A risk management tool for SMMEs: the case of Sedibeng District Municipality

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DECLARATION

I, Niël Almero Krüger, do solemnly declare that

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is my own work, where all of the resources have been acknowledged and quoted by way of complete references. This study has correspondingly not been for previous assessment for post graduate studies at any other university.

Niël Almero Krüger

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ABSTRACT

Keywords: Risk, Risk management, Small business, SMME, Sedibeng District Municipality,

Risk management is a managerial science that has developed formally in the wake of major risk events such as the subprime crisis. In response to risk events like this, risk management has seen a systematization of the processes and principles that govern risk. Structures and frameworks have been developed to address risks throughout the internal structures of businesses through enterprise wide risk management standards. Although these systems have been in practice for decades the uptake of formal risk management practices in small businesses rarely incorporate them. Small businesses, like all businesses, face risks daily through their operations and their positioning in the external environment. However, unlike larger businesses they lack the experience or scale to weather critical risks by merit of their internal structures. Small businesses generally struggle to maintain their survival because of competitive issues, poor business and financial management which leaves the failed entrepreneur heavily dissuaded to pursue entrepreneurial endeavors after their initial failures. Moreover, it has been found to be the general tendency of small business owners to wait until a risk event occurs before they apply themselves. This is due to poor risk identification by the small business and a dependency on their own observations and experiences. Small business owners also have the additional challenge of maintaining any risk management system they have in combination to all the other managerial considerations that they must maintain.

In order to address the difficulties inherent to small businesses the study launched a literature review of risk management and the collected standards that are used as the benchmark for good risk management in practice today. Risk management was explored and dichotomized into the fundamental principles and processes required in a risk management system. Having identified the foundational components of risk management, the study then proceeded to explore small businesses in South Africa and abroad. Small businesses were defined by national documentation and the characteristics shared unilaterally by them. The reasons for their failure and those characteristics that contributed to their success was explored to account for the small business particularities that would have to be factored into a risk management approach tailored for them. To frame the discussion in a South African context the small business environment and policy supports and shortfalls as they relate to South African small businesses were discussed.

From the literature review, the required data became more apparent. A methodology and questions were developed to gather it. This led to the initial development of two scales and a clear methodological process for interpreting the data once gathered. From the data various observations

were made that confirmed a great deal of the theory gathered. Demographical characteristics were discussed, and the scales developed in the study were tested to produce reliable components that were in turn analyzed, correlated, and tested for differences in regards to selected demographical items. It was found that, small businesses do not have risk management personnel, are primarily distributed in the trading and service industry, tend to pursue high-growth businesses, and have high levels of education amongst small business owners. It was also found that most businesses do not apply any risk management standards and that a similar proportion of them do not survive for more than five years. Additional tests for differences were performed and it was found that different municipalities have the greatest effect on the components identified, while education only made a difference between how well employees reported their risks in the business.-

The findings generated by the demographical analysis were of secondary concern as the final frequency analysis gave a clear indication of how regularly small businesses applied the various risk management processes, and the deficiencies in their ability to identify and differentiate between various risks. The risk tolerance and risk taking of small businesses were also clearly identified respectively through frequency analysis of the Survey of Consumer Finances (SCF) tolerance assessment question and a Domain-Specific Risk-Raking (DOSPERT) scale. The analysis of these frequencies allowed for a clear identification of the deficiencies in small business risk management processes.

To address the cumulative considerations of the observed shortcomings of small businesses in literature, and the shortcomings identified in the statistical analysis the Small Business Risk Management Intervention Tool (SBRMIT) was developed. The SBRMIT is the primary contribution of this study and guides a small business through every important initial risk management consideration needed to construct a risk management system internally. The SBRMIT developed through this study incorporates the considerations that limit small businesses. It is unlike other standards in that it is free of charge and serves to bridge risk management difficulties in SMMEs. The SBRMIT addresses the primary considerations of all major risk management frameworks but is not prescriptive. It is open for individualization based on the nuanced micro-particularities of the individual businesses. By applying the systematic steps discussed in it, the small business can practically incorporate those considerations into its internal structures. The SBRMIT can thus help small businesses overcome the challenges that face them and thereby improve the chances for their success.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
BSP	Business Support Programmes
CFA	Confirmatory Factor Analysis
CICA	Canadian Institute of Chartered Accountants
CoCo	Criteria of Control Board
COSO	Committee of Sponsoring Committees of the Treadway Commission
DOSPERT	Domain-Specific Risk-Taking
EFA	Exploratory Factor Analysis
EFE	External Factor Analysis
ERM	Enterprise-wide Risk Management
F	Finance
GL13S	Grable and Lytton's 13-item Scale
HR	Human Resources
H/S	Health and Safety
IFE	Internal Factor Analysis
ISO	International Organization for Standardization
JSE	Johannesburg stock exchange
MDBSA	Municipal Demarcation Board of South Africa
NDP	National Development Plan
NGP	New Growth Path
NAMAC	National Manufacturing Advisory Centre
O	Opportunities
S	Strengths
SBRMIT	Small Business Risk Management Intervention tool
SCF	Survey of Consumer Finance
SDI	Spatial Development Initiatives
SDMA	Sedibeng District Municipal Area
SEDA	Small Enterprise Development Agency
SME	Small Micro Enterprises
SMME	Small Micro Medium Enterprises
SO	Strength Opportunity
SPACE	Strategic Position and Action Plan
SPSS	Statistical Package for Social Sciences
SS	Societal Safety

ST	Strength Threat
SWOT	Strengths Weaknesses Opportunities Threats
T	Threats
TBI	Technological Business Incubators
TSA	Table Score A
TSB	Table Score B
W	Weaknesses
WO	Weakness Opportunity
WT	Weakness Threat

CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

"Education is the key solution for change, for peace, and for help in the fight against racism and discrimination in general." ~Clarence Seedorf

1.1 INTRODUCTION

Risk as a concept, is embodied in the reduction of business asset value or forfeited business opportunities, and originates from the internal activities of the business or from the external business environment (Aven & Renn, 2009:7; Marx & de Swardt, 2013:35). Risk is present when frequency, exposure, probability, or the ultimate outcome of risk is unknown (Kaplan & Garrick, 1981:13-17; Knief, 1991:55; ISO, 2009a:15). Internal risk is predominantly represented in business activities and is traditionally addressed through managerial intervention (Tchankova, 2002:291; Verbano & Venturini, 2013:188). Conversely, external risk is the causative result of market fluctuations and political actions, which are outside of a business's capacity to manage or control (Tchankova, 2002:293; Verbano & Venturini, 2013:196).

Risks exist as abstract concepts, and are nominal in nature, that are inconsequential to a business, unless they are realised in the business directly, or pre-emptively contextualised and related to business goals and managed in advance (Valsamakis *et al.*, 2013:83). An improved understanding of individual risks as they relate to a particular business entity allows for managerial intervention prior to the realisation of a particular risk event (Valsamakis *et al.*, 2013:79-88). Sufficient risk management reduces losses and aids the business in meeting its performance goals (Smit & Watkins, 2012:6324-6330; Gwangwava *et al.*, 2014:3-4). How well risk management addresses the risk, is influenced by the ability of a business to identify, analyse, treat, monitor and integrate strategies to manage those risks into formal business practices in the business (Valsamakis *et al.*, 2013:79-88). Despite the benefits of risk management, implementation often only realises because of the national policy requiring it (Valsamakis *et al.*, 2013:79-88).

Larger businesses, such as those listed on the Johannesburg Stock Exchange (JSE) address risk management as a compliance issue (Valsamakis *et al.*, 2013:79-88). JSE registered enterprises are required to conform, for example, to the Companies Act of 2008 (Act No. 71 of 2008), Committee of Sponsoring Committees (COSO), International Organization for Standardization (ISO) 31000, ISO 31010 and King IV (Matthews & Scott, 1995:44; Van Niekerk & Labuschagne, 2006:17). For JSE registered enterprises, compliance is ensured through the actions of a risk management

department or at least a risk manager that meets the compliance criteria as a part of their risk management function (Valsamakis *et al.*, 2013:79-88). By legally obliging businesses to comply, risk management is exercised throughout the business and ensures that risks are clearly defined, addressed without deception, and managed proactively (Valsamakis *et al.*, 2013:79-88).

A small business is defined as one that has less than 50 employees and does not have the same legally enforced compliance requirements as JSE registered businesses (South-Africa, 1996:15). The absence of legally enforced compliance results in a lack of policy motivation to apply risk management standards (Smit & Watkins, 2012:6324). Consequently, few small businesses neither know of these standards nor apply the principles contained within them and thereby risk management is rendered insufficient (Ntlhane, 1995:55; King & Lessidrenska, 2009:103; Smit & Watkins, 2012:6324). Although the lack of policy motivation contributes to ignorance on good risk management practices, there are inhibiting factors that are characteristically associated with small businesses that further limit their capacity to apply risk management.

SMMEs, in many instances, lack both the managerial complexity and financial resources to successfully manage risk (Le Roux, 2016:158). In the absence of intervention, 75 percent of small businesses fail within the first five years, illustrating the lack in capacity to or ability to accurately determine their exposure (SEDA, 2016:5). Due to their small size and simplistic risk perceptions, SMMEs (Small, Micro, and Medium enterprises) resort to risk avoidance, unstructured crisis management, or risk transfer by means of taking insurance (Gwangwava, Manuere, Kudakwashe, Tough, & Rangairai, 2014:9). Small businesses also tend to function unsystematically, with risk intervention applied unevenly throughout the organisation (Matthews & Scott, 1995:44; Turpin, 2002:4). This is a natural consequence of poor skills training, and risk management skills are comparatively absent in small businesses (Janney & Dess, 2006:392). When risk interventions are applied in small businesses, they do not address the full risk profile of the business, instead focusing on realised risks and not incorporating those into future considerations (Janney & Dess, 2006:392).

The collection of risk management knowledge and experience in a specific business is brought together meaningfully in the risk management policies of the business (Smit & Watkins, 2012:6324). The collection of those policies and processes can be referred to as a risk management system (Smit & Watkins, 2012:6324; Hopkin, 2018:66). However, the lack of consistency in risk management practices in small businesses makes it difficult to diffuse experience gained over time throughout the managerial structures of a small business (Hopkin, 2018:67). Effective risk

management must be systematic, ongoing, assess the probability of risk events, estimate the potential severity of the outcome, control all realised risks and build those considerations into a risk management process or structure (Tchankova, 2002:293; Marx & de Swardt, 2013:93; Verbano & Venturini, 2013:192). Risk management structures and policies allow risk managers to utilise otherwise risky scenarios to accelerate business growth through controlled risk-taking (NSW, 2005:12).

In time, risk management systems aid the business by identifying and quantifying the effects of a risk on a business (Smit & Watkins, 2012:6326). Risk management can aid small businesses in addressing skill shortfalls without requiring expensive training. Moreover, risk management is systematic and addresses interdisciplinary concerns, thus it allows the business to develop the entire enterprise. One of the critical aspects of a risk management systems, is it allows the ranking of the importance of risks as they relate to the business culture effect and the calculation of minimum resources of skills needed to manage those risks (Smit & Watkins, 2012:6326). When a risk is identified and noted as insignificant, risk policies give guidance on how to address it in the future (Smit & Watkins, 2012:6327).

Risk management systems propose a blueprint for what the business perceives to embody in holistic risk management, enhances risk awareness and simultaneously reduces risk exposures (Valsamakis *et al.*, 2013:79-88; Hopkin, 2018:146). When developed within a business over time, custom systems are designed according to the needs of a business entity (Mulcahy, 2010:134). However, for small businesses, this can be considered a challenge. Multiple iterations of identifying, analysing, contextualising, treating, monitoring and incorporating results are required to develop risk management processes. Alternatively, prefabricated risk management standards along with the supporting documents can be purchased (Harvey, 2008:3); however, application of those standards could be difficult for small businesses due to their limitations.

1.2 PROBLEM STATEMENT

The first challenge to small businesses is the business environment, which has become an increasingly competitive domain and resulted in the growth of companies capable of adapting and the decline of those too small or unwilling to evolve (Diedericks, 2015:26). Cost-effective risk management is essential to survive and remain competitive as it creates awareness of business threats and opportunities through consistent observation and feedback (O'Gorman, 2001:69; Watson, 2009:96; Diedericks, 2015:17-32). However, the creation and application of a risk management system is time-consuming and resource-intensive, which if not handled correctly, can

result in costs that outweigh the benefits derived therefrom (Harvey, 2008:9; KMG, 2013:1). To either construct a risk management system or to implement one through a highly skilled risk manager is expensive and time-consuming (Gwangwava *et al.*, 2014:8).

The smaller the business, the less likely it is that they are aware of adequate risk management standards or the manner in which to successfully implement a risk management framework throughout the business (Weissinger, 2013:20). Furthermore, Costes (2013:14) stipulates that even if small businesses were forced to adopt a risk management standard, the results would likely not be as significant as if it were voluntarily applied. This inability to apply a standard comes from the characteristic weaknesses of small businesses as they have been cited to have insufficient general and financial management and limited capacities to compete (Burns, 2010:192). When applying risk management in a small business, an additional level of complexity is added, as small businesses requires simplicity and affordability in not only applying but in maintaining risk management processes once established (Le Roux, 2016:154). For risk management to add enough value to be voluntarily pursued by small businesses, requires that the risk management process expands risk awareness and provides risk management strategies to address risk affordably and within the business's operating context (Le Roux, 2016:154).

Implementing the risk management process in systematic steps that are simple and not onerous, allows the practical value of risk management to outweigh the costs and inherent difficulties in applying risk management in small businesses (Weissinger, 2013:20-21). Once risk management has been separated into individual practical steps and compiled into an assessment tool the specific gaps in a small business's risk management processes can be identified and addressed without requiring a complete revision of its activities (Liuksiala, 2012:78). To do this requires that the underlying assumptions and activities of risk management be explicitly addressed, and application tools developed to bring small business activities in line with risk management practices. By applying Small Business Risk Management Intervention Tool (SBRMIT) , those measures could be consolidated into a systematic risk process that suits the needs of the small business or present systems employed by them can be modified to incorporate formal standard considerations (Le Roux, 2016:154).

The primary goal of this study is the development of a SBRMIT that guides and informs a small business on how to incorporate good risk management throughout the business in a manner that is simple and cost-effective whilst addressing:

- Insufficiencies in the risk management processes of small businesses in the Sedibeng District Municipal Area (SDMA);
- Difficulties in identifying and classifying risks that the small business has exposure to but lacks managerially sufficient awareness of to manage; and
- The particular vulnerabilities of small businesses.

1.3 OBJECTIVES OF THE STUDY

In order to produce the desired tool, the following objectives have been formulated for the study:

1.3.1 Primary objective

The primary objective of this study was the development of a risk management tool for small businesses within the Sedibeng district municipal area. The proposed tool allows small businesses to address, rapidly and cost-effectively, risk management principles and processes without needing to adopt or develop a formal risk management process. Specific points addressed and identified include limitations and shortcomings in small business risk awareness, gaps in small business risk management processes, the financial risks that small businesses are not aware of and risk-taking behaviours of their managerial teams.

1.3.2 Theoretical objectives

To achieve the primary objective of the study, the following theoretical objectives were identified:

- Theoretical objective 1: Conduct a literature review on the theories, definitions and principles that pertain to risk management (Chapter 2);
- Theoretical objective 2: Conduct a literature review to ascertain the importance of sound risk management and the underlying principles, structures and benefits thereof (Chapter 2);
- Theoretical objective 3: Construct a taxonomy of risks that allow for comprehensive risk awareness and the systematic incorporation of additional risk categories (Chapter 2 annexure);
- Theoretical objective 4: Discuss and define small businesses, small business characteristics, small business risk-taking characteristics, reasons for small business failure and factors that contribute to their success;
- Theoretical objective 5: Identify and discuss the role that good risk management can have in reducing small business failure (Chapter 3);
- Theoretical objective 6: Evaluate the current demographical characteristics of small businesses (Chapter 3); and

- Theoretical objective 7: Identify and discuss policies and government interventions aimed to aid small businesses (Chapter 3).

1.3.3 Empirical objectives

To achieve the primary objective of the study, the following empirical objectives were identified:

- Empirical objective 1: Analyse the demographical data received from small businesses in the SDMA to determine the selected particularities of small businesses in the SDMA;
- Empirical objective 2: Apply exploratory factor analysis to determine if small businesses can differentiate between different categories of risks that they face (Section A, Self-Administered Questionnaire);
- Empirical objective 3: Apply exploratory factor analysis to determine how willing small businesses are to take risks as laid out in the Domain-Specific Risk-Taking (DOSPERT) scale (Section B, Self-Administered Questionnaire);
- Empirical objective 4: Run a Survey of Consumer Finance (SCF) to determine the risk appetite of small businesses in the SDMA (Section B, Self-Administered Questionnaire);
- Empirical objective 5: Apply exploratory factor analysis to analyse how closely the risk management practices of small businesses within the SDMA align with what is displayed in theory (Section C, Self-Administered Questionnaire);
- Empirical objective 6: Apply frequency analysis and descriptive analysis to identify general shortcomings in small business' risk management within the Sedibeng district municipal area;
- Empirical objective 7: Run tests of differences using T-tests and Analysis of Variance (ANOVA) to determine if the components varied for different demographical groups;
- Empirical objective 8: Run item-component and inter-component correlations to determine the relationships between components and selected demographical items; and
- Empirical objective 9: Create a risk management tool that aids in the development of small business risk management.

1.4 RESEARCH DESIGN AND METHODOLOGY

The research design provides a detailed outline of the procedures that was employed in obtaining the data that is needed to address the research question (Redda, 2015:36). This study applies a single-stage quantitative methodology. The primary data is quantitative in nature. The ontological position applied within this study is constructed from theory thus the study has a Radical structuralist/Positivist paradigm. The reason that this paradigm was selected is because of the

quantitative orientation of this paper and the quantifiable nature of the variables explored. Moreover, as the independently administered questionnaire was constructed from pre-established academic theory and reviewed and adjusted using the criticisms and comments of qualified researchers and subject specialists bias can be argued to be minimal if present. The underlying assumption is that poor risk management is as a result of the lack in application of risk management principles and processes and can thus be measured in a binary format or through a Likert scale, transforming information into quantifiable numerical forms. Moreover as there is no additional filter or guide in the questionnaire the observations gathered are considered objective because they are derived directly from the source.

The epistemological position of the study argued for an objectively observable framework for risk management based on academic theory. A structuralist approach was used as it directs towards a meaningful intervention.

A self-administered questionnaire was designed to extract pertinent data from the identified sample. The constructs of the questionnaire included constructs from previously validated questionnaires as well as items identified from the literature probe. The questionnaire was subject to specialist pretesting and a pilot study to ensure that the constructs are clear and that the target audience was able to complete the questionnaire. After the pre-testing and piloting, the questionnaire was distributed to the defined audience. The questionnaire then gathered situational information on the predefined researched themes of specific financial risks, the risk appetite of small businesses and small business risk management processes.

1.4.1 Literature review

The secondary data for this study comprised an extensive collection of books on risk management, journal articles, dissertations and theses, websites, newspapers and magazine articles (including electronic versions).

1.4.2 The empirical study

The empirical section of the study constitutes several subsections.

1.4.2.1 Population

The target population for this study was small businesses within the Sedibeng district municipal area. According to the Municipal Demarcation Board of South Africa (MDBSA, 2017:21), Sedibeng comprises the Emfuleni, Lesedi, and Midvaal Local Municipalities.

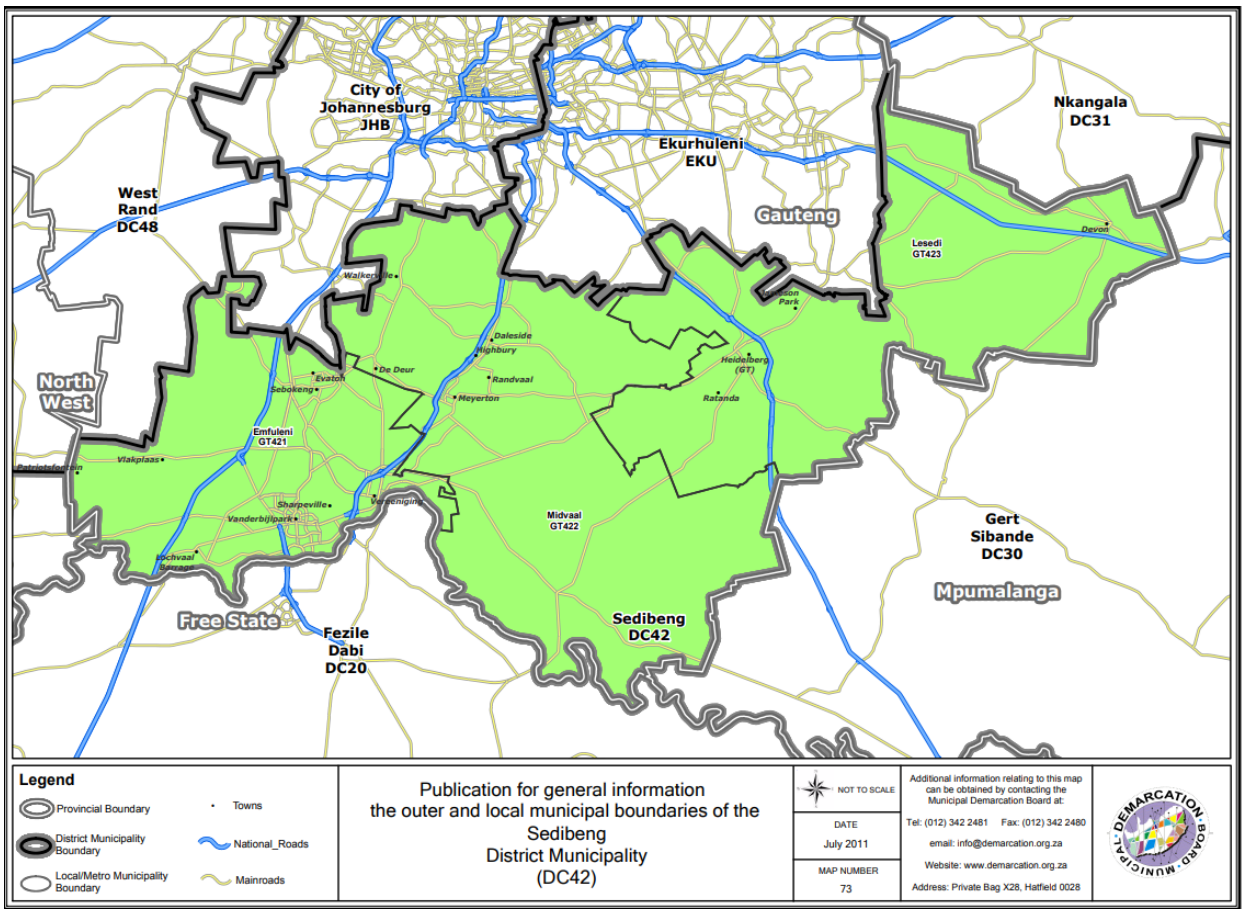

Figure 1. 1: Sedibeng district municipality

Source: MDBSA (2017)

Small business within context of the study was defined as a business with less than 50 full-time employees (Africa, 1996:15; Meyer, 2009:18). The simplest metric to measure the state of development in a business is the number of employees in the business. In the context of the Small Business Act (102 of 1996) (Africa, 1996:15), a micro-enterprise employs no more than ten employees, a very small business is one that employs between ten and 20 employees, a small enterprise is defined as a business in the formal market that has less than 50 employees and medium businesses employ no more than 200 employees (Africa, 1996:15). The predominant economic sectors identified under the Small Business Act are agriculture, mining and quarrying, manufacturing, utilities, construction, the automotive industry, wholesale trade, commercial services, tourism, logistics, finances and community services (Africa, 1996:18; Meyer, 2009). A more robust discussion of these sectors are included in Appendix G. Each of these sectors can be included if they abide by the definition of a small business, however, this study is not sector-specific.

1.4.2.2 **Sampling technique**

Non-probability sampling techniques were used to gather the sample for this study. Probability sampling is done by gathering the sample from the population at random by means of random number generators or some other unbiased selection method (Barreiro & Albandoz, 2001:3; Urdan, 2011:4; Samuels, 2017:7). Generally, applicable probability sampling methods include random sampling, systematic sampling, stratified sampling and cluster sampling (Maree, 2016:123; Samuels, 2017:7). Non-probability sampling can be defined as a sampling technique within which the probability for selection of a participant within the population is unknown (Blackstone, 2012:100). Non-probability sampling can be done through purposive or judgement sampling, convenience sampling, theoretical sampling, quota sampling or snowball sampling (Bernard & Ryan, 2010:32; Maree, 2016:128; Samuels, 2017:8).

A combination of two non-probability sampling techniques, namely purposive and convenience sampling, was used in the selection of the sample elements as identified from the target population. The sample was obtained by means of contacting the various business organisations and networks in the study area in order to obtain access to their database of local businesses. In addition, snowball sampling techniques were also used to identify additional small business owners. Self-administered questionnaires were used to collect primary data from the identified sample. The reason and purpose behind selecting this specific approach lies in the fact that the study wishes to exclude small businesses that do not have a registered place of business (operating from a fixed property or shop) and may include both registered and unregistered small businesses.

1.4.2.3 **Sample size**

As the exact population size of small business owners in the Sedibeng district municipal area is unknown, it was difficult to determine the exact sample size. The appropriate sample size for this research study was estimated based on two criteria. The first was what Sekaran (2003) refers to the rule of thumb in determining a sample size suitable for most non-probability methods to be between 30 and 500 participants. The second is based on the historic method, the following samples were drawn in similar studies, namely Meyer (2009:53) 36, Buthelezi (2011:66) 30, Stander (2011:66) 87, Kock (2008:71) 80, Neethling (2016:93) 200 and Rasego (2011:57) 28. It was anticipated that a sample of approximately 300 small business owners/managers would have been be sufficient. The sample was proportionally distributed according to economic activity between the sectors; Lesedi and Midvaal each account for 10 percent and Emfuleni accounts for 80 percent of the desired sample (Neethling, 2016).

1.4.3 Measuring instrument and data collection method

A self-administered questionnaire was used for this study, which was administered in person. The questionnaire consists of four sections.

Section A: This section consists of a scale that was used to identify how risk is framed and experienced by small business owners as well as, which financial risks they are privy to (Carey, 2001:26; Bank for International Settlements, 2011:11-17).

Section B: This section comprises an amended DOSPERT scale as well as the SCF risk tolerance scale used to identify the risk-taking behaviours of small business management (Gilliam *et al.*, 2010:31-32; Grable & Schumm, 2010:125).

Sections C: Assesses which individual components of the risk management process small businesses fail to apply so that intervention can be directed to the specifically identified problem areas (Chicken, 1996:105; IRM, 2002:4; Beck, 2006:333; Valsamakis *et al.*, 2013; Hopkin, 2018:188).

Section D: Comprises of questions relating to the demographical and business information of the participants, which was used to assess what influence the demographical differences might exhibit of the small businesses risk management practices in this sample.

1.4.4 Statistical analysis

The collected and captured data was analysed using the Statistical Package for Social Sciences (SPSS), version 25.0. Analysis of the data was grouped by various statistical methods. These methods will include reliability, validity and descriptive analysis. In addition, exploratory factor analysis was used to determine underlying relationships between risk awareness, perception and mitigation practices of small businesses in developing and validating the proposed scales (Malhotra & Peterson, 2006:739). The statistical techniques employed are indicated in Table 1.1, next to their corresponding empirical objectives.

Table 1. 1: **Statistical techniques to be employed**

Empirical Objectives	Statistical techniques
Determine the profile of financial risk within small businesses within the Sedibeng district municipal area	Descriptive statistics and exploratory factor analysis
Analyse risk tolerance of small businesses within the Sedibeng district municipal area	Exploratory factor analysis, reliability analysis, and correlation analysis of factors
Analyse the risk management practices of small businesses	Descriptive statistics and exploratory factor analysis
Identify gaps in small business risk management within the Sedibeng district municipal area	Correlation analysis

Source: Author's own compilation

1.5 CONTRIBUTION OF THE STUDY

The primary theoretical contribution that this study provided is a more pronounced understanding of the risk management needs of small businesses in the Sedibeng district municipal area. Secondary theoretical contributions that were met were: A clear understanding of risk theories, definitions and principles that pertain to risk management; a clear indication importance of sound risk management in small businesses and the underlying principles, structures and benefits of dominant risk management standards; a taxonomy of risks that allow for comprehensive risk awareness and the systematic incorporation of additional risk categories at varying levels of business sophistication; an unobstructed understanding of the current risk management environment of small business in the Sedibeng municipal district area and a review of policy efficacy and government involvement in aiding small business risk mitigation and risk management development

The SBRMIT was the practical contribution of this study. It enables small businesses to apply risk management without formal training or expertise in risk management in a cost-efficient and functionally uncomplicated manner. Findings from this study was for the development of the SBRMIT, which small businesses will find useful The proposed SBRMIT was orientated to the needs of small businesses while addressing the larger scope of risks that were present to the small business owner or manager. The improved managerial efficiency subsequently allowed the business to address a wider scope of risks at a reduced cost (Gwangwava *et al.*, 2014:11). A SBRMIT has the capacity to contribute towards small business survival, growth and evolving risk management to include the -concerns of small business owners. The study also aimed to help reduce the difficulties inherent with applying standards such as ISO 31000 in the small business context, aiding in the further development of robust risk management practices.

1.6 CHAPTER OUTLINE

Chapter 1: Introduction and background to the study

This chapter serves to introduce the topic of the study and give background information on it. Furthermore, it indicates the problem statement of the study. This chapter also states the overall research objectives, as well as the theoretical and empirical objectives of the study. The contribution is elucidated, and fundamental concepts are discussed.

Chapter 2: Theoretical analysis of risk management frameworks

This chapter is the first of two theoretical chapters. This chapter serves to provide a background of risk by addressing definitions of risk and identifying risk types. In addition, an overview of the risk management standards and the fundamental elements thereof were highlighted.

Chapter 3: Theoretical analysis of small businesses in South Africa

This chapter creates an overview of the risk environment of small businesses in the context of South Africa, defines and discusses small businesses in the South African context and indicates the importance of small business' role in the South African economy. Economic theory is included to substantiate decision-making motivations of small businesses as well as theory relating to the high failure rates of small businesses.

Chapter 4: Research design and methodology

This chapter provides information about the research methodology and data collection techniques. This includes explanations of the sample size, choice of sample and the data collection process.

Chapter 5: Data analysis and discussion of results

The results and findings of the statistics performed on the questionnaire data are presented here. This section also contains a small business risk management tool.

Chapter 6: Risk management intervention tool

The results of the former chapters are analysed and integrated into an intervention tool in this chapter.

Chapter 7: Summary, conclusions and recommendations

This chapter provides the summary, conclusion and recommendations of the study.

CHAPTER 2

RISK AND RISK MANAGEMENT

"Every problem has in it the seeds of its own solution. If you don't have any problems, you don't get any seeds." ~Norman Vincent Peale

2.1 INTRODUCTION

Businesses are encouraged to take on risk to make profits, however, when a business's risk appetite is set above its risk tolerance levels it can produce losses that result in business failure (Hopkin, 2018:32). As opposed to large businesses, small businesses have a small capacity to take on risks due to their low bargaining power and financial reserves, which make them more vulnerable to risk events in the external environment (SEDA, 2016:14). Additionally, small businesses have internal managerial limitations that limit risk management efficacy (Bruwer *et al.*, 2017:9).

This study aims to ease the burden on small businesses through the provision of a risk management tool that aids in the adoption of risk management practices in a manner that is sensitive to the challenges that small businesses face. The proposed tool was used to identify and address the following: shortcomings in small business risk awareness; shortcomings in their risk management processes; and overexposure tendencies. The tool includes a checklist by which risk management can be introduced and developed in a manner that is oriented to the risk context of the individual small business. The tool does not require any knowledge of risk management or risks and includes a compiled typology of risks to expand risk awareness beyond the experience of small businesses.

This chapter focuses on the theoretical fundamentals of risk management and address the first-, second- and third theoretical objectives, namely to:

- Conduct a literature review on the theories, definitions and principles that pertain to risk management (Theoretical objective 1);
- Conduct a literature review to ascertain the importance of sound risk management and the underlying principles, structures and benefits of dominant risk management standards (Theoretical objective 2);
- Construct a taxonomy of risks that allow for comprehensive risk awareness and the systematic incorporation of additional risk categories at varying levels of business sophistication (Theoretical objective 3).

To construct a risk management tool requires that the underlying theoretical concepts be addressed in context of small businesses is such a way that it achieves the goals set out by this study. The theoretical concepts that was discussed are risk, risk management rudiments and common principles presented in formal risk management standards (RMS) used today. The chapter initially proposes a working definition for risk. Thereafter, the discussion was expanded to address specific risks as extracted from a wide literature review and subsequently, compiled into a typology of risk. This will address the third theoretical objective. The typology of risk presented in this study identifies risk relative to the internal- or external context of the business and defines those risks clearly enough to be understood, easily and quickly, by a small business owner. Thereby, a holistic overview of relevant risks is created, giving small businesses a wide-reaching understanding of what risks they must be cognisant of.

The discussion of risk management as an integrated collection of processes and principles allows for the extraction of fundamental constituents of an integrated general risk management system. The definition of what risk is, the typology of risks, and the dissection of the risk management process will produce a thorough understanding of the fundamental theoretical elements that must be addressed by a risk management process for it to be complete. This chapter incorporates the provisions of risk management standards as they relate to the concepts discussed. As such, the risk management rudiments, on which there is professional consensus, are indicated and included in the considerations of this system, adding further validity to the scales developed. By means of the disambiguation of the concepts described, the first and second theoretical objectives was met.

2.2 NATURE AND DEFINITION OF RISK

In order to develop a tool to address the risk management needs of small businesses, there are fundamental concepts that must be disambiguated. Amongst these fundamentals is the definition of risk, a broad cognitive awareness of the risks a business may face and an understanding of how to address those risks. An understanding of which risks the business are likely to encounter and which take precedence is generated through an experience of daily events and circumstances as they relate to the business. To perceive risks in a business requires an understanding of what risks are, where they come from, and the time delayed effects which they carry. Accomplishing this task requires that individual businesses define, identify and contextualise the risks that they face.

Risk is defined as the uncertainty of frequency, severity, or deviation of expected outcomes from realised outcomes and is contingent to an event that could have an influence on the business or parties associated with the business (Chicken, 1996:7; Olsson, 2002:5; Investment Management

Consultants Association, 2003:29; Aven & Renn, 2009:1-12; Valsamakis *et al.*, 2013:28-32). The defining characteristics of risk, when definitions are compared, are uncertainty of outcome or loss, the probability of a risk event and the risk exposure as a result of an event (Kaplan & Garrick, 1981:11-27; Graham *et al.*, 1995:19; Rosa, 1998:28-33; Valsamakis *et al.*, 2013:48). Risk can thus be defined as a deviation from an expected scenario that results in a shortfall beyond the expectations of the applicable party, losses, or losses that are beyond the initial loss expectations of the applicable party (Investment Management Consultants Association, 2003:38; Borghesi & Audenzi, 2013:3-17).

Risk is a prerequisite in doing business since business activities come at the cost of time and resources expended in the pursuit of profit (Knief, 1991:23; Hopkin, 2018:44). Whether one experiences financial gains or losses depends on whether or not risk situations occur and the severity of the losses resulting from a risk situation (Investment Management Consultants Association, 2003:11; ISO, 2009c:9). A business will take on this uncertainty if the expectations for a potentially profitable outcome is considered more likely (Investment Management Consultants Association, 2003:39; Marx & de Swardt, 2013:27). In the event that the potential risk of an action outweighs the benefits that can be derived from it, avoiding the risk situation through inaction would be the most prudent action (Olsson, 2002:6).

It becomes evident that risk perception results from a complex interplay of loss or gain expectations by the risk takers when they must make decisions that contain risk (Borghesi & Audenzi, 2013:3-17). Perception is a matter rooted in individual experience, as such, no single risk carries the same perceived cost amongst individuals (Chicken, 1996:8; Strategy-Unit, 2002:28-39). In a business context, the same principle extends but instead of experience it is the individual managerial and financial capacities of businesses that determine the subjective level of risk being taken (Chicken, 1996:8; Strategy-Unit, 2002:28-39). Beyond subjective applicability, risk is generally and primarily preoccupied with the negative consequences that may arise from a risk event (Valsamakis *et al.*, 2013:28-32). Risk events come about as a result of inconsistencies and failures from within the business, or from events outside of the business, such as systemic external shifts within an otherwise balanced political, social, or economic system (Olsson, 2002:12; Borghesi & Audenzi, 2013:19-27; Marx & de Swardt, 2013:29).

When seeking to address the risk, one must orientate one's business efforts to that which is in the business's power to influence, namely internal risk. How well a business comprehends its power to influence risk is innately dependent on the capacity of the business to perceive risks through the

experience or the skillset of the management team that guides it. Many small businesses are limited in this regard, as they have less employees and employees and managers that are less experienced than those in larger businesses and rarely exist beyond five years. Developing an itinerary of risks in their individual contexts can help small businesses close this gap by defining, classifying and contextualising their individual risks.

2.3 CLASSIFICATION OF RISK

Classifying risks accurately can reduce uncertainty by conceptualising risks and allowing a risk taker to address the key risks to which they are exposed. Risks are primarily identified in practical relation to the business and are contextually bound to the source, nature, or archetype relating to the specific outcomes of a risk event or situation (Marx & de Swardt, 2013:30; Valsamakis *et al.*, 2013:33). Risk can be classified pragmatically by its outcome or by its origin. This section discusses the various conceptual manifestations of risk with the intention of creating a comprehensive background of practical risks (Hopkin, 2018:45).

2.3.1 Risk by outcome

Risks can be classified broadly as pure risks, control risks, or opportunity risks (Hopkin, 2018:46). Pure risk is defined as a risk that can only have a negative outcome with no possibility of acquiring economic or strategic benefits (Hopkin, 2018:47). A control risk is a risk with uncertainty in regard to the source from which the risk arises or from the uncertainty of the effect of the focus (ISO, 2009b:1-3; Borghesi & Audenzi, 2013:19-27). Pure and control risks, once identified, have the capacity to be insured against if an insurer offers cover for the identified risk (Kahane *et al.*, 1985:191-199; Valsamakis *et al.*, 2013:34). Opportunity risks, also known as speculative risks, are risks taken as part and parcel of the business process (Borghesi & Audenzi, 2013:3-8). Opportunity risks are the main focus for the business function of organisations (Hopkin, 2018:47). Opportunity risks differ from pure and control risks in that they are entered under the expectation of an economic reward and are usually uninsurable (Hopkin, 2018:48). Arranging risk by outcome helps in determining if an investment is worth entering, however, risk management can be challenging from this perspective, as it does not address the particulars of the risks faced. To address this concern, risks can be analysed by their origin and the technical particularities that bring them about.

2.3.2 Risk by origin

By dismantling risk into individually identifiable themes, each risk can be approached in a manner that allows for management of these risks. The risk can come about from within the organisation

and its day-to-day operations or from events and situations that arise from the external business environment, within which the organisation exists. Theory suggests that risk can broadly be classified grouped into one of two categories that are either internal or external, particular or fundamental, unsystematic or systematic (Foucault, 1991:197-210). Broadly, risk can be split into one of two categories, the first being characterised by what is outside of the direct control of the business (Type 1 risks) and the second being those risks that are within the direct control of the business (Type 2 risks). The typology of risk, shown in Appendix A, and Figure 1.1, respectively, creates a register of all risks with their accompanying definitions, and illustrates how various risk types can be grouped within a business. This is done to provide small businesses with an awareness of risks they are not aware of, and to which they know of but fail to relate to their own businesses.

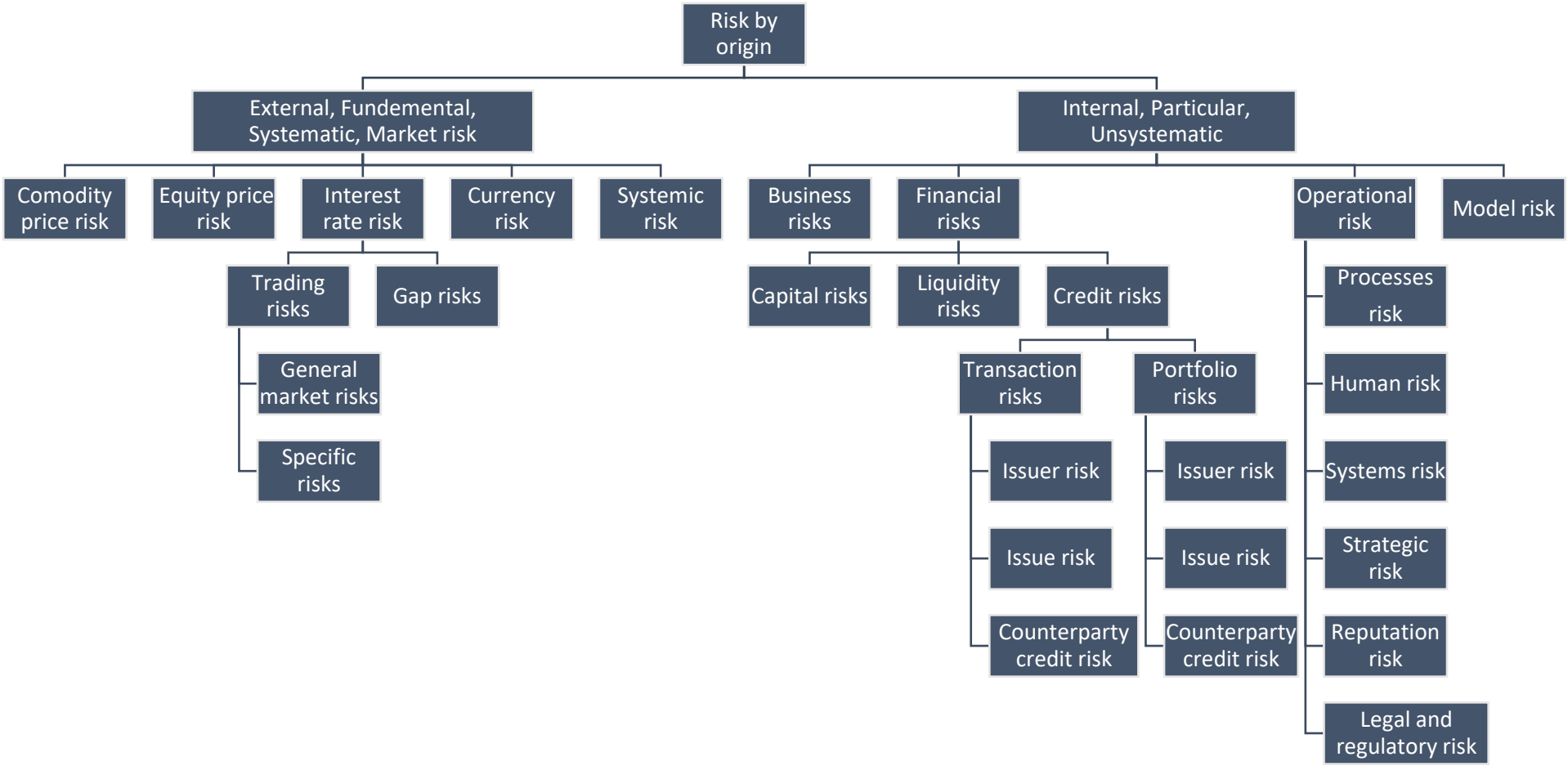

Figure 2. 1: Risk by origin

Source: Author's own compilation

The value of the risk typology is that it discusses individual risks in their multiple contexts, and thereby individual risks become discernible from each other. This allows for more efficient and precise interventions and thereby amplifies the value of managerial intervention. However, cognisance of the risks to which a business has exposure to is not solely sufficient to account for a risk management process. To apply risk management within a business requires a systematic and recurring process governed by principles, such as those employed in risk management standards and developed within the business's individual context. It is in the integration of a clear understanding of risks, with the managerial principles and considerations that govern risk management, and those processes that encapsulate the actionable tasks required to address the former, that can be classified as risk management. Having developed a robust source from which to identify risks, the study will now progress with a discussion of risk management and then expand on the individual component steps that must constitute it.

2.4 RISK MANAGEMENT

Since many risks cannot be avoided while pursing economic profits a process is required. The process by which risks are brought in line with the risk appetite of a business is called risk management.

2.4.1 Definition of risk management

Risk management must maintain certain characteristics to be considered completely defined. Risk management must be continuous, forward looking, iterative, systematic and a shared process (Valsamakis *et al.*, 2013:12-14). Risk management must relate all internal and external events, economic climates, economic activities and actions taken throughout a business as coordinated parts of a whole (Valsamakis *et al.*, 2013:12-14). Risk management must then also guide the process of responding to those events in a manner that matches the goals and capacity of the business to which it relates (Valsamakis *et al.*, 2013:12-14).

Risk management is only useful when some exposure that is required by a business is present (Aven, 2007a:16). Exposure is introduced into a business by the activities it takes in the pursuit of economic profits (Chicken, 1996:20; Aven, 2007a:15). Risk management seeks to empower a business by bringing risk exposures to acceptable levels within the business through evaluating, controlling and monitoring both hazards and risky scenarios that could yield economic profits (Chicken, 1996:19; Aven, 2007a:17; Hopkin, 2018:34).

The ideal of risk management is the maximisation of favourable outcomes whilst minimising risk (Knight, 2012:28; Hopkin, 2018:283). It is important to note that risk management does not aim

to eliminate risk, it seeks to control it. Avoiding all risky scenarios would consequently eliminate all potentially favourable outcomes (Knight, 2012:17). Instead, risk management becomes the process by which the business selects which risks it should manage and which should be mitigated and then backing that decision with the appropriate action (Knight, 2012:11). Risk management can be limited to projects or applied across the organisation, however, risk tends to be managed as a cumulative effort of both these approaches (Raz & Hillson, 2005:64).

In addressing individual scenarios that contain an element of risk, the risk management process begins by determining the probability of a risk event occurring (Hopkin, 2018:220). Once the probability of an event has been determined, estimates of severity of losses that could be experienced are calculated and control measures implemented (Mulcahy, 2010:27; Marx & de Swardt, 2013:34; Valsamakis *et al.*, 2013:12-14; Verbano & Venturini, 2013:188).

Risk management requires the co-operation and feedback of stakeholders, as it entails preparing plans for how identified and assessed risks was mitigated and the efforts successfully tracked (Reuvid, 2010:32; Verbano & Venturini, 2013:189-200). Tracking the efficacy of a risk management intervention requires continuous monitoring and employs tools that indicate an early movement away from acceptable tolerance levels (Reuvid, 2010:33). Risk management reduces risk and increases the likelihood for success in business practice; however, the possible motivation for applying risk management extends beyond that. Section 2.4.2 expounds the additional benefits that a business extracts from the application of risk management principles.

2.4.2 Benefits of risk management

Risk management reduces the effects of unexpected losses and clarifies the causal relationships among risk events and the effects that they carry (COSO, 2016:6). All stakeholders of an organisation benefit from risk management in that risk management promotes profitable operation of the business and encourages health and safety as well as environmental protection (Reuvid, 2010:25; Hopkin, 2018:27); thereby, building up stakeholder trust by ensuring significant risks have been addressed (Reuvid, 2010:25; Hopkin, 2018:27).

A risk management strategy also serves to provide direction in a business, guiding it to prioritise risks and when, or if, and to what degree action should be taken to manage them (Smit & Watkins, 2012:6324-6330; Gwangwava *et al.*, 2014:3-4). Through risk management strategies, business resources are spent more efficiently. This creates a surplus of resources to be used elsewhere in the business (Smit & Watkins, 2012:6324-9330; Gwangwava *et al.*, 2014:3). By ensuring compliance with legal and regulatory standards, the robustness of the business is further enhanced

and performance variability is decreased leading to more stable growth and operations (COSO, 2016:6).

Risk management allows for an enhancement of the overall efficiency and capacity of a business through the utilisation of risky scenarios (IRM, 2002:1-2; Gwangwava *et al.*, 2014:4). By establishing objectives and developing risk mitigation mechanisms, risk management brings risk appetite in line with risk strategy and reduces operational shortcomings (ISO, 2009b:11; Aven, 2014:1649-1656). Risk management frameworks exist as a collection of risk management interventions and policies within a business that serve to guide the business on when to avoid, reduce, outsource or accept risk exposures (Reuvid, 2010:36; Smit & Watkins, 2012:85). Identifying and managing cross-organisational risk, seizing opportunities, improving organisational learning and improving capital deployment can be accomplished through risk management (NSW, 2005; Aven, 2007b; ISO, 2009a).

2.4.3 Steps in the risk management process

When risk management is expanded to the scope of an entire business, the complexity of applying a risk management process expands with it. To compensate for the complexity that comes with integration into a business's managerial structures, risk management needs to be simplified into practical steps. The risk management process serves as the basis of risk management and encapsulates the entirety of what is considered best practice in risk management. According to the IRM (2002:2-16), risk management follows specific, predefined steps. When applied in order, the steps allow for better management across a business and improved performance and decision making (Reuvid, 2010:69).

Amassing these processes into a coherent offering creates the risk management process of a business, which is subsequently integrated into the business's individual risk management framework/system. Through the risk management process, a business can ensure risk management is conducted over the entire business (Borghesi & Audenzi, 2013:20). Any successful risk management must include the fundamental attributes of risk identification, assessment, treatment, control resourcing, reaction planning and reporting (Hopkin, 2018:188). Since the risk management process exists as a formal conglomeration of individual principles and actions, it can also be used as a checklist by which the sufficiency of a business's current risk management practice can be assessed. When compared throughout theory, the risk management process can be broken up into six individual steps. These steps in order are: (1) identifying risks, (2) designing risk management systems, (3) continually monitoring risk, (4) identifying highly volatile risks, (5)

taking actions and then (6) adjusting the system based on experience and revision (Chicken, 1996:105; IRM, 2002:4; Beck, 2006:333; Valsamakis *et al.*, 2013; Hopkin, 2018:188). These steps are individually discussed below.

2.4.3.1 **Risk identification**

Risk identification is the first step of risk management and is executed by searching for loss and gain scenarios relevant to the business context (Aven, 2014:1649-1656). Risk audits across the business define risks pertinent to the business, the scope and possible losses (Borghesi & Audenzi, 2013:134). Before risk can be managed or measured, it must be perceived and before appropriate action can be taken, the risk characteristics of a business must be known (Chicken, 1996:396; Marx & de Swardt, 2013:350). Identification of risk requires a thorough understanding of all activities undertaken by the business entity and includes concerns such as technical standards and legal limitations (Chicken, 1996:318; Aven, 2014:1647). The identification process begins by first determining, which political factors, technical indicators, performance standards, or opportunities for co-operation are relevant to the business (Borghesi & Audenzi, 2013:72; Aven, 2014:1648). Risks that are pertinent to the business are described in this step, providing further details of the risks and framing them in context of the business (IRM, 2002:5).

2.4.3.2 **Risk assessment**

Risk analysis, evaluation and estimation, are cumulatively referred to as risk assessment (Verbano & Venturini, 2013:186-197). Risk analysis investigates the cause and effect of risks and risk events and, subsequently, acts as a descriptor of risk in context of the business (Aven, 2014:1650). Risk analysis extends to sustainability, fairness, political and legal acceptability, ethical acceptability and public acceptance (Valsamakis *et al.*, 2013:73; Aven, 2014:1652). Risk, once determined by an analysis, is followed by risk evaluation, which is the process of comparing analysis results with predefined reference levels or criteria (Tchankova, 2002:74; Aven, 2014:1654). Risks can be qualitatively, quantitatively of jointly evaluated as risk, having the potential to result in a gain or in a loss (IRM, 2002:12-14).

2.4.3.3 **Risk treatment**

Complete risk assessment allows for appropriate treatment. Risk treatment is the decision on how risk is avoided, reduced, transferred or retained (Marx & de Swardt, 2013:228). Treating risk is the process by which all participants of a business address risk in relation to their function in the business and how aware of and trained they are to address the risks that they are likely to encounter (Burns, 2010:391). The degree to which a business is capable of treating risks, which are relevant

to it, is dependent on its size, the influence that it has accrued, the political sway it has and its financial strength relative to the risk it faces (Hopkin, 2018:376). A larger business can mobilise more resources inside the business itself and its community and account for a larger proportion of employment within a country. Thus, it can influence its local environment and holds political sway.

Risk tolerance refers to the level of exposure a person or business is willing to take on to acquire the opportunity to pursue the desired outcome (Hopkin, 2018:142). Where the risk exposure likelihood is low and falls within the capacity of a business to absorb, risk is to be tolerated (Tchankova, 2002:290-297). When risks are likely to occur, regardless of the impact of the exposure, risk is to be treated (Hopkin, 2018:148). When risk is being treated, reducing the effects of a risk event is the primary directive and to such a degree insurance might be taken out in part if it comes about spontaneously, or additional infrastructure or operational protocols could be developed if the risk is recurring (Reuvid, 2010:16).

Risk transfer is not to be confused with risk treatment. Where risk treatment is the middle ground between risk acceptance, risk transfer is the process by which risks are transferred to a third party along with some of the profitability from the exposure through a contract (Aven, 2014:1654). When a risk event is unlikely but has a large impact, a risk transfer is the preferred strategy (Hopkin, 2018:175). Risk can also be transferred in part by getting insurance to cover specific risks but varies in scale when compared to risk treatment in that it is more comprehensive and expensive than when treated (Lalonde & Boiral, 2012:287). Whether an insurer will cover a risk and the degree to which it will cover a risk is not guaranteed and is largely dependent on the specific requirements set out by the insurer in relation to the specific risk (Lalonde & Boiral, 2012:290). The decision to insure is a cost benefit decision that weighs the costs of insurance against the direct and indirect losses that could be experienced (Lalonde & Boiral, 2012:292).

If no quantitative measure exists to determine the risk exposure, a qualitative assessment is permissible and could thus be a variable amongst insurers (Smit & Watkins, 2012:6328). The order or priority by which risks are to be transferred is determined by the scope, severity and probability of a risk occurring and giving precedence to risks that have wide scopes, catastrophic severity and a high likelihood to occur (Chicken, 1996:532). Risk should only be terminated when the likelihood and severity of loss is outside of the risk appetite of the organisation (Leitch, 2010:888). Since risk can only be terminated by closing an exposure; withdrawing all possibility of a gain is a prerequisite when taking this action (Smit & Watkins, 2012:6325).

2.4.3.4 **Reaction planning**

Reaction planning is the process of developing contingencies and setting up reserves for disaster recovery, pure risk and potential business community alliances (Hopkin, 2018:180). Reaction planning, notably, is not solely concerned with the planning of what must be done but includes the actualisation of those plans. Large institutions such as banks have nationally enforced policies that necessitate reserves as a first defence against systemic failures. Thus, in large part, governing bodies and politically driven legislation regulate and guide the responsible exposures that larger enterprises must carry in addition to the business's internal management considerations. For small businesses that face liquidity and capital shortcomings (as discussed in Chapter 3), such policies would directly threaten not only their profitability but also their survivability at a fundamental level. This complex dynamic makes it difficult for policy makers to aid small businesses in setting up legislation that governs reserves for contingencies against macro-economic shocks. Reaction planning within a business not only reviews business risks that the business takes but includes additional planning on how to respond to threats, hazards, or opportunities outside of the business's immediate concerns (Chapman, 2011:531).

The strategic insights produced augment the competitive capabilities of businesses and allow them to avoid or take advantage of shifts in the external environment. Control measures are needed to manage risks and to establish those controls, resources must be gathered. Depending on the decision to tolerate, treat, transfer or terminate identified risks, relevant resources must be gathered to ensure that such an action can be executed (Hillson, 2002:239). Controls come in the form of capital reserves or training staff in how to handle situations that carry risk and thereby holistically bringing the business in line with business and national policy (IRM, 2002:2-15). Gathering resources to actuate control is conceptually easier in a large firm when compared to smaller firms, primarily because larger firms are likely to have larger reserves and better liquidity.

2.4.3.5 **Reporting, monitoring and reviewing risk**

The reader might be tempted to assume that reaction planning is the final step of the process as it addresses future concerns. However, risk management must also be continuous, and this is facilitated through reporting, monitoring and reviewing risk. What separates reaction planning from a risk management system is the manner in which the information and experiences gathered through the risk management process is incorporated and integrated into the managerial risk consciousness of a business. Practical reporting and integration strategies are required to ensure that relevant information flows to the right parties within the business. This can be accomplished

through database systems that monitor the business as an entire entity or through dedicated functional groups within the business that congregate to disseminate their own experiences amongst each other and the business at large. Risk reporting and monitoring guide how information on risks that a business face flow through the business to applicable parties (IRM, 2002:4; Aven, 2014:1655). Information consists of performance evaluations, event and action reports, business audits, procedures used to audit the organisation and new experiences and information that was gathered between reviews (IRM, 2002:5). Once risk has been reported from across the enterprise, the considerations that they generate must be integrated into the risk management system of the enterprise (Aven, 2014:1656).

2.4.4 Risk management processes of risk standards

The risk management process is an essential element in major standards such as the International Standardization Organization (ISO) 31000 risk management document and in the Committee of Sponsoring Organizations (COSO) enterprise risk management (ERM). The risk management process can be used in its entirety or come through in more abstract forms such as within the Criteria of Control Board (CoCo) standard of the Canadian Institute of Chartered Accountants (CICA). Variations in the risk management process, although present are semantic in nature, rephrasing the processes into more detailed or more abstract terminology, but fundamentally still describing the same process. The risk management processes as they are presented in the aforementioned standards are briefly discussed below.

CoCo uses four principles, called criteria, through which risk management is exercised (KPMG, 1999:80-84). The criteria by which risk is loosely managed are purpose, commitment, capability, monitoring and learning. Purpose, the first criteria, is derived through objectives that are established in response to an event and subsequently communicated to the rest of the internal environment (McGill, 2019:1). Significant obstructions to the achievement of the objective, risks, are identified in the internal and external environment (KPMG, 1999:80-84). Objectives and related plans require that measurable performance targets and indicators be identified and integrated with business policies (KPMG, 1999:80-84). Policies and plans to support objectives and minimise risk are then established, communicated and enforced to define the parameters of what is considered acceptable behaviour (IFAC, 2006:9).

Once the purpose has been identified, the commitment must be established. Shared ethical values must be constructed by means of human resource (HR) policies that match the ethics of the business to still reach its objectives (McGill, 2019:1). For HR to accomplish this task requires that

the line of responsibility and authority be clearly established and that mutual trust be fostered to allow effective and appropriate information flows (McGill, 2019:1). Having established commitment, it is essential to actuate it. Capability is the principle that ensures that the necessary knowledge, skills and tools to meet business objectives are distributed throughout the business as needed (KPMG, 1999:81). Timely and coordinated communication, by which enough and relevant information is spread, is essential to achieve this principle (McGill, 2019:1). Control activities must flow naturally from the fundamental identity of an organisation and include those considerations as they pertain to the objectives and risk environment of the organisation (IFAC, 2006:4).

Through the final principle, monitoring and adaptation, the learning environment can signal the need to adjust objectives or modify controls (McGill, 2019:1). Monitoring performance against the targets and indicators identified in the organisation's objective setting and planning phase allows for consistent, comparable and meaningful internal reporting on performance (McGill, 2019:1). Organisational objectives should adapt to the findings obtained by monitoring activities and adjust activities to account for identified concerns (IFAC, 2006:4,9). Upon the acceptance of changes in objectives or plans, or after identifying reporting deficiencies, information systems should be adjusted to account for the changes (KPMG, 1999:82). Once the adjustments have been satisfactorily implemented, the monitoring must be adjusted to include new observational criteria in the follow-up procedures (McGill, 2019:1). Planned periodical assessments ought to be performed by management to assess and communicate the efficacy of current internal controls (IFAC, 2006:9).

ISO 31000 arrange the risk management process into five fundamental yet interconnected parts. Part one is the communication and consultation process, which includes all concepts associated with internal and external interaction (ISO, 2009b:14). After communication comes the process of establishing the context in which the business operates, which then leads to a risk assessment thereof. Risk assessment includes the steps of risk identification, analysis and evaluation. Risk treatment is the next step by which the risks that have been assessed as relevant and threatening to the business are minimised, eliminated, or ignored (ISO, 2009c:14)

"Risk in execution" is the nomenclature that the Committee of Sponsoring Organizations (COSO) uses to describe the risk management steps (COSO, 2016:62). COSO ERM begins by identifying risks as being either new, emerging, or changing, then expands on how to describe risks and lays out approaches for identifying risks (COSO, 2016:64-67). Risk assessment is then applied across

divisions, functions and operating units to identify what risks are present in what amounts and how much risk should be taken. Risks are then prioritised, the appropriate risk response selected and applied. How well the business manages their operational risk across all levels is then monitored and the results are communicated internally, reported to stakeholders and the risk management experience recorded (COSO, 2016:79-83).

When combining the processes described in theory with those which come from standards, it becomes possible to extract the fundamental risk management process that must be exercised to create reasonable assurance that risk management is applied in a business. By breaking up those fundamental steps into individually observable processes and creating an evaluation tool, a small business can quickly and easily identify where there is probable cause for concern within its risk management processes and realign its management activities to address them. This study has created a scale (see Chapter 4) that assesses the frequency by which certain risk management steps are applied in sampled small businesses. This tool serves to expand the risk management knowledge of small businesses as well as creating a quick and easily implemented checklist that can guide the small business to a greater understanding of its risk management shortcomings and provide meaningful direction to address them.

2.5 PRINCIPLES OF RISK MANGEMENT

Underlying principles and objectives guide the risk management process at a fundamental level. These serve as motivation and the perceptual scaffolding around which the risk management process is exercised and, thus, these principles guide and inform the risk management activities taken throughout a business. Although these principles are not explicitly reviewed in the risk management process, they set the perceptual tone through which the value of risk management is communicated within the business and can be essential in the incorporation of a risk-aware culture into the business. The fundamental principles of a risk management system that must be present as suggested by the literature and amongst standards are summarised in Table 2.1.

Table 2. 1: Fundamental principles that govern risk management

No#	Principle
1	Maximising value to the shareholder by protecting and creating it.
2	Proportional risk management to risk exposure
3	Tailored to the business by addressing risks relevant to business activities
4	Structured to transparently and inclusively represent of the entire business's risk exposure and managerial practice
5	Embedded within business culture, operational processes and decision-making processes
6	Proactively adaptive to change and iterative
7	Explicitly address uncertainty in a timely manner
8	Orientated to continuously develop the business using the latest, most reliable and relevant information
9	Inclusive of currently relevant societal and cultural sensitivities

Source: ISO (2009b:7-8); Purdy (2010:813); Lalonde and Boiral (2012:273)

The principles that govern risk management draw off the principles described above; however, there is a capacity for great variation in the number and implementation method of principles. The literature provides direction on which principles amplify risk management and despite the variation in different standards' principles, there is still a general consensus on what should be included amongst them. Variation between standards shows that either a general or more explicit approach can be applied to determining the principles by which the business orientates its risk management system.

To accentuate further the variation that can exist in the complexity of risk management principles, the CoCo standard can be compared to the COSO-ERM standard. The Criteria of Control Board standard of the Canadian Institute of Chartered Accountants is an RMS that concerns itself with the principles of purpose, commitment, capability, monitoring and learning. Instead of providing a set of statutory requirements and procedures to manage risks, CoCo provides the aforementioned principles (CICA, 1995:9; Page & Spira, 2004:30-34). In contrast to CoCo, COSO- ERM outlines and discusses all 23 of the principles it supports and integrates them pedantically throughout each of the individual processes (COSO, 2016:23).

The value of principles is brought forth in how they modify the perception of risk and the approach to risk that a business will take as a result. The principles discussed guide the objectives of risk management internally within a business, however, the objectives of risk management extend beyond that.

2.6 OBJECTIVES OF RISK MANAGEMENT

Beyond maintaining the afore-discussed principles, certain objectives must be met for risk management processes to be developed internally and applied holistically (Hopkin, 2018:323). The first objective of risk management is driven through the legal requirements of compliance with relevant regulations as required based on the nature of the business (Purdy, 2010:812). As opposed to large businesses, small businesses are not legally forced to maintain compliance with risk management standards, which means that there is not meaningful policy motivation to pursue it (Ntlhane, 1995:55; King & Lessidrenska, 2009:103; Smit & Watkins, 2012:6324). Regulation, if not applied systematically, can add a great deal of difficulty for the business in that it can strain operations or necessitate complete restructuring of the businesses. Secondly, a business must provide reasonable assurance that risk management and internal control complies with some variation of the fundamental underlying principles of risk management (Lalonde & Boiral, 2012:295).

The third objective is to ensure that relevant risk information is clearly identifiable and made available to management in a timely manner to support decision making (Purdy, 2010:881). As an extension of a business's managerial function it is thus essential to develop the underlying structures needed to support risk identification, analysis and treatment and then develop the needed infrastructure and policies to ensure that information can flow as required.

The final objective is ensuring that risk management interventions are efficient, processes are effective and that strategy is efficacious (Reuvid, 2010:53; International Standardization Organization, 2015:12). As with the former objective, the ability of a business to actuate this objective requires an underlying managerial competency. When risk management is applied through these principles, the benefits of risk management can be made available to those who apply it. Having defined the principles that underlie the risk management process and the risk management process itself, it is important to integrate those considerations into the remainder of the enterprise. To achieve this goal, the principles, objectives and risk management process can be compiled into a single framework through which risk management can be integrated into the small business.

2.7 RISK FRAMEWORKS

A risk framework is a grouping of processes by which risks are identified in context to the business; a strategy developed to address those risks and a mechanism is derived to review risk (Hopkin, 2018:262). Although similar to the risk management process, it must be differentiated. A risk

framework must abide by the tri-part concept of risk architecture (RA), risk strategy (RS) and risk protocols (RP) within the larger tri-part environment of the external, internal and risk management (RM) context (Raz & Hillson, 2005:54). RA defines roles, responsibilities, communication and risk structure (Hopkin, 2018:78). RS measures risk policy, risk attitudes, risk appetite and the risk philosophy of the business (Hopkin, 2018:78), with RP coalescing into a unified expression of rules and procedures, risk management methodologies and the tools and techniques that should be used (Hopkin, 2018:78).

The development of individual risk frameworks requires an understanding of the role of the business as it relates to their internal and external environment. The internal environment of a business is the composite sum of affairs within the power of the business to control such as its operations and business activities and thereby meet the requirements of the stakeholders within the business (Badenhorst *et al.*, 2013:333). The internal business framework governs which activities need to be performed to maintain profitability within the business. The risk portion of that framework is governed by the business's RA, RS and RP (Badenhorst *et al.*, 2013:334).

The external environment is beyond the immediate control of a business and consists of the physical, political, economic and social environment within which the business is situated (Andersen, 2006:84). The risk management policy serves as the main driver of risk management throughout the business and the conceptual scaffolding around which RA, RS and RP are built (Pearson, 2015; Hopkin, 2018:80). These three factors cumulatively contribute to and support the risk management process by contextualising risk, clarifying the business context to its the internal and external environment and defining risk management practices in the business (Chapman, 2011:86).

Risk frameworks also come together in risk standards but the terms are not synonymous in practice (Chapman & Ward, 2003:114). A risk framework forms part of a risk standard in that it is used to develop a holistic approach to risk (ISO, 2018:1-5). However, risk standards go beyond risk frameworks to include processes and practices developed for specific industries and scenarios according to their technical and industry specifications (ISO, 2018:1-5). To be effective, the, administration and continuous development of a risk framework into the culture and managerial capacities of a business, the creation and application of which is unique and practically suitable for an individual business.

2.8 CONCLUSION

For risk to be managed throughout an enterprise, a knowledge of what risks are pertinent to them and how they can be minimised and mitigated must be present. This begins with becoming aware of risks and how they relate to the business. A typology of risks (see annexure A) that allows for comprehensive risk identification and the systematic relevant incorporation at varying levels of business sophistication has been constructed, thereby meeting theoretical objective three. The typology of risks has been drawn widely from the literature, which names and describes a large variety of risks that a business can possibly face. By using this as an addendum to a risk evaluation checklist, it is possible for small businesses to educate themselves quickly on what risks are, how they are classified, where they come from and how they pertain to them.

A typology of risk is still not sufficient for sustained and consistent risk management. Additional efforts must be made in assessing the probable effects of the risk, treating it, monitoring it and communicating the developments throughout the organisation. To do this consistently and verifiably, while adding value back into the business, a risk management process must be built into the business that maintains the fundamental first principles and objectives of risk management. The literature review discussed the theories, definitions and principles that pertain to risk management at a fundamental level. In so doing, the fundamental elements of risk management have been extracted and collected. The principles discovered throughout the literature review process have been condensed into concrete steps; thereby, theoretical objective one has been met.

The importance of sound risk management and the underlying principles, structures, objectives and processes of risk management standards have been discussed and included into theoretical considerations without duplicating them or infringing on their copyright. Theoretical objectives one, two and three have been met. The archetypical constructs of risk, risk management, risk management objectives and underlying risk management principles have been identified, contextualised to the small business dynamic and prepared for incorporation into the risk management tool. The next chapter will address the particularities of small businesses and the dynamics of the internal and external environments that define their activities and risk exposures.

CHAPTER 3

SMALL BUSINESS DYNAMICS

"*For every challenge we face - unemployment, poverty, crime, income growth, income inequality, productivity, competitiveness - a great education is a major component of the solution*." ~ Bruce Rauner

3.1 INTRODUCTION

In order to relate risk management to the needs of small businesses requires an understanding of what constitutes a small business and the environment within which it operates. Unmanaged risks from the internal and external environment of business both contribute to their failure. To address these risks requires an understanding of the risk context of small businesses. Having defined the risks that a business could face in Chapter 2, this chapter will orientate itself towards creating context by means of an in-depth review of the academic literature surrounding small businesses.

This chapter begins by providing a definition of what a small business is and compares definitions across different countries. This is done to expand the general concept of variability in the definition of small businesses as a subjective concept that is primarily determined by the general economic environment within which it operates (Section 3.1). Thereafter, the general risk-taking behaviours of small businesses within a sample area of the Sedibeng district municipality are discussed (Section 3.2).

This is followed by a discussion of the principle reasons for the failure and success of small businesses with the intention of focusing the development of the risk management tool towards the most pertinent concerns that a business faces (Section 3.5 and 3.6 respectively). The risk taking characteristics were discussed lightly (Section3.4) further analysis would be done. Thereafter, the South African small business policy environment was discussed to create perspective on the developmental progress of small businesses (Section 3.7) and policy shortcomings, as well as elucidating on suggested foci (Section 3.8). Through this process, theoretical objectives four and five are to be addressed.

- Execute a literature review to appraise the current environment of small businesses (theoretical objective 4); and
- Identify and discuss policy efficacy and government involvement in aiding small business risk mitigation and risk management development (theoretical objective 5).

3.2 DEFINITION AND CLASSIFICATION OF SMALL BUSINESSES

What is defined as a small business is relative to the characteristics of the economy within which the small business exists. National policy defines the parameters by which businesses are classified in context of the primary considerations present in each country. Small businesses have a characteristically small number of employees, however, what is considered a small number of employees is relative to the country that the business presides in (India, 2018:5). Table 3.1 indicates how small businesses are described in developing and developed countries.

Table 3. 1: National definitions of small businesses

Country:	Definition:	Source:
Brazil	"small enterprises — industrial operations with between 20–99 employees and services employing between 10–49 employees"	(White, 2005:15)
Russia	15-100 employees	(Makhmudova & Koroleva, 2017:4)
	Turnover ≈ 400 mln RUB ≈ € 12.7 million (mln)	
India	"a small enterprise, where the annual turnover is more than five crore (50,000,000) rupees or 0.64 mln Euro but does not exceed seventy-five (750,000,000) or9.6 mln Euro crore rupees"	(India, 2018:5)
Norway	No more than 19 employees	(Makhmudova & Koroleva, 2017:4)
Sweden	No more than 50 employees	(E.U., 2011; Makhmudova & Koroleva, 2017:4)
	Minimum income €5.3 mil	
	Balance of € 2.7 mln in currency	
Australia	For statistical purposes, the Australian Bureau of Statistics (ABS) defines a small business as an actively trading business with 0–19 employees	(Australia, 2012:vii)
United States of America	50-1550 employees	(Makhmudova & Koroleva, 2017:5)
	Annual income, min €0.68 mln max €495 mln	
European Union	"Small enterprises are defined as enterprises that employ fewer than 50 persons and whose annual turnover or annual balance sheet total does not exceed EUR 10 million."	(Commision, 2017:15)
South Africa	"Small enterprise means a separate and distinct business entity, together with its branches or subsidiaries, if any, including cooperative enterprises, managed by one owner or more predominantly carried on in any sector or subsector of the economy mentioned in column 1 of the Schedule and classified as a micro, a small or a medium enterprise by satisfying the criteria mentioned in columns 3 and 4 of the Schedule."	(Africa, 2019:2)

Source: Author's own compilation

The defining characteristics of a small business differ between countries quantitatively and qualitatively. Definitions vary to such a degree that what is considered a small business in one country is not directly translatable to other nations. Small business definitions are stratified first, by a national definition, then further complexity is added by discriminating between economic sectors within those countries (International Leadership Development Programme, 2014:15). The

various classifications of different industries in South Africa appear in Appendix G. Contextual definitions are required as they determine the quantitative criteria used by policy makers to subsidise or aid what they consider essential or vulnerable businesses (Scarborough & Zimmerer, 2003:72; Klauve *et al.*, 2019:241). What is consistently observed throughout the comparison of national definitions are the themes of business turnover and the number of employees, which are defined by quantitatively measurable metrics (Scarborough & Zimmerer, 2002:45; April, 2005b:124; International Leadership Development Programme, 2014:15).

Within South Africa, small businesses are defined according to sector-specific guidelines as laid out in the schedule, which accompanies the National Small Business Act (102 of 1996) (Africa, 1996a:2; Africa, 2019:2). The Act was amended in 2018 to account for inflation and definitions were consequently adjusted. The amended small business act provides a consistent scaling schedule for business according to the number of employees they have per class but varies in regard to total annual turnover (Africa, 2019:2). The schedule for the amended small business act is included in Appendix F. A business that falls within the quantitative boundaries of the schedule can still be disqualified qualitatively. If a business is a subsidiary to a larger conglomerate that cumulatively exceeds the turnover or employment requirements of the Act, it is no longer considered a small business (SEDA, 2016:26).

Special exceptions also exist due to the historical particularities of South Africa. Businesses that classify as black-, women-, family-, or cooperatively-owned enterprises are also considered small businesses (Department of Trade and Industry, 2005; Scholz 2016:228). This is done as a tax relief for historically and currently repressed groups as well as to foster growth in small businesses in disadvantaged communities (Watson, 2001:82; Department of Trade and Industry, 2005:13). A description of individual economic sector definitions and the quantitative definitions attached to them, as defined in South Africa, have been included in Appendix G

3.3 SMALL BUSINESS CHARACTERISTICS

Having defined small businesses in the South African context, the characteristics of small businesses must be disseminated to guide the focus of the risk management intervention tool. The characteristics of small businesses serve to focus the risk intervention tool towards small business concerns and provide a consistent representation of typical small business behaviour in South Africa. This section will explore the characteristics of small businesses that are beneficial and detrimental to their continued operations and then explore specific considerations of what supports business failure and success.

Small business management teams are limited to a single person or a very small number of owner partners that actively participate in business activities (Van Aardt & Bezuidenhout, 2014:22). Small business employees tend to be generalists that perform multiple activities instead of being highly specialised; as a result, organisational structures are informal and flat (April, 2005a:98). Hiring of advanced specialists is reserved for moments of absolute necessity as they tend to be expensive (Herbst, 2001:26). Small businesses also, traditionally, have comparatively informal, flat and highly flexible business structures, with employees that perform business actions across multiple functional areas (Ehlers, 2000:63; Andreassi, 2003:102; Nieuwenhuizen, 2003:69). Although flat managerial structures allow for fast decision making, limits on man-hours available, to specialise in any single managerial function, limit efficiency (Manalova *et al.*, 2011:16). In addition to the structural limitations of small businesses, they also traditionally face limited growth potential and competitive saturation within range of their business activities and are geographically limited to the directly marketable consumer base (Martin, 2006:35; International Leadership Development Programme, 2014:74). Operational and business risks come about as a result of the lack of effective managerial intervention and skills training in this regard (Meyer, 2019a:115).

Despite the capacity of small businesses to innovate their market offerings rapidly, they are rarely leaders in terms of market share and financial performance within their respective industries (Nieuwenhuizen, 2003:72; Kuratko & Hodgetts, 2007:88). Small businesses are characteristically different from large businesses in regard to business culture, resources and influence (Ehlers, 2000:66). Small business culture is more flexible and independent, has more personal relations with suppliers and clients, tolerates uncertainty far more than large businesses and has a predominantly short-term view (Ehlers, 2000:72; Herbst, 2001:26). Individual small businesses have limited economic or political influence (Ehlers, 2000:66; April, 2005a:98). Resources within small businesses are comparatively limited, which means financing growth is a challenge and liquidity is often strained (April, 2005a:130). In addition to financing growth, these limitations also leave small businesses especially vulnerable to systemic risks, which could result in liquidity risks that could potentially result in business closure. Small businesses must innovate to compete and survive as they do not have economies of scale or economies of scope nor readily available resources to access technological development (Kroon & Moolen, 1992:53; Meyer, 2019c:25). Through innovation, they develop markets in ways that larger businesses cannot because of the sunk costs of past production decisions. However, for innovation to be viable, the business must have the resources to innovate when it is required. In addition to the general characteristics of small businesses, they also have certain characteristics that are beneficial to business success and

characteristics that place them at a disadvantage when compared to big business. Table 3.2 lists some of the predominant characteristics.

Table 3. 2: Beneficial and detrimental characteristics of small businesses

Beneficial characteristics of small businesses	Small businesses have few major decision makers and flat business structures allowing for quick responses to events and rapid dissemination of new information (April, 2005a:24).
	Small organisations can adapt their product or service offerings more easily thus provide competitive and often better customer care (Herbst, 2001:69).
	Small businesses learn from their activities much faster than big business because the smaller they are the faster business experience spreads throughout the organization (Herbst, 2001:72).
	Small businesses can target smaller market groups which would otherwise not be profitable for large businesses to advertise to (Andreassi, 2003:103).
	Small businesses also have support initiatives and has more beneficial regulation when compared to big business (Ehlers, 2000:98; Meyer & Surujlal, 2019:2358).
Detrimental characteristics of small businesses	The foremost and most cited source of failure for small businesses is poor management skills which come about from a lack of skills training (Audretsch, 2005:112; Havenga, 2008:64; Preuss, 2011:800; Moos, 2015:62)
	Poor provisions planning, cash flow management and inaccurate bookkeeping are the second major contributor to small business failure (Havenga, 2008:66).
	Poor marketing, incomplete advertising campaigns and poor feedback contribute to the problem of poor external communication (Preuss, 2011:799).
	Small businesses first compete by lowering their prices, despite innovation and quality competition being vital for holistic competition they only resort to this at later stages of growth (Audretsch, 2005:110).
	Generally small businesses are also not likely to improve value offering of their goods or services beyond what is needed (Scarborough & Zimmerer, 2003:243).

Source: Author's own compilation

By disseminating the characteristics listed in Table 3.2, it becomes possible to create a general perspective of where the risks a business faces would lie and what risks would be of primary concern to small business owners. In a study conducted in 2017, small businesses in the Midvaal and Emfuleni municipalities were interviewed and the results gathered in that study reinforces the perspective held in the literature (Kruger, 2017:58). The insights into the risk characteristics of small businesses, gleaned from the academic research is discussed in Section 3.4.

3.4 RISK-TAKING CHARACTERISTICS OF SMALL BUSINESSES

Small businesses have risk particularities that appear as fragmented aspects of their larger counterparts. Which risks they are aware of, and how they identify risks, are two of these considerations. The most common risks that they experience are employee risk, business risk, managerial risk, reputational risk, operational risk, moral risk, legal risk and personal risk (Kruger, 2017:116). The primary risk focus of small business is their business and operational risks (Kruger, 2017:116). Furthermore, small businesses were found to have no structured and systematic ways

to identify, classify or manage their risks and tended to deal with their risks as they arose or once they had experienced them (Kruger, 2017:116). However, this leaves small businesses with exposure to risks that they are not even aware exist (Kruger, 2017:116).

3.5 SMALL BUSINESS FAILURE

Section 3.4 shows the reality that small businesses cannot pre-emptively identify their risk exposures and rely instead on their own experiences. However, the failure rate of small businesses within South Africa (75%) does not exclusively come about because the businesses are exposed to risks they did not foresee (SEDA, 2007:11; Katekhaye *et al.*, 2019:222). Small business failure also comes about from the inability of small businesses to maintain business considerations with a degree of managerial competence that does not endanger the business's continued operations (SEDA, 2007:11). This section explores some of the available academic literature to ascertain the particular sources of business failure and the effect of failure on small business growth.

Business failure can be defined as the inability to continue business activities. Small business failure includes considerations of asset and liability disparities, whether revenue covers costs, how well production/output can keep up sourcing/inputs and how closely demand and supply predictions follow on each other (April, 2005a:108; SEDA, 2016:17). What dominates the conceptual landscape of small business failure are the themes of insolvency - liquidity shortfalls at critical times, performance declines, insufficient revenue, poor to no growth, liability-dominant balance sheets and the willing cessation of trade by small business owners (Lussier, 1996:79; Henderson, 1999:310; April, 2005a:35; Cannon & Edmondson, 2005:311; Probst & Raisch, 2005:98; SEDA, 2018:22). For the sake of this study, business failure was defined as the point at which insolvency is present and continued operation will result in financial and/or legal distress (SEDA, 2016:23).

Common causes of business failure have been confirmed in the literature. The main cited causes are managerial incompetence, poor financial cash flow controls, the lack of experience, the lack of strategic planning, inappropriately managed growth, poor stock control, wrong working attitudes, lax credit granting, capital shortage and inappropriate geographical location (Lussier, 1996:79; Henderson, 1999:310; Cannon & Edmondson, 2005:311; Probst & Raisch, 2005:98; Meyer, 2019b:11). These causes can be grouped into terms such as poor management, lack of financial management, lack of continuation and competitive issues, which was discussed individually (Watson & Everett, 1993:42; Sheppard & Chowdhury, 2005:320; Medway & Byrom, 2006:34; Burns, 2010:10).

In general terms, poor management encapsulates the lack of industry-specific skills, the absence of managerial skills, the presupposition that people are absolutely reliable, poor time management, poor adaptability and poor strategic planning within a business (Watson & Everett, 1993:43; Meyer, 2019a:111). Lack of financial management includes poor financial control with particular reference to credit and liquidity positions of the business as well as the lack of appropriate financial management in the form of compliance with generally acceptable accounting practices (GAAP) (Sheppard & Chowdhury, 2005:319; Meyer *et al.*, 2018:188). Lack of continuation addresses how poor business growth is managed and managerial handovers are managed (Medway & Byrom, 2006:35). Competitive issues relate to the considerations of the external environment in which a business abides with particular reference to marketing, sales, geographical location and inappropriate product pricing (Burns, 2010:11). Sections 3.6.1 through to 3.6.4 discuss each of the aforementioned reasons for failure in greater depth.

3.5.1 Poor business management

Business management accounts for the managerial processes used to moderate and guide business activities and includes human resources and technical industry-specific considerations (Ritchie & Richardson, 2004:242). Managerial failures can take form in a multitude of ways. The failure to apply strategic management, the process by which the current business environment is assessed and by which the business subsequently plans its activities and positions itself, increases external vulnerability (Honjo, 2000:566). Growth management is an essential managerial function that must also be present for business success. Business growth leads to increasing levels of business complexity and requires managerial development that can keep track of the increased complexity (Coelho & McClure, 2005:255). Growth management can be aided through a strong corporate culture that includes predefined stakeholder considerations and, thereby, enhances business-wide awareness of where the distribution of growth is disproportionate with the rest of the business (Zacharakis *et al.*, 1999:75; Lussier & Pfeifer, 2001:80; Meyer & Meyer, 2017:135). Poor management in small businesses has been argued to be the result a lack of skills training, limited experience, impaired financial and technical capacities and the quantity of managerial decisions that only a few and, in many cases, one individual must make (Scarborough & Zimmerer, 2002:33; Gitman, 2009:53). Risk management can be used as a systematic process to amplify management across all managerial constructs within a business; through the risk management process it can systemise the management process to account for other managerial considerations.

3.5.2 Lack of continuation

Small businesses are rarely perpetuities in legal or practical terms, as their existence is often dependent on information and the existence of a small number of key staff members (Cressy, 1996:1260; Molefe *et al.*, 2018:12). Continuity is very important to small businesses as the aggregation of essential skills and experiences usually lie in the hands of a small number of individuals and must be re-acquired at the most basic level (Thornhill & Amit, 2003:498). When the business owners discontinue their participation in the enterprises it can result in a loss of purpose, vision, leadership, values and skill capacity if plans for succession are not clearly laid out in advance (Headd, 2003:53).

3.5.3 Competitive issues

When doing business, it is essential to ensure that there is a market for the products that the business desires to sell; however, where lucrative markets exist, the motivation for participation in those markets also increases. This motivation results in additional market entrants and before long, the market becomes segmented to the degree that sellers must compete for market share. Small businesses are especially susceptible to competition (Friedland & Morris, 1976:12; Meyer & Surujlal, 2018:19). Competitive advantage is developed and maintained by having business location, customer services that speak to a desired market better than competitors, cost effective operations that benefit from economies of scale or scope, well developed and executed marketing campaigns and quality control that ensures consistency (Friedland & Morris, 1976:13; Jennings & Beaver, 1995:194; Meyer & Keyser, 2019:73). Small businesses must produce goods of comparative quality, that are differentiated and priced accordingly, to survive in a modern competitive environment (McCartan-Quinn & Carson, 2003:2019).

Competition is especially challenging for small businesses since they have fewer resources to use to their advantage. Small businesses also face unidirectional competition from larger, more established businesses that might decide to compete for market share and small businesses that are constantly trying to enter their market with innovative products and business models (SEDA, 2007:14; Seshadri, 2007:58). Small businesses can benefit greatly from the application of marketing fundamentals by altering the cosmetic characteristics of produced goods so that they align with the demands of specifically identified customers (April, 2005a:58; Meyer, 2019c:30). Setting up price levels for differentiated goods could also aid in diversifying products and justifying higher prices (April, 2005a:59). Establishing sales and advertising methods and combining them all into one plan could also amplify competitiveness (April, 2005a:59).

Risk management also has the ability to amplify the competitive capacities of a business that applies it by considering the internal and external environment of the business. This amplifies awareness of potential sources of risk and the opportunities to profit from them as well as awareness of internal limitations and strengths. In addition to the awareness that risk management creates, it reinforces business survivability and, thereby, provides a competitive advantage when compared to businesses that do not apply it.

3.5.4 Lack of financial management

Financial management is critical to the survival and growth of small businesses (Thompson, 1996:33). Businesses require constant cash flow and the availability of liquid capital to pay creditors, purchase stock, maintain equipment and finance business activities and growth (Scarborough & Zimmerer, 2003:47; Meyer & Surujlal, 2019:253). When financial management is lacking, it results in the seizure of business assets that served as collateral and could result in the loss of key staff. Financial management begins with an understanding of the operational and regulatory particularities that are of relevance to the business. Financial management requires accurate and up-to-date data on operations and the costs of doing business, budgetary movements within the business and the greater economy and regulatory and compliance particularities that affect the business (Shepherd *et al.*, 2009:596). Once the required financial data has been obtained from the business, liquidity movements and capital requirements can be tracked and planned (Scarborough & Zimmerer, 2003:48).

To manage financial data requires a management system specialised for that data that gives current information on the financial position and needs of the business. Well-documented accounts that inform managerial decisions are thus an essential element of financial management within small businesses (Bezuidenhout, 2003:111). Inventory control goes hand-in-hand with accountancy and thus relates directly to financial management and includes concepts of cash, capital and cash equivalents (Friedland & Morris, 1976:17; Katekhaye *et al.*, 2019:223). Within small businesses there is a tendency to mismatch inventory on hand with inventory needs (Seshadri, 2007:59). When there is an excess or deficit of stock held, it results in an opportunity loss, such as lost interest or the inability to complete a sale (Shepherd *et al.*, 2009:590). Stock mismanagement could also result in cash costs for storage, depreciation by deterioration or outdatedness (April, 2005a:62). To accomplish this task, primarily requires the implementation of accounting practices throughout the business. Risk management can serve as an important, secondary support to this function by means of formalising the reporting process of applicable financial and operational information

throughout the enterprise and integrating additional regulatory and business-specific considerations.

3.5.5 Poor employee maintenance

Small businesses have dynamics that make certain tasks and functions challenging to them. Small businesses employ less people, resulting in more interpersonal connections between individuals in small businesses than is typical in big businesses (McGrath, 1999:19). This results in more personal and flexible business dynamics than those in larger businesses and can lead to a challenging and dynamic working environment (McGrath, 1999:13; Meyer, 2019b:15). The informal dynamic of small businesses comes with amplified interpersonal politics and personal considerations that challenge productivity (Shepherd, 2003:588; Meyer & Meyer, 2017:136). Due to the difficulties in productivity and interpersonal conflict experienced in small businesses, they often struggle to acquire or retain highly qualified employees (Richardson *et al.*, 1994:18). To counteract the potential skills drain, it has been suggested that intangible rewards, such as public recognition and responsibility, as well as the development of opportunities to learn and grow, have been identified as potent motivators of employees within small businesses (Van Aardt & Van Aardt, 1997:49; Van Aardt & Bezuidenhout, 2014:81). To motivate employees within a small business requires identification, utilisation and recognition of individuality (Thornhill & Amit, 2003:500).

Risk management has the ability to support the challenges that employees face by improving operational feedback. Risks in the operational scope are easier to identify and can be addressed faster. This results in increased awareness of the operational capacities of individual employees and enables employers to respond to their value, thereby bridging the gap between employer and employee expectations. Through this collaborative effort, risk management can aid in securing worthwhile employees and removing undesirable elements from the business.

3.5.6 Consequences of small business failure

Small businesses are especially vulnerable to failure due to their small size (Cook, 2001:24). The financial consequences of small business failure translate into wasted human and capital resources (Bezuidenhout, 2003:173). The failure of a small business affects its immediate society by increasing unemployment and poverty, which affects the larger national economy by increasing the dependency on grants and subsidies (Dimitras *et al.*, 1996:493; Meyer *et al.*, 2018:189). The loss of employment can impair future endeavours due to the psychological impact that severe failure has on people (Scarborough & Zimmerer, 2003:54). The stigma associated with failure

increases the pain experienced with loss of social position or individual status and can be more daunting than the motivation of potential financial gains in the event of a success (Kuratko & Hodgetts, 2007:59). As previously discussed, risk management can aid in the mitigation or reduction of the effect of many of the causes of business failure.

3.6 CONTRIBUTING FACTORS OF SMALL BUSINESS SUCCESS

This section focuses on those factors that are most closely related to small business success. Risk management is not a sufficient assurer of small business success, it is an integrated part of business success. The factors that contribute to small business success are also not exclusive to small businesses; it does not come about as a result of the particular characteristics of small businesses but instead manifests as unilaterally applicable principles of good business practice. Small businesses can reinforce their opportunity for success by developing technical, personal, entrepreneurial and business skills (Perry, 2001:205; Molefe *et al.*, 2018:12). Technical skills include the knowledge that must be cumulatively fostered in a business to insure the production and development of relevant services or products (Van Witteloostuijn, 1998:511; Meyer & Surujlal, 2019:17). Personal skills are those skills that relate to the personal capacities of the individual to which they relate and include concepts like decision making, literacy, inner control, numeracy, networking, achievement, the ability to learn, problem solving, leadership, persistence, motivation and commitment (Sarasvathy, 2001:251). Entrepreneurial skills encompass the capacity to gather resources, establish role models, approach scenarios with creativity, being innovative, being able to take risks and take advantage of market/ industry opportunities (Luthans *et al.*, 2000:100). Business skills are those skills that relate to the day-to-day administrative and management skills required to mobilise and synergise factors of production (Wiesenfeld *et al.*, 2008:242). Business skills include marketing, an understanding of the legal system within which one operates, communication skills, the ability to manage human resources, financial management, operational management and strategic and operational planning (Wiesenfeld *et al.*, 2008:243).

The development of management skills is the first success factor to be discussed. Acquiring management knowledge, skills and competencies would be what constitutes the development of managerial skills, however, this training takes time (Shepherd *et al.*, 2009:293). Managerial skills can be incorporated nearly immediately into a business by having an experienced business partner join or by hiring a consultant (Temtime & Pansiri, 2004:35). Small businesses, however, rarely employ these more immediate means due to the financial costs associated with them as well as the loss of ownership that accompanies taking on additional owners. Managerial skills, thus, are developed by means of experience within the small business environment and managerial skills

develop slowly as a result. Good record keeping is the second important factor associated with business success (Kuratko & Hodgetts, 2007:37). Accurate and readily available information on sales, customer details, supplier details, discussion notes, finances, employee hours, stock levels and share values is required for fastidious and effective management (Bezuidenhout, 2003; Scarborough & Zimmerer, 2003:75). As with the development of managerial skills, small business owners do not prioritise formal training in record keeping, arguing their time could be better spent doing the work and justifying their decision by referencing the cost that accompanies skill acquisition (Kuratko & Hodgetts, 2007:42). This necessitates that small business owners must employ skilled bookkeepers at an additional expense to the business (Balkenhol & Evans-Clock, 2003:52). This can be difficult for small businesses due to cash flow difficulties and a lack of assurance of business continuance.

Cash flow management is the third most important contributing factor to small business success, as liquidity issues often cripple or slow down business activities to a near halt, resulting in failure (Kuratko & Hodgetts, 2007:46). Cash flow struggles are characteristic of small businesses (SEDA, 2018:19). What exacerbates cash flow issues in small businesses is the extension of credit terms that make them overly vulnerable, overstocking of products and the propensity to seek ownership of the property or equipment needed to operate a business venture instead of leasing or renting prior to having acquired the excess capital to purchase those assets without impairing operations (Temtime & Pansiri, 2004:35). The negative effects of poor cash flow are exacerbated by poor management and a lack of sufficient record keeping.

Adaptability is the fourth major contributor to small business survival and growth. Adaptability refers to the ability of a business to alter the scope of its activities and the size of its production and operational units (Perry, 2001:205; Meyer, 2019a:103). Adaptability also extends to how capable a business is in determining its position in the environment that it operates in and altering internal structures (Perry, 2001:206). In addition to supporting survivability, adaptability is essential in restructuring outdated or ineffective business models. Fostering adaptability in the business allows the business to modify its expense profile to match market conditions and alter its product and service offerings to remain profitable and maximise growth.

How a business presents its products, services and brand affects how its customers interact with it and thus carries a major effect on the business to which it relates. In risk management, this extends to reputational risk. An efficient marketing strategy in combination with a good product governs this relationship and requires market research and analysis representative of the target market the

business aims to engage. For a business to take advantage of good marketing, it requires a feedback system that critically analyses the product offering of the business from the customer's perspective (Van Gelder *et al.*, 2007:318). To apply a marketing strategy continuously in combination with the other obligations a business faces can stress the labour and financial capacity of small businesses. Maintaining a clear understanding of what customers want and expect from an enterprise enables the business to play to its strengths and adapt rapidly to meet new customer needs (Van Gelder *et al.*, 2007:318). Although the particular methodology that marketing departments use can be variable, there are particularities that are fundamental to ensure that it is minimally acceptable in regard to the reputational risks that they represent. First, it is essential to know what customers think about a product or a service. Thereafter, the business must develop a market plan that guides the efforts of a business to alter the products or services to meet the customer needs and communicate the change with the customer (Van Gelder *et al.*, 2007:319). An analysis of the competition that can also meet those needs must be included in the marketing plan (Van Gelder *et al.*, 2007:320). Once observation of and preparation for the consumer's needs have been done, the business must execute its plan to meet or forfeit that market and then restart the process at a later date (Van Gelder *et al.*, 2007:319). If the marketing is flawed in any way that evokes social outrage or offense, it can harm the business over the long term.

Planning can be argued to be a part of managerial skills; however, the literature suggests that it must be addressed as a separate and independent contributing factor to business success (Wiesenfeld *et al.*, 2008:237). Planning starts by defining a core objective and then extends considerations into the activities of the departments and functional units of the enterprise. By co-ordinating activities throughout a business and amongst its partners, it minimises costs and maximises productive action taking. Planning relates to how a business will utilise its practical capacities to meet its core objective and must, therefore, extend into resource and financing planning (Luthans *et al.*, 2000:101; Wiesenfeld *et al.*, 2008:238). Planning must explicitly state the company's guidelines that must be followed to ensure that it aligns with business culture, but to account for risk management considerations, planning must also become reiterative and systematic (Luthans *et al.*, 2000:101). Plans must also carry with them an explicit time dimension with due dates on smaller operational processes to track progress (Sarasvathy, 2001:253). To further track the efficacy of planning requires that meticulously detailed indicators for the progress of any plan be explicitly defined and tracked throughout the daily operations of an enterprise (Van Witteloostuijn, 1998:511; Meyer, 2019c:27).

Maintaining the success factors described above can strengthen the capacity of the business to grow and survive, when combined with risk management it can result in robust businesses models and facilitate business success. However, the internal factors are not the only considerations that a business must maintain. The external environment in which a business operates can negatively affect the business, despite the perfect application of the success factors or the support of risk management in attaining the desired outcome. Section 3.8 discusses these considerations.

3.7 BUSINESS ENVIRONMENT AND SMALL BUSINESSES

The economic environment in which a small business operates affects its survivability and profitability. Economic stability, economic growth, economic policy and support programmes all affect the business environment (Bates *et al.*, 2005:133; Brand, 2006:31). Economic failures result in unemployment, which results in people having to pursue entrepreneurial activities to survive; formal and informal small businesses are the immediate response (Balkenhol & Evans-Clock, 2003:17). In addition to economic and market fluctuations, changes in legislation, development of technology and fluctuating societal needs create opportunities to establish new businesses and challenge the survivability of existing ones (Balkenhol & Evans-Clock, 2003:18; Brand, 2006:129).

The environment within which a business operates can be broken up into the three interconnected parts of the macro-environment, the market environment and the business micro-environment (Diedericks, 2015:58). Effects cascade from the macro-environment to the market environment and ultimately come into effect in the business micro-environment (Nieuwenhuizen, 2003:70). The macro-environment broadly addresses and includes the political, social, economic and technological domains (Bezuidenhout, 2003:42). These factors, for the most part, are outside of the capacity of a business to directly affect, however, the business must still be aware of its position in the micro-environment and actively seek an advantageous position.

The market environment narrows the focus of business considerations to within the domain of the strategic function of a business (Bridge *et al.*, 2003:32). The market environment is defined by the cumulative aggregation of the actions of competitors within a particular market (Bridge *et al.*, 2003:34). As opposed to the macro-environment, the market environment includes the business and the actions it takes and thus is a participant amongst other participants. The stronger the business is the larger the influence it will exert in this environment. How the market reacts to participants in it, by means of interaction with customers and suppliers, is the counterbalance to the market environment (Bridge *et al.*, 2003:39; Meyer & Surujlal, 2019:2354). Customers express

their needs and encourage a business to meet that need through their purchasing power, while suppliers and intermediaries actuate and limit what is possible for a business to achieve (Bridge *et al.*, 2003:39). Despite the ability of a business to engage with the market environment, the degree to which it carries influence is directly limited by its size and connections and, thus, this domain still exists as part of the external environment for the large majority of businesses under competitive market conditions (Bridge *et al.*, 2003:42).

The micro-environment, also known as the internal environment of a business, refers to the resources, management systems, vision, mission and objectives of the business and is categorised by their complete control (Nieuwenhuizen, 2003:73; Brand, 2006:58). Within the context of small businesses, the micro-environment is the easiest of the three domains to influence, however, due to the characteristics of small businesses could be difficult to control (Steinberg *et al.*, 2004:147).

It is within the unique internal environment of a business that risk appetites of the business, the operational risks a business faces and general risk management manifests and determines how risk is conceptualised and addressed (Price Waterhouse Coopers, 2011:26; Booysen & Visser, 2012:61; Diedericks, 2015:75). However, due to the characteristic limitations of small businesses, there exists a disconnect between best practice risk management and what small businesses are doing in regard to risk management (Balkenhol & Evans-Clock, 2003:37; Nieuwenhuizen, 2003:88; ISO, 2018:9).

To maximise the success rate of businesses at large requires that policy makers work hard to ensure stability in the business environment through responsible decision making on national and provincial levels. It also requires that collusion and other anti-free trade structures be limited or dismantled beyond that which is required to assure national security.

3.8 CURRENT SMALL BUSINESS STATE IN SOUTH AFRICA

The intervention of national bodies and support agents is important to note in context of the development of a business environment and the growth of small businesses. It has been argued that small businesses are better capacitated to produce new seats of permanent employment at rates that exceed those of established big businesses (Sexton & Landström, 2000:16; Katekhaye *et al.*, 2019:220). This is reaffirmed by the Bureau for Economic Research report, which states that 69 percent of small businesses employ additional staff on a yearly basis. This is important to policy makers as it that businesses are incentivised to mechanise their operations where possible for the cost saving effect that it carries (Ehlers, 2000:72). In terms of socio-economic development and human development, a small business can serve as an accessible vehicle for upward class mobility

(Kroon & Moolen, 1992:53). Through synergistic amalgamation, the factors discussed make small businesses a powerful tool to address poverty and unemployment (April, 2005a:100).

This section addresses the latest figures that are available on small businesses within South Africa to provide an overview of the current position of small businesses in aggregate. A comparison was done between results from previous periods to give an indication of whether the situation is improving or deteriorating. The Bureau of Economic Research (BER), Small Enterprise Development Agency (SEDA), Small Business Institute (SBI) and the Department of Trade and Industry (DTI) all gather and process information on SMEs. Because the aforementioned third parties report on SMEs as opposed to just small businesses, it must be noted that the results reported serve as a proxy for small businesses, inclusive of the full sample of small businesses and lends itself to businesses that are characteristically similar or adjacent in this regard.

Table 3.3 shows the distribution of SMEs across South Africa's provinces. The figures in Table 3.3 tend to remain constant with the shift between 2017 and 2018 only being a 3 percent decline in KwaZulu-Natal's numbers and a growth of 3 percent in Limpopo. What is shown is that there is an aggregation of small businesses. Table 3.3 further indicates that SME numbers declined in four of the nine provinces over the 10-year period as shown in Table 3.4 (BER, 2016:17; SEDA, 2018:53). In the 10-year period, SMEs have only grown by 11.93 percent cumulatively. When compared to the near doubling of nominal GDP for the same period, it indicates a disproportionate performance between the general economy and small businesses. An informal business is defined as one that is unable to raise profitability to the levels required for formal taxation. It was found that 67 percent of SMEs exist as informal enterprises (BER, 2016:18). Informal SMEs outnumber formal SMEs in every province except for the Northern Cape and Western Cape (BER, 2016:25). The ratio of informal to formal SMEs is 7:3 and has remained constant over the last 2 years (SEDA, 2018:44). Only 35 percent of SME owners employ other people (SEDA, 2018:48) and only around 250 000 SMEs contribute to employment in South Africa (SBI, 2016:4).

The formal employment produced by SMEs in South Africa accounts for only 28 percent of all jobs despite constituting nearly 98.5 percent of all formal business entities in South Africa (SBI, 2016:4). When compared to international statistics, this is problematic as SMEs abroad contribute between 60 and 70 percent (SBI, 2016:4). What was discovered is that 61.22 percent of all SMEs are distributed between Gauteng, KwaZulu-Natal and Limpopo.

The provinces with the fastest small business growth rate over the past 10 years in order of greatest magnitude are Limpopo (69.20%), Gauteng (23.24%) and Western Cape (20.24%). Gauteng

maintains a share of SMEs that is 10.8 percent larger than the population percentage distribution allocated to it. This translates into the phenomenon that a disproportionate number of people are establishing businesses in Gauteng when compared to the populations of other provinces.

Table 3. 3: Provincial distribution and growth of SMEs 2008 and 2018

Provinces:	Number (2008: Q1):	Number (2018: Q1):	10-year growth rate percentage:	Population percentage of national total (2011 census):	Percentage of all SMEs:
Western Cape	223,933	269,256	20.24	11.25	11.02
Eastern Cape	218,865	212,292	-3.00	12.68	8.69
Northern Cape	29,894	23,904	-20.04	2.21	0.98
Free State	114,949	114,584	-0.32	5.30	4.69
KwaZulu- Natal	418,406	333,461	-20.30	19.83	13.65
North West	109,860	125,535	14.27	6.78	5.14
Gauteng	687,556	847,329	23.24	23.71	34.68
Mpumalanga	193,259	201,922	4.48	7.80	8.26
Limpopo	186,101	314,880	69.20	10.44	12.89
Total:	**2,182,823**	**2,443,163**	**11.93**	**100**	**100**

Source: (BER, 2016); SBI (2016:4); (SEDA, 2018)

As displayed in Table 3.4, amongst industries, mining has seen the greatest growth in participation by SMEs by a large margin. Construction, community work and transport and communication follow up as industries that have grown in regard to the number of SME participants, while agriculture and manufacturing have declined the most. SMEs do not only decline because they fail but because they grow large enough to no longer be defined as an SME. However, due to the failure rate of 75 percent as reported by (SEDA, 2018:56), the former can be extrapolated as the primary cause for the decline. Table 3.4 shows the distribution of SMEs by sector within South Africa. SMEs are predominantly in trade and accommodation at 39.6 percent of total. Community, construction, finance and business services are the closest contributors at 12.96 percent, 14.85 percent and 12.65 percent respectively.

Table 3. 4: SME industry participation 2008 and 2018

Industry	Number 2008	Number 2018	10 year % change	Percentage of all SMEs
Agriculture	87,820	71,237	-18.88	2.87
Mining	2,696	10,123	275.48	0.41
Manufacturing	267,817	218,525	-18.41	8.82
Electricity, gas & water	4,252	4,601	8.21	0.19
Construction	252,233	368,035	45.91	14.85
Trade & Accommodation	974,083	981,700	0.78	39.60
Transport & Communication	122,370	166,291	35.89	6.71
Finance & Bus. Services	236,740	313,618	32.47	12.65
Community	227,243	321,328	41.40	12.96
Other	7,569	23,420	209.42	0.94
Total	**2,182,823**	**2,478,877**	**13.56%**	**100.00%**

Source: BER (2016); SBI (2016:4); SEDA (2018)

In addition, Figure 3.1 illustrates the distribution of SMEs by industry so as orientate the reader towards which industries are those in which SMEs are primarily active in.

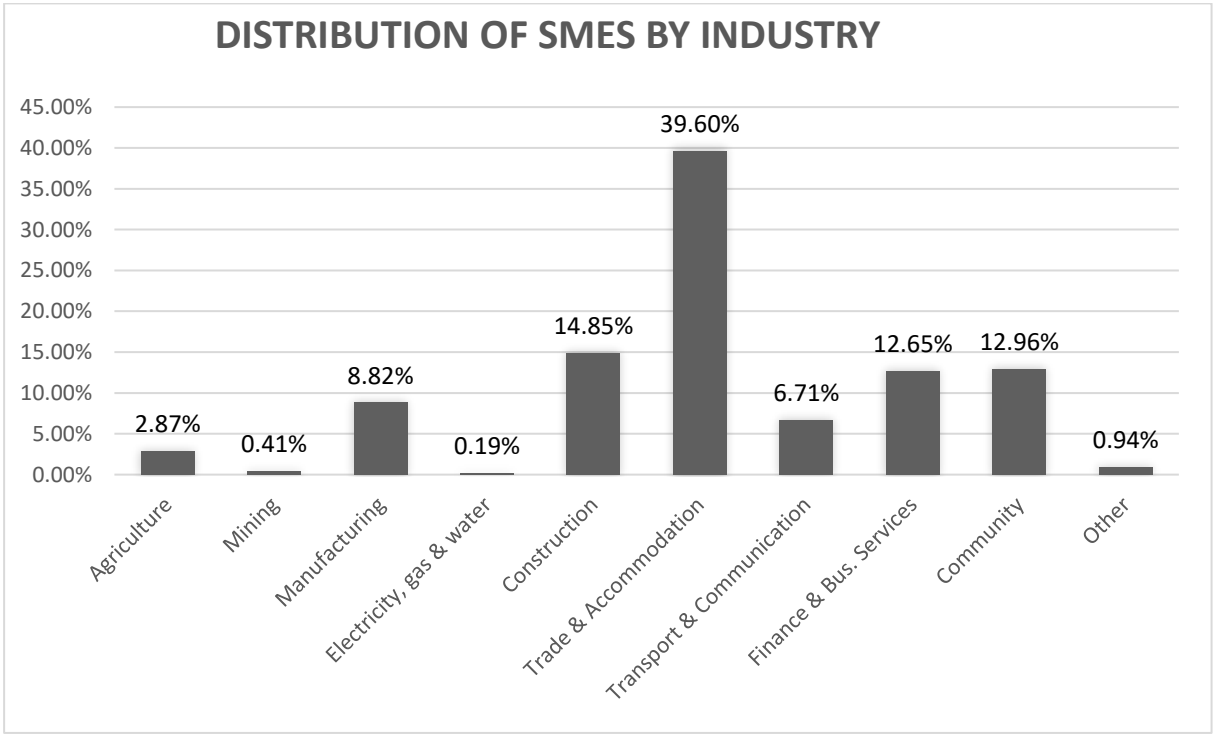

Figure 3. 1: Distribution of SMEs by industry

Source: SEDA (2018)

3.8.1 SME ownership by racial demographic

According to the BER (2016:18) report, as shown in Figure 3.2 and Table 3.5, 34 percent of formal businesses are owned by the black community, 51 percent by whites, 10 percent are owned by Indians and five percent are owned by people of mixed race (BER, 2016:19). Figure 3.3 shows the distribution of all SMEs amongst population groups, with black people owning the greatest share of SMEs at 73 percent, however, these remain informal for the most part. Informal businesses produce significantly lower incomes and rates of growth than formal businesses, thus disparities such as poverty persist. Fluctuation in the number of SMEs per population group is the greatest amongst white people with a 5 percent growth between the last quarter of 2017 and the first quarter of 2018 after an 8.75 percent decline between quarter one 2017 and quarter four of 2017. All other population groups maintain relative growth stability. Although all population groups are growing in the number of small businesses, white people have seen a decline of 11.71 percent over the last 10 years. Black-owned businesses have grown the most in nominal terms followed by Indian-owned businesses and Coloured-owned businesses. Over the last 10 years, SME numbers have grown by 13.56 percent; however, when compared to the near doubling of GDP, this number indicates that the economic benefits have not been allocated unilaterally to small businesses, as can be seen in table Table 3.5.

Table 3. 5: Racial demographics of SMEs

Primary ethnic background	Nominal amount 2008	Nominal amount 2018	10 year nominal change	10 year percent change	2018 percentage distribution
Black	1,523,219.00	1,825,007.00	301,788.00	19.81	74
Coloured	101,047.00	116,983.00	15,936.00	15.77	5
Indian	64,669.00	100,846.00	36,177.00	55.94	4
White	493,889.00	436,041.00	-57,848.00	-11.71	18
Total	**2,182,824.00**	**2,478,877.00**	**296,053.00**	**13.56**	**100**

Source: BER (2016); SBI (2016:4); SEDA (2018)

In addition, Figure 3.2 illustrates the distribution of SMEs by race.

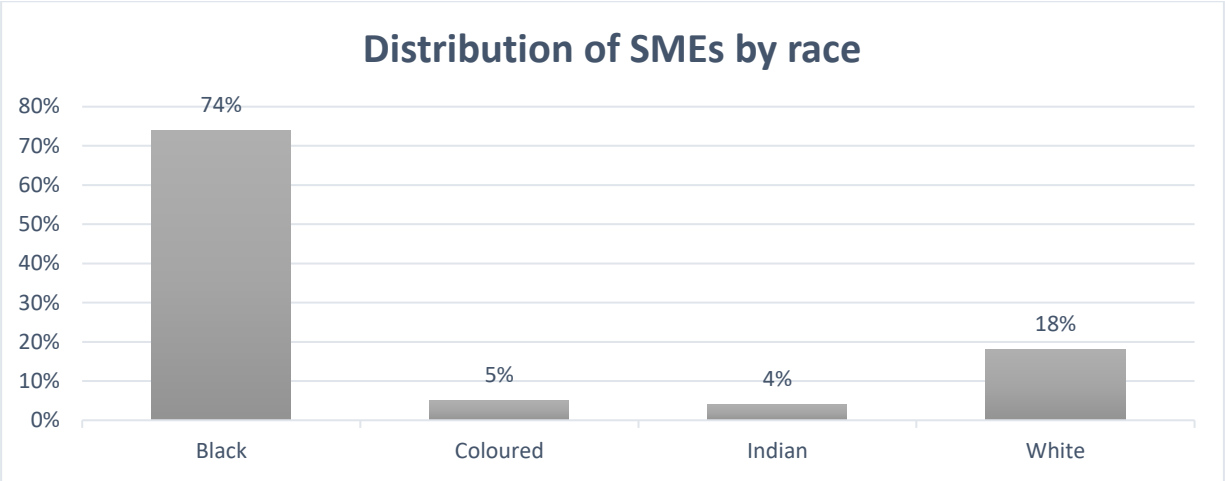

Figure 3. 2 Racial distribution

Source: BER (2016); SBI (2016:4); SEDA (2018)

3.9 SOUTH AFRICAN SMALL BUSINESS POLICIES

This section explores the policies and policy bodies that contribute to small business development. It also explores areas where policies have been criticised for falling short and potential solutions to those problems. The fundamental objective of a small business policy is the growth of existing small businesses and the development of new ones (Botha *et al.*, 2015:60). Policy makers pursue this objective with the expectation that they can create sustainable employment in South Africa and accelerate economic growth, and thereby develop regional economies and compete globally (Thorpe *et al.*, 2005:271). Secondary objectives extend to reduce poverty and create higher levels of income equality within a society (Troskie, 2008:16). Policy agents aim to facilitate the fundamental objective by means of reducing or eliminating administrative and trade barriers and thereby modifying the business environment in such a way that it supports small business activity (Glancey, 1998:21; Meyer, 2019b:7). However, poor awareness of support initiatives, the costs of accessing support, poor service delivery and poor communication with policy creators hamper the efficacy of small business policy (Storey, 2008:17).

To meet the needs of small businesses as they change in response to the external environment, requires that policy makers remain adaptive and explicitly pursue stakeholder inclusivity (Wickham, 2001:112). For a policy to be effective it must be supported on national, provincial and municipal levels, which can make policy adjustments slow (Van Vuuren & Botha, 2010:617). Despite the difficulty that might arise from providing policy support as and when needed, the success of small businesses is largely dependent on the level of policy support they receive (Van Vuuren & Botha, 2010:618). The policy can contribute to the success of small businesses by

favourably altering tariffs and taxes or developing special development zones in favour of small businesses (Begley *et al.*, 2005:45). Policy efficacy is dependent on how well it reflects the challenges that small businesses face (Moos, 2015:69).

Because businesses have operations that vary in terms of resource and material requirements, technical skill limitations and societal and environmental effects, the policies that surround them must address their individual industries and sub-industries (Storey, 2008:19). How well a policy is implemented is as important as the policy being implemented (Litan *et al.*, 2006:65). Policy gaps are scenarios where a deviation between policy goals and the policy effects exist (Lundström & Stevenson, 2005:23). Policy gaps result in shortfalls in support and can arise from unrealistic goals, a poor understanding of policy implications and the inability to apply and monitor policy application (Brynard, 2007:360). Policy gaps can be minimised by ensuring policies remain flexible and sensitive enough to adapt to small business needs (Schofield, 2001:251; Meyer & Meyer, 2017).

Businesses and small businesses, by extension, fall under a wide variety of classifications as can be seen in Appendix G. Due to the practical and technical variations that exist between the types of businesses, policies also need to vary to account for the vast differences in earnings, capital requirements and the type of labour needed to have them function. Therefore, a one-size-fits-all approach will not be deemed appropriate. Some industries such as agriculture could be aided directly through subsidisation while other industries such as manufacturing could be aided more through import limitations on the products that they produce. Due to the large variation in these policies and their applicability to only those industries that define their focus. Policy support was shifted to policies and policy agents that support the majority of small businesses.

3.10 POLICY SUPPORT

The development of the small business sector is supported in numerous policy frameworks such as the New Growth Path (NGP), the framework for economic policy, and the National Development Plan (NDP) (SEDA, 2018:12). National publications explicitly state their support for small businesses (Africa, 1996a; Department of Trade and Industry, 2005; SEDA, 2012). The National Small Business Act (102 of 1996) pronounces this support clearly from its inception, indicating national agreement that small businesses must be supported. Various governmental support agents have been funded to this end and, as a result, the Small Enterprise Development Agency (SEDA) supports small business growth by modifying the regulatory environment in favour of small businesses (SEDA, 2018:12). In addition to the efforts of SEDA, spatial

development initiatives (SDI) have been established to direct of investment towards small businesses and maximise the synergetic co-operation between the various layers of government (Baumback, 1983:22; Meyer *et al.*, 2018:191).

In addition to the aforementioned, Business Support Programmes (BSP) exist that narrow their focus and considerations to a limited number of small business aspects (Maritz, 2001:28) and are embodied in the following:

- The Khula Enterprise Finance Facility is dedicated to the acquisition and provision of finances for small businesses through intermediation between financing institutions and small businesses by serving as a guarantor of credit to banks on behalf of small businesses;
- The National Manufacturing Advisory Centre (NAMAC) programme provides advice and information to small businesses in the manufacturing industry;
- Ntsika provides a wide scope of business support programmes that focus on improving the market penetration and competitive capacities of the small businesses that they aid; and
- Technological Business Incubators (TBI), which primarily aim to assist small businesses in the adoption of technology and the provision of skills training to make technological innovation accessible to start-ups.

Despite the numerous government endeavours to aid small businesses through policy bodies and the national and international consensus that government ought to play a role in supporting small business development, there is disconnect between policy and small business needs (Maritz, 2001:28). This is evident in the failure rate of small businesses being as high as it is and extends into a discussion of policy shortfalls in general.

3.10.1 Policy shortfalls

Whether a small business is established or developed further lies in the hands of entrepreneurs and business owners. However, skills shortages, poor investment outlooks and a lack of quality opportunities to educate themselves, limits small businesses on a systemic level (Bezuidenhout, 2003:42). To aid small businesses in bridging these systemic gaps, government policies have been constructed to aid small business owners. However, these policies have not proven sufficient due to a lack of definitive focus and capacity in applying and monitoring policy and mismatches between what is relevant to small businesses and what is applied (Botha *et al.*, 2015:62). Incoherence in policy application, policy irrelevance and impractically allocated national budget further amplify policy inefficacy (Man *et al.*, 2002:134; Botha *et al.*, 2015:62).

Small business policy has not sufficiently addressed the development of informal or small businesses and that is where the risk management tool devised by this study has the possibility of aiding government in developing small businesses (Erikson, 2002:282; BER, 2016:13). Policy-mandated small business support agencies have failed to meet the scope and depth of their mandates effectively (Ucbasaran *et al.*, 2002; BER, 2016). Policy mandates have additionally been ambiguous with the application being so unconventional as to attract criticism (Ucbasaran *et al.*, 2002; BER, 2016:14). Co-ordination and support between the various government agencies have persisted, which has further limited synergetic effects between them (Darroch & Clover, 2005:333; BER, 2016:14). Instead of working together towards a goal, the government agencies and policy-mandated bodies are now competing against each other for continued funding and support. The small business policy has also been criticised for being slow, unresponsive and excessively restrictive with regard to the qualifications for support (Erikson, 2002:283; BER, 2016:15). Domestic criticisms extend to labour laws surrounding the ease of increasing and reducing the labour force employed by the business as is determined by the economic particularities that surround the business (Perks & Struwig, 2005:171; BER, 2016:16). The policy has also been touted as providing subpar quality interventions and insufficient access to support functions that equip small businesses with skills (Botha *et al.*, 2015:61; BER, 2016:16)

To address policy shortfalls requires the systematic revision of the policy and continual monitoring of the efficacy of policy agents in applying their mandate. It is suggested that King IV be considered as a guide to monitor the corporate governance of policy agents. As per the identified difficulties faced by small businesses, the policy must account for the development of managerial skills (Lighthelm, 2013b:67). The small business policy should focus primarily on enhancing the environment within which they operate (Moos, 2015:51). The policy can support small businesses by formalising skills and entrepreneurship training, beneficial legislation and trade and industry specific support in the form of advantageous trade policies (Brynard, 2007:59). Bradford (2007:102) suggests that the policy should be focused primarily on the business and financial environment. The Department of Trade and Industry (2005:7) reinforces this perspective and suggests improving access to relevant information and easing market access. (Ladzani *et al.*, 2011:1463) proposes an alternative, particularly, the advancement of technology and its improved adoption, as well as the development of knowledge-based economies. Lighthelm (2013a:70) argues that the best way the policy can support small businesses is through establishing a mandate to erect special development zones that concentrate on technical infrastructure, technological innovation, physical infrastructure, logistics and human resource development (Lighthelm, 2013a:70). Additionally it is suggested that assisting in the connection of financing facilities with

small businesses along with tax reliefs, grants and subsidies can aid in the establishment and growth of small businesses to larger businesses (Gwija *et al.*, 2014:63). Additionally, the provision of managerial skills training along with educational programmes can serve to generate long term modifications to the businesses overall survivability (Rwigema & Venter, 2004:34; Peters & Naicker, 2013:16).

3.11 CONCLUSION

Risk management can augment the capacities of businesses to establish themselves, develop and grow. Risk management can aid businesses in incorporating additional managerial and operational considerations that have proven to be best practice. However, risk management is not a solution in itself. For small business to flourish necessitates that the environment in which they operate to be stable enough to allow small businesses to be able to make mistakes without resulting in their complete and immediate failure. Small businesses must also actively pursue those factors that contribute to their success while simultaneously being aware of the factors that could jeopardise their success. In regard to the latter, risk management can be employed to support those practices in a meaningful way. It is also required that government policy and government agencies alike support small businesses through active reporting and intervention.

This chapter provided a definition of what a small business is and compared definitions across different countries and, thereby, the general concept of variability in the definition of small businesses as a subjective concept has been discussed (Section 3.1). The general risk-taking behaviours of small businesses within a sample area of Midvaal and Emfuleni were analysed and are part of the Sedibeng district municipal area (Section 3.3). The risk taking characteristics were discussed lightly (Section3.4). The principle reasons for the failure and success of small businesses as well as the applicability of risk management intervention in addressing and supporting those factors were discussed and related to each other (Section 3.5 and Section 3.6 respectively). The South African small business policy environment was discussed to create perspective on the developmental progress of small businesses from a numerical perspective over the last 10 years and provide an overview of some of the policies and policy agents that support small businesses (Section 3.7). The discussion of policy shortcoming was extended in Section 3.8 and suggested foci elucidated on to direct policy discussion to intervention that could result in the amplification of small business survivability and growth. The next chapter will provide a detailed discussion of the methodological considerations, that must be addressed to develop a small business risk management tool.

CHAPTER 4

RESEARCH METHODOLOGY

"Great leaders are almost always great simplifiers, who can cut through argument, debate and doubt, to offer a solution everybody can understand." ~ Colin Powell

4.1 INTRODUCTION

Research has an important role in the modern world, borne from its ability to promote and accelerate change for the better. In order for research to be of value, it is required that it be up to date and representative of the topic that it addresses. Research also needs to be representative of the subject that it researches. In order to assure the value of the results obtained from the research, the processes of research must be verified and accepted as scientifically valid. For research to be considered scientifically valid, it must include clearly defined objectives and use validated methods of meeting those objectives. The following empirical objectives are sought to be addressed through the methods described in this section, however, the actual results will be discussed in Chapter 5 and Chapter 6:

- Analyse the demographical data received from small businesses in the SDMA to determine their composition (Empirical objective 1);
- Apply exploratory factor analysis on Section A to determine if small businesses can differentiate between different categories of risks that they face (Empirical objective 2);
- Apply exploratory factor analysis on Section B to determine how willing small businesses are to take risks as laid out in DOSPERT (Empirical objective 3);
- Run and interpret the SCF in Section B to determine the risk appetite of small businesses in the SDMA (Empirical objective 4);
- Apply exploratory factor analysis on Section C to determine how small businesses group risk management processes as they are displayed in theory (Empirical objective 5);
- Apply frequency analysis and descriptive analysis to determine the stance on the components identified in the factor analysis (Empirical objective 6);
- Run tests of differences using T-tests and analysis of variance (ANOVA) to determine if there were any differences between selected demographical items and components (Empirical objective 7); and
- Run item-component and inter component correlations to determine the relationships between components and selected demographical items (Empirical objective 8).

- Create a risk management tool that aids in the development of small business risk management (Empirical objective 9).

Scientific objectives can manifest in a variety of forms, such as developing theories or tools, determining the relationships between constructs and the causative relationship between them, or developing solutions to specific problems. Research, if defined, implies a formal process of gathering the required information to make an informed decision or to develop a relevant solution. In this regard, the research participants or respondents must be sampled in such a way that they are represented in line with real world populations. The aim of this chapter is the provision of a detailed record of the procedures, statistical tools, statistical analysis methods, research methods, paradigms and research design employed in this study. The chapter begins with a discussion of the research paradigm.

4.2 RESEARCH PARADIGM

A paradigm is a set of ontological, epistemological and methodological assumptions that frame the nature of reality (Orlikowski & Baroudi, 1991:7), the nature of knowledge and knowing (Ezell & Crowther, 2007:269; Cohen *et al.*, 2013:116) and the process by which the researcher approaches the research question (Guba & Lincoln, 1994:105-117; Hammersley & Atkinson, 2007:283). Paradigms are underpinned by human experience and the philosophical positions we take that form the dominant worldviews scattered throughout modern humanity. Different world views result in different interpretations and perspectives from which research is done and vary ontologically, epistemologically and methodologically (Patel, 2012:11). Multiple paradigms have been formally accepted in academic research. A study may either fit perfectly into one of these categories or consist of a combination of sub-categories. Understandably, a mixed-method study could include aspects of all categories. Table 4.1 provides an overview of these theoretical paradigms.

Table 4. 1: Theoretical paradigms and their beliefs

Theoretical paradigm	Aspects and beliefs
Radical structuralist **(Positivist paradigm)**	Believes that reality can be measured and quantified when addressing independent facts (Healy & Perry, 2000:119). Assumes that the study is not influenced by the views or biases of the researcher (Krauss, 2005:759). Relies on the concept of cause and effect (Dammak, 2015:2; Creswell & Creswell, 2017:110). Assumes that all predictions are without error and objective results extracted by scientific methods (Neuman, 1997:64; Mack, 2010:6). Assumes that results are not affected by observation (Healy & Perry, 2000:119; Bryman, 2009:17). Considers numerical, quantitative data and statistical analysis procedures as superior to other data types and observational procedures (Dammak, 2015:4; Creswell & Creswell, 2017:110).
Functionalist **(Realist paradigm)**	Believes that all subjective experience, individual or shared, is based in one real and objective reality (Healy & Perry, 2000:118; Sobh & Perry, 2005:1200). Maintains the position that reality exists independently of the researcher's capacity to perceive it (Pring, 2000:58). Posits that theoretical experimentation is the means by which to discover new knowledge, (Outhwaite, 1983:332; Pring, 2000:58). Applied by means of statistical analysis, unstructured and semi-structured in-depth interviews and case studies (Krauss, 2005:762; Creswell & Creswell, 2017:110). Aims to develop a myriad of answers that meet varying philosophical contexts (Healy & Perry, 2000:123).
Humanist/ interpretivist **(Constructivism paradigm)**	Researchers argue that all-knowing is influenced by world views that fundamentally bias research (Healy & Perry, 2000:120). Meaning and the construction thereof is the primary goal of the researcher (Edge & Richards, 1998:336). Orientated towards extracting understanding more so that explaining a phenomenon (Mack, 2010:8). Research findings are allowed to lead to several constructed realities (Sobh & Perry, 2005:1195; Creswell & Creswell, 2017:110). Multiple perspectives about reality due to various perspectives of many individuals all holding to different interpretations of events (Mack, 2010:8). Multitudes of perceptions may impact on the quality of the answers obtained from the research and cannot be judged according to a set benchmark (Lincoln & Guba, 1985:295). Due to the involvement of people, the research should be observed from the inside and should never be objectively observed from the outside alone (Mack, 2010:8).

Theoretical paradigm	Aspects and beliefs
Pragmatism (Pragmatic approach)	Views knowledge as a synthesis of contextually and socially constructed data and objective observations (Morgan, 2013:144).
	The purpose of it is to produce practical interventions (Guba & Lincoln, 2011:55; Morgan, 2013:145; Creswell *et al.*, 2016:192).
	Primarily concerned with shared meaning but lends emphasis to the practical product and consequences of the research at hand (Creswell *et al.*, 2016:192).
	Argues that theories have both contextual and generalisable properties when analysed for transferability in situations outside of the primary context they were originally observed in (Onwuegbuzie *et al.*, 2007:124).
	Applies an abductive approach, varying between the use of both induction and deduction in its analytical processes, to connect theory before and after data collection (Morgan, 2007:71; Guba & Lincoln, 2011:55).
	Researchers are given liberty to select and utilise the procedures, techniques and methods that they deem capable of producing the best intervention to a research question (Morgan, 2013:145).
	Emphasis is less on what reality or truth is, or how information is interpreted by the human mind but rather on that which creates an executable solution to a problem (Maxcy, 2003:73).
Participatory paradigm	Advocates a political agenda and a plan with which to actuate proposed actions with the intention of producing the desired effects as laid out by the particulars of a specific research project (Ponterotto, 2005:68).
	Seeks to identify overarching social structures that result in intentional or unintentional discrimination against marginalised individuals and develop stratagems that actualise emancipation (Creswell & Creswell, 2017:110).
	Contemporary social issues serve as the necessary point of origin for participatory research arguments (Ponterotto, 2005:68).
	Participatory ideologies seek to advocate for a voice and power for marginalised individuals (Ahmed, 2004:146) while educating them and advancing the political argument in favour of the position that they hold (Van der Riet, 2008:555).
	Collaborative in that it includes the inputs generated from participant minority groups, thus empowering marginalised groups by orienting the discussion on minority needs (Ahmed, 2004:146).
	Allows for deductive and/or inductive reasoning as is required (Creswell & Creswell, 2017:111).

Source: Author compilation

Considering the theoretical and empirical objectives of this study, the radical structuralist or positivist paradigm was selected as it most accurately addresses them. This study makes use of empirical data obtained from individuals, but processed through statistical methods and, thereby, establishes objectivity (Howlett *et al.*, 2009:21). Quantification of relationships between concepts is scientifically possible through statistical methods as this paradigm permits the use of test hypotheses (Kaboub, 2008:343; Mouton, 2011:65). Lincoln and Guba (1985:290) argue that the use of this paradigm permits confirmation of the relational interactions between variables. The selection of a paradigm, although important, does not constitute research in and of itself. To

research requires multiple considerations that must be maintained. To ensure that all required research considerations are maintained, a well-structured research design is required.

4.3 RESEARCH DESIGN

A research design is a set of research procedures listed in order, from conception to publishing, that serve as a blueprint or framework used to structure the approach by which a research question was addressed and expand the accumulated knowledge of the subject (Leedy, 1997:195; Churchill & Iacobucci, 2005:741; Malhotra, 2010:102; McDaniel & Gates, 2010:49; Punch, 2013:224; Creswell, 2014:52). A research design guides the reader through the development of a research question and the methodical processes used to answer that question (Mouton, 2003:19; Mackenzie & Knipe, 2006:199; Hesse-Biber & Leavy, 2010:201.; Fink, 2014; Yin, 2014:37; Creswell & Creswell, 2017:132; Creswell & Plano-Clark, 2018:38). By creating a well-planned and holistically inclusive process, a research design amplifies the credibility of the research (Roberts *et al.*, 2003:22). The research design creates an expectation of which objectives was addressed through predefined means and what the potential outcomes of research can be and proposes a framework, or blueprint (De Jongh, 2017:104).

Research can be characterised as exploratory or conclusive. Exploratory research explores the knowledge surrounding phenomena that cannot be conclusively answered and is generally associated with, but not limited to, qualitative research approaches (McDaniel & Gates, 2010:43; Struwig & Stead, 2010:7; Zikmund & Babin, 2013:48). Conclusive research is more rigid than its exploratory counterpart and aims to produce a definitive outcome that explains relationships in concrete terms or tests predefined hypotheses (Meyer, 2018:158). Descriptive research design is a type of conclusive research, which describes the features and characteristics of individuals, groups of people or environments (Zikmund & Babin, 2013:49).

Descriptive research can take the forms of a longitudinal or cross-sectional design (Iacobucci & Churchill, 2010:86). A longitudinal design is characterised by the repetitious application of a set of measuring instruments on a single sample over time (Lac, 2016:1). Conversely, a cross-sectional design, although maintaining a focus on a single sample (single cross-sectional design) or samples (multiple cross-sectional designs), only takes a measurement at one point in time (Moutinho & Hutcheson, 2011:109). As the study focused on understanding the underlying risk management practices of small businesses in the SDMA and determining, which factors are lacking when compared to the literature, a descriptive single-sample cross-sectional design was followed. This involved the use of a structured questionnaire to collect data from a sample once only.

4.4 RESEARCH APPROACH

Any research project can use one of three established research designs, namely the qualitative, quantitative or mixed methods approach (Bradford, 2017:1). Quantitative and qualitative research approaches are widely accepted in academic circles as verified approaches to answer research questions, with the particularly suitable approach being dependant on the nature of the questions that are sought to be answered (Smith & Heshusius, 1986:7; Babbie, 2011:332).. The mixed-methods approach is the youngest of the three approaches and serves as a combination of qualitative and quantitative research (Onwuegbuzie *et al.*, 2007:115; Tashakkori & Teddlie, 2010:122; Babbie, 2011:332).

Quantitative research is a widely used research approach (Guba & Lincoln, 1994:105-117). The goal of a quantitative approach is to establish an objective relationship between a dependent variable and multiple independent variables that can be measured and expressed numerically (Creswell, 2014:54; Bell *et al.*, 2018:324). The ability of a quantitative research approach to describe a statistical relationship between variables is its main benefit (Bell *et al.*, 2018:324). Quantitative approaches make use of and advocate deductive reasoning, which is a process by which an investigation proceeds from general observations towards specific predictions (Borrego *et al.*, 2009:58; Creswell, 2014:55). The findings can be used to objectively predict a result for a particular population with a degree of specified probability (Borrego *et al.*, 2009:58). In addition to their predictive capacities, qualitative research approaches maintain versatility, as these studies can be relational, causal or descriptive, allowing it to be used in a multitude of study fields to answer a multitude of questions (Creswell, 2014:55). The quantitative approach can be further sub-classified as non-experimental or experimental (Punch, 2013:226; Creswell, 2014:56).

The principal objective of qualitative research is a deeper understanding of specific variables or factors that have already been identified as significant within the study's context (Olds *et al.*, 2005:19; Welman *et al.*, 2005:42; Borrego *et al.*, 2009:58). Qualitative methods can also be used as a revision tool that enables the development of new approaches to old problems and new research objectives and to learn of phenomena in their natural environment and context (Quinlan *et al.*, 2019:208). Qualitative research methodologies are orientated towards understanding and exploring meaning (Creswell, 2014:57). Qualitative research is exploratory in nature (Quinlan *et al.*, 2019:208) and thus especially useful in social sciences where they originate (Gherardi & Turner, 2002:85; Gillham, 2005:20). Mixed methods research approaches serve as the practical link between quantitative and qualitative approaches and combine the use of both (Onwuegbuzie *et al.*, 2007:116; Tashakkori & Teddlie, 2010:122; Babbie, 2011:270; Babbie, 2013:34; Creswell,

2014:143). Mixed methods approaches allow for the revision and expansion of previously performed studies, databases can be enlarged and the depth and meaning of understanding expanded beyond the limitations of the original research (Tashakkori & Teddlie, 2010:122).

As the primary objective of this study was the creation of a risk management tool for small businesses with which to manage risks more effectively, the study applied a quantitative approach and used primary data collected through the use of structured questionnaires, which were processed through predefined statistical analysis. The process by which the sample was defined, identified, selected and processed was described in the following section.

4.5 SAMPLING STRATEGY

Gathering data comes at a cost proportionate to the volume of data that must be collected, the cost of which is often beyond the capacity of most individuals (Bernard & Ryan, 2010:27; Thompson, 2012:236; Maree, 2016:212). Delays such as travel time to and from participants, the time cost of capturing large quantities of data and unavoidable participant unavailability lead to the production of data that are outdated over larger studies (Levy & Lemeshow, 2013:308). Sampling solves these problems by limiting the number of participants and phenomena observed to a group that is statistically representative of the whole population (Som, 1995:74; Bernard & Ryan, 2010:28). A sample is a selection of people or phenomena from the target population (Chandra & Sharma, 2013:42). The main argument in favour of sampling has improved the timeliness and reduced costs in attaining data (De Vos *et al.*, 2011:272). By means of sampling, data can be produced more quickly and more cost-effectively, making them preferable to census data in practice (Maree, 2016:212). For sampling to be as effective and efficient as possible, requires that a strategy be applied to address the necessary concepts that such a process would necessitate. A sampling strategy requires first that the target population be clearly defined. Subsequently, a sampling frame must be selected and applied, thereafter, a sampling method must be selected, the sample size determined and sampling initiated. This process is illustrated in Figure 4.1.

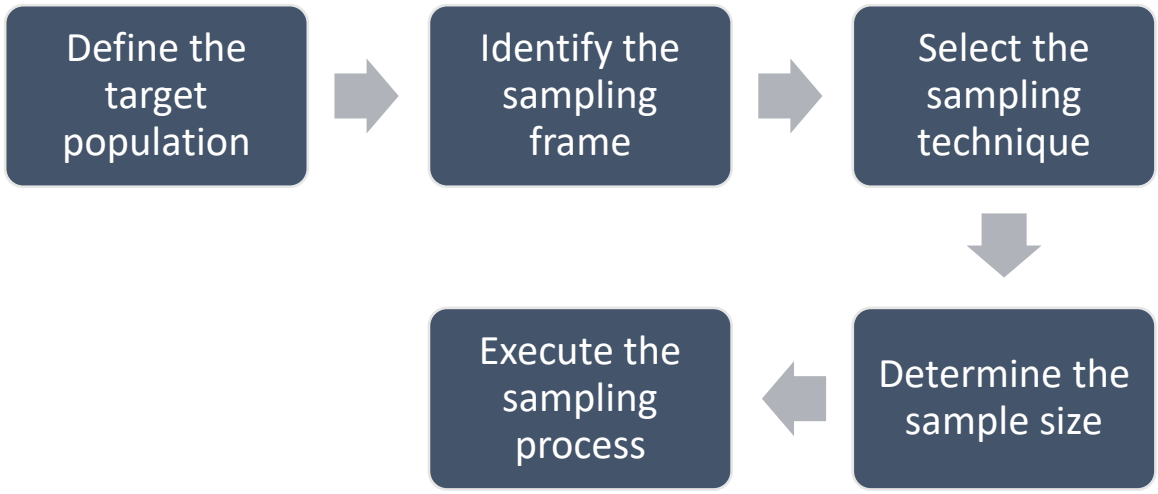

Figure 4. 1: Sampling strategy

Source: Meyer (2018:161)

4.5.1 Step 1: Define the target population

A target population is a specific group of people or things within the universal population of people and things that manifest the specific fundamental criteria for inclusion within a research study (Som, 1995:80; Flick, 2008:77; De Vos *et al.*, 2011:272; Quinlan *et al.*, 2019:208). Data are only representative of that targeted group of people or phenomena from which the data have been extracted; this group of people or phenomena are called target populations (Thompson, 2012:236). Target populations, when not sufficiently limited, can still consist of so many people or phenomena that the aforementioned problems with gathering large data sets will persist (Levy & Lemeshow, 2013:308). It is thus essential to limit the population to only those participants or phenomena that address the research question.

This study is oriented towards addressing the risk management practises of small businesses. The target population for this study will thus consist of small businesses. The population was further defined by the size of the business. A small business within the context of the study was defined as a business with less than 50 full-time employees (Africa, 1996b:15; Meyer, 2009:18). The Sedibeng district municipal area (SDMA) contains a high aggregation of small businesses. The target population for this study is small businesses operating within the SDMA and is illustrated geographically in Figure 4.2.

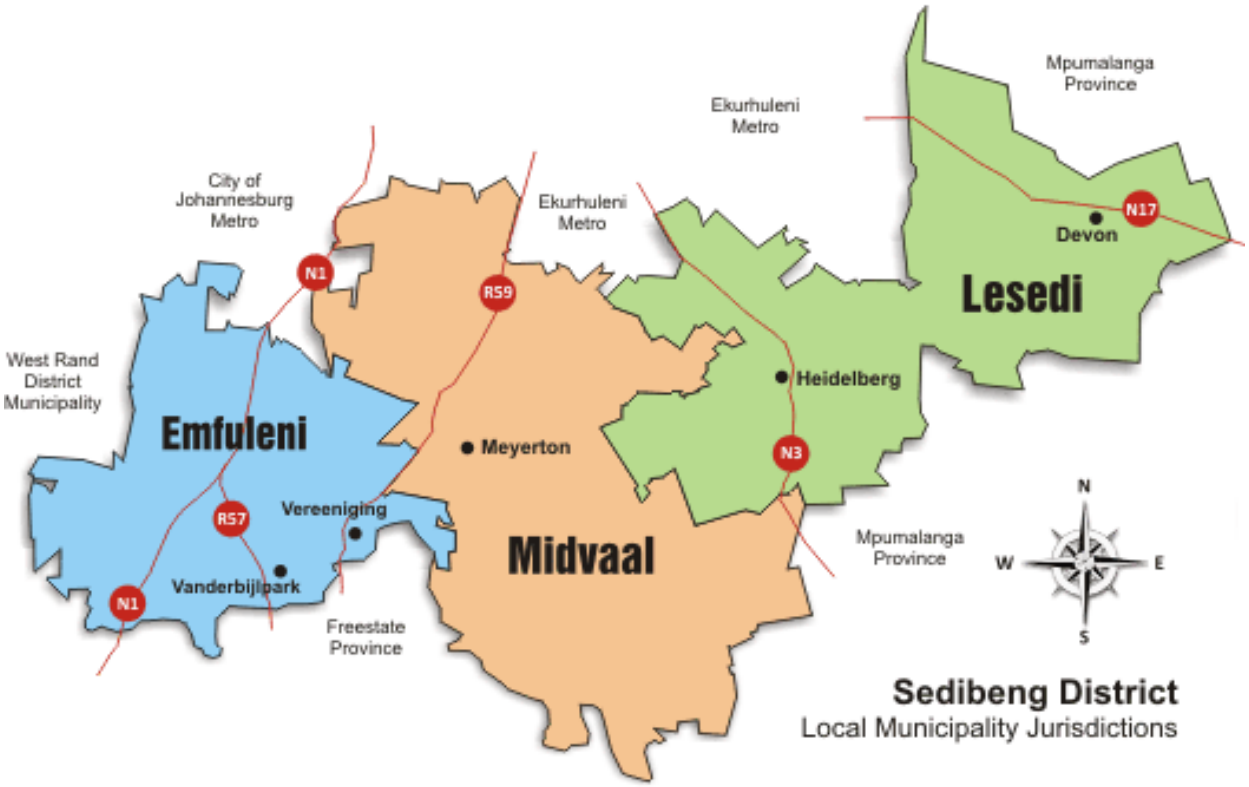

Figure 4. 2: Sedibeng District Municipality

Source: SDMA (2018)

The municipal, and geographical details were gathered about the particularities of each of the municipalities explored to create an insight into the demographical differences between municipalities. As indicated in Table 4.2, Emfuleni carries the highest values for every metric except for surface area and population growth, in which Midvaal carries the lead. The information here indicates what should be expected when sampling these municipal areas.

Table 4. 2: Overview of Sedibeng district municipal area

	Emfuleni Local Municipality (GT 421)	Midvaal Local Municipality (GT 422)	Lesedi Local Municipality (GT 423)	Sedibeng District Municipality (DC 42)
Municipal Information				
Area (km2)	1 275 km2	2 310 km2	1 040 km2	4 620 km2
Towns and cities	Sebokeng, Vanderbijlpark, Vereeniging, Evaton, Sharpville.	Meyerton, De Deur, Walkerville, Vaal Marina, Eikenhof.	Heidelberg, Devon, Vischkuil.	(Includes all the cities and towns from three local municipalities).
Demographic Information				
Population	721 663 (78.7%)	95 301 (10.4%)	99 520 (10.9%)	916 484
Households	220 135 (78%)	29 965 (10.7%)	29 668 (10.6%)	279 768
Household size (average)	3.30	3.20	3.40	3.30
Population Growth (p.a.)	0.92%	3.94%	3.26%	1.43%
People per km2	565 p/km2	41 p/km2	95.5 p/km2	197.9 p/km2
Households per km2	172.5hh/km2	12.9hh/km2	28.4hh/km2	60.4hh/km2
Main economic sectors	Manufacturing.	Manufacturing.	Manufacturing and agriculture.	Manufacturing and agriculture.

Source: Neethling (2016:56)

4.5.2 Step 2: Identifying the sampling frame

A sampling frame is any material, device, list or database that gives access to the population from which a representative sample was drawn (Särndal *et al.*, 2003:383). A sampling frame defines the characteristics that permit inclusion into the sample as required by the study. As no definitive list of all small businesses in the SDMA exists, the sampling frame consists of three criteria to which any of the businesses must minimally maintain. First, the business must exist as a formal business, defined as a business having a consistent locality. Secondly, businesses that employ an excess of 50 employees was excluded. Finally, the business has to be located in either the Emfuleni, Midvaal, or Lesedi municipal areas. In addition to the criteria above, the Golden Triangle Chamber of Commerce (GTCOC) was approached and their databases were accessed.

4.5.3 Step 3: Selecting the sampling technique

A sample can be derived through both probability and non-probability sampling methods, the decision of which being determined primarily by the goals of the research being conducted (Barbour, 1998:355; Särndal *et al.*, 2003:388; Mack *et al.*, 2005:73; Quinlan *et al.*, 2019:208). Sampling procedures are diverse and plentiful with varying procedures being applicable depending

on whether the study is qualitative, quantitative, or mixed in nature (Blackstone, 2017:122). The procedure that is selected is strongly dependant on the ontological assumptions initially made; the premise of the current research and other approaches applied to similar research (Bernard & Ryan, 2010:29).

Sampling can be generally classified as either quantitative or qualitative in nature and then further classified as either probability samples or non-probability samples (Särndal *et al.*, 2003:388; Mack *et al.*, 2005:73). When the ability to confidently generalise in a statistically verified manner is the primary preoccupation of a study, quantitative techniques such as probability sampling tend to be utilised (Mack *et al.*, 2005:73). Quantitative sampling is principally orientated towards extracting a statistically representative sample of a population with the intention of generalising findings to the original population (Särndal *et al.*, 2003:388). Conversely, qualitative inquiry is framed in the context of interpreted meaning and exercised with the intention of augmenting and deconstructing human belief or perception (Mack *et al.*, 2005:73). Qualitative data are hidden in the experiential framework of human interaction and historical, social and cultural nuances (Quinlan *et al.*, 2019:209). Consequently, qualitative phenomena are not easily categorised by discrete characteristics nor can they be observed outside of the subjective frame of the reality of participants from whom it is gathered (Quinlan *et al.*, 2019:208-211).

Probability sampling is done by randomly selecting participants, or cases from a population in accordance with the characteristics that are sought to be observed (Barreiro & Albandoz, 2001:9). Prerequisites for probability sampling are a sampling method, a means by which participants are selected at random and a clearly defined sampling frame defining appropriate participants (Samuels, 2017:1). Probability sampling is more often than not applied to quantitative studies, but not limited to them and is exercised through the methods of random sampling, systematic sampling, stratified sampling or cluster sampling (Levy & Lemeshow, 2013:334).

Conversely, non-probability sampling can be defined as those sampling techniques within which the probability of selecting a participant for participation in the study is characteristically not known and is exercised through purposive (judgement) sampling, convenience sampling or theoretical sampling (Thompson, 2012:238; Maree, 2016:232; Blackstone, 2017:122). As a result of the non-random nature of this sampling archetype, it cannot be considered totally representative of the sample it aims to represent (Fenberg *et al.*, 2013:304). Despite this limitation, it does not invalidate this approach as it is not used to produce insight on a complete sample and is instead orientated towards a particular group (Quinlan *et al.*, 2019:208-211).

As the study focused on small businesses within the SDMA and no formal list including all these businesses exists, the study implemented a single cross-sectional non-probability sampling approach. A combination of two non-probability sampling techniques was used in the study. First, a purposive sampling technique was utilised as it focuses on characteristics of a population based on the objective of the study, particularly formal small businesses employing less than 50 employees (Thompson, 2012:238). Secondly, a convenience sampling technique was employed based on the participant selection criteria as described in the sample description. The combination of purposive and convenience sampling is predicated a necessity as there is no significant prior knowledge of the precise locations and the names of the individuals from which the sample could be drawn.

As shown in section 4.7, the sample was obtained through trained fieldworkers which were used to administer questionnaires in the different regions that comprise SDMA, and the appointment of an external service provider who specialises in data collection. To eliminate undesirable participants in the questionnaire, demographic questions, such as the number of employees, the type of business and the municipal area were included in the questionnaire. This assisted in determining sample representativeness and consequently, the degree to which the study's findings could be generalised to that population.

4.5.4 Step 4: Determining the sample size

The sample size is an essential aspect of ensuring that the data produced through sampling is able to be generalised to the larger population (Levy & Lemeshow, 2013:311). Qualitative and quantitative methodologies have divergent perspectives on what a good sample consists of and how large that sample must be for meaningful interpretations to be made from them (Som, 1995:74; Thompson, 2012:236). Quantitative studies require a sample size large enough to make generalisations and that holds true for the population in practicum (Sandelowski, 2000:250). Sampling error can be reduced by increasing sample size; however, the rate at which sampling error decreases slows down drastically as more data are captured (Blackstone, 2017:122). Therefore, the goal is to gather enough data but not to waste time by gathering more than is needed (Meyer, 2009:53). Determining the ideal sample size is a matter dependant on the fundamental characteristics of the phenomena in question (Barreiro & Albandoz, 2001:9).

As the precise population size of small business owners in the SDMA area is unknown, it was difficult to determine the exact sample size. An appropriate sample size for this research study was estimated based on other studies done in the SDMA. Sekaran (2003) refers to the rule of thumb in

determining a sample size suitable for most non-probability methods to be between 30 and 500 participants. Based on the historic method, the following samples were drawn in similar studies, namely Meyer (2009:53) 36, (Meyer, 2018) 515, Buthelezi (2011:66) 30, Stander (2011:66) 87, Kock (2008:71) 80, Neethling (2016:93) 200 and Rasego (2011:57) 28. Although factor analysis can be applied with as few as 10 participants, a number below 100 participants is considered poor, above 200 is considered fair and 300 or above is considered good (Byrne, 2010:5; Malhotra, 2010:724; Kline, 2011:116).

It was anticipated that a sample of approximately 300 small business owners/managers should be sufficient. The sample is proportionally distributed according to economic activity within the municipal areas, therefore, Lesedi and Midvaal each accounting for 20 per cent and with Emfuleni accounting for the remaining 60 percent of the desired sample (Neethling, 2016:93). Having defined the sampling procedure, the method and instrument by which data were collected are explained next.

4.6 DATA COLLECTION INSTRUMENT AND METHODS

Data collection is the process by which data relevant to the empirical objectives of the study are gathered from the sample. Primary quantitative data can be gathered through either the observation technique or through the use of a survey (Blumberg *et al.*, 2008:278). An observational technique employs systematic observation and recording of particular phenomena within a selected sample to provide an understanding of certain events (Schmuck, 1997; Zikmund & Babin, 2013:237). By contrast, survey methods typically make use of a pre-designed questionnaire that addresses the research question (Cant *et al.*, 2005:95; Mertens, 2010:172). Questionnaires provide flexibility in terms of how they are administered allowing them to be completed in person by means of face-to-face interviews or through a telephonic interview or online platforms (Struwig & Stead, 2010:86). The type and complexity of information required, the particularities of a target population and time constraints determine the most appropriate method by which it must be distributed and collected (FAO, 2017). Questionnaires may be self-administered or interviewer-administered. The variation in approach translates to the necessity of inclusion or exclusion of the interviewer in the data capturing process. When self-administered, the interviewer is excluded from the process and the participant is asked to complete the questionnaire in their absence (Zikmund & Babin, 2013:171).

A self-administered questionnaire is more cost-effective, more consistently limits researcher bias, and more expeditious in terms of administering, conducting, capturing, analysing and interpreting data than interview-administered questionnaires and allows for larger samples to be more easily

gathered (Drew *et al.*, 2008:16). Given these advantages, this study utilised the self-administered questionnaire survey method to collect the required data. As the sample spans multiple municipal areas and due to the time limitation of this study, the questionnaires were distributed either in hard copy (where possible) or electronically via email. Trained fieldworkers and an independent data collection company, as mentioned, were appointed to assist in the data collection process.

4.6.1 Questionnaire design

A questionnaire is a predetermined collection of questions that relate to a particular research objective and are typically arranged into sections that address particular empirical objectives (Cant *et al.*, 2005:147). Although the core content of a questionnaire directly addresses the empirical objectives of a study, it can be undermined by the absence of a professional appearance (Iacobucci & Churchill, 2010:221). To encourage participation and subsequent completion, a comprehensive but brief covering letter is suggested (Iacobucci & Churchill, 2010:221; Zikmund & Babin, 2013:174). A questionnaire requires a detailed and iterative planning process to produce questions that can test research theories and accurately investigate research questions (Lee, 2006:760). Questions must be specific and directly related to the subject matter, follow a logical internal structure and flow in relation to each other, maintain a format that is in line with the primary language rules of its place of origin and be concise (Berndt (Struwig & Stead, 2010:91; Berndt & Petzer, 2011:186). A questionnaire requires the efforts of a participant to complete. It is thus suggested that a questionnaire does not require more than 20 minutes to complete nor include more than 100 to 120 items that need to be addressed (McDaniel & Gates, 2013:359). Additional characteristic considerations that should be maintained in a questionnaire are linguistic and conceptional simplicity, a combination of positively and negatively phrased questions and brevity (Struwig & Stead, 2010:91).

Questionnaires must also refrain from including indefinite terms, slang, sensitive questions, assumptive statements, double negatives and leading questions (Struwig & Stead, 2010:91). Whether questions have a limited set of definitive answers or allow for discussion and individual participation determines whether the question is respectively structured or unstructured (Bell, 2005:160; Cant *et al.*, 2005:151; Maree *et al.*, 2011:161). Open-ended questions provide large variations in their responses, consequently, this type of question is useful for expanding on qualitative knowledge as it creates a plurality of new perspectives (Berndt & Petzer, 2011:187). Closed questions, by contrast, only allow a limited number of responses and thereby aid in developing definitive answers on the questions it asks (Iacobucci & Churchill, 2010:604). All of

the questions in this instrument are structured. The advantages and disadvantages of using structured and unstructured questions are discussed in Table 4.3

Table 4. 3: Advantages and disadvantages of using structured and unstructured questions

Question type:	Disadvantages:	Advantages:
Open-ended (Unstructured questions)	Questions take long to answer and this may result in lower response rates or non-completed answer. Difficult to analyse. Difficult to capture. Necessitates that the researcher is the one that interprets the responses, thus generating biases.	Allows respondents to provide in-depth reasons for their response. Provides a level of detail for the topic being investigated.
Closed-ended (Structured questions)	Misinterpretation of questions by respondents. Lacks depth in responses.	Easy to capture. Reduced researcher bias (Statistically analysed). Questions are easy and quick to answer. Sensitive questions answered more easily.

Source: Iacobucci and Churchill (2010:604); Berndt and Petzer (2011:187); Meyer (2018:168).

Questions may be structured in the form of multiple-choice questions, dichotomous questions or a conglomeration of questions that cumulatively form a scale (Malhotra, 2010:282). The questionnaire employs multiple-choice and dichotomous questions in Section D. Multiple-choice questions and dichotomous questions provide the participant with a selection of answers and they pick the one they feel is most correct (Zikmund *et al.*, 2013:285). The only difference in these two question structures is the number of possible answers a participant can select, with dichotomous questions only allowing two answers and multiple-choice questions allowing for more (Malhotra, 2010:344; Zikmund & Babin, 2013:285). Scaling varies from the absolute answers of dichotomous or multiple-choice questions and uses a continuum on which measures of interest are located (Cant *et al.*, 2005:137). A scale can be either comparative and employ rank order, paired comparison, constant sum scales or non-comparative and use of either continuous rating, or itemised rating scales (Cant *et al.*, 2005:137). Likert, semantic differential and staple scales, or a combination thereof, are all examples of itemised rating scales (Cant *et al.*, 2005:137).

Sections A, B and C employ Likert scales to measure the participant's views. A Likert scales is a multi-category scale in which a participant chooses a single response along a continuum of possible responses. This type of scale is a psychometric response scale measuring the degree to which a participant agrees or disagrees with a particular research question. (Bertram, 2008:1). Whether a Likert scale has an even or odd number of categories depends on whether or not the participants in a study are considered adequately informed on the content matter of a questionnaire (Malhotra, 2010:313). When it is assumed that a participant has sufficient background information

to answer a question an even-scaled response category is employed. Conversely, where it is assumed that a participant group is not sufficiently knowledgeable an odd-scaled response can be implemented (Bertram, 2008:2). The scales used in this study consisted of a four-point equal scale ranging from 1-Strongly disagree to 4- Strongly agree. As the samples used in this study are small businesses, it is assumed that they have encountered risk in some manner or form and are thus sufficiently knowledgeable.

Once the questions have been clearly defined and constructed, the order and grouping of them is the next logical consideration. Combining questions into groups creates individual sets and scales into a logical questionnaire format (Czinkota & Ronkainen, 2010:258). The questionnaire format was designed with the aim of addressing the empirical objectives as set out in Chapter 1. The variables used in the questionnaire were developed from theory surrounding risk, risk management and fundamental best risk management practice. The majority of scales were developed from an extensive literature review as no existing scales could be obtained that were orientated towards small businesses. However, the risk tolerance and risk-taking scales were adopted from existing scales and are discussed under their respective sections. Scales were determined to be the preferred option when compared to independent single item questions as the latter is more complex, contains higher levels of multicollinearity, can produce unnecessarily complex results and result in measurement error when the number of items linked together is numerous (Williams, 2003:470). The following section explains the variables used in the questionnaire. The specific actions undertaken in designing the questionnaire used in this study are discussed in greater detail.

4.6.1.1 Section A - Risk identification

Section A aims to identify how risk is perceived and experienced by small business owners. Section A applies a four-degree Likert scale over 14 questions and five constructs. The first construct confirms the general perception of the risk that the sample holds. The remaining four constructs test the ability of a business to identify key financial risks. The items that describe the constructs used are indicated in Table 4.5. The theory that describes each question in Section A is discussed in Chapter 2, Section 2.3. It should be noted that a large number of constructs discussed in Chapter 2, Section 2.3 were not utilised in the final questionnaire as they were considered not to be applicable to all small businesses within the study. Scale A was not meant to be comprehensive but was intended to determine whether small businesses acted in line with the theoretical underpinnings of the concepts that each construct embodies. Table 4.4 lists the constructs of the theoretical groupings that were derived through the literature review process and

the sources that are relevant to each construct. Table 4.4, presented below, illustrates the particular questions employed (highlights illustrate groupings).

Table 4. 4: Section A - Question grouping and sources

Constructs:	Item groupings:	Source:
Risk as a concept	A1-A3	(Kahane *et al.*, 1985; Foucault, 1991; Borghesi & Audenzi, 2013; Valsamakis *et al.*, 2013; Hopkin, 2018)
Credit risk	A4-A5	(Altman & Saunders, 1997; Bank for International Settlements, 2011; Chapman, 2011; Crouhy *et al.*, 2014)
Liquidity	A6-A8	(Glosten, 1989; Pástor & Stambaugh, 2003; Brunnermeier & Pedersen, 2008; Drehmann *et al.*, 2013; Valsamakis *et al.*, 2013; Crouhy *et al.*, 2014)
Operational risk	A9-A11	(Bank for International Settlements, 2011; Valsamakis *et al.*, 2013; Crouhy *et al.*, 2014)
Market risk	A12-14	(De Nicolo & Kwast, 2002; Das & Uppal, 2004; Haldane & May, 2011; Billio *et al.*, 2012) (Battiston *et al.*, 2012)

Source: Author's own construction

Table 4. 5: Scale A - Risk Identification

Item designation:	Question:
A1	A risk is an event that results in a pure loss.
A2	In order to make profit one does not need to take risks within the business.
A3	Risk is the uncertainty of the outcome of an event.
A4	Debtors pay me back on the terms we originally agreed on.
A5	Debtors do not repay me as agreed.
A6	I do not always have enough cash on hand to pay my creditors (e.g. banks, suppliers, etc.).
A7	I do not always have enough cash to purchase resources and supplies for the business.
A8	I do not always have enough cash to pay my employees.
A9	My employees often make mistakes that cost the business money.
A10	My business is often interrupted or delayed by activities outside of my control.
A11	My sales and purchases are not always processed and recorded.
A12	Changes in government policy have negatively influenced my business before.
A13	Changes in interest rates have an effect on my business.
A14	Changes in the exchange rate influence my business in some or other way.

Source: Author's own construction

4.6.1.2 **Section B - Risk tolerance and risk-taking**

The pilot study originally employed a combination of Survey of Consumer Finances (SCF), shown in Table 4.6 and the Grable and Lytton's 13-item Scale (GL13S), shown in Appendix E. The Grable and Lytton's 13-item scale is used to determine the risk tolerance of a particular group as

it related to the financial risk-taking behaviours of a particular group and consisted of 13 questions (Kuzniak *et al.*, 2015:179).

SCF uses a single risk-tolerance question to directly measure risk attitudes and has been included in multiple published works (Gilliam *et al.*, 2010:31-32). In reference to the study, SCF was used as a proxy for financial risk tolerance along with GL13S. To be considered reliable without any doubt, SCF must have a Cronbach alpha between 0.52 and 0.59. The reason for this is that published research has proven a degree of item validity with scores being consistently within the range of 0.52 and 0.59 (Grable & Schumm, 2010:125). SCF was retained; however, GL13S was summarily dismissed, as it did not provide statistically robust feedback in the pilot study. To expand the considerations of risk-taking the DOSPERT was applied in its place. The amended Section B uses the SCF as the validated scale by which risk tolerance is tested as well as an amended DOSPERT scale.

Table 4. 6: SCF

B1	Which of the following statements comes closest to the amount of financial risk that your business is willing to take?	1	Take substantial financial risks expecting to earn substantial returns.
		2	Take above-average financial risks expecting to earn above-average returns.
		3	Take average financial risks expecting to earn average returns.
		4	Not willing to take any financial risks.

Source: Gilliam *et al.* (2010:31-32)

Originally developed in 2002 and revised in 2006, the DOSPERT scale implements self-evaluation through the specific domains of social, recreational, investment, gambling, health/safety and ethical domains (Weller *et al.*, 2015:1). DOSPERT employs a Likert scale of varying degrees of intensity (Weber *et al.*, 2002:284). It assesses domain-specific risk-taking intentions, domain-specific risk perception and domain-specific perceived expected benefits (cost-benefit likelihood) of individuals instead of advocating for a singular risk attitude as a characteristic trait (Dickason, 2017:94). The 2002 Weber *et al.* (2002:263-290) version employs a 50-item questionnaire, while the Blais and Weber (2006:33-47) version only uses a 30-item questionnaire; however, despite shortening, it is still applicable to 95 percent of ages, cultures and educational levels while maintaining integrity when compared to the 2002 version (Dickason, 2017:94).

The DOSPERT scale was amended to employ a four-degree Likert scale instead of the traditional seven-point Likert scale. Additionally, the scale used in the study includes only the domains of finance (F), health and safety (H/S) and societal safety (SS). The domains of ethics and recreation

along with two questions from health and safety were excluded due to ethical concerns and lack of applicability in the study. Which questions were used and which were removed are indicated in Table 4.7.

Table 4. 7: Amended DOSPERT

Item designation:	Original items:
B2	Betting a day's income at the horse races. (F)
B3	Admitting that your tastes are different from those of a friend. (S)
B4	Investing 10% of your annual income in a moderate growth mutual fund. (F)
B5	Disagreeing with an authority figure on a major issue. (S)
B6	Driving a car without wearing a seat belt. (H/S)
B7	Betting a day's income at a high-stakes poker game. (F)
B8	Choosing a career that you truly enjoy over a more secure on. (S)
B9	Riding a motorcycle without a helmet. (H/S)
B10	Investing 5% of your annual income in a very speculative stock. (F)
B11	Speaking your mind about an unpopular issue in a meeting at work. (S)
B12	Moving to a city far away from your extended family. (S)
B13	Betting a day's income on the outcome of a sporting event. (F)
B14	Sunbathing without sunscreen. (H/S)
B15	Starting a new career in your mid-thirties. (S)
B16	Investing 10% of your annual income in a new business venture. (F)
B17	Walking home alone at night in an unsafe area of town. (H/S)
N/A	Going camping in the wilderness. (R)
N/A	Taking some questionable deductions on your income tax return. (E)
N/A	Having an affair with a married man/woman. (E)
N/A	Passing off somebody else's work as your own. (E)
N/A	Going down a ski run that is beyond your ability. (R)
N/A	Going whitewater rafting at high water in the spring. (R)
N/A	Revealing a friend's secret to someone else. (E)
N/A	Taking a skydiving class. (R)
N/A	Bungee jumping off a tall bridge. (R)
N/A	Piloting a small plane. (R)
N/A	Leaving your young children alone at home while running an errand. (E)
N/A	Not returning a wallet you found that contains $200. (E)
N/A	Engaging in unprotected sex. (H/S)
N/A	Drinking heavily at a social function. (H/S)

Source: Blais and Weber (2006:33-47)

4.6.1.3 **Section C - Risk management practice**

Section C (shown in Table 4.8) aims to determine what aspects of risk management small business owners/managers implement and how often they do so. This section identifies the key elements of risk management that a small business focuses on by deconstructing risk management into core components and inquiring on the degree to which each component is addressed. The theoretical discussion of the risk management frameworks is present in Chapter 2, Section 2.7. This creates a scale that tests the composite concepts of risk identification, risk analysis, risk treatment and risk monitoring, reporting and review. The greater the frequency at which a business applies the core

steps, the greater the managerial involvement in maintaining well-rounded risk management. The frequency scale ranged from never applying the actions suggested in it to doing so daily.

Table 4. 8: Section C questions

Item designation:	Question:	Sub-scale:
C1	I identify which risks may affect the business.	Risk identification
C7	I identify new risks.	
C3	I analyse the effect of identified risks on business objectives.	Risk analysis
C11	Risk solutions increase business risk awareness.	
C14	The business minimises the negative effects of risk.	
C5	I avoid business activities that may expose the business to risk.	Risk treatment
C6	I develop options and activities to reduce threats to the business.	
C8	I transfer risk (e.g. taking out insurance).	
C9	I accept risk as a natural aspect of a business.	
C10	I apply corrective measures to reduce the effects of risk.	
C12	Risks are reported by management.	Risk monitoring and reporting
C13	Risks are monitored by management.	
C16	Risks are reported by business employees.	
C17	Risks are monitored by business employees	
C2	I review risk solutions to ensure risks are dealt with effectively.	Risk review
C4	I review risk solutions to ensure risks are dealt with at a reasonable cost.	
C15	I ensure proposed risk solutions are sustainable.	

Source: Own construction

The questions in this section were designed to test how well core risk management principles were being applied in the business through the proxy of how frequently each of them was considered and how often actions were taken thereafter. Thus, it is measured as a matter of frequency. Chapter 2, Section 2.4, addresses the theory of each of the core principles in detail. This section was not amended in the final questionnaire.

4.6.1.4 **Section D - Demographical questions**

Standard demographical questions were asked to filter out unusable responses and to provide the required demographical data for an in-depth analysis of the factors that influence risk management in small businesses. The questions are displayed in Table 4.9 A single question was added into the demographic section that aimed to determine whether the businesses had used other risk management standards at any point of their business activities.

Table 4. 9: Section D questions

Item designation:	Question:	Concept:
D1	In which sector does your business operate?	Business particularities
D2	What is your company's legal form?	
D3	How many employees do you have?	
D4	Where is the business premises?	
D10	In which municipality is your business situated in?	
D6	What is your position in the business?	Managerial/ owner specific considerations
D7	In which ethnic group do you fall	
D8	What is your age?	
D9	What is your current level of education?	
D11	How many years of management experience do you have?	
D12	How long have you owned/ managed this current business?	
D13	Does the business have a dedicated risk manager or risk management department?	Risk management
D14	Does the business employ any of the following risk management standards?	

Source: Own construction

4.6.2 Questionnaire layout

How questions are asked, how they are grouped and ultimately, how they are laid out in the questionnaire, affects the response that is received. If the questions appear convoluted, the mental energy of the participant is taxed; thereby, contributing to frustration, confusion, or a lack of comprehension in answering the questionnaire, which may result in partial or complete failure in filling in the questionnaire. To address the aforementioned, it is required that layout and positioning are kept in constant consideration while setting up the questionnaire (McDaniel & Gates, 2010:347). Berndt and Petzer (2011:196) suggest that when a questionnaire is formatted in a logical and non-impeding form it contributes to a higher response rate. The primary consideration in determining how a questionnaire should be laid out, is first ensuring that the questions themselves maintain the characteristic of being easily and comprehensively understood by the desired audience and representative of the constructs the questionnaire aims to address (Maree *et al.*, 2011:159). Once questions have been brought in line with the aforementioned characteristics, they can be arranged into sections. Sections allow questions, that maintain a relation to a specific construct or topic, to be grouped together and thus allow a participant to maintain a consistent mind-set while answering a questionnaire (Malhotra, 2010:351). The layout of the questionnaire used in this study is depicted in Table 4.10.

Table 4. 10: Questionnaire layout

Section:	Number of items:	Constructs:	Purpose:
A	14	Risk as a concept: (A1- A3) Credit risk: (A4-A5) Liquidity Risky: (A6-A8) Operational risk: (A9-A11) Market risk: (A12-14)	The purpose of these construct was to determine how aware businesses are of the risk in their business.
B	17	Risk attitude: (B1) Domain-specific risk-taking: (B2-17)	These constructs are intended to elucidate what the small business manager or owner's risk-taking limits are.
C	17	Risk management practices: (C1-C17)	This construct measures how regularly a business applies the activities considered essential to manage risks.
D	14	Demographics and business specifics: (D1-D14)	The purpose of this construct was to identify the demographic details of the participants and gather information on the particularities of their business.

Source: Own construction

The questionnaire was prefaced with a cover letter providing the background and purpose of the study as well as the contact details of the researcher and promotors. The following sections discuss the pre-testing of the questionnaire and the pilot study process and results.

4.6.3 Pre-testing of the questionnaire

Pre-testing of a questionnaire is a significant component of the design phase. Conducting a proper pre-test reduces errors and eliminates questions that can be considered inappropriate, overly complex, or irrelevant to the desired sample (Zikmund & Babin, 2013:183). The linguistic clarity of the questionnaire is also improved as pre-testing analyses whether appropriate language is used in respect of the content, whether the phrasing of content and instructions allows for multiple interpretations and whether that layout can be improved (Meyer, 2018:179-180). The benefits of a pre-test extend beyond the technical aspects of the questionnaire and provide a realistic estimation of the time needed to complete it (Cant *et al.*, 2005:157). Pre-testing was applied in this study and consisted of an academic peer review process. Questionnaire pre-testers were selected according to the criteria suggested by (McDaniel & Gates, 2013:353) in that they possess knowledge of the topic and understand the background considerations related to the same population sample (McDaniel & Gates, 2013:353). All eight of the academics selected to pre-test the questionnaire were researched experts. The pre-testers had extensive knowledge regarding risk management, economics, entrepreneurship and extensive experience with small businesses within the sampling frame of the research. Once the academic peer pre-test was conducted and the

necessary adjustments made to the questionnaire a pre-test was run in an attempt to establish the approximate time it took to complete the questionnaire and to ascertain face and content validity (Synodinos, 2014:112).

4.6.4 Pilot testing of the questionnaire

Once satisfaction has been reached on the technical considerations produced by the pre-test process it is necessary to test the questionnaire on the intended audience, this process is called a pilot study (Polit *et al.*, 2001:467). A pilot study tests the questionnaire for reliability and assesses convergent and discriminant measurement validity (Pallant, 2013:6). As the aim of a pilot study is to test the constructs created and refined in the pre-test, the scope of it is limited to a smaller sample that remains representative of the target population (Iacobucci & Churchill, 2010:223). It must be noted that participants in a pilot study must be excluded from the main study as answering the questionnaire a second time creates a false equivalency between experienced participants and new participants. The pilot study consisted of 30 small business owners selected from a sample that maintains similar properties to the target population. As the main study was conducted in the SDMA, the pilot study was conducted in the neighbouring municipal area of Metsimaholo. This was done in an attempt to avoid a situation where pilot study respondents were accidentally included in the main study. Small businesses within the Metsimaholo municipal area have similar economic characteristics to small businesses in Midvaal, Lesedi and Emfuleni. Therefore, the use of Metsimaholo as a pilot-study region was deemed appropriate. Participants were recruited on a voluntary basis and no incentives were given for their participation. The detailed results of the pilot study conducted for this study are presented in Table 4.11.

Table 4. 11: Pilot study data

Items:	Construct:	Number of items:	Cronbach alpha:	Average inter-item correlation:
A1-A3	Risk as a concept	3	0.53	0.27
A4-A5	Credit risk	2	-0.44	-0.18
A6-A8	Liquidity risk	3	0.75	0.50
A9-A11	Operational risk	3	0.70	0.44
A12-A14	Market risk	3	0.69	0.44
B4, B5, B12, B11, B8	Investment risk,	5	0.16	0.04
B1, B3, B6, B7, B13	Risk comfort and experience	4	-0.64	-0.08
B2, B9, B10	Speculative risk	3	0.27	0.12
C1, C7	Risk identification	2	0.57	0.41
C3, C11, C14	Risk assessment	3	0.72	0.47
C5, C6, C8, C9, C10	Risk management	5	0.68	0.29
C12, C13, C16, C17	Risk monitoring and reporting	4	0.70	0.40
C2, C4, C15	Risk review	3	0.82	0.60

Source: Author's own compilation

The questionnaire consisted of four sections. These were grouped into 14 constructs. Items in Section A were measured on a four-point Likert scale. Section B consisted of validated scales and was thus applied as directed by the original research that governs it. Section C was measured on a six-point frequency scale. Section D used dichotomous and multiple-choice questions. For further discussion of the sections and their subsequent adjustments see Section 4.6.3.

Cronbach alpha measures internal consistency, which is the degree to which items relate to each other as a group (Malhotra, 2010:319). The minimum accepted Cronbach alpha coefficient value is 0.6. (Malhotra, 2010:319). The average inter-item correlation values indicate construct validity through convergent validity when values are below 0.15 and discriminant validity, when exceeding 0.50 (Clark & Watson, 1995:316). An acceptable Cronbach alpha of above 0.6 was not achieved on all the scales, with some coming back negative. When below 0, a Cronbach alpha indicates a lack of internal consistency. The questions from Grable and Lytton's 13-item questionnaire did not show internal consistency and were summarily removed from the pilot and replaced with DOSPERT. A4 and A5 were reverse-scored thus the negative Cronbach alpha score do not serve as a premise for its exclusion. Moreover, the majority of the average inter-item correlation values fell between the recommended 0.15 to 0.50 levels, with one construct above 0.50 and one below 0.15.

4.7 ADMINISTRATION OF THE QUESTIONNAIRE

The data for this study were collected over five months in 2019. The data were gathered through various sources and included the researcher's contacts and references as well as respondents recruited by an independent data collection company and trained field workers. The data collection process and the teams involved are described in Table 4.12.

Table 4. 12: Data collection process and team

Province	Number collected	Number usable	Team members involved	Process followed in collecting the questionnaires
Midvaal	60	52	Researcher's contacts	All field workers, students and the independent data collection companies received proper instruction in how to distribute the questionnaire, ethical considerations and methods of distribution. The various teams collected questionnaires from various towns in the various municipal areas.
Lesedi	60	55	Independent data collection company	
Emfuleni	230	225	The researcher's contacts, trained field workers and independent data collection company	

Source: Author's own compilation

As indicated in Table 4.12, multiple resources were used to acquire the data in the shortest time period possible. The various teams and processes they followed are discussed below.

4.7.1 Researcher's contacts and fieldworkers

Students and field workers were trained to assist in distribution. The training was provided on an individualised basis in neutral environments where the questionnaires were disseminated to them. The questions were explained, and any misunderstandings were addressed. Each was informed of the ethical considerations that needed to be maintained and rehearsed distributing the questionnaires until the process was perfected.

4.7.2 Independent data collection companies

An independent data-gathering company was also employed in gathering questionnaires. The representative of the company was given a detailed briefing on the objectives of the study and field workers were given comparable training to other field workers.

4.8 PRELIMINARY DATA ANALYSIS AND PREPARATION

Having received the required number of questionnaires, they were subsequently captured in Microsoft Excel in a spreadsheet. This served to back up the data, thus protecting them and allowing them to be edited, coded and tabulated with greater efficiency. Once the data were

transferred onto the spreadsheet, the process of cleaning the data, also known as editing, could begin. Editing is the process of examining questionnaires for usability and encourages more accurate and precise results (Malhotra, 2010:453). Questionnaires that were deemed unusable when more than 10 percent of the data was missing, erroneous, or inconsistent were summarily excluded from the total. Of the 350 questionnaires distributed physically or electronically 350 were returned and of the 332 was deemed usable. As the questionnaires were pre-coded the coding and tabulation of the data happened before cleaning the data.

4.9 STATISTICAL ANALYSIS

The process by which numerical values are transformed into meaningful data from which observations can be drawn is statistical analysis. Statistical analysis uses various mathematical techniques to derive trends, patterns and draw statistically verifiable conclusions about the data of a study. This study employs a myriad of such tools beginning with validity and reliability measures and progressing to descriptive statistics, correlation analysis, structural equation modelling and exploratory and confirmatory factor analysis.

4.9.1 Data measurement

Measurement is the process by which concepts are put in the context of the rules that govern them, indicators that serve to describe them and the scenarios within which they play out (Welman *et al.*, 2005; De Vos *et al.*, 2011:308). Measurement breaks down phenomena into observable component parts (Aurini *et al.*, 2016:128). How true a recorded observation remains and how well it demonstrates the phenomenon, in reality, is the validity of a measure (De Vos *et al.*, 2011:308). For research to satisfy validity concerns, construct validity, face validity, content validity, criterion validity and instrument validity must be present and robust (Welman *et al.*, 2005:98). Reliability occurs when replicated measurement by other researchers under similar conditions provides predictive results within an acceptable margin of error in their observations (De Vos *et al.*, 2011:308; Aurini *et al.*, 2016:128).

Quantitative methods measure data in predefined units and rely on the use of a large number of cases to validate research (Welman *et al.*, 2005:99; Flick, 2008:79). Indicators are selected or set up to represent objects or features of significance, subsequently, allocated numbers show the relationships amongst indicators (Flick, 2008:79). Interpretation is not proportional when using indicative numbers, thus a two does not necessarily imply twice as much as one (Welman *et al.*, 2005:99; Zikmund *et al.*, 2013:45). Scales can be constructed when numbers are used (Aurini *et al.*, 2016:128). Data can be counted if the observed units are homogenous enough to be considered

similar (Maree, 2016:331). Categories can describe features in an exhaustive way and be used to establish countable data (Black, 1999:395). Once categories are established, single features can be grouped together in meaningful segments by indexing single features (Black, 1999:396). Meaningful data can then be extracted by applying counting to the indexes (Maree, 2016:331).

4.9.2 Reliability and validity

Consistency of results and a lack of random errors amongst them is ensured through reliability (Pallant, 2013:6). Variations in participants or measurement circumstances create random errors and inconsistency (Hair *et al.*, 2008:151; Malhotra, 2010:318). Reliability is a verifiable state in which results contain minimal errors; a correct measure was one where no random error is found (Cant *et al.*, 2005:235). Although necessary, reliability cannot solely qualify the validation and development of a scale (Hair *et al.*, 2008:166; Iacobucci & Churchill, 2010:259). Validity is the degree to which scale scores represent real relationships between the constructs they embody (Welman *et al.*, 2005:145; Iacobucci & Churchill, 2010:256; Malhotra, 2010:320). Validity is the extent to which a measure, instrument, or scale measures what it is expected to measure (Hair *et al.*, 2008:151; Pallant, 2013:7).

Reliability can be tested by one of three processes, namely test-retest reliability, alternative-forms reliability and internal consistency reliability (Malhotra, 2010:318; Babbie, 2013:145). Scales can be reliable without being valid (Hair *et al.*, 2008:151). There are three main types of methods for determining validity, namely content validity, criterion validity and construct validity (Malhotra, 2010:320; Pallant, 2013:7).

Test-retest reliability repeats the administration of the same scale, to the same participant audience, in the same conditions, at two different times (Hair *et al.*, 2008:165; Iacobucci & Churchill, 2010:259; Malhotra, 2010:318). Test-retest reliability can be statistically validated through a high correlation coefficient between the test and retest observations (Malhotra, 2010:318; Pallant, 2013:6). The larger the divide between the correlation coefficient derived through this process and a correlation coefficient of one, the greater the random error present in the observation is (McDaniel & Gates, 2013:286).

The test-retest reliability approach has various disadvantages and criticisms. Malhotra (2010:319) stipulates that variability of observation is hard to avoid because of the number of variables that must be replicated for a valid retest and the sensitivity those factors have to change. It is also possible that participants remember their responses and thereby invalidate the entire retest process

altogether and is time-consuming, expensive and increasingly prohibitive as sample size increases (Blanche *et al.*, 2006:153; Malhotra, 2010:319).

Alternative-forms reliability is based on the same principles of test-retest reliability with the exception that it is required that two equivalent scales are administered instead of the same (Malhotra, 2010:319). Whether two equivalent scales can be developed is a matter of contention since although questions can be theoretically equivalent they can be read and interpreted very differently, which results in inherent variability (Blanche *et al.*, 2006:153). Because of its similarity with test re-test reliability, it suffers from the same disadvantages and criticisms (Hair *et al.*, 2008:165-166).

Internal consistency refers to the degree of relatedness of individual questions that make up a construct. The underlying assumption that must be present for internal consistency reliability to be valid is that individual items within a scale measure the same fundamental concept and can be summated into a larger scale (Hair *et al.*, 2008:166; Iacobucci & Churchill, 2010:259; Pallant, 2013).

The Cronbach alpha coefficient, which is a mean reliability coefficient, can be used to identify internal consistency in a multi-item measurement scale (Pallant, 2013:6). With a coefficient between 0 and 1, Cronbach alpha calculates an average correlation of all items on a scale. Values above 0.60 translate into acceptable scale reliability, 0.70 to 0.80 reflect good reliability and 0.80 to 0.95 portray very good reliability (Hair *et al.*, 2008:166; Pallant, 2013:6).

Scale reliability refers to how well the results of a scale can be replicated over multiple applications (Du Plooy, 2001:85; Hair *et al.*, 2008:165; Babbie, 2013:188). Reliability is concerned with and relates to the credibility of the findings of the research (Welman *et al.*, 2005:145).

Content validity, also known as face validity, assesses whether items in a scale or measure reflect a specific domain of content.in the matter that it is intended to indicate and warrants the representativeness of a scale (Iacobucci & Churchill, 2010:256; Malhotra, 2010:320). A precise definition of what is being measured, thorough analysis of the literature, consultation with experts in the field and scale pre-testing are done in advance to ensure it includes items that represent all relevant aspects of the construct (Hair *et al.*, 2008:167; McDaniel & Gates, 2013:290; Neuman, 2014:216). Content validity has also been argued to be insufficient in and of itself for establishing validity but can be used in conjunction with other validity measures like criterion validity (Malhotra, 2010:320).

Criterion validity indicates whether a scale performs as expected in relation the demographics, attitudes, behaviours and psychographic characteristics that underlie them (Welman *et al.*, 2005:144; Malhotra, 2010:320; Pallant, 2013:7). Criterion validity consists of the two time-bound sub-categories of predictive and concurrent validity (Malhotra, 2010:320; McDaniel & Gates, 2013:292; Neuman, 2014:217).

Predictive validity is a type of criterion validity that is used to foresee future performance (Jackson, 2008:72). Predictive validity is the level or degree of accuracy that an instrument, measure, or scale has in forecasting the results of a construct that it measures after being administered (McMillan & Schumacher, 2001:181). To establish predictive validity, the scale should be administered at two different points in time, where one was in the present and the other was in the future (Malhotra, 2010:320). In contrast, concurrent validity measures the likeliness that two instruments, measures, scales or constructs measured at the same point in time can produce the same outcome based on the tool used (Iacobucci & Churchill, 2010:256).

Construct validity concerns itself with the theoretical and empirical underpinnings of the major criteria from which the scale is derived and is considered the most sophisticated and difficult type of validity to establish (McDaniel & Gates, 2013:293). The degree to which a measure abides by the empirical and theoretical specifications that describe it is measured by construct validity (Blanche *et al.*, 2006:151). The greater the overlap between two measures of the same construct, the greater the correlation between them tends to be (Welman *et al.*, 2005:143). Irrelevant constructs or measurement errors must be avoided in favour of constructs that resonate with the empirical and theoretical underpinnings of a scale (Welman *et al.*, 2005:142).

Malhotra (2010:321) states that construct validity is made up of convergent, discriminant and nomological validity. Construct validity involves three measures of validities, namely convergent validity, discriminant validity and nomological validity (Malhotra, 2010:321). Construct validity requires that there is a correlation with measures designed to measure a similar concept (convergent validity) but not with those that are intentionally contrary to that (discriminant validity) (Welman *et al.*, 2005:143; McDaniel & Gates, 2013:293; Zikmund & Babin, 2013:260). The inter-item correlation that falls within the 0.15 and 0.50 range, on average, suggests convergent and discriminant validity (Clark & Watson, 1995:316; Blanche *et al.*, 2006:151; Iacobucci & Churchill, 2010:258).

Nomological validity is the degree to which relationships between constructs can be theoretically proven and related to each other (Malhotra, 2010:321; Maree, 2016:217). By means of establishing

construct validity, standardisation can be implemented on a scale or measurement tool (Redda, 2015:119).

4.9.3 Correlation analysis

A correlation, also known as a Pearson product-moment correlation, is a measure that quantifies the linear relationship between interval-scaled variables or constructs and indicates the degree to which changes in one affect the other (Kumar *et al.*, 2002:411; Hair *et al.*, 2008:286; Iacobucci & Churchill, 2010:441; McDaniel & Gates, 2013:560; Pallant, 2013:133). The correlation coefficient (r) can have a negative, positive, or null relationship and have an upper and lower limit of +1 and -1 respectively (Chandra & Sharma, 2013:34; Zikmund *et al.*, 2013:562). A negative relationship (where $-1 \leq r < 0$) implies an inverse relationship in which increases in one variable lead to decreases in the other and decreases in one leads to increases in another (McDaniel & Gates, 2013:526). A positive relationship (where $1 \geq r < 0$) implies that when increases or decreases are experienced in one variable the others follow suit (Pallant, 2013:126). The correlation coefficient indicates the direction and strength of the relationship between variables or constructs (Malhotra & Peterson, 2006:497).

4.10 DESCRIPTIVE STATISTICS

Descriptive analysis is used to recapitulate and simplify frequency data (Malhotra, 2010:468). Descriptive statistics can either be run on categorical or continuous variables (Pallant, 2013:53). Categorical variables are described by frequencies, the number of times a phenomenon occurs or appears in a sample (Pallant, 2013:54). For continuous variables, summary statistics such as the mean, median, mode and standard deviation are more easily applied (Pallant, 2013:55).

Descriptive statistics can be used to describe characteristics of the sample in a research study, check variables for violations of underlying statistical techniques and address specific research questions (Pallant, 2013:53). As a hypernym, the term descriptive statistics encapsulates the mean, standard deviation, ranges, skewness and kurtosis of variables observed and provides information about the distribution of a statistical sample (Churchill & Brown, 2004:545; Pallant, 2013:53,56). Descriptive statistics can be classified into broad and popularly used groupings of statistical analysis which are: measures of shape, measures of central tendency, measures of location, and measures of variability/dispersion (Malhotra, 2010:486).

4.10.1 Measures of location

The mean, median and mode are measures of central tendency but are also referred to as measures of location (Hair *et al.*, 2008:246). A mean is an average; mathematically, this translates to the sum of all responses divided by the sample number with regard to a specific variable or construct (Kolb, 2008:254; McDaniel & Gates, 2013:458). The mean is the most commonly used measure of central tendency (Diedericks, 2015:112). The median is the data point that lies in the middle of a sequence arranged in descending or ascending order and is found by dividing the sum of the two central number of observations by two when the data set is even (Chandra & Sharma, 2013:34; Zikmund & Babin, 2013:340). The mode is the most commonly repeating response in a sample (Hair *et al.*, 2008:247).

4.10.2 Measures of variability

Range, variance and standard deviation are general measures of variability used to examine the broadness of a data set as a whole (McDaniel & Gates, 2013:458). The range of a data set is the difference between the highest and lowest number and is calculated by subtracting the lowest value from the highest value (Hair *et al.*, 2008:248). The standard deviation describes the average amount by which the scores deviate from the mean (Hair *et al.*, 2008:272). Standard deviation is the square root of the variance (Chandra & Sharma, 2013:42). Variance is the mean squared deviation from the mean and measures the spread of scores in a distribution (Malhotra, 2010:487).

4.10.3 Factor analysis

Factor analysis, or the factor analytic technique model, denotes a statistical procedure (summarised in Table 4.15) for investigating relations between variables by examining covariance between variables to identify constructs (Hair *et al.*, 2008:94; Byrne, 2010:5). Factor analytic technique is used in the evaluation and development of tests and scales (Pallant, 2013:179). Once a problem has been formulated, a correlation matrix must be drawn up that shows new sets of variables that are developed in accordance with their relationships to each other (Cooper & Schindler, 2003:635). Principal component analysis, image factoring, alpha factoring and weighted least squares are the most common manifestations of factor analysis (Pallant, 2013:179). Factor analysis primarily takes the form of either exploratory factor analysis or confirmatory factor analysis and is described below in greater detail (Pallant, 2013:17).

Exploratory factor analysis (EFA) is employed when the links between variables, latent or observed, are either uncertain or unknown to the researcher (Byrne, 2010:5). EFA is used in the early stages of the research to determine if, how and to what extent variables are related (Byrne,

2010:5). EFA includes a class of procedures that cover principal components, centroid and principle factor analysis (Kline, 2011:116). EFA differs from the confirmatory factor analysis (CFA) in that it does not require an estimation of the number of factors, specification of correlated factors is not required (it is optional) and does not require a priori hypothesis relating to expected factor-indicator correspondence (Kline, 2011:116).

CFA is a more complex and sophisticated set of techniques, used to estimate the measurement model (Malhotra, 2010:724). CFA confirms how many constructs are present and their loadings (Malhotra, 2010:724). CFA determines tests theoretical loadings against observed reality and thereby verify the factor structure of a set of variables/constructs (Malhotra, 2010:724). Testing the hypothesis that relationships exist can be conducted with CFA (Malhotra, 2010:724).

4.11 ETHICAL CONSIDERATIONS

The ethics of science concerns what is wrong and what is right in the conduct of research. Because scientific research is a form of human conduct, it follows that such conduct has to conform to generally accepted norms and values (Mouton, 2003:238). The essential purpose of research ethics is to protect the welfare of research participants. However, Blanche *et al.* (2006:61) are of the view that research ethics involves more than just a focus on the welfare of research participants and extends into areas such as scientific misconduct and plagiarism.

Due to ethical consideration concerning the use of secondary and primary data ethical clearance had to be pursued at an institutional level and was given to the researcher by the institution through which the research was performed. Ethical clearance (clearance code: ECONIT-ACC-2015-005) was obtained from North-West University. The following ethical principles were applied in conducting the study:

- Personal data of respondents were processed fairly and lawfully and used only for the purpose of the study;
- The questionnaire did not contain the names of respondents and anonymity of respondents was maintained throughout the study;
- Participation in the study was voluntary;
- Independent objectivity in the interpretation of the survey findings was upheld; and
- Personal responses from individuals were not ascribed to any individual.

4.12 CONCLUSION

The purpose of this chapter was to define, explain and expand on how the research related to the statistical tools, processes, paradigms and research design applied in this methodology. A descriptive quantitative research approach, which applied a cross-sectional design through the vehicle of a structured questionnaire was employed as the research design indicated it would be the most appropriate to answer the empirical objectives indicated in Chapter 1. The approach is compatible with the structuralist and positivist paradigm employed in this study and lends itself to the use of empirical data interpreted in a statistical manner.

The sampling strategy was explained in detail; this included the sampling frame, study area and target population, sampling techniques and sample size. The design and development of the data instrument has been explained in detail, as it is an essential component of the cross-sectional design. An existing scale was incorporated (Scale B) and the remainder developed from theory. The research instrument administration process, pretesting and pilot study results were discussed in addition to the actions taken as a result. The statistical methods were discussed, which included descriptive statistics, reliability and validity, correlation, EFA, and CFA. Having provided a detailed explanation of the methodology applied in this research, this chapter has thereby met its mandate. Chapter 5 will focus on the analysis of the data using the statistical methods described in this chapter and discuss the findings therefrom.

CHAPTER 5

ANALYSIS AND INTERPRETATION OF RESULTS

"After every storm the sun will smile; for every problem there is a solution, and the soul's indefeasible duty is to be of good cheer." ~ William R. Alger

5.1 INTRODUCTION

The methodological considerations were discussed in Chapter 4 in detail. Chapter 5 will discuss the survey data and extract from them observations that aid in the development of the SBRMIT. The information in this chapter was compiled using the data obtained through the survey using the questionnaire discussed in Chapter 4. In order to meet the empirical objectives laid out in Chapter 1, multiple statistical analyses were conducted, and the findings and interpretations are expanded upon. The statistical analysis used includes descriptive statistics, factor analysis, frequencies, percentages, reliability, validity measures, correlation analysis and tests of differences. The empirical objectives are as follows:

- Analyse the demographical data received from small businesses in the SDMA to determine their composition (Empirical objective 1);
- Apply exploratory factor analysis on Section A to determine if small businesses can differentiate between different categories of risks that they face (Empirical objective 2);
- Apply exploratory factor analysis on Section B to determine how willing small businesses are to take risks as laid out in DOSPERT (Empirical objective 3);
- Run and interpret the SCF in Section B to determine the risk appetite of small businesses in the SDMA (Empirical objective 4);
- Apply exploratory factor analysis on Section C to determine how small businesses group risk management processes as they are displayed in theory (Empirical objective 5);
- Apply frequency analysis and descriptive analysis to determine the stance on the components identified in the factor analysis (Empirical objective 6);
- Run tests of differences using T-tests and analysis of variance (ANOVA) to determine if there were any differences between selected demographical items and components (Empirical objective 7); and
- Run item-component and inter component correlations to determine the relationships between components and selected demographical items (Empirical objective 8).

Statistical analysis was conducted using SPPS, version 25.0. As the pilot study was already addressed in Chapter 4, Section (4.6.4), this chapter will only focus on the final data from the survey. The following sections will expand on the data through means of explanation and reports on individual outputs. The first section addresses the demographic characteristics of respondents through the tabulation of frequencies obtained in the survey.

5.2 DEMOGRAPHIC CHARACTERISTICS

The demographic questions can be separated into questions relating to the business, questions relating to the owner/manager of the business, and questions relating to risk management concerns. Those questions that relate to the business are: the businesses' legal form (D2), the sector in which it operates (D1), the number of employees that they have (D3), where they are based (D4), whether a business is primarily focused on mere lifestyle or orientated towards growth (D5), and where it is located (D10). Questions that relate to the business owner are racial demographics (D7), the age of business owners (D8), the level of education of the business owner/manager (D9), what the business owner's role is in the business (D6), and how much experience the business owner/manager has in business (D11 & D12). Finally, there are questions of whether the business has dedicated risk management personnel (D13) and whether they have experience with existing risk management frameworks (D14).

5.2.1 Distribution of sample

The sample of small businesses was collected from the SDMA, which included the Emfuleni, Lesedi and Midvaal municipal areas. The reason for selecting this sample group was explained in Chapter 4. As can be seen in Figure 5.1, Emfuleni accounted for 67.5 percent of the total sample, Midvaal for 15.5 percent of the sample and Lesedi accounted for 17 percent of the total sample. The distribution of this sample is explained in Chapter 1 and Chapter 4.

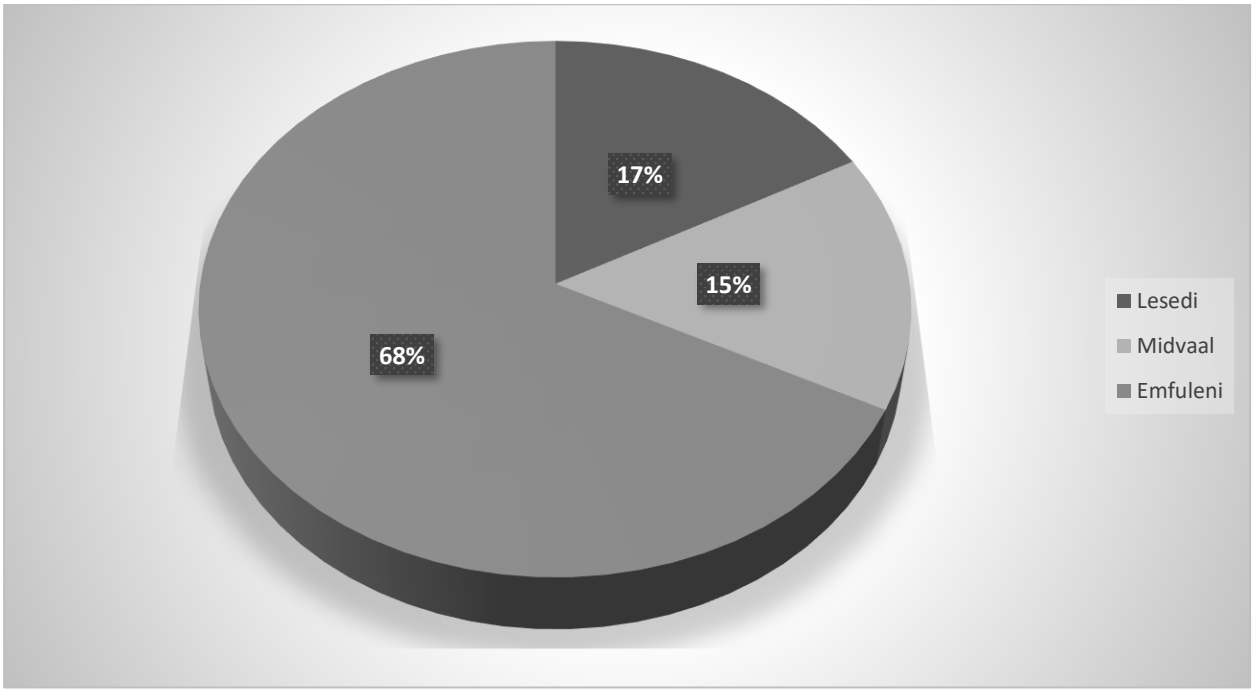

Figure 5. 1: Distribution of sample

Source: Author's own compilation

5.2.2 Industry distribution of sample

The sector distribution of small businesses in the SDMA can be seen in Figure 5.2. The majority of small businesses exist as service and trade businesses that cumulatively account for 45 percent of all small business activities within the SDMA. This means that they are trading the goods of others or intangible goods. These two figures are high in comparison with the others, indicting greater survivability and greater ease of access, as such, the focus should be primarily brought to these sectors (Oakley, 2013:33). Production, finance and manufacturing account for a cumulative 23.8 percent share of the market. The remaining 37 percent splits over all other sectors combined. When compared to the Bureau of Economic Research (BER) report from 2016, the results (shown in Figure 5.3) correspond with the results from the questionnaire with only slight variations (BER, 2016:23). The distribution of small businesses per sector within South Africa show that the largest sectors from 2016 are also the main sectors active in the SDMA.

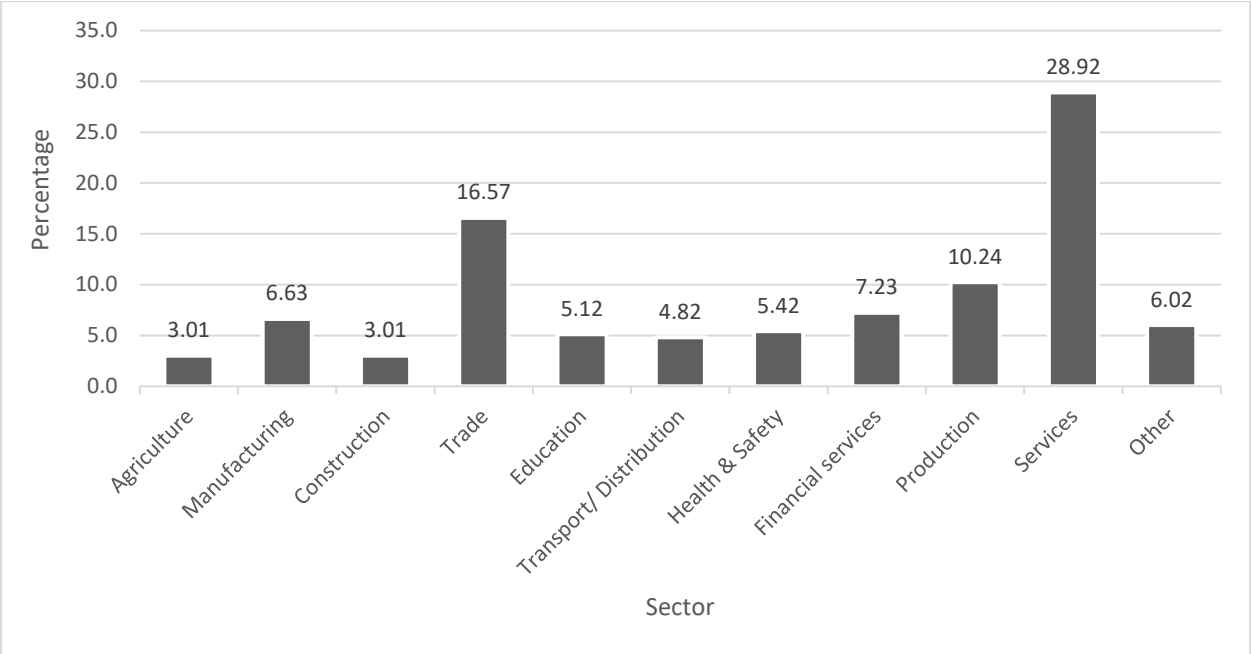

Figure 5. 2: Industry distribution of sample

Source: Author's own compilation

5.2.3 National small sector distribution

What is different between the data derived from the questionnaire and the BER (2016) report is that there is a significantly improved distribution of minor categories. This indicates a gathering of multiple skills and professions into a much smaller geographical area. The greater concentration of skills from various sectors theoretically should allow for greater opportunity for innovation and multidisciplinary tie-ins. The SDMA is a suitable location for investment into Special Development Zones (SDZ) if the focus is orientated towards multidisciplinary integration and synergetic co-operation (Kliebert, 2018:475). Within South Africa, small businesses are predominantly in trade and accommodation at 41.94 percent of total small businesses. Community, construction, finance and business services are the closest contributors at 13.57 percent, 13.29 percent and 12.07 percent respectively. The remainder of the economic classifications as reported (BER, 2016:12) are shown in Figure 5.3 for comparison.

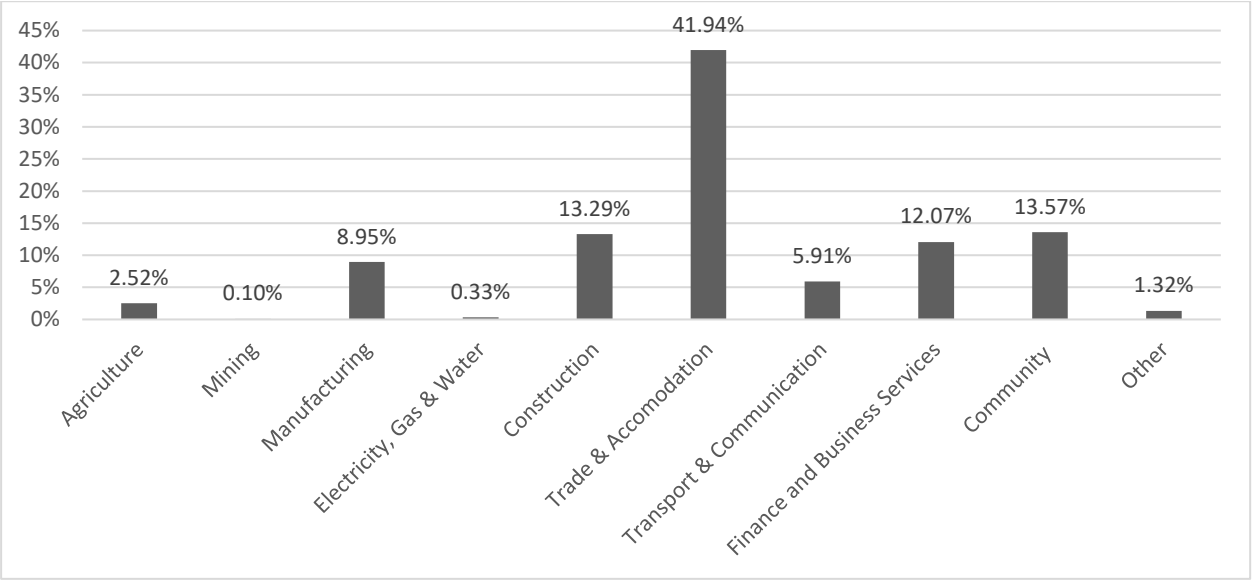

Figure 5. 3: National small sector distribution 2016

Source: BER (2016)

5.2.4 Small business legal form

One of the major qualifying criteria for inclusion into the study was that the business was formal. This study defines a formal business is defined as one small enough to abide by the national definition of a small business but large enough to have a legal form or a brick-and-mortar business venue. The sampling procedure ensured this by only approaching brick-and-mortar institutions with a physical address. The reason for excluding informal businesses is that despite the fact that a large percentage, some reports even as high as 66 percent, of small businesses within South Africa exist as informal enterprises they rarely exist as legal entities, do not have a fixed place of business, or do not survive long enough to develop managerial considerations (BER, 2017). Informal businesses were pre-emptively excluded from this research as the focus had to fall to businesses established enough to assuredly benefit from risk management intervention.

Beyond the exclusion of undesirable respondents, the legal form of a business also has major influences on matters such as the degree to which liability is distributed between the business owner and the business, how taxation will affect it, what paperwork and regulation is relevant to the business and how it can raise capital (Ebrahim *et al.*, 2019:6). The South African Companies Act of 2008 defines the legal forms of sole proprietorships, partnerships, private companies, public companies, personal liability, state-owned-, non-profit- and foreign companies. It should be noted that although close corporations are no longer allowed to be registered, as stipulated in the South

African Companies Act of 2008, they are still permitted to continue operations indefinitely, despite pressures to conform to GAAP for SMEs (Stainbank, 2008:12)

Noteworthy, as indicated in Figure 5.4, is that 13 percent of the businesses were not registered, and 2.7 percent of small businesses classified their business as other, despite there being no such category from a legal perspective. This means that the businesses still had a physical presence despite not being registered. The most prevalent form of ownership is that of a private company at 34.6 percent. Sole proprietorships come in second at only 15.1 percent of the total and partnerships only account for 10.5 percent.

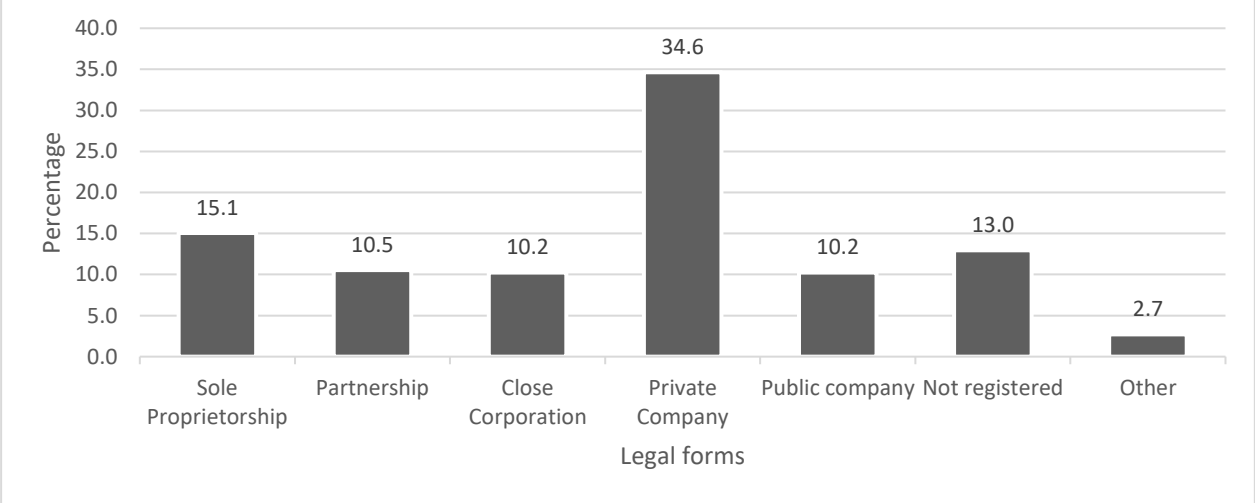

Figure 5. 4: Small Business legal forms

Source: Author's own compilation

5.2.5 Business premise

Having limited the involvement of informal businesses, it was required to know where the businesses are situated in order to frame their operations. Some businesses have no choice besides to reside in areas zoned for them, businesses dealing with industrial waste and businesses that require agricultural farm land are examples of such. The rest have a high degree of freedom and will exercise that right. The majority of the businesses exist in outlying business zoned areas (25.3%). A close second to zoned areas that are outlying is home-based businesses (23.8%). Central business districts and un-zoned outlying areas both account for 16.9 percent of small businesses in the SDMA. 8.1 percent are accounted for by industrials, 4.5 percent are located on agricultural/ farm land and 1.2 percent are classified as other. According to Meyer (2018:213), the category of home-based businesses (23.5%) can be indicative of small to micro businesses, as starting out at home is typical and includes reasons like a lack of funds and convenience.

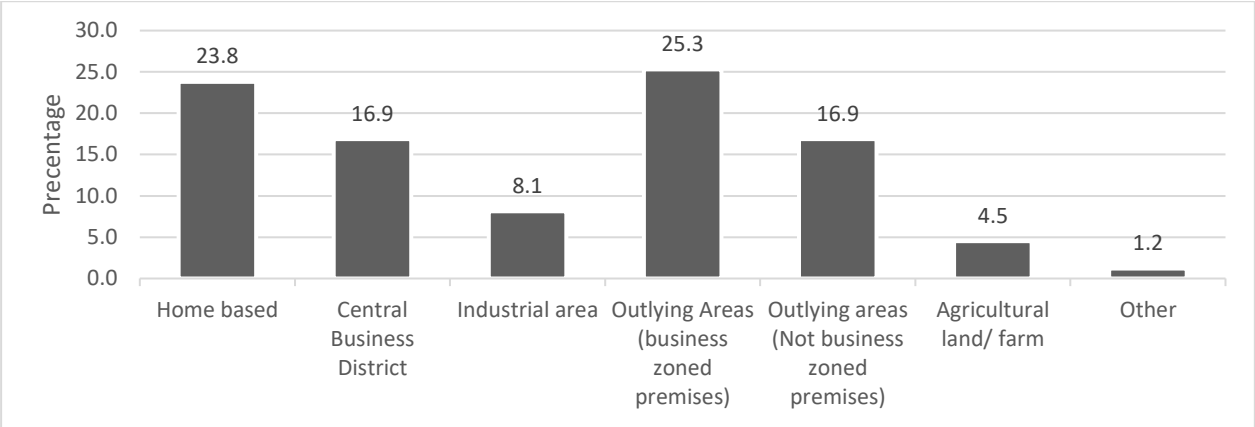

Figure 5. 5: Business premise

Source: Author's own compilation

5.2.6 Number of employees

Small businesses average eight employees per business, however, the mode sits at one with most (50%) small businesses having only between one and four employees. With so few manpower hours in a business, the risk management tool must be able to be applied quickly and maintained with little additional effort. The number of employees can be used as a proxy for the size of the enterprises that is accurate when put into perspective of the industry within which they operate.

As businesses grow it becomes harder for them to maintain their larger size (Ward, 2011:196). This is shown in Figure 5.6 where, when the number of employees rise to four, there is a sudden drop in the number of businesses that can maintain that size. The trend repeats at nine and at 22 employees indicating increasing levels of difficulty at these points. This difficulty rises starkly, as only 10 percent of the overall sample had employee numbers above 22 employees and only 30 percent of businesses had more than eight. The graph suggests that thresholds exist at which point the difficulty to employ additional staff increases. The first threshold identified is at the five employee mark, then 10 employees, then 24 employees.

Running this with a sample of medium and large enterprises with a sample of at least 1 000 (350 small businesses, 350 medium businesses and 300 large businesses) respondents might elucidate this observation more clearly and it is suggested that an additional study be conducted to ascertain the validity of this effect. If proven true in future studies, the theoretical thresholds might be able to serve as generalised indicators for the need of greater managerial intervention or as indicators of difficulty in the businesses. This is, however, increasingly subjective as different industries would have different cut off numbers, but still deserves further exploration.

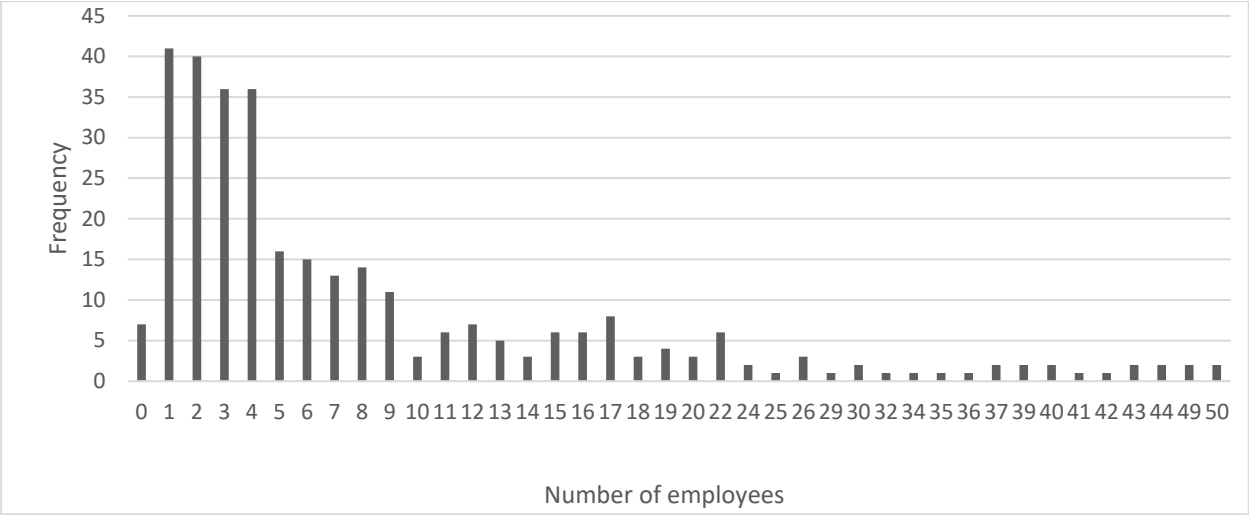

Figure 5. 6: Employee frequency distribution

Source: Author compilation

5.2.7 Business style

When the respondents were asked how to describe their business, they were given the option between "Lifestyle business" and "High growth business". This question was primarily asked to determine whether the small business had the intention to only sustain itself or whether it had the intention to grow into a corporation. The former would explain a lower willingness to take risk, while the latter would be indicative of being more ambitious and, thus, more risk aggressive businesses. The former is characteristically orientated towards smaller markets, deeper relationships with its clientele and smaller economic volumes (Masurel & Snellenberg, 2017:9). Additionally lifestyle business owners aim primarily to feel satisfied in their careers, earn enough to maintain a respectable earning and allow for time for what is important to them in their personal lives (Marcketti *et al.*, 2006:242). What was found is that 38 percent of the businesses were lifestyle businesses and 62 percent of the businesses intended to grow their business larger. The second reason this question was asked was to determine how valuable the ability oto integrate or transition to an established standard like COSO or ISO would be to the small business, as it grows with growth-oriented businesses being the party that it would be built for.

As can be seen in Figure 5.7, there is a clear intention by the majority (62%) of businesses to develop their enterprises to the best of their ability. As such, the risk management intervention tool had to account for the fundamental risk management principles as well as the fundamental risk management processes in all standards. These were collected and analysed in Chapter 2 and, subsequently, reworked to be simplified enough to be combined into a set of reworked principles

to be preliminarily incorporated into the small business's managerial considerations. Additionally, the risk management tool was constructed to bear structural similarity to other established risk management standards, although it has been drastically simplified. This ensures the ability of risk personnel to easily transition to them when the time is right.

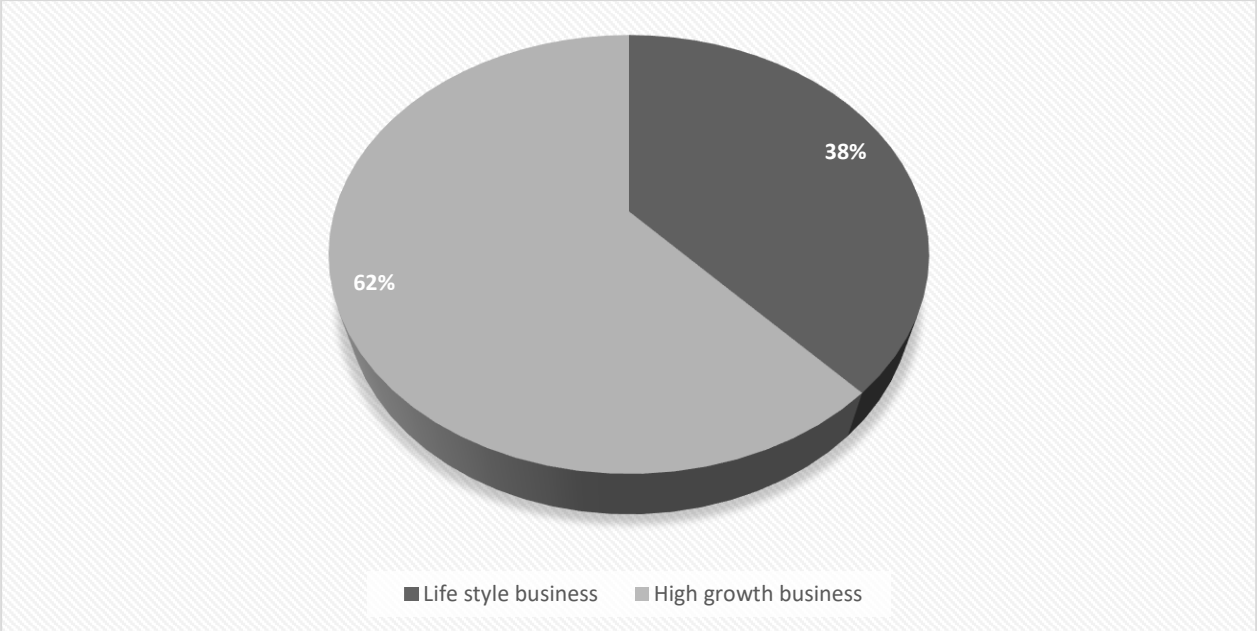

Figure 5. 7: Description of the business style

Source: Author compilation

5.2.8 Owners influence

The presence of the small business owner was investigated to determine whether it was the business owner or manager who filled in the questionnaire. This was important in this study because this informs the intervention tool regarding for whom the tool must be formulated. As illustrated in Figure 5.8, 73 percent of the questionnaires were filled in by the owner of the business and the remaining 27 percent were filled in by managers. Thus, the risk management intervention tool was formulated for the small business owner, although, it was beneficial for use by the manager as well. This translates to a colloquial use of language in the tool and ease in application through example and discussion that is simplified to a high school learner level of difficulty.

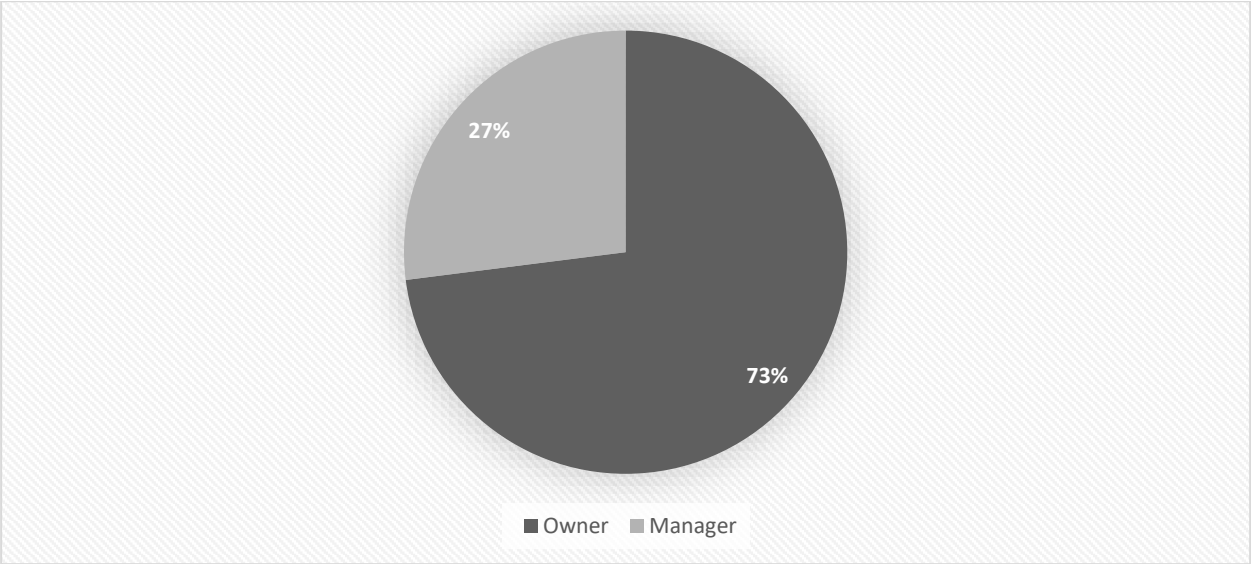

Figure 5. 8: Distribution of owner influence

Source: Author compilation

5.2.9 Racial distribution

Figure 5.9 shows that national formal small ownership by race was 71 percent black, four percent white, 21 percent Indian and four percent for mixed in 2016 (BER 2016). When comparing the data gathered from the respondents of the questionnaire (Figure 5.10) it was found that small ownership by race from the sample drawn in the SDMA varied substantially from former national estimates. Black small business owners in the SDMA account for 42 percent, whites account for 36 percent, Indian and Asian populations account for 12 percent and mixed-race accounts for 10 percent. This translates to black small business representation that is 59 percent below national averages, white representation that is nine times as high as national averages, Indian/ Asian representation that is 1.75 times lower than national averages and mixed-race representation that is two and a half times larger than national averages. This may, however be due to the chosen sampling strategy (non-probability) and better representation would probably be obtained through a probability sample in future.

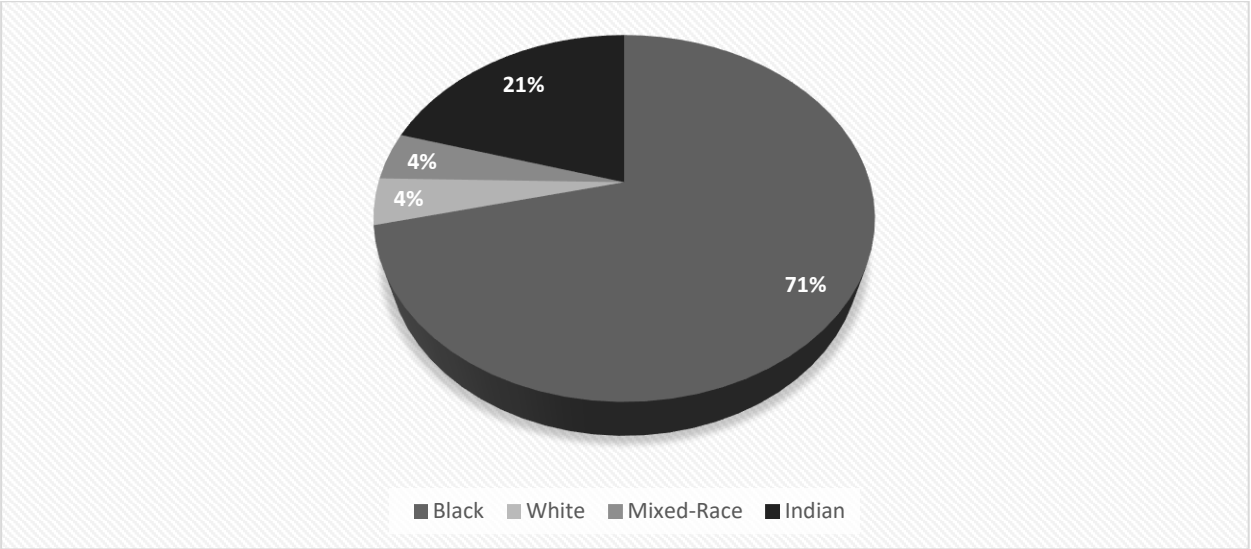

Figure 5. 9: Racial distribution of SMME owners

Source: BER (2016)

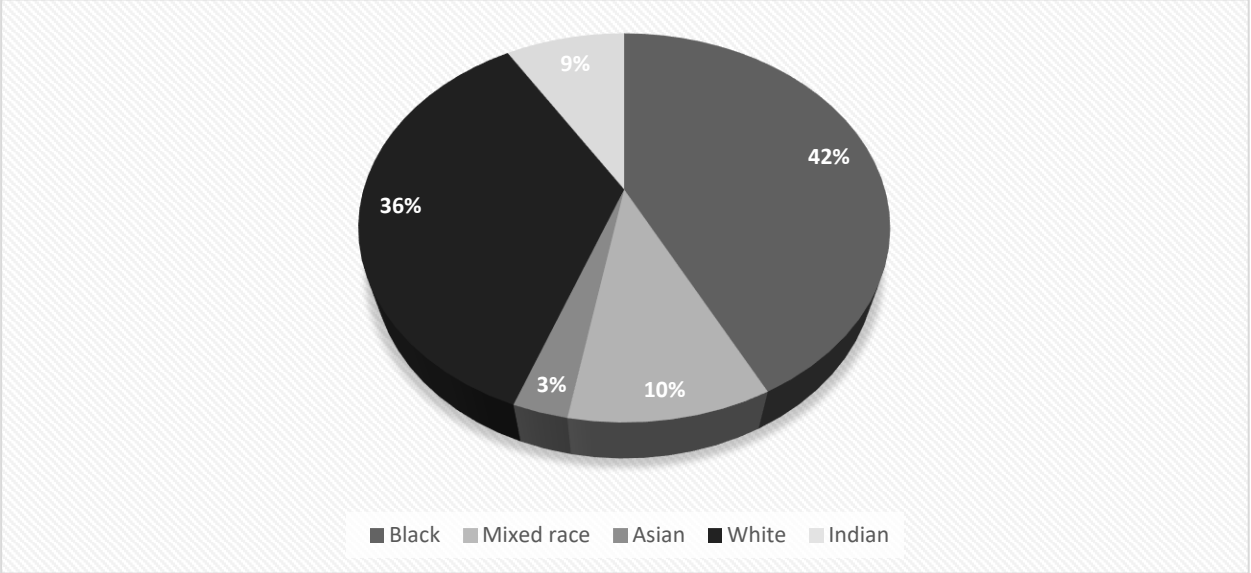

Figure 5. 10: Racial distribution SDMA 2019

Source: Authors compilation

5.2.10 Age of business owner or manager

The age distribution of small owners falls predictably in line with the investor life cycle (Smith, 2019:4). Initially they accumulate resources. which accounts for people from 21 to 40 years of age. This represents approximately 60 percent of all small owners in the SDMA. The age group of 41 to 50 years show a major decrease in the number of small business owners, which is in line with when consolidation would take place as there is a 50 percent drop in the number of small

businesses in this category in contrast to the former. There is only a two percent increase in the numbers from 41 to 50-year category to the 51 to 60-year category, which can be argued as the manifestation of the known effect of increased risk taking in the declining stages of the life cycle (Habib & Hasan, 2018:2). Numbers then drop to early pre-accumulation stage levels as most people aged greater than 61 enter their spending phase as they approach the end of their lives. Age distribution of the sample is also in line with the Global Entrepreneurship Monitor 2014 report, which states that early entrepreneurial activity tends to be low at the age category of 18 to 24 years, it peaks during the age group of 25 to 34 and then declines thereafter, following an inverted U-shape (Herrington *et al.*, 2015:28). This falls in line with an inverted U theory that argues that when the likelihood of becoming an entrepreneur is maximised there is a peak in that action (Lévesque & Minniti, 2011:270). This is proven true as entrepreneurship is maximised at 31 to 40 years and spikes again at 51 to 60 years. At the 31 to 40 year category, potential entrepreneurs have acquired both skills and resources and thus apply themselves in their entrepreneurial pursuits. This repeats at the point where early retirement becomes possible.

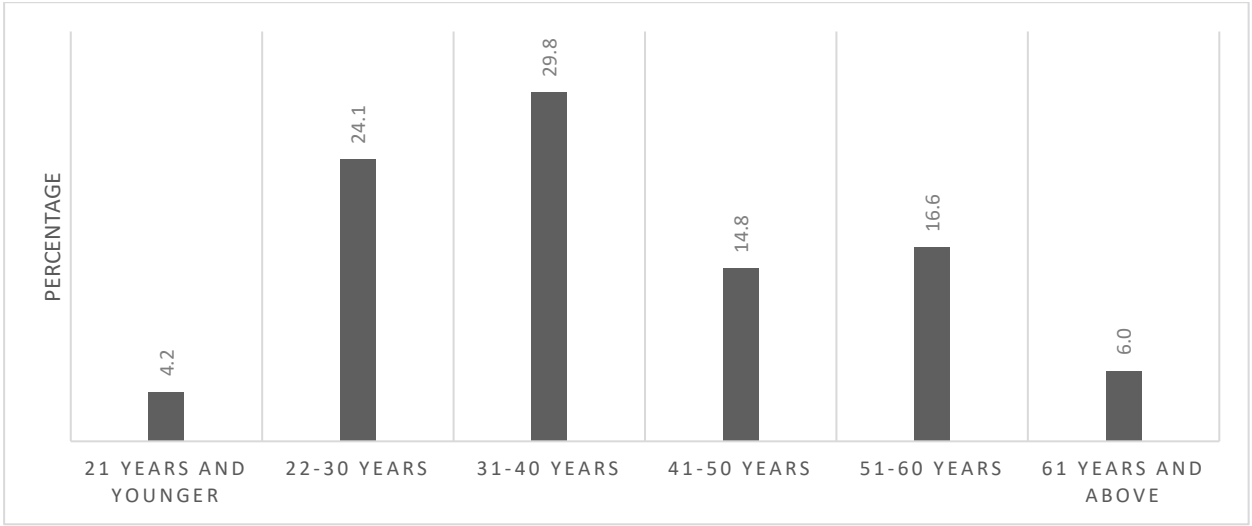

Figure 5. 11: Age of owner/manager

Source: Author compilation

5.2.11 Level of schooling

This study assumed that business respondents had a basic level of literacy, numeracy, understanding of the industry it was in and some degree of managerial competence. Education, in terms of this study, referred to the degree of education of the respondents. This was included into the questionnaire to determine if there was some correlation between education and entrepreneurial success. The general consensus is that at least primary education is important (Kolstad & Wiig,

2010:14-15), however, the effect of higher levels of education on entrepreneurial success is still contested (Maycotte, 2015). Figure 5.12 shows that nearly one in every five small business owners do not have a matric certificate or similar level qualification. Furthermore, 29 percent of participants have a university degree, 42 percent have a certificate or a diploma and 29 percent did not have a qualification higher than matric. The number of SMME owners with a degree is the same as those with up to a matric. Indicating that a high level of education is not needed to enter into entrepreneurial activity. Whether or not a higher degrees of education correlates to higher degrees of success is not a conclusion that can be drawn with the data gathered and it is suggested that a study be conducted to ascertain the relationship between the two.

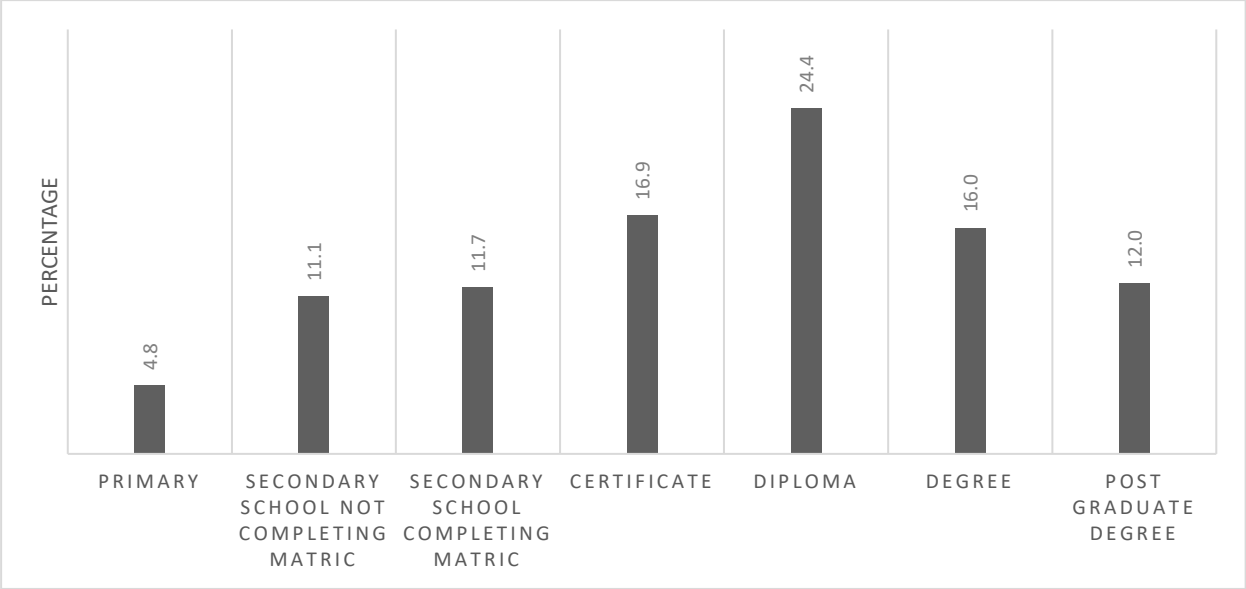

Figure 5. 12: Level of schooling

Source: Author compilation

5.2.12 Years of management experience

In the theory from Chapter 3 it was found that a great deal of SMME failure was as a result of poor management. Managerial skills are just that, skills, as such the amount of time spent practicing them would affect the capacity of a business to apply the managerial acumen needed when facing business challenges. This is proven by the high number of components that correlate with years of experience. In order to gauge the managerial experience that small business owners have in their businesses, respondents were asked to indicate the number of years of managerial experience that they had. This question also gave an indication of the age of the business. It was found that most (75%) of small business owners in the sample only had one to five years' experience. Whereas, the remaining 25 percent accounted for six to 40 years of experience. Moving into the six to 10

years category saw a drop to 13 percent. Which then dropped to four percent in the 11 to 15 years' category and dropping by a percent every subsequent year. It was also found that 75 percent of small businesses fail in the first five years that they are active (SEDA, 2018:4). As has been discussed in Chapter 3 the reason for the low number of small businesses in later years could be bound strongly to the reasons of small business failure, however, it could also be strongly correlated with the life cycle of small business owners in later years (Habib & Hasan, 2018:8).

Figure 5. 13: Years of managing current business

Source: Author compilation

5.2.13 Presence of a risk manager

Most small businesses (82%) do not have any kind of dedicated risk management officer. As can be seen in Figure 5.15, 18 percent of small businesses in the sample do not have a dedicated risk personnel member. This was in line with the findings from a study conducted by Kruger (2017), which showed that small businesses had difficulty in differentiating between risks and applying the risk management processes that would help alleviate their risk exposures. Chapter 3 also created the expectation that a dedicated risk management officer was not to be expected, as specialisation is unlikely when the work is varied and employees are few as is the case in small businesses.

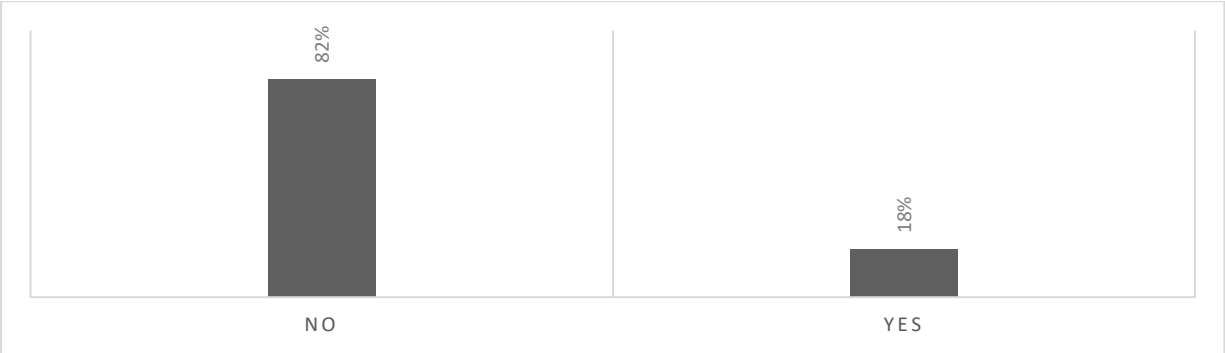

Figure 5. 14: Presence of a dedicated risk management personnel

Source: Author compilation

5.2.14 Risk standard compliance

When Figure 5.14 is compared with Figure 5.15, 71 percent of small businesses in the sample did not apply any risk management standards. Of the remaining 29 percent, 6 percent fell in the other category. This category constituted of phrases like “my own”, or “self-managed” and only rarely included standards like ISO 9001 or the like, thus it should be noted that this category could be included into that category of “None”. The remaining 23 percent was distributed between the ISO 31000 standard (8%), ARMS (6%), COSO (5%) and CoCo (4%). When the 82 percent of people who have no dedicated risk management personnel is compared with the 77 percent of businesses who fall in the “None” or “Other” compliance categories, there is 5 percent deviation between the two. This means that only 5 percent of small businesses try to apply risk management standards without having a dedicated personnel member to do so. This indicates that small businesses do not initially prioritise risk management. Mazzei *et al.* (2015) confirms this effect stating that the initial innovation is often traded in for more conservative business strategies once they have effectively established themselves.

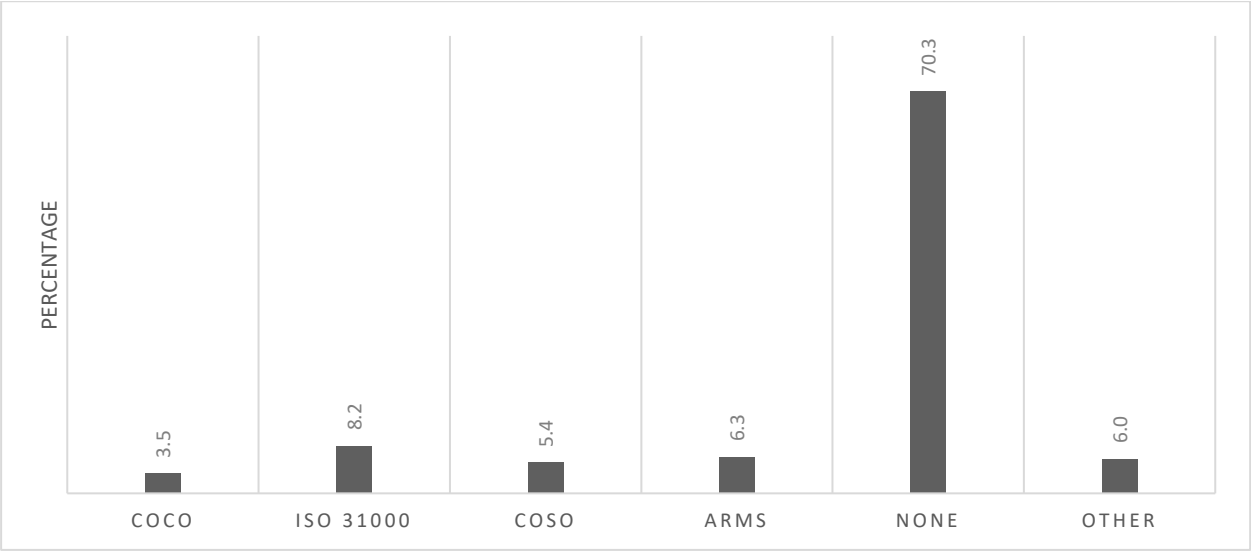

Figure 5. 15: Risk standard compliance

Source: Author compilation

5.3 EXPLORATORY FACTOR ANALYSIS (EFA)

Factor analysis (FA) is the statistical process of refining or reducing data into factor groupings by means of analysing the relationships between interrelated variables (Field, 2009:431; Malhotra, 2010:774). This section of the study discusses the EFA that was run on sections A, B and C of the questionnaire. Prior to running the EFA, the data had to be tested for suitability and intercorrelation. This was done by means of running a Kaiser- Meyer- Olkin (KMO) and Bartlett's test of sphericity. Multicollinearity between variables was also tested for, by means of using Pearson's correlation.

Before a FA can be performed it must be tested for sampling adequacy. The KMO measures specifically for this. A KMO will give a value between zero and one with higher values indicating a better adequacy factor. A KMO value was affected by sample size and Pallant (2013:185) stipulates that a minimum sample of 150 respondents (this sample is 332) is required before adequacy can be reasonably expected. Furthermore Pallant (2013:190) suggests a ratio of at least five cases per variable. In this study, the sample (332) yielded a ratio of 24 cases for each variable. According to the theory underlying KMO, there are categories for sample adequacy (Malhotra *et al.*, 2012:776). Broadly, a score of 0.0 to 0.04 is considered inadequate and a factor between 0.5 to one is considered adequate for factor analysis. Further categorisation is suggested by Malhotra *et al.* (2012:638), Field (2009:659) and Kaiser (1994:32), who argue that up to five categories of adequacy can be differentiated and they are: Inadequate: less than 0.5, Average: 0.5-0.7, Good:0.7-0.8, Great: 0.8-0.9 and Superb: greater than 0.9.

The KMO and Bartlett's test of sphericity was extracted from the three sections of the questionnaire from the items used to inform the constructs. The KMO values are reported under every subsection. Bartlett's test of sphericity was used as an identity matrix to examine if each variable correlates with itself but does not correlate with any of the other variables (null hypothesis) (Malhotra *et al.*, 2012:775). In terms of factor extraction (analysis of eigenvectors), this research study made use of principal component analysis (PCA) and applied Oblimin with Kaiser normalisation. In order for FA to be appropriate, the Bartlett's test of sphericity should be significant ($p<0.05$) (Field, 2009:660). In this case, the null hypothesis for the Bartlett's test of sphericity was significant where p-values for sections A, B and C were less than 0.05. All sections had a statistical significance of $p<0.000$. The chi-squared and degrees of freedom are shown for each subsection individually. An eigenvalue can be used as an aid in factor extraction as it represents the amount of variance associated with each factor. Factors with an eigenvalue less than 1.0 are considered insufficient and, as such, any factor that does not have at least an eigenvalue of one was not considered (Malhotra 2010:638). Kaiser's criterion states that a component can only reliably be considered valid if it produces an Eigen value of one or greater (Pallant, 2016:193). Assuming that the components have an Eigen value of one or greater, the cumulative variance criterion is used report on the cumulative variation explained by the proposed components (Hair *et al.*, 2010:109).

5.3.1 EFA on Section A

The 14 items in Scale A were analysed using principle component analysis and the rotation method employed was an Oblimin method with Kaiser normalisation in SPSS, version 25. Prior to performing the principle component analysis, the KMO and Bartlett's test of sphericity were analysed to ensure data suitability for Section A. This provided a KMO score of 0.64, which is considered the average in adequacy and exceeds 0.6, which is the recommended value. The Bartlett's test of sphericity showed an approximate chi-squared of 464.82, with 91 degrees of freedom and was shown to be significant where $p=0.000 <0.05$. Resultantly factor analysis can be considered appropriate for Section A. Item groupings are shown in Table 5.1.

Once the suitability of factor analysis had been confirmed, Section A was shown to have three components with eigen values over one, with a cumulative variance of 39.30 percent. The Oblimin rotation revealed the presence of the theoretically supported simple substructures in the scale, shown in Table 5.1. Component one, was subsequently labelled Liquid capital management and accounted for 16.96 percent of total variance. Component two was labelled Externalised risk and explained 12.86 percent of variance. Component three, received the label Concept of risk and

explained 9.49 percent of the variance. The components extracted are consistent with how small businesses perceive risks and their relation to it. The components maintained weak correlations between each other (0.01 to 0.036).

Table 5. 1: Pattern and structure matrix for Section A

Item	Pattern coefficients			Structure coefficients			Communalities
	Component A1	Component A2	Component A3	Component A1	Component A2	Component A3	
A8	**0.68**			**0.68**			0.48
A7	**0.68**			**0.69**			0.55
A5	**0.60**			**0.59**		0.31	0.41
A6	**0.58**		0.29	**0.60**			0.49
A11	**0.50**			**0.51**			0.27
A14		**0.60**			**0.60**		0.40
A13		**0.56**			**0.56**		0.33
A10		**0.55**			**0.55**		0.32
A9		**0.53**			**0.53**		0.32
A12		**0.52**			**0.53**		0.31
A4			**0.72**			**0.72**	0.54
A1			**0.60**			**0.60**	0.43
A2			**0.41**		-0.36	**0.40**	0.32
A3	-0.29		**0.31**	-0.28		**0.32**	0.25

Note: Major loadings are bolded and groupings shaded

Source: Author compilation

5.3.2 EFA on Sections B

The 16 items in Scale B were analysed using the same processes as scale A. This provided a KMO score of 0.76, which is considered to represent good adequacy and exceeds 0.6 which is the recommended value. The Bartlett's test of sphericity showed an approximate chi-squared of 710.66, with 120 degrees of freedom and was shown to be significant where $p=0.000<0.05$. Resultantly, factor analysis can be considered appropriate for Section B. Item groupings are shown in Table 5.2.

Once the suitability of factor analysis had been confirmed Section B was shown to have four components with eigen values of over one with a cumulative variance of 39.60 percent. The Oblimin rotation revealed the presence of the theoretically supported simple substructures in the scale, shown in Table 5.2. Component one was labelled as, Willingness to take unnecessary risks and accounted for 19.408 percent of total variance. Component two was labelled as, Willingness to take financial risks and explained 12.25 percent of variance. Component three was labelled as, Willingness to take on personal risks and explained 7.94 percent of the variance. The components

extracted are consistent with how small businesses perceive risk and their relation to it. The components maintained weak correlations between each other (-0.20 to 0.05).

Table 5. 2: Pattern and structure matrix for Section B

Item	Pattern coefficients			Structure coefficients			Communalities
	Component B1	Component B2	Component B3	Component B1	Component B2	Component B3	
B7	**0.7**			**0.71**			0.54
B13	**0.66**			**0.66**			0.51
B2	**0.65**			**0.65**			0.43
B9	**0.64**			**0.6**			0.49
B17	**0.60**			**0.61**			0.38
B14	**0.47**			**0.48**			0.43
B11		**0.58**			**0.54**		0.53
B6	0.44	**0.56**	0.359		**0.54**		0.55
B5		**0.51**		0.47	**0.51**		0.31
B3	-0.43	**0.47**			**0.49**		0.43
B12		**0.47**		-0.41	**0.48**		0.32
B15		**0.45**			**0.47**		0.54
B16			**-0.73**			**-0.75**	0.56
B4			**-0.72**			**-0.71**	0.47
B10	0.39		**-0.44**	0.39		**-0.44**	0.37
B8			**-0.29**			**-0.34**	0.19

Note: Major loadings are bolded

Source: Author compilation

5.3.3 EFA on Sections C

The 17 items in Scale C were analysed using the same processes as scale A. This provided a KMO score of 0.92, which is considered to be excellent for expressing adequacy and well above 0.6 which is the recommended minimum value. The Bartlett's test of sphericity showed an approximate chi-squared of 1848.13, with 136 degrees of freedom and was shown to be significant where p=0.000 <0.05. Resultantly factor analysis can be considered appropriate for Section C. Item groupings are shown in Table 5.3.

Once suitability of factor analysis had been confirmed, Section C was shown to have three components with eigen values of over one with a cumulative variance of 52.64 percent. The Oblimin rotation revealed the presence of the theoretically supported simple substructures in the scale, shown in Table 5.3. Component one was named Risk identification and accounted for 38.15 percent of total variance. Component two was named Risk intervention and accounted for 7.89 percent of variance. Component three was named Employee risk feedback and explained 6.61 percent of the variance. The components extracted are consistent with how small businesses

perceive risk and their relation to it. The components maintained moderate to weak correlations between each other (-0.49, 0.33 and -0.38).

Table 5. 3: Pattern and structure Matrix for Section C

Item	Pattern coefficients			Structure coefficients			Communalities
	Component C1	Component C2	Component C3	Component C1	Component C2	Component C3	
C9	**0.76**			**0.69**			0.49
C10	**0.62**			**0.67**	-0.44	0.43	0.47
C8	**0.59**			**0.56**	-0.42	n/a	0.32
C12	**0.57**			**0.68**	-0.37	0.49	0.32
C14	**0.56**		0.31	**0.65**	-0.42	0.45	0.51
C13	**0.50**		0.25	**0.63**	-0.49	0.31	0.46
C11	**0.49**			**0.62**			0.44
C3		**-0.81**		0.35	**-0.80**	0.34	0.65
C4		**-0.78**		0.33	**-0.78**	0.35	0.61
C1		**-0.77**		0.28	**-0.78**	0.40	0.52
C2		**-0.74**		0.36	**-0.71**		0.62
C6		**-0.57**		0.49	**-0.66**		0.48
C5	0.30	**-0.44**		0.59	**-0.63**	0.32	0.37
C7	0.36	**-0.43**		0.55	**-0.57**	0.34	0.50
C15	0.34	**-0.37**		0.48	**-0.55**		0.43
C16			**0.81**	0.39	-0.37	**0.86**	0.75
C17			**0.86**		-0.34	**0.85**	0.73

Note: Major loadings are bolded

Source: Author compilation

5.4 RELIABILITY ANALYSIS

Cronbach alphas are used in tandem with inter-item correlations to ensure that the data are reliable. Prior to the dissemination of the following sections it should be noted that the scales contained less than 10 items per grouping. This is important to note, as fewer items could potentially result in lower Cronbach alphas (Field, 2009:675). Although a generally accepted Cronbach alpha value of 0.8 is appropriate for tests in hard sciences and can have a cut-off point as low as 0.7, in the social sciences, a value of around 0.6 can still be expected and remain valid (Field, 2009:675; Hair *et al.*, 2010:166; Kline, 2013). Additionally, since the scales were comprised of various subscales it is suggested that the Cronbach alphas be applied separately to each subscale (Field, 2009:675; Pallant, 2010:345). Having analysed the factors, they must now be tested for reliability. The reliability statistics are summarised in Table 5.4.

Table 5. 4: Component summary table

Comp	Component label	Mean	SD	Cronbach Alpha	Inter-item correlation	Reliability
A1	Liquid capital management	2.60	0.58	0.62	0.25	YES
A2	External risk	2.68	0.58	0.54	0.19	YES
A3	Conceptualisation of risk	N/A	N/A	0.27	0.08	NO
B1	Willingness of the owner/manager to take health and safety risks	2.13	0.65	0.73	0.31	YES
B2	Willingness of the owner/manager to take social risks	N/A	N/A	0.45	0.12	NO
B3	Willingness of the owner manager to take financial risks	N/A	N/A	0.43	0.15	NO
C1	Risk identification	4.10	1.03	0.80	0.36	YES
C2	Risk intervention	4.18	1.08	0.86	0.43	YES
C3	Employee risk feedback	4.36	1.43	0.72	0.56	YES

Source: Author Compilation

The Cronbach alpha of Component A1 is 0.62 with an inter-item correlation of 0.25, thus proving the reliability of this scale. Component A1 consisted of three variables relating to pure liquidity risk and one factor relating to operational risk. The questions were grouped together as Liquid capital management, seeing that the operational risk relates to disparities in the availability of cash. Liquidity capital management has been shown to be a major factor in small business survival, sustainability and growth (Edem, 2017:147; SEDA, 2018:19).

The Cronbach alpha of Component A2 is 0.54, which is below the score of 0.60 that is considered acceptable, however, with an inter-item correlation of 0.250, reliability can still be assumed. When scales are smaller than 10 items the inter-item correlation can be reported as an alternative to the Cronbach alpha as long as the value is between 0.15 and 0.55 (Clark & Watson, 1995:309-319; Gliem & Gliem, 2003:85). Component A2 addresses questions that relate to externalised risk factors and includes considerations pertaining to government interference, changes in interest rates, exchange rates and operational risks outside of the business owner/ manager's personal control. These factors group together to discuss the business environment, over which a business has no control (Waeibrorheem & Suriani, 2016:1324).

The Cronbach alpha of Component A3 is 0.27 with an inter-item correlation of 0.08, in this event Component A3 is not reliable as the Cronbach alpha and inter-item correlation is too low. Component A3 addressed questions designed to determine whether the participant understood risk as a concept. Risk can be classified as pure risk, opportunity risk, or control risk (Marx & de

Swardt, 2013:30; Valsamakis *et al.*, 2013:33; Hopkin, 2018:45). If this factor proved significant it would mean that the perspective that the small business owners had of risk could be determined, however, with the results given it cannot.

Section B used the SCF scale that stands on its own and is interpreted separately, along with a modified DOSPERT scale to determine the risk-taking behaviours of the small business owner/ manager to determine how prone to risk taking behaviours they were across the built in subscales (Blais & Weber, 2006). Components B1, B2 and B3 speak to the DOSPERT portion of this interpretation. Component B1 related to the risks that addressed health and safety risk taking behaviours. The Cronbach alpha of Component B1 is 0.73 which is sufficient for reliability purposes. Component B2 addressed social risk taking and Component B3 addressed financial risks, respectively. Component B2 and Component B3 have Cronbach alphas of 0.49 and 0.43 and inter-item correlations of 0.12 and 0.15, respectively and are thus not to be considered reliable and were not included in further analysis.

Section C was set up to determine how regularly individually identifiable risk management principles were applied within the business. The frequency of which would indicate how often the individual processes of risk management were addressed, conceptually this would serve to show what aspects of risk management small businesses emphasise in practice. The interpretation of frequencies for Section C is shown in Section 5.3.3. Section C was intended to produce components that matched the steps laid out in theory (Valsamakis *et al.*, 2013:48). This would allow for the identification of the gaps in particular risk management processes in the business, arguing that a lower frequency of interaction with a particular risk indicated a lower concern for the small business persons (Highhouse *et al.*, 2017:403).

The factor analysis in this section was used to determine if the small business owners would group the various questions relating to the individual risk management steps together as is found in theory, or whether they would group them atypically (Marx & de Swardt, 2013:30). What was found is that the section factored out to three instead of the expected six grouping. This indicates that small business owners/ managers' perception of risk management processes are conceptually or cerebrally grouped differently from theory and can serve as a motivating factor for more clearly separated risk management processes in practice (Highhouse *et al.*, 2017:403).

Despite the variation between theory and practice components, C1, C2 and C3 have shown to hold the highest Cronbach alphas at the values of 0.80, 0.86 and 0.72, respectively. Component C1 can be grouped as Risk identification as the questions relate to concepts in which actions are taken to

actively identify risks. Component C2, Risk intervention, serves as a grouping of questions that show the managerial tendencies of the small business owner as all the items used in this component deal with considerations and interventions notably within the hands of only the owner of the enterprise. Component C3, Employee risk reporting, creates a clear separation between the involvement of the owner/ manager and the employees in the business. The conglomeration of steps indicates the lack of risk awareness and a shallow understanding of best practice risk management (Valsamakis *et al.*, 2013:48; Hopkin, 2018:35). Subsequently, it should be noted that for the risk management intervention tool proposed by this study to meet the intended goal, requires an explicit listing and discussion of the elements that comprise it which is done in chapter 6 .

5.5 FREQUENCY AND DESCRIPTIVE ANALYSIS

Determining the component item factor, provides the researcher with insights to how the items relate to each other, in the context of the recipient. However, they do not discuss the outcomes of a particular group. Frequency and descriptive analysis can be used to determine how far off a small business is from the theoretical ideal and to identify the particularities of a group of recipients in practice. The data gathering tool, the questionnaire, was explained in Chapter 4. A total of 332 questionnaires were gathered of which a total of 316 questionnaires were deemed to be usable. The difference of 16 questionnaires were excluded based on insufficient completion, as they were missing more than 10 percent of their content. The frequencies relating to the questionnaires are shown in Appendix B and have been arranged into the groupings assigned to them during the exploratory factor analysis. As discussed in Section 5.3 the components that were excluded in the factor analysis and reliability testing sections have been excluded in this section but a full transcription of the frequencies is added in Appendix B. Items A5, A6, A7, A8 and A11 were reverse scored as they were asked as negative statements. The most prevalent frequencies have been bolded.

The mean for Component A1 was 2.60 and the standard deviation, the degree to which results vary, was 0.58 when rounded up to two decimal places. It was found that the participants were willing to enforce debt collection and would prioritise the payment of their employees above paying their own creditors and purchasing business resources and supplies. The legal repercussions of not paying employees on time is a ground that creates sufficient motivation for a business to threaten its long-term stability for short-term liquidity (Finn, 2015:46). The purchase of supplies and payment of creditors allow business operations to proceed smoothly, as the proof of credit worthiness engenders the extension of additional credit in the supply chain (Belás *et al.*, 2015:48).

What can be stated from the results presented is that small business owners/ managers prioritise addressing legal risks. Whether the business needs to decide between paying their employees or paying their debt and purchasing stock is not indicated but worth investigation. Frequency distributions are shown in Table 5.5.

Table 5. 5: Descriptive analysis for components A1 and A2

Risk identification:				
Component A1: Liquid capital management			**Mean:** 2.60	**Standard Deviation:** 0.57
Scale Item	**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**
RA5	49	**122**	109	47
RA6	60	104	**135**	29
RA7	49	116	**132**	31
RA8	72	**146**	71	38
RA11	52	114	**118**	41
Component A2: External risk awareness			**Mean:** 2.68	**Standard Deviation:**0.58
Scale Item	**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**
A9	52	79	**126**	68
A10	41	97	**125**	64
A12	42	93	**116**	77
A13	43	82	**118**	83
A14	55	77	**124**	72

Source: Author compilation

SCF analyses the risk financial tolerance of participants (Blais & Weber, 2006) by analysing the conglomeration of the greatest number of responses. In the case of small business owners, the SCF showed that the majority of them were either risk averse to very risk averse. Risk tolerance is a measure of how psychologically averse a respondent is to taking financial risks and is related to factors, such as the age, income and financial goals of the individual in question (Kuzniak *et al.*, 2015:179). Taking risk is an essential aspect of business, if no risk is taken, economic profits cannot be made, thus it is essential to produce the means by which to safely do so. This can be done through the application of a formal risk management system. However, accounting for the general propensity of small businesses' unwillingness, or inability, to adopt these systems (shown in Figure 5.15), it is imperative that an alternative be made available to them that is easy to apply whilst addressing the essential components of risk management. Despite the general aversion to risk, approximately 22 percent of them remain risk aggressive and 18 percent very risk aggressive. This emphasises that the small business owners in the SDMA are mostly risk averse by nature and

this could be used as a good addition to a discussion on the motivations of starting and maintaining a small business in the SDMA. Frequency distributions are shown in Table 5.6.

Table 5. 6: Student Consumer Finance scale analysis

SCF	Very risk aggressive	Risk aggressive	Risk averse	Very risk averse
B1	54	76	**97**	93

Source: Author compilation

To test risk taking behaviour among small business owners the DOSPERT scale was used to measure risk taking over the domains of health and safety, financial risks and social safety. Component B1 was intended to determine whether there were risk taking propensities that were consistent amongst small business owners. The mean of Component B1 is 2.13 and the standard deviation is 0.65. What was found is that results varied significantly in the domains of finance and social safety but was consistent in regard to health and safety. What was shown was that small business owners were risk averse, but this can only be reliably reported in regard to their own health and safety. This is an important consideration when presenting a risk management intervention as it is likely that they will adopt it if there is sufficient motivation on its benefits (Highhouse *et al.*, 2017). Frequency distributions are shown in Table 5.7.

Table 5. 7: Component B1: Willingness of the owner/manager to take health and safety risks

Component B1: Willingness of the owner/manager to take health and safety risks			**Mean:** 2.13	**Standard Deviation:** 0.65
Scale Item	**Very unlikely**	**Unlikely**	**Somewhat likely**	**Very likely**
B2	**181**	54	55	36
B7	**145**	77	62	37
B9	**155**	68	57	47
B13	**152**	66	69	37
B14	**92**	81	87	66
B17	**130**	72	54	68

Source: Author compilation

Section C was used to determine the frequency at which the small businesses believed themselves to be addressing their risks through the various processes of risk management. Component C1 addressed how regularly risks are identified by the small risk manager. The ideal in this regard is that risk interventions run continuously, identified and assessed through reporting, communication and monitoring of risks. Five to ten percent of the respondents had never actively applied risk identification and a third to half of the respondents stipulated that they apply risk identification

daily or monthly. While this might be, preliminarily, considered sufficient when accounting for start-up considerations, it was found that small businesses have a misconception of the risks their business face until their effects are realised in the business (Kruger, 2017:116). Although a mean of 4.10 would strongly indicate that small businesses apply risk identification monthly, there is still a full degree of standard deviation (1.03) in these results. Frequency distributions are shown in Table 5.8.

Table 5. 8: Component C1: Risk identification

Component C1: Risk identification			**Mean:** 4.10		**Standard Deviation:** 1.03	
Scale Item	**Never**	**Annually**	**Bi-Annually**	**Monthly**	**Weekly**	**Daily**
C1	36	35	18	72	61	**104**
C2	27	35	43	**75**	71	**75**
C3	27	38	41	**85**	66	69
C4	26	37	33	**83**	78	68
C5	19	36	30	73	72	**94**
C6	20	30	4	**87**	72	71
C7	29	23	32	69	72	**96**
C15	14	30	34	**91**	86	70

Source: Author compilation

Component C2 addressed the questions that collectively addressed the treatment, reporting and monitoring and reaction planning of risks by management at a mean of 4.18, this meant that they were, on average, treating their risk monthly. However, the standard deviation of 1.08 would imply that this range extends from bi-annually through to weekly. The frequency with which small businesses declared their risk interventions indicates how regularly they engage with their identified risks. However, it does not speak to how efficiently they address those risks. Half of the individual processes required to manage risks have been grouped together under Component A2, this brings into question what informs the small business's idea of risk intervention and what they would define as a sufficient risk intervention. When compared to Figure 5.13, only one in every four small businesses survived beyond five years; this would suggest that what interventions the small business owner implements are not enough for survival.

To combat the phenomenon of small business failure requires a clear definition of the individual procedures required to conceptually address the concept of risk intervention in context of the small business. This definition must account for the particularities of its individual constituent parts and only unify those parts into a singular approach once they have accounted for the theoretical

knowledge and practical procedures that would qualify it as sufficient and allow it to be adopted by the enterprise. To this end, the SBRMIT accounts for a great deal of academic theory and is written as a practical procedure. The SBRMIT clearly defines and addresses each of the four risk management procedures grouped by Component C2 and systematically allows each individual process to be addressed separately from the other processes. The frequency distributions are shown in Table 5.9.

Table 5. 9: Component C2: Risk intervention

Component C2: Risk intervention			**Mean:** 4.18		**Standard Deviation:** 1.08	
Scale Item	**Never**	**Annually**	**Bi-Annually**	**Monthly**	**Weekly**	**Daily**
C8	62	59	34	**87**	45	37
C9	32	31	35	75	57	**91**
C10	22	27	35	75	77	**87**
C11	16	41	30	**85**	80	64
C12	33	19	31	**92**	71	77
C13	21	19	36	77	80	**92**
C14	25	30	28	**86**	78	76

Source: Author compilation

Component C3 addresses the questions that related to the interaction of employees in relation to the risk management of the business. The mode for all the questions in C3 reported daily incorporation of employee insights into the risk management process of the business. The mean was 4.36 and the standard deviation is 1.43. C3 represents the risk monitoring and reporting that is actuated and guided by employees in the business. Risk reporting embodies how information on risks within a business are grouped (Aven, 2014:1655). Information consists of performance evaluations, event and action reports, business audits, procedures used to audit the organisation and new experiences and information gathered between reviews (IRM, 2002:5). Small businesses have few major decision makers and flat business structures allowing for quick responses to events and rapid dissemination of new information (Aven, 2014:1655). To incorporate this benefit into the SBRMIT requires that the reporting be quickly capable of being revised and tracked, but remain simple. The reporting section of the SBRMIT encourages and guides a small business towards accomplishing this feat. Frequency distributions are shown in Table 5.10.

Table 5. 10: Component C3: Employee risk reporting

Component C3: Employee risk reporting			**Mean:** 4.36		**Standard Deviation:** 1.43	
Scale Item	**Never**	**Annually**	**Bi-Annually**	**Monthly**	**Weekly**	**Daily**
C16	29	17	37	71	73	**98**
C17	33	21	36	56	64	**115**

Source**:** Author compilation

5.6 TESTS OF DIFFERENCES

This study includes independent variables, as such, testing for differences is necessary when looking at whether the growth ambitions of the small businesses or the presence of what a small businesses owner would describe as a dedicated risk manager had any effect on the components identified. Testing the variables for differences was done through independent sample one way T-tests as the answers were binary in nature. A T-test is a type of inferential statistic used to determine if there is a statically significant difference between the means of two potentially related groups. A T-test compares the mean values of two data sets and is used as a hypothesis testing tool (Malhotra, 2010:42). A T-test takes a sample from each of the two sets and establishes the problem statement by assuming a null hypothesis that the two means are equal. If the null hypothesis qualifies to be rejected, it indicates that data readings are strong and are not by chance.

It was also deemed necessary to test for differences based on which municipal area the respondents were in and their level of education by means of independent one way sample ANOVA tests, since there were more than two groups (Pallant, 2016:55). ANOVA is used to determine whether a relationship exists between independent variables and dependent variables and if they have an effect on each other. The ANOVA compares more than two groups at the same time to determine whether a relationship exists between them. This study employs a unidirectional ANOVA as it determines if there are any statistically significant differences between the means of three or more independent groups.

Once the hypothesis tests have been concluded a Cohen's D must be calculated to determine the effect size of the differences between groups. The Cohen's D value is calculated using the formula:

$$\text{Cohen's D} = (\bar{x}_1 - \bar{x}_2 \div \sqrt{[(\sigma_1^2 + \sigma_2^2) \div 2]}) \qquad \text{equation 1}$$

The Cohen's D value indicates by how many standard deviations groups vary from each other. The result thereof is that the Cohen's D value rises as the difference between the two groups increase (Cohen, 2013:109). If significance is proven through a T-test or ANOVA, an effect size

can then be attributed to it. The traditional effect sizes are considered to be 0.2 or below for a small effect, 0.5 for a moderate effect and 0.8 for a large effect (Cohen, 2013:110). However, values are not limited between zero and one and can extend as many deviations as is necessary. It should also be noted that it is the significance of an effect and not the effect size that should be given priority, especially where small deviations can have a large effect. as such if the p-value does not indicate statistical significance ($p \leq 0.05$) the effect size cannot be considered reliable (Durlak, 2009:922).

5.6.1 Hypotheses to be tested

As stipulated, T-tests and ANOVAs are run to test differences by means of hypotheses. A hypothesis is a statement or set of statements that are constructed from theory and observations which attempt to explain a phenomenon and its accompanying nature. The rejection of the null hypothesis is indicative that the alternative hypothesis is accepted. The null and alternative hypotheses are set as opposing statements. Traditionally, a confidence level of 0.05 is considered acceptable (Pallant, 2016:242). A confidence level of 0.05 means that the possibility of the results being random and coincidental only has a 5 percent, or one in 20, chance. This study sets its confidence level at 5 percent.

High-growth and lifestyle businesses have different priorities beyond remaining in business (Fraser *et al.*, 2015:75). High-growth businesses must be more willing to pursue more business opportunities and, therefore, take on a greater amount of risk (Ateljevic & Doorne, 2000:380). As such it is plausible that they address risk differently. High-growth businesses may be more risk aggressive since they are pursuing higher profits than lifestyle businesses and how they perceive and manage their risks could also possibly vary (Kirkwood, 2016:600). The aforementioned initiated the formulation of the following hypothesis.

$H_0 1$: There is no significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small business owners that identified as high growth businesses and those identified as lifestyle businesses.

$H_a 1$: There is a significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small business owners that identified as high growth businesses and those identified as lifestyle businesses.

Chapter 2 extensively discusses risk management, its processes, benefits, steps, principles, objectives and frameworks. Chapter 3 also discussed how small business owners traditionally have challenges in implementing and managing risk in their businesses. A T-test was run to determine whether small businesses had what they would consider to be a risk manager and whether there was a difference between them in terms of the components. The aforementioned guided the formulation of the following hypothesis.

$H_0 2$: There is no significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small businesses that have a dedicated risk manager and those that do not.

$H_a 2$: There is a significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small businesses that have a dedicated risk manager and those that do not.

Different municipalities have different demographics, budgetary limitations and governing bodies (Gherehs *et al.*, 2016:952). The variations between municipalities translates to variations between the environments in which the businesses in the sample operates in (Gherehs *et al.*, 2016:952). The aforementioned initiated the formulation of the following hypothesis.

$H_0 3$: There is no significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small business in different municipal areas.

$H_a 3$: There is a significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small business in different municipal areas.

The study decided to explore if education had an effect on risk management in small businesses to determine whether there was a credible relationship between business success and higher levels of education. It should be noted that although the education of the small business owners was queried, it was done in a general sense; thus, the responses relate to training relating to the industry in which they found themselves. Traditionally, education has been shown to have an effect on the entrepreneurial capacities of a business (Quinlan *et al.*, 2019:53). The aforementioned initiated the formulation of the following hypothesis.

H_04: There is no significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small business owners' different levels of education.

H_a4: There is a significant difference in liquid capital management, external risk awareness, willingness of a small business owner to take health and safety risks, risk identification, risk intervention and employee risk feedback between small business owners' different levels of education.

5.6.1.1 **Differences based on business styles**

Table 5.11 shows the results of the independent sample T-test used to determine if there were significant differences between high-growth and life-style businesses. What was found is that all of the components showed no statistically significant differences with all the p-values being greater than the value of 0.05. Therefore, in the case of Components A1 Liquid capital management, A2 External risk awareness, B Willingness of the owner/manager to take health and safety risks, C1 Risk identification, C2 Risk intervention, C3 Employee risk feedback and business style, there is insufficient evidence to reject the null hypothesis (H_01). Thus, it is concluded that there is no difference between high-growth and lifestyle businesses in relation to components A1 Liquid capital management, A2 External risk awareness, B Willingness of the owner/ manager to take health and safety risks, C1 Risk identification, C2 Risk intervention, C3 Employee risk feedback. Cohen's D was used to measure for effect sizes and they ranged from 0.01 to 0.14 showing small effects (individual effect sizes are shown in Table 15.11). As none of the values proved significant, neither the means, standard deviations, or Cohen's D were reported on beyond what was already discussed in the frequency analysis in Section 5.5 and showed in Table 5.11.

It is sensible that there is no significant difference between high growth and lifestyle businesses as small businesses face a variety of challenges in regard to their small size, such as poor management skills which come about from a lack of skills training (Audretsch, 2005:112; Havenga, 2008:64; Preuss, 2011:800; Moos, 2015:62); provisions planning, cash flow management and inaccurate bookkeeping (Havenga, 2008:66); and poor marketing, incomplete advertising campaigns and poor feedback (Preuss, 2011:799). IThese challenges that make it difficult for a small business, regardless of its style, to address liquidity shortfalls, face external risks, identify risk, effectively intervene and treat risks, set up and maintain risk feedback from employees or change the risk averse nature of small business owners.

Table 5. 11: T-test results for the differences between components and business styles

Business style		N	Mean	Std. Deviation	p-value	Effect sizes
A1 Liquid capital management	Life style business	121	2.63	0.58	0.50	0.08
	High growth business	196	2.59	0.58		
A2 External risk awareness	Life style business	121	2.62	0.52	0.19	0.14
	High growth business	196	2.71	0.61		
B Willingness of the owner/ manager to take health and safety risks	Life style business	120	2.10	0.64	0.48	0.08
	High growth business	196	2.15	0.65		
C1 Risk identification	Life style business	119	4.10	1.08	0.95	0.01
	High growth business	195	4.09	0.96		
C2 Risk intervention	Life style business	119	4.09	1.14	0.27	0.12
	High growth business	195	4.23	1.04		
C3 Employee risk feedback	Life style business	119	4.26	1.53	0.40	0.09
	High growth business	195	4.40	1.35		

Source: Author compilation

5.6.1.2 **Differences based on presence of a dedicated risk manager**

Table 5.12 shows the results of an independent sample T-test to determine if there was a significant difference between the small business owners in regard to the whether they had a dedicated risk manager. The respondents were divided into the two groups. None of the components showed statistically significant differences with p-values all being greater than the value of 0.05, which was required. Therefore, in the case of A1 Liquid capital management, A2 External risk awareness, B Willingness of the owner/manager to take health and safety risks, C1 Risk identification, C2 Risk intervention, C3 Employee risk feedback and the presence of a dedicated risk management there is insufficient evidence to reject the null hypothesis ($H_0 2$). It is concluded that for the aforementioned components, there are no observable differences between the groups and dedicated risk management. As none of the values proved significant, the means and the standard deviations were not reported on beyond what was discussed in the frequency analysis section.

When compared to the qualitative results of a study conducted by Kruger (2017:116) the results presented here confirm and reaffirm the disparity between what small business owners consider thorough risk management and what is good risk management. This is sensible since the majority of small business owners (77 percent) do not apply any risk management standards, as could be seen in Figure 5.12. Some small businesses (23 percent) might be aware of risk intervention frameworks like ISO 9100 but there is no statistically different effect in their ability to identify

risks internally or externally, treat, or report on risk in general. As the T-test indicates, a small business risk manager does not have a significant effect on any of the components discussed. This strongly indicates a disparity between risk management and the documented benefits thereof, and what small business people are applying in their capacities.

Table 5. 12: T-test results for the differences from the presence of a dedicated risk manager

Does the business have a dedicated risk manager?		N	Mean	Std. dev	p-value	Effect sizes
A1 Liquid capital management	Yes	58	2.62	0.61	0.86	0.03
	No	243	2.61	0.58		
A2 External risk awareness	Yes	58	2.69	0.50	0.99	0.00
	No	243	2.68	0.60		
B Willingness of the owner/manager to take health and safety risks	Yes	58	2.26	0.68	0.09	0.25
	No	242	2.09	0.64		
C1 Risk identification	Yes	57	4.28	1.08	0.09	0.24
	No	241	4.01	1.01		
C2 Risk intervention	Yes	57	4.35	1.18	0.18	0.20
	No	241	4.12	1.05		
C3 Employee risk feedback	Yes	57	4.59	1.45	0.15	0.21
	No	241	4.28	1.45		

Source: Author compilation

5.6.1.3 **Test of differences between different municipalities**

This analysis tested for differences between various municipal areas and numerous components set out in $H_0$3.

Table 5. 13: ANOVA results for differences between components in different municipalities

D10. In which municipality is your business situated in?		N	Mean	Std. Dev	Std. Error	P-value	Effect size	
							Lesedi with:	Midvaal with:
A1 Liquid capital management	Lesedi	55	2.49	0.58	0.08			
	Midvaal	50	2.67	0.42	0.06	0.25	0.31	
	Emfuleni	218	2.61	0.61	0.04		0.19	0.11
A2 External risk awareness	Lesedi	55	2.43	0.54	0.07			
	Midvaal	50	3.04	0.64	0.09	0.00*	0.95	
	Emfuleni	218	2.65	0.54	0.04		0.6	0.6
B Willingness of the owner/manager to take health and safety risks	Lesedi	55	2.54	0.47	0.06			
	Midvaal	50	1.51	0.37	0.05	0.00*	2.22	
	Emfuleni	217	2.18	0.64	0.04		0.57	1.06
C1 Risk identification	Lesedi	55	3.46	0.93	0.13			
	Midvaal	50	4.54	0.80	0.11	0.00*	1.16	
	Emfuleni	215	4.14	1.02	0.07		0.67	0.39
C2 Risk intervention	Lesedi	55	3.68	0.89	0.12			
	Midvaal	50	4.61	0.99	0.14	0.00*	0.94	
	Emfuleni	215	4.19	1.10	0.08		0.46	0.38
C3 Employee risk feedback	Lesedi	55	3.55	1.37	0.18			
	Midvaal	50	4.72	1.46	0.21	0.00*	0.81	
	Emfuleni	215	4.47	1.36	0.09		0.68	0.17

Source: Author compilation

A one-way ANOVA was conducted to compare the components with the municipal area within which the respondent was located and the results are displayed in Table 5.13. The municipal areas that are compared are Midvaal, Emfuleni and Lesedi. In order to determine if any of the components were significantly different an ANOVA was run and the p-values analysed. The p-values for A2 External risk awareness, B Willingness of the owner/manager to take health and safety risks, C1 Risk identification, C2 Risk intervention and C3 Employee risk feedback were all 0.000 and thus below the significance value of 0.05.

Thus, in the case of the aforementioned components there is sufficient evidence to reject the null hypothesis (H_03) and the alternative hypothesis (H_a3) is accepted. This indicates that there were

identifiable differences between them. However, for Component A1 Liquid capital management there was insufficient evidence to reject the null hypothesis ($H_0 3$), as its p-value exceeds 0.05. Thus, only for component A1 Liquid capital management there are no significant differences between different municipal areas.

Cohen's D was used to measure the effect sizes and they ranged from 0.38 to 2.22 showing moderate to large effects (individual effect sizes are shown in Table 15.14). Of the three municipal areas, Midvaal had the highest levels for liquidity capital management ($\bar{x}$=2.67), external risk awareness ($\bar{x}$=3.04), risk identification ($\bar{x}$=4.54), risk intervention ($\bar{x}$=4.41) and employee risk feedback ($\bar{x}$=4.72) and Lesedi had the highest level for willingness of the owner/manager to take health and safety risks ($\bar{x}$=2.54).

The Games-Howell (Appendix C) indicated that, in the case of the municipal area in which the small business was situated, it showed observable differences between Lesedi, Midvaal and Emfuleni municipalities and external risk awareness, willingness of the small business owner/ manager to take health and safety risks and risk identification. Lastly, it was found that there were notable differences in terms of employee risk feedback between Lesedi and both Midvaal and Emfuleni, but not between Emfuleni and Midvaal.

The differences are sensible as different municipal areas come with their own economic, political and demographic dynamics that shape how policy is implemented therein (Neethling, 2016:56). Table 5.14 tabulates economic differences for a more explicit comparison. Of the indicators presented by (Global-Insight, 2016) the most apparent differences are in the fields of: Population growth, which is 0.9 percent of Emfuleni as opposed to the average growth rate of 2.7 percent of the other municipalities; population density that is 10 times greater in Emfuleni than in either of the other municipalities; lower than average human development scores in Lesedi and Emfuleni; variation in degrees of urbanisation with Emfuleni in the lead at 97.1 percent; higher poverty rates in Emfuleni at 41.7 percent; unemployment rates varying from 23.5 percent in Midvaal to 44.9 percent in Emfuleni; and average household income, which is more than three times that of Emfuleni. As can be seen, there are factors that are likely to contribute more in terms of themotivation to engage in entrepreneurship between municipalities and multiple contexts that frame the behaviours of small business owners/ managers. Further investigation is advised to ascertain which of these indicators are correlated with risk taking and risk management behaviours.

Table 5. 14: A comparison of economic indicators

Indicator:	Gauteng	Lesedi	Emfuleni	Midvaal
	2015	2015	2015	2015
Demographic information				
Population growth rate	2.1%	2.9%	0.9%	2.6%
Household size	3.1	3.2	3.3	3.2
Population density*	722.1	72.2	757.7	60.7
Economic development indicators				
Human development index	0.72	0.67	0.68	0.73
Gini coefficient	0.64	0.66	0.63	0.63
Level of urbanisation	95.3%	59.1%	97.1%	56.7%
Infrastructure basic index	0.83	0.79	0.86	0.77
Crime index****	117.1	97.40	93.5	127.8
Social economic development indicators				
Poverty Levels**	34.1%	38.8%	41.7%	26.5%
Literacy ***	90.9%	88.4%	89.1%	87.6%
% of Households in Informal Housing	21.6%	31.1%	17.8%	29.9%
Economic growth indicators				
Tress Index	49.9	38.4%	54.4	37.7
Economically Active Population	49.1%	42.9%	45.0%	47.9%
Trade Surplus per Capita (R1 000)	-1.2	-3.6	-4.0	1.8
Average Income per Household (x1000)	226.4	165.6	89.1	307.9
Unemployment	26.3%	37.4%	44.9%	23.5%

*Number of people per km² ** Share below upper poverty line ***Functional literacy: age 15+, completed grade 7 or higher ****Weighted average/ 100 000 people

Source: Global-Insight (2016)

Author Compilation

5.6.1.4 **Differences based on level of education**

The next analysis tested for differences between levels of education and numerous components set out in $H_0$4.

Table 5. 15: ANOVA results for differences between components and the level of respondent education

D9. What is your current level of education?		N	Mean	Std. Dev	Std. Error	Sig.	Effect size	
							Basic with:	Tertiary with:
A1 Liquid capital management	Basic	92	2.62	0.56	0.06			
	Tertiary	190	2.60	0.60	0.04	0.72	0.04	
	Post	40	2.53	0.51	0.08		0.16	0.11
A2 External risk awareness	Basic	92	2.71	0.65	0.07			
	Tertiary	190	2.66	0.56	0.04	0.48	0.08	
	Post	40	2.59	0.52	0.08		0.2	0.14
B Willingness of the owner/manager to take health and safety risks	Basic	92	2.18	0.71	0.07			
	Tertiary	190	2.08	0.63	0.05	0.21	0.14	
	Post	39	2.26	0.57	0.09		0.11	0.28
C1 Risk identification	Basic	92	4.05	1.21	0.13			
	Tertiary	188	4.06	0.97	0.07	0.52	0.01	
	Post	39	4.26	0.84	0.13		0.17	0.2
C2 Risk intervention	Basic	92	4.00	1.29	0.13			
	Tertiary	188	4.22	1.00	0.07	0.14	0.17	
	Post	39	4.35	0.92	0.15		0.28	0.14
C3 Employee risk feedback	Basic	92	4.02	1.67	0.17			
	Tertiary	188	4.47	1.32	0.10	0.04*	0.27	
	Post	39	4.49	1.28	0.20		0.28	0.01

Source: Author compilation

A one-way ANOVA was conducted to compare the components with the current level of education of the respondent. The mean and standard deviation is presented in Table 5.14. It was found that the current level of education had a significant effect only on Component C3 as the p-value for this component was 0.04 and thus smaller than the significance level p-0.05. The Games-Howell (Appendix D) indicated that in the case of the current level of education there were no significant observable differences except for Component C3 Employee risk feedback. The difference was between basic and tertiary education. Cohen's D was used for effect sizes and they ranged from 0.01 to 0.28 showing only small effects.

In the case of component C3 there is sufficient evidence to reject the null hypothesis (H_04), thus for Component C3 the null hypothesis is rejected and the alternative hypothesis (H_a4) is accepted. In the case of components A1 Liquid capital management, A2 External risk awareness, B

Willingness of the owner/manager to take health and safety risks, C1 Risk identification and C2 Risk intervention, there was insufficient evidence to reject the null hypothesis.

The results are interesting as it would suggest that there is a relationship between the level of education of a small business owner and the regularity with which employees provide feedback, but not with their ability to identify and treat risks, better manage liquidity, or moderate risk exposure. The fact that the difference is between basic and tertiary education implies that tertiary graduates are more likely to report the risks they face. This implies that the lack of risk reporting from employees is as a result of a lack of industry-specific knowledge. What must be remembered is that that the education that the small business owner received is likely a combination of business experience and training on the technical aspects of the industry in which he/she operates. Thus, risks that relate to the operations of a business was a matter they are well aware of. The gap thus exists in their training, as it relates to management and skills outside of the technical scope of their industry.

Within the Component C1 there is a trend of a rising mean frequency of risk reporting by employees with every additional level of education provided. At the level of basic education, the mean ($\bar{x}$=4.02) is lower and standard deviation (σ=1.67) is higher than for tertiary education ($\bar{x}$=4.47; σ=1.32) or post tertiary education ($\bar{x}$=4.49; σ=1.28). This consideration is sensible as higher levels of education, or additional education and training allow for a clearer reporting criterion, criteria that the small business owner was not aware of prior to being educated (Lichny & Pon, 2015:546). It is already known that small businesses tend to maintain flat hierarchies and that the employees are in constant communication with the business owner/ manager as a result of proximity (April, 2005a:24). This allows for regular feedback and updates on matters that the employee believe to be their responsibility. However, it is interesting to consider that a higher level of education allows for the perception of more frequent communication.

5.7 CORRELATIONS

Correlations show the relationships between variables and describe the strength and direction of those relationships (Pallant, 2016:132). A two-tailed Spearman correlation test was employed to determine the correlation between factors. According to Burns *et al.* (2017:382-384), coefficients come in five ranges, very strong (+/-0.81 to +/-1.00), strong (+/-0.61 to +/-0.80), moderate (+/-0.41 to +/- 0.60), weak (+/- 0.21 to +/-0.40) and very weak (+/-.20 or below). The direction of the relationship can be negative or positive. A positive relationship is also called a direct relationship and a negative relationship is called an indirect relationship. When items are directly correlated

this means they move in the same direction and an increase or decrease in the one has a direct effect on the other, which will also increase or decrease as the other one does. The degree to which the change in one affects the other is determined by the strength of the relationship, indicated by the correlation coefficient.

5.7.1 Component to item correlation

Having briefly described how correlation works, this section discuss the results of the correlation. The results of the correlation test between demographic items and components are displayed in Table 5.16 and discussed in the sequence of the components thereafter.

Table 5. 16: Summary correlations

Component	D3: Employee Numbers	D8: Age of business owner	D9: Education	D11: Years of experience	D12: Age of business
A1, Liquid capital management	0.03	-0.08	0.01	0.06	0.01
A2, External risk awareness	0.04	0.18**	-0.01	0.16**	0.19**
B, Willingness to take health and safety risks	0.05	-0.22**	-0.05	-0.44**	-0.38**
C1, Risk identification	0.29**	0.14*	0.02	0.08	0.09
C2, Risk intervention	0.19**	0.17**	0.10	0.13*	0.12*
C3, Employee risk feedback	0.22**	0.21**	0.10	0.11	0.13*

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

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

Source: Author compilation

Component A1, Liquid capital management does not correlate with anything significantly, neither does the current level of education of the business owners. Component A2, External risk awareness, correlates positively with the age of the business owners (0.18), the years of experience the business owner has accumulated (0.16) and the age of the business (0.19). This is sensible because as small business owners become more aware of the risks they face and translate the effects of external risks into the context of their own businesses. Furthermore, the investor lifecycle theory supports this notion in that it has been proven that people tend to become more risk averse as their earning potential declines, as their age increases (Smith, 2019).

Component B is a measure of the willingness for small business owners to take health and safety risks. What was found is that there is a negative correlation between the willingness of small business owners to take risks and that they were less willing (negatively correlated) to take risks as their age (-0.22), business experience (-0.44) and the age of the business (-0.38) increased. Small business owners in the Sedibeng district municipal area regard their employees as their first responsibility amongst the components identified in this study. As was seen by their willingness to forgo purchasing additional stock, which would benefit the business, or paying their debtors on time, which would allow the business greater liquidity in the future, but instead, they focus on paying their employees. Subsequently, small business owners do not take risks with their own health and safety that could jeopardise all their employees and the business. This tendency increases with the age of the business owner, business experience and the age of a business as frailty starts to settle in, in later years (Albert & Duffy, 2012:6).

Component C1, risk identification showed weak correlation with the age of business owners (0.14) and the number of employees that the business (0.29) had. This is intuitive as the ability to identify risks is a matter of experience. The age and experience of a business owner allows them to pull from their own life experience, a greater the number of employees allows for a wider awareness of risks and more manpower hours in which to identify them. Component C2, risk intervention was weakly correlated with the number of employees (0.19), the age of business owners (0.17), the years of business experience the small business owner (0.13) had and the age of the business (0.12). How well a business knows to address the risks it faces is a matter of experience and foresight. The passing of time allows for the acquisition of more experience. The more man hours that have been put into a business, through the multiplication of time that additional employees contribute and the experience of the business owners, through all the years the business has been active and the business owner has gained experience, the better its ability to intervene. Component C3, employee risk feedback is weakly correlated with the number of employees (0.22), the age of business owners (0.22) and the age of the business (0.13). These factors explain that risk communication is something prioritised as the business owners become more aware of their limitations through experience. The greater the number of employees, the more likely it is that feedback on risks was provided and the longer the business is active the more likely it was that employees and business owners will experience risk events that can be reported on.

5.7.2 Inter-component correlations

This section analyses the correlation that exist between components.

Figure 5. 16: Inter component correlation

Components:	A1	A2	B	C1	C2	C3
A1, Liquid capital management	1.000					
A2, External risk awareness	-0.19**	1.000				
B, Willingness to take health and safety risks	-0.25**	-0.18**	1.000			
C1, Risk identification	0.03	0.26**	-0.13*	1.000		
C2, Risk intervention	0.04	0.22**	-0.07	0.63**	1.000	
C3, Employee risk feedback	-0.08	0.24**	-0.08	0.46**	0.49**	1.000

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

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

Source**:** Author compilation

Components do not only relate to demographic items but also correlate between each other. Component A1 and A2 accounts for Scale A: risk identification. Component A1, Liquid capital management correlates weakly and negatively with Component A2 (-0.19). The management of liquid capital is a matter of internal managerial efforts, while external risk awareness is orientated towards externalised risks. From Chapter 3 discussions of the limitations of small businesses (Section 3.3, 3.4, 3.5, 3.6 and 3.7), it can thus be argued that time spent managing eternal risks detracts from time that can be spent managing the internal risks. As such the negative correlation between the two is sensible. The effect is small, however, and this is because, as either of them improves it inherently aids the other and, as such, as the business grows it is likely that the correlation will invert.

Component A1, Liquid capital management correlates weakly (-0.25), with the willingness to take health and safety risks. This is sensible as the more limited a small business' liquid capital is the more unwilling it was to take risks and ignore Component C3, Employee feedback, (-0.02) which in turn protects them from new and immediately relevant risks. Component A1, Liquid capital management also correlates weakly and positively with Component C1, Risk identification, (0.03) and Component C2, Risk intervention (0.04). These correlations are very weak; however, this is not to say that it must be ignored. The very low correlation between Component C1, risk

identification and Component C2, risk intervention, speaks to the lack of a relationship that, as a theoretical ideal, should exist between them and Component A1, Liquid capital management endeavours. During risk identification and risk intervention, estimated on losses and costs of managing risks are developed to allow for better resource allocation needed to address potential risks (Hopkin, 2018:72). The fact that these do not correlate is indicative of a deficiency in small business risk management. In order to address this the SBRMIT discussed in Chapter 6 explicitly guides these processes so that they may be addressed sufficiently to create a better link between these concepts.

Component A2, external risk awareness, correlates with Component B weakly and negatively (-0.18). This is sensible, as a higher awareness of the risks that the business faces the less likely unnecessary risk-taking behaviours become (Valsamakis *et al.*, 2013:55). Component A2, External risk awareness, correlates with Component C1, risk identification (0.26), Component C2, risk intervention (0.18) and Component C3, Employee risk feedback (0.24). The more aware of those risks over which the business has no control, the more the business seeks to identify and intervene those risks. The small business is also more likely to encourage feedback on risks that the employees can identify to aid in this process.

Component B, willingness for small business owners to take health and safety risks, accounts for Scale B, risk taking with DOSPERT. Even though Scale B accounted for three of the five domains of DOSPERT only the Willingness of the owner/ manager to take health and safety risks factored significantly. Component B correlates weakly and negatively with Component C1 (-0.13), Component C2 (-0.07) and Component C3 (-0.08). This implies an inverse relationship between risk taking and risk management. This is sensible, as the more risk averse and the less risk taking a small business owner is, the more likely they are to employ better risk identification, risk intervention and risk communication interventions (Highhouse *et al.*, 2017:402).

Component C1, risk identification, C2, risk intervention and C3, Employee risk feedback, account for Scale C, The risk management process. Risk identification correlates positively and moderately to strongly with risk intervention (0.63) and employee risk feedback (0.46). Risk intervention correlates positively and moderately with Component C3 (0.49). As a single scale that measured related risk management processes it is highly unlikely that they could not be correlated. The reason for this statement is that the latter processes follow and are informed by the previous (Hopkin, 2018:95). For small businesses, risk identification comes about as a means of experiencing the risk event (Kruger, 2017:116). A risk intervention is a necessity as a result, since

the failure to act in this regard would result in losses that could be reduced. Furthermore, risk communication, in this case, is a matter that is driven from the employees to the business owner. The motivation for reporting risks in these cases is not as a result of a defined procedure but to ensure they are not held responsible for factors beyond their control.

5.8 CONCLUSION

This chapter provided the results of the analysis of quantitative data that reinforce the need for risk management intervention in small businesses. in the results in Section 5.2 shows that the majority of small businesses were in the trade and accommodation sectors, the most abundant business form was that of a private company. There is reason to believe that there might be levels of difficulty or thresholds for maintaining increased numbers of employees. If the aforementioned is proven true it might be possible to better identify at which stage any small business is and allow for more tailored interventions. Most businesses (62%) pursue high growth businesses and the majority of small business owners are between the ages of 31 and 40. Additionally, 27 percent of the businesses had managers and 80 percent of the respondents had a level of education equal to or higher than a matric. Only 18 percent have an employee dedicated to risk management. It was found that 75 percent of small businesses are younger than five years and 77 percent of them do not apply any kind of risk management standard in their business. Having gathered these observations, the first empirical objective has been met and a better understanding of the composition of small businesses have been obtained.

The study employed factor analysis in order to determine if small businesses grouped the various categories of risk as laid out in theory, the domains of risk in DOSPERT and risk management processes. Of the various risk categories that proved significant, small businesses could only group the risks as liquidity risks (ComponentA1), or as external risks (Component A2). This spoke to a lack of sophistication and inability to separate the individual risk categories presented in the questionnaire. This showed a rudimentary differentiation between risks but not to a degree that allowed for specialised strategies with which to address them (empirical objective one). Furthermore, risk management processes were grouped by the small businesses into just three significant factors, which were risk identification, risk intervention and employee risk feedback (empirical objective five). It was shown that the risk management process for small businesses in the SDMA, as it exists in practice, can be summarised in the following steps: Identify risk, intervene with the identified risk and listen to your employees when they tell you something is wrong. This is drastically insufficient in what can be considered a risk management system and the SBRMIT addresses this problem. The DOSPERT scale for health and safety was the only factor

that proved significant in the EFA. This means that the small business person was incapable of differentiating financial risk from social risks and indicates a lack of consistency in their responses. In addressing empirical objective three, the only response is that the willingness to take health and safety risks is consistently low, as the small business owners are risk averse. Small business owners were shown to be risk averse through the use of SCF and the analysis of the frequencies of responses pertaining to it (empirical objective four).

Frequency analysis was needed to determine the stance on the components identified in factor analysis (empirical objective six). The frequency analysis indicated that employees were shown to report on the risk events they experienced daily. The small business owners would identify risks and intervene in treating them monthly on average. Small business owners are very unlikely to take health and safety risks. Small business owners have shown to face liquidity risks and cumulatively identify their exposure to external risks. Tests of differences, particularly T-tests and ANOVAs, were run to determine if the components were affected by demographical components, this met empirical objective seven. No statistically significant difference is made on any of the components by its business style, or presence of a dedicated risk manager. What did have a significant effect on a majority of the components is the municipality in which the small business was located. Higher levels of education appeared to only bolster the frequency with which employees reported risk. Correlation analysis (empirical objective eight) showed that the strongest relationships existed between components that came from the same scales. Years of experience had the highest effect on the components as far as demographics are concerned. Correlations are further discussed in Section 5.7.

To address the shortfalls of businesses described in this chapter requires that aid be given to small business owners in overcoming the difficulties of implementing risk management in their businesses. Chapter 6 presents a risk management intervention tool designed especially for small businesses to aid them, which is written whilst incorporating the results in this chapter.

CHAPTER 6

RISK MANAGEMENT INTERVENTION TOOL

"Never bring the problem-solving stage into the decision making stage. Otherwise, you surrender yourself to the problem rather than the solution." ~ Robert H. Schuller

6.1 INTRODUCTION

In order to address the shortfalls of businesses described in this chapter requires that aid be given to small business owners in overcoming the difficulties of implementing risk management in their businesses. Chapter 6 presents a risk management intervention tool designed especially for small businesses to aid them that is written whilst incorporating the results in this chapter. The following objective is addressed in this chapter:

- Create a risk management tool that aids in the development of small business risk management (Empirical objective 9).

This SBRMIT is intended to create a first contact point with risk management, amplify already present efforts to manage risks, as well as augment the approach that small businesses use to incorporate the fundamental risk principles, the processes associated with risk management and the strategic concerns that surround it. The outline of the processes followed in this tool can be seen in the visual overview of the process (Figure 6.1), which note the most important considerations. Using theoretical discussions (Chapters 2 and 3) and the data gathered in Chapter 5, the challenges to small business risk management have been identified. By establishing a clear understanding of the limitations of small businesses and the requirements that need to be adhered to, it reasonably argues for a risk management system; a middle ground can be developed that allows for the early adoption of risk management.

The process, as outlined, begins by guiding the business in establishing a unified comprehension of the business environment, strategic considerations relevant to the business, complete awareness of potential risks a business faces and risk management objectives aligned with best practice principles and the particularities of the business. This is done by evaluating the business's position in relation to fundamental risk management principles, guiding the business through the risk identification process and elucidating and actuating a simple yet effective initial strategic evaluation procedure. Once the fundamental risk management principles have been incorporated into the managerial awareness of the business, the easy risk identification table can be used to

identify risks from various fields and provide guidance in the discussion and suggested process with which to begin managing each risk. To address Type 1 risks or external risks (Table 6.2) and guide the business to practical risk management solutions, the tool includes a strategic management tool established from selected theory.

Through the application of the fundamental principles of risk management, the strategic management tool and the easy risk identification tool, the business can identify risks and the risk context it operates in and thereby orientate the business towards addressing relevant risk exposures. Risk identification was followed by risk assessment, which will, in turn, inform treatment protocols, contingency concerns and reporting requirements. By means of application of this tool, the risks and the changes in risk exposure can be tracked and monitored to determine whether exposure is increasing or decreasing, as well as measure intervention effectiveness. Once these steps have been taken by the business, it will have managed past risks.

From the theory in Chapter 2, it has been found that businesses that are inexperienced in risk management usually believe risk management to be completed once it has been treated. However, without forward planning and the setting up of contingencies and action plans for risks not yet realised, this can at best be considered crisis management. Risk management is a process that requires the additional development of not only reaction plans, but also risk reporting, risk communication and risk monitoring, to be considered a rudimentarily functional risk management system. The SBRMIT includes a guide that addresses these concerns. The guide is written in colloquial language and consists of simple-to-follow processes. These were briefly discussed to incorporate the necessary practical minimum considerations to qualify a complete risk management process.

6.2 SMALL BUSINESS RISK MANAGEMENT INTERVENTION TOOL: A PRACTICAL GUIDE FOR SMALL BUSINESS

The Section 6.2 is divided according to the different steps of the SBRMIT (c.f. Figure 6.1). The SBRMIT progresses from the identification and incorporation of the fundamental risk management principle to the identification of individual risk types and risks, to a strategic audit that cumulatively provide a Unified comprehension of the business environment, strategic considerations relevant to the business, a complete awareness of potential risks a business faces, and risk management objectives aligned with best practice principles and the particularities of the business. THE SBRMIT then progresses through the steps of risk identification, risk assessment, risk treatment, risk planning, risk reporting and communication, to risk monitoring.

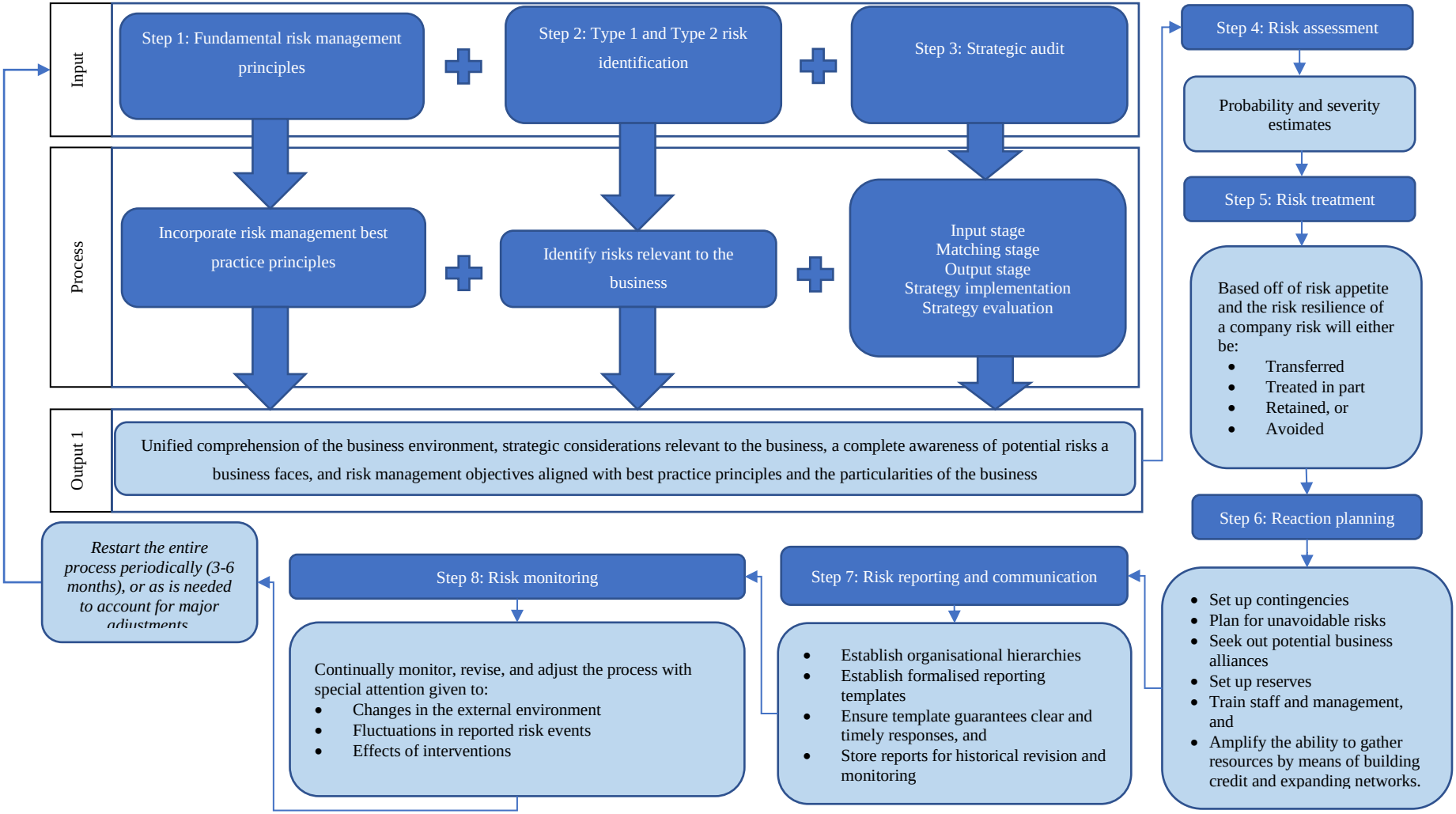

Figure 6. 1: SBRMIT overview

Source: Author compilation

6.2.1 Step 1: Fundamental risk management principles

Before the risk management can be carried out in your business, it is important to know how it is relevant to your business and what value it brings. The fundamental risk management principles help in understanding how they can help the business. Table 6.1 outlines the fundamental risk management principles from major standards and adapts them for use for the businessperson who needs or wants to incorporate a risk management system into their business. Table 6.1 is split up so that the fundamental risk management principles are placed alongside a process to implement them and an expected output as a result of using them. Key questions are also included to guide the risk manager on how to implement these fundamental risk management principles. To use this table, you will first need to understand the principles. In many cases, the value of these principles was straightforward, but where there is uncertainty, look to the key questions column to expand your view on the principles. The process by which the basic risk management principles are implemented provides a business with the benefits mentioned in the outcomes column of Figure 6.2. As can be seen in Figure 6.2, the principles are not purely a consequence of risk situations but extend into managerial sciences as a whole. This allows other managerial functions a potential point of connection to the risk management function and the reverse is also true.

Table 6. 1: Step 1: Fundamental risk management principles

Fundamental risk management principles:	Key questions:	Process:	Output:
Maximising value to the shareholder by protecting and creating value	• What needs do my business meet? • Who are the people affected by my business? • How do I improve the profitability of my business? • How do I ensure that my business positively affects my community, my shareholders, my employees, the business and physical environment it is in? • What can I do to improve the experience of my customers and the value my service or product offers to my customers?	1. Answer each question in full. 2. Expand on the details of the individual questions. 3. List all opportunities to both improve the overall capacity of the business to consistently produce earnings and growth and reduce unnecessary exposures and costs. 4. Create an action plan and implement it.	A better understanding of the factors that could influence shareholder value and practical solutions by which shareholder value can be protected and amplified.
Proportional risk management to risk exposure	• How much cover is reasonable, considering the particularities of the business? • Are there business particular risks in the sector I am in that require specialist knowledge to determine accurately?	1. Use the risk assessment tool (Table 6.7) to determine the scope, probability and severity of a risk exposure. 2. Use Risk Treatment step in Tool (Table 6.9).	The appropriate amount of risk management intervention for the business.
Tailored to the business by addressing risks relevant to business activities	• Does my business require specialist knowledge to understand the risks it faces? • What business activities could produce risks for the business (see risk typology for a comprehensive checklist)?	1. In the risk identification step, feel free to expand on the risks in the typology to include specific risks that the business faces as result of its business activities.	A focus on the pertinent risks.
Structured to transparently and completely represent the entire business's risk exposure and managerial practice	• Are there risks that might be underreported? • Does the entire business report on risks or are there areas that remain unreported?	1. Criticize and critically assess the reports received from the Risk Reporting & Communications step, the risk identification step and the Risk Monitoring process. 2. Adjust the risk management activities of a business to include any formerly unidentified risks and adjust for inconsistencies in managerial endeavours.	Comprehensive, iterative and proactive improvement of the risk management capacity of the business and the risks it faces.

Fundamental risk management principles:	Key questions:	Process:	Output:
Embedded within business culture, operational processes and decision-making processes	• Has risk management been promoted internally at decision-making levels within the business and run through the rest of the operational levels?	1. Establish a risk culture that matches the particularities of the business on a strategic level. 2. On a functional level, use the risk culture to guide decision making at the large scale. 3. Enforce and monitor the decisions made on the functional and strategic levels to direct operational activities of the business through policy.	Relevant and complete risk feedback that can be meaningfully and timeously reincorporated into the business's risk management processes.
Ensure that it is iterative and proactive	• Does the business continuously seek to identify risks in advance?	1. Continually report, communicate and monitor risk events while allowing feedback to decision-making parties as soon as possible. 2. When setting up reaction plans, create plans for possible and improbable events.	The risk register is continuously updated and is not limited to risks that have been historically experienced.
Explicitly address uncertainty in a timely manner	• Does the business respond to scenarios of uncertainty as soon as possible?	1. Identify a scenario that generates an uncertain outcome that relates to the business. 2. Report the risk to the pertinent department or leader that has the authority to enact a change. 3. Measure the risk by doing the research on the risk. 4. Create an action plan in the event that the risk is realized.	A starting point from which to address risks when they appear.
Orientated to continuously develop the business using the latest, most reliable and relevant information	• Does the business seek out reliable and relevant informant? • Does the business continuously develop itself?	1. Monitor the internal and external business environment with an emphasis on keywords that relate to the business in question. 2. Research the business sector within which the business is located.	Foresight into market shifts that could result in new risks and opportunities.
Inclusive of currently relevant societal and cultural sensitivities	• Do your risk considerations extend into what is politically sensible? • Have you taken account of potential events that might cause backlash from a key demographic?	1. Keep up to date with local affairs and international trends. 2. Identify key trends in their relative contexts. 3. Identify key triggers of conflict. 4. Analyse the business activities for potential triggers. 5. Reduce or remove sensitive content.	Reduced reputational risk.

Sources: Author compilation

6.2.2 Step 2: Risk Identification

Risk identification is the process by which you discover, which risks are relevant to your business. You probably already know of many risks that you need to take into consideration on a day-to-day basis. This can range from customers that will not pay you what they owe you, difficulties in getting cash when you need it, problems with your employees, to increases in the price of doing business. Whatever the cause, it is always preferable to know what you are dealing with. As a business owner, you have dealt with many risks, however, there are many other risks that your business could face or might even be exposed to without you knowing. There are a lot of possible risks, but do not worry, Table 6.2 can be used to easily identify, which of these risks you are exposed to and Table 6.3 will help you expand on the risks you have identified and suggest some of the more common solutions that a consultant might give you.

To use Table 6.2, start by reading the names of the risks. These are the ones that risk management theory has collected over the last 80 years so there are sure to be some you do not recognise. Do not worry about it, I have also included some questions that can help you identify if your business is exposed to them. If you answer yes to a question, then look to the section in Table 6.3. It will guide you through a process that allows you to start addressing those risks.

Table 6. 2: Step 2 (Part 1), Easy risk identification checklists

Name of risk:	How to identify named risk:	No:	Yes:	Solution :
Type 1 risks	Characteristics of Type 1 risks are that they are: 1. **Systemic** - they affect the national economy, the sector, the industry and all businesses that are affected by the risk. 2. **Unavoidable** - Type 1 Risks cannot be avoided by any means except not doing business.			For all Type 1 risks, the business can only position itself in such a way that minimises the effects. See Table 6.3 for a discussion and use Section 6.3 to guide the business in positioning itself strategically to minimise Type 1 risks.
External environment risk/Fundamental risk	Is the risk something you cannot avoid while staying in business?			See external environment risk / fundamental risk in Table 6.3
Systematic risks/Market risks/Strategic risk	Do your operating costs increase because of increases in the rates of fundamental inputs that your business requires? Is the price you can sell your product at decreasing? Are the assets that your business owns reducing in value as a result of developments in your field?			See systematic risks / market risks / strategic risk in Table 6.3
Commodity price risk	Does your business own inventories that have values that change over time? Have you failed to make a sale as a result of a customer telling you they could get your product at a better price? Have you been unable to purchase new stock because old stock has not been sold yet?			See commodity price risk in Table 6.3
Interest rate risk	Do you have outstanding loans whose interest rates are floating? Does the business have a net asset or liability interest position?			See interest rate risk in Table 6.3
Currency risk	Does your business pay for its inventories in a currency besides the national currency of the country you reside in? Do you accept foreign currency for the rendering of services or the sale of your business's products?			See currency risk in Table 6.3
Basis risk	Do you hedge any aspect of your business? Do you hedge any product that does not have a hedging market specifically for it?			See basis risk in Table 6.3
Systemic risk	Do the banks in your country fail regularly? Is the success of your business dependant on the success of your business networks? Does the news noticeably affect your business's profitability?			See systemic risk in Table 6.3

Name of risk:	How to identify named risk:	No:	Yes:	Solution :
Type 2 risks	Type 2 risks can be identified by their origin in business activities and the capacity to be managed in the business. As opposed to Type 1 risks, Type 2 risks can be managed by the business without question by means of adjusting managerial activities or operational exposures.			See Type 2 risks in Table 6.3
Particular risk/Unsystematic risks	Does the business use money? Does the business compete with other businesses? Does the business hold stock/inventories? Does the business refine products? Does the business own property or assets? Do you have employees?			See particular risk / unsystematic risks in Table 6.3
Inherent risks	Does the business operate in a competitive market? Does the business experience fluctuations in profitability?			See inherent risks in Table 6.3
Incidental risks	Does the business extend credit that must be written off often? Is profitability and competitiveness affected by variation in currency rates? Has fluctuations in the interest rates caused your assets to devaluate? Do you struggle to get investment when needed? Does the business have sufficient capital to amplify its growth? Does the business ever not have enough money on hand to meet current financial obligations?			See incidental risks in Table 6.3
Business risk	Has the business failed to revise its policy in the last 6 months? Is the business falling behind of its competitors? Has the business failed to incorporate new and useful technology into its structures?			See business risk in Table 6.3
Model risk	Has the business model produced challenges that were not expected? Has the business model failed to produce meaningful improvements above the previous one? Are some of the business processes not represented sufficiently in the business model?			See model risk in Table 6.3
Liquidity risk	Have you ever been unable to pay your employees, debtors, suppliers or, meet any financial obligation when it was due?			See liquidity risk in Table 6.3
Trading liquidity risk	Does the business find itself incapable of making payments for stock when those payments are due? Does the business find it difficult to sell product at the market price?			See trading liquidity risk in Table 6.3
Funding liquidity risk	Does the business struggle to pay dividends or liquidate owners' interest when it is time to do so? Does the business struggle to meet its obligations when people who owe the business money do not pay on time? In the event that the business hedges its exposures, does it fail to keep those positions open until they are exercised?			See funding liquidity risk in Table 6.3

Name of risk:	How to identify named risk:	No:	Yes:	Solution :
Capital risk	Does the business experience events that result in damage to equipment or the derailing of business operations for extended periods of time?			See capital risk in Table 6.3
Credit risk	Do the people or businesses that your business extends credit terms to fail regularly to pay you back in the amount and at the time you agreed on?			See credit risk in Table 6.3
Operational risks	Do the people in your business make mistakes? Do the processes or systems (payment and money management systems, inventory management systems, fleet tracking systems, production processes) in your business fail from time to time, record incorrect information, or produce faulty products?			See operational risks in Table 6.3
Reputation risk	Has the reputation of your business come under attack? Do your customers give your business negative reviews often? Has your business been accused of ethical violations, environmental damage, or been accused of damaging to the society within which it exists?			See reputation risk in Table 6.3
Legal/ Regulatory risks	Has the business failed to investigate the legislative environment it finds itself in? Has the business been sued? Has the business failed to research what legislative changes have occurred in the last 3 months that relate to your business?			See legal / regulatory risks in Table 6.3

Source: Author Compilation

*If the answer was yes, see figure 6.3 for additional information and suggestions in managing the risk.

Table 6. 3: Step 2 (Part 2): Small business risk identification tool

Risk	Discussion	How to identify	Process	Outcome
Type 1 risks	Type 1 risk is a designation given to risks classified as external risks and are associated with risks such as fundamental risk, systematic risk and market risks since they adhere to the primary characteristic of being outside of the direct control of the business. Examples: • Changes in petrol prices as a result of policy changes • Changes in tax rates and thresholds; • Changes in the value of the national currency in relation to others; • The failure of systemic industries (like the banking sector); or • Technologic advancement that invalidates older iterations thereof.	Characteristics of Type 1 risks are that they are: 1. **Systemic**-they affect the national economy, the sector, the industry and all businesses that are affected by the risk. 2. **Unavoidable**-Type 1 Risks cannot be avoided by any means except not doing business.	Measures must be taken to protect against the effects of these events and moderate exposure to them through how the business actuates its activities. The primary measure usually taken is some form of insurance or the retention of a capital buffer to address the risk if insurers are not willing to offer coverage. The primary reason for this is that no change in internal activities can influence the outcome while the opportunity for profitability remains. A process for each risk category was indicated here.	A structured method on how to identify external risks and prompt the business into developing processes that simplify the reduction of risks.
External environment risk/ Fundamental risk	Activities and events that are outside of the scope of the business to influence directly. Fundamental risk originates in the external business environment and includes political and socio-economic movements or natural disasters.	Is the risk something you cannot avoid while staying in business?	1. Determine if risk exposure can be reduced by managerial intervention: 1.1 If so, then it is not an external risk. 1.2 If not, then the risk is external. 2. In the event that the risk is external risk, insurance should be considered. 3. In the event that insurance options are not viable the risk must be: 3.1 Avoided by not creating exposure to it, or, 3.2 Accepted as a part of doing business and moderate exposure to within the capacity of the enterprise to address it.	An understanding of which external risks are relevant to the business and how to address them.

Risk	Discussion	How to identify	Process	Outcome
Systematic risks/ Market risks/ Strategic Risk	Systematic risks affect the business through fluctuations in market prices and rates thus it is also called market risk. Systematic risks include increases in the prices of commodities such as electricity, oil, petrol, rent or a number of other inputs related to the nature of the business involved. It does, however, also extend to the possible prices of the sale of the product as well. Through fluctuations in market rates and prices business assets, such as securities held by the business or the financial portfolio of the business can be devalued or severely damaged. Market risk is non-diversifiable and is represented by measures of market volatility defined as a deviation from some benchmark How closely a business's portfolio is correlated to the market determines the vulnerability of a business to market risk. Market risks can be further subdivided into commodity price risk, equity price risk, interest rate risk and currency risk.	Do your operating costs increase because of increases in the rates of fundamental inputs that your business requires? Is the price you can sell your product at decreasing? Are the assets that your business owns reducing in value as a result of developments in your field?	Market risk accounts for a wide array of risks. The following sections will discuss the sub-partitions of these risks individually and provide specific processes for each of the risks involved. The general approach to these risks is to: 1. Identify the risks, 2. Determine if they pertain to the business, 3. Assess the possible effects of those that are relevant. 4. Moderate exposure the risks within the capacity of the business to address. 5. Monitor and report the results.	The ability to identify which sup-partitions of market risk the business has exposure to. Processes by which to become aware of the risks that are faced and reduce their effect.

Risk	Discussion	How to identify	Process	Outcome
Commodity price risk	Commodity price risk is the risk that the value of goods might change. Commodity price risk is exacerbated by a small number of suppliers, poor trading liquidity amongst suppliers and overheads such as the storage of the commodity Equity price risk will not be included as it addresses the relation that a business's portfolio carries with Stock Market Indices. The equity risk tied to the portfolio of a business can be diversified and thus managed. However, market equity price risk that comes about from market activities cannot be eliminated through diversification as it is dependent on the valuations and actions of investors. The only way to limit exposure to market risk, systematic risk and commodity price risk is to manage inventories and assets very carefully. As a small businessperson, you might be tempted to purchase larger inventories in the hope that you can meet the needs of a larger market share. This hopeful buying increases exposure to these risk types disproportionately to what your business can handle.	Does your business own inventories that have values that change over time? Have you failed to make a sale as a result of a customer telling you they could get your product at a better price? Have you been unable to purchase new stock because old stock has not been sold yet?	To moderate exposure the business should: 1. Determine how quickly the inventories of the business turns on average (update monthly). 2. Investigate possible developments in your industry that could reduce or increase the value of commodities in your business (continuous monitoring or active investigation). 3. Use the information gained above to discount stock (up to cost price) that might become incapable of being sold in latter business cycles. 4. Never put all the capital of the business into stock. 4.1 Retain sufficient liquid capital (cash) to pay overheads and salaries for at least two business cycles.	Although the particularities of business will differ in regard to this risk, commodity price risk should be reduced through the process described. Moreover, by implementing the prescribed process the business should be able to take advantage of good business deals when they appear, as well as reduce the probability of a catastrophic failure in the business, adding resilience over time. Growth opportunities and strategic threats can also be reduced in this manner.

Risk	Discussion	How to identify	Process	Outcome
Interest rate risk	Interest rate risk is the risk that adverse interest rate changes could lead to a decrease in net interest income of a business. Interest rate risk comes about from changes in market interest rates while the business interest rate maintains fixed. Interest rate risk becomes increasingly complex with the addition of interest-bearing instruments as asset maturities, asset cash flows, the gap between liability- and asset-like instruments and resets dates, must all be accounted for. Liabilities are often required for a business to do business, such as credit purchases of expensive equipment, or loans for expansion of business activities. In this way, it is not always possible to avoid taking on liabilities. Assets are also not exempt from interest rate fluctuations, when interest rates decrease the income from assets also decreases, resulting in a net negative effect on the business.	Do you have outstanding loans whose interest rates are floating? Does the business have a net asset or liability interest position?	1. Identify interest-bearing assets and liabilities 2. Determine which assets and liabilities carry floating rates. 3. Aim to balance the overall liability and asset position. 3.1 When the business has an asset dominant position it means that decreases in the interest rate serve as a risk 3.2 When the business has a liability dominant position it means an increase in interest rates is a risk 3.3 When assets and liability positions are balanced, risk is eliminated because the changes in asset income and liability expenses cancel each other out. And/or 4. Hedge the interest positions where possible through the use of derivative contracts	By balancing interest-bearing assets and liabilities, a business can eliminate the negative and positive effect of interest rate fluctuations.

Risk	Discussion	How to identify	Process	Outcome
Currency risk	Currency risk, also known as foreign exchange risk, is the risk that a change in currency values will adversely affect the purchase and sales prices of goods. Imperfect correlations between currency pairs and international interest rate fluctuations actuate currency risk. Currency risk appears when assets or liabilities that are sold or purchased in the foreign currency. Despite the positive effect that a positive valuation of a local currency might have in relation to another, the fluctuations during a transaction period can lead to losses on returns, operating losses, competitive disadvantage and reduced investment. Although derivative contracts exist on most major currency pairs, locking in the price charges an additional fee for the option of exercising a derivative contract, which might not be worthwhile for a small business unless it purchases inventories in bulk.	Does your business pay for its inventories in currency besides the national currency of the country you reside in? Do you accept foreign currency for the rendering of services or the sale of your business's products?	Currency risk can be reduced by: 1. Only trading in the national currency that the business is established in, 2. Purchasing a currency derivative to lock in the value of a currency for international purchases at a particular date.	Currency interest rate exposure can only be reduced by reducing the number of transactions the business engages in that requires the use of foreign currency. However, despite the possible use of derivatives and minimizing of exposure through managerial intervention the effects of the macro-economy will still come forth in price fluctuations from companies that imported the goods.

Risk	Discussion	How to identify	Process	Outcome
Basis risk	Basis risk can come about if hedging positions are not perfectly correlated to the product they are meant to hedge. Basis risk is a term that represents the potential for a failure in the relationship between the price of a product and the price of the price-hedging instrument used to offset it. Basis risk exists because not all products have a hedging instrument that fully accounts for the price of the commodity that is hedged. Certain products are hedged against similar or correlated products. However, despite the similarities of these products there still exist variations in their correlations. Basis risk is inevitable in a large variety of commodity hedges. A position is hedged, is a prerequisite in establishing basis risk. However, hedging itself is a strategy to reduce risk. Thus, the net position of a hedged product is still better than a product that is not hedged.	Do you hedge any aspect of your business? Do you hedge any product that does not have a hedging market specifically for it?	1. Do not take out a hedge on a product in which the underlying asset of the hedge is not the product in question. 2. Do not hedge.	If one does not hedge basis risk is technically eliminated, but to do so means to throw away a powerful risk management tool.

Risk	Discussion	How to identify	Process	Outcome
Systemic risk	Systemic risk is the risk that an entire system fails due to the failure of systemically significant institutions (Such as banks or governments). Systemic risk is propagated through transactions and reactions to other institution's transactions that destabilise large economic units. Perception of excessive risk or institutional losses in highly correlated markets leads to large-scale disruption; the disruption is transferred to healthy market segments that were formerly thought to be uncorrelated. This disruption leads to panic and panic leads to margin calls across the board, which leads to liquidity seeking behaviour by institutions at a significant devaluation, which leads to a drop-in asset value across the board, which in turn triggers another round of additional margin calls and asset devaluations. The size and interconnectedness of economic entities add to systemic risk, not only in the capacity of these enterprises but also in regard to the time it would take to repair functional relationships between these entities. For small businesses, this risk is one that is particularly destructive as it degrades the capacity of the entire economy to contribute to a healthy business environment, straining an already difficult business setting. At best a small business might be able to set up a reserve of sorts to help carry it from month to month, but to recover from systemic events require long periods of time (e.g. the subprime crisis of 2008).	Do the banks in your country fail regularly? Is the success of your business dependant on the success of your business networks? Does the news noticeably affect your business's profitability?	1. Establish whether your business has network inter-dependencies. 2. Determine the degree to which each network connection affects your business's success. 3. Establish additional/new business connections for network sensitive areas.	Decreased dependence on business partners. Increased bargaining power. Higher survivability in systemically challenging times.

Risk	Discussion	How to identify	Process	Outcome
Type 2 risks	**Type 2 risks** are characteristically defined by their ability to be managed within an organisation. Type 2 risks include the categories of risks defined by terms such as internal risk, particular risk, or unsystematic risk.	Type 2 risks can be identified by their origin in business activities and the capacity to be managed in the business. As opposed to Type 1 risks, Type 2 risks can be managed by the business without question by means of adjusting managerial activities or operational exposures.	The process by which to identify and treat Type 2 risks is dependent on the risk type and cannot be generalised into a single process. However, what is consistent in the process of managing Type 2 risk is the process of Identification, Assessment, Treatment, Reaction Planning, Risk Reporting and, Monitoring	The broad outcome of the following section is the lessening of the exposure or preparation for the exposure of risk types in this section.

Risk	Discussion	How to identify	Process	Outcome
Particular risk/ Unsystematic risks	A particular risk is limited to an individual entity as a specific internal event that is directly responsible for potential losses. Particular risk originates from the internal environment and is thus within the range of business to control. Businesses tend to be aware of internal risks as they are dealt with on a regular basis Risks that are in control of the organisation are also known as unsystematic risks. Risk managers primarily focus on managing unsystematic risks, which can be broken down into financial risk, marketing risk, resource management risk, property and personnel risk and personnel and production risks. Within the managerial and corporate context, unsystematic risk can be further classified into incidental or inherent risk Whereas inherent risks are strictly Type 2 risks Incidental risks are not. Incidental risks carry a mixture of Type 1 and Type 2 risks as some of them are associated with systemic influences.	Does the business use money? Does the business compete with other businesses? Does the business hold stock/inventories? Does the business refine products? Does the business own property or assets? Do you have employees?	1. Identify all the points in your business that have the potential for something to go wrong. 2. Stipulate the details of every vulnerable point. 3. Assess the possibility and scope of losses that can be experienced at each stage. 4. Define the treatment plan. 5. Act on the treatment plan. 6. Take care to expand further on the details of the identified problem areas. 7. Report the effects of the treatment plan to all relevant parties. 8. Monitor and expand business activities.	An understanding of what risks the business faces from the inside. A plan to address the risks that have been identified. A preliminary risk management process.

Risk	Discussion	How to identify	Process	Outcome
Inherent risks	Inherent risks manifest in risks that are part and parcel of doing business. As they are part of doing business the only way to reduce them is to improve the way in which they are approached, stepped into and terminated, i.e. how they are managed. Examples of inherent risk are sales variability, profit margin variability, turnover variability, leveraged operational positions and the risk of not having the needed production resources. Sales variability is the deviation of sales from mean sales. Operating leverage is the percentage change in operating earnings over the percentage change in sales. Resource risk is the risk that cost or availability of resources needed to produce a product are adversely affected. Competitive pressures force product margins down, subsequently reducing turnover and creating a risk to shareholder earnings	Does the business operate in a competitive market? Does the business experience fluctuations in profitability?	1. Track and monitor the following: 1.1 Sales 1.2 Operating earnings 1.3 Resource costs 1.4 Competitor's pricing 2. Where sales decrease, operating earnings decrease, Resource costs increase, or competitive pressures necessitate lowering of sale price. Take note of the particularities that surround those phenomena and report this to management in a formalised report.	Early identification of risks that could threaten the business over time. Analytic data that can be used in decision making. Improved understanding of what is happening in the business and the business environment.

Risk	Discussion	How to identify	Process	Outcome
Incidental risks	Incidental risks include a range of financial risks such as credit risks and currency risks, interest rate risks, investment/ capital risks, liquidity risks The subsequent sections will discuss pertinent Type 2 risks	Does the business extend credit that must be written off often? Are profitability and competitiveness affected by variation in currency rates? Have fluctuations in the interest rates caused your assets to devaluate? Do you struggle to get investment when needed? Does the business have sufficient capital to amplify its growth? Does the business ever not have enough money on hand to meet current financial obligations?	1. Determine sensitivity to Incidental risks by measuring how often the events described in the preceding questions occur. 2. Determine which events are most harmful to the business. 3. Prioritise treatment and managerial intervention to those risks 4. Employ process for the risks as described in the sections below	Amplification of managerial awareness and improved decision making. Improved investor value and their perspective of the business. Better capital retention and liquidity management. Better risk management.

Risk	Discussion	How to identify	Process	Outcome
Business risk	Business risk is that risk that business structures are no longer competitive in their prescribed markets. Business risks come about from poor business strategy, competition, the economic environment, the social and political environment, technological capacity, vulnerability of product value, capital limitations, compliance, credit foreign exchange, liquidity, commodity price risk, reputation risks and transaction risks.	Has the business failed to revise its policy in the last 6 months? Is the business falling behind its competitors? Has the business failed to incorporate new and useful technology into its structures?	1. Identify and analyse the following as they relate to the business: 1.1 Opportunities 1.2 Threats 1.3 Technological advancements 1.4 Political and legislative changes 1.5 Opportunities for collaboration 1.6 Strengths 1.7 Weaknesses 2. Determine what the business is capable of exploring and avoiding. 3. Create a plan on how to engage with the identified drivers so that losses are moderated while profitability is best retained. 4. Apply the plan 5. Report on the plan at regular intervals and adapt the plan so that it accounts for new developments.	Awareness of which business risks pertain to the business to which degree. Improved collaborative and competitive advantages. Improved preparation for potential systematic shocks.
Model risk	Model risk is the risk that a model used to represent business dynamics contains some internal error, cannot be applied or interpreted correctly, or that inputs are hard to produce. A model fails if it leads to outcomes that are not beneficial to the business. Wrong initial assumptions about the underlying processes that assets follow sets up a model for failure. Even if a model is mathematically correct and generally applicable within reality, there still exists the possibility that it might be misapplied within a situation.	Has the business model produced challenges that were not expected? Has the business model failed to produce meaningful improvements above the previous one? Are some of the business processes not represented sufficiently in the business model?	1. Map out all the processes in the business and how they relate to each other - from the financing of inventories through to taxation of net profits. 2. Determine what new factors, players, or processes have entered into the business domain. 3. Analyse the current business model and determine whether all the factors identified have been included in the business model. 4. Expand on the particularities of each player, process and system 5. Create a plan with which to update the current business model with the new considerations. 6. Repeat the process at least once a year.	An up to date business model. Improved awareness of the relationships between business components.

Risk	Discussion	How to identify	Process	Outcome
Financial risks	Financial risks are those risks associated with the capacity of a business to meet the financial claims it incurs using the financial assets it has acquired. Certain systematic risks drastically affect the financial risk profile of a business but are outside of the power of a business to manage. Commodity price risk, equity price risk, interest rate risk and foreign exchange risk are examples of these systematic risks. Major financial risks that are within the capacity of the organisation to control are capital, credit and liquidity risks.			
Liquidity risk	Liquidity risk is the risk that a business has the insufficient liquid capital to cover its operational needs. Short-term liquidity is required to meet the day-to-day financial obligations of a business. Liquidity risk has a trading component and a funding component. Liquidity can be thought of as functioning in business the way oil does for an engine. Liquidity allows the business to run smoothly from one month to the next. Straining liquidity may cause business processes to seize up and as a result, the business might not be able to get to the next month.	Have you ever been unable to pay your employees, debtors, suppliers or, meet any financial obligation when it was due?	1. Determine the nominal revenue of your business per business cycle and per salary month. 2. Establish the total cash on hand on a monthly basis needed to meet all business obligations. Such as petrol costs, salaries, overheads, repayment of debt. 3.1 In the event that the revenue exceeds the costs, you are in an advantageous position and it would be wise to put a reserve away of about 3 months of operating costs. The remainder can be spent on expanding/developing the business. 3.2 In the event that your expenses exceed the revenue, your business can make it is an indication of bad market conditions or a declining enterprise. With reserves, this position can be weathered out. In the absence of reserves, it might necessitate downscaling the business or adjusting production levels. 4. Where decreasing production is not an option liquidity can also be borrowed from a bank or other authorised lender.	In applying the process, liquidity can be grown, maintained, or expanded.

Risk	Discussion	How to identify	Process	Outcome
Trading liquidity risk	Trading liquidity risk is a type of liquidity risk that is specifically concerned with the incapability of business completing a transaction at the market price. For a small business, this could manifest in purchasing too much stock that devaluates to such a degree that the market will not accept it at the price you require to cover the costs associated with it. Trading liquidity, as a sub-branch of liquidity risk, comes about for the same reason, namely: The total cash flow of the business is not regular and/or significant enough to cover obligations as is needed. Thus, moderating expenditure in relation to what can be sold is essential. Trading liquidity risk results in the inability to hedge adverse exposures, reduce market risk or meet capital needs during asset liquidation.	Does the business find itself incapable of making payments for stock when those payments are due? Does the business find it difficult to sell a product at the market price?	1. Determine the total payments that must be made within a business cycle or monthly, whichever one is shorter. 2. Work to build up a cash reserve that can cover all payments during the business cycle or every 14 days (whichever is shorter). 3. Time business expenditures to be as far away from payment cycles as possible so that revenue-generating activities have the maximum time allocable to generate liquid capital. 4. Moderate your business expenditures so that you do not chase expansion faster than demand for your product or service justifies additional purchases in your current business cycle.	Reductions in stock that sits for extended periods of time. Reduced risk of insolvency and illiquidity.

Risk	Discussion	How to identify	Process	Outcome
Funding liquidity risk	Funding liquidity risk is the risk of inability to meet capital withdrawals, rollover debt, meet margin calls and meet collateral or counterparty claims. Funding liquidity risk is directly proportional to the size of transactions and inversely proportional to the rate at which it must be executed. Funding liquidity risk. Funding liquidity risk can be managed through holding cash and cash equivalents, setting credit lines in place and monitoring buying power.	Does the business struggle to pay dividends or liquidate owners' interest when it is time to do so? Does the business struggle to meet its obligations when people who owe the business money do not pay on time? In the event that the business hedges its exposures, does it fail to keep those positions open until they are exercised?	1. Determine the total value of assets that the business might be obligated to pay out immediately. 2. Determine the historical average of assets withdrawn over the last business quarter. 3. Place the historical quarterly amount of liquid capital into liquid interest-bearing assets.	A reserve through which reasonable assurance can be provided that funding liquidity needs can be met as and when required.
Capital risk	Capital risk is the risk of damage, degradation, devaluation or loss of human and non-human capital by means of perils the business is exposed to. Perils can be physical, financial, or human. It has been observed that reducing human capital risk is an efficient driver of development within a business.	Does the business experience events that result in damage to equipment or the derailing of business operations for extended periods of time?	1. Identify what perils the business faces. (see the description of the risk for insight) 2. Determine what the worst-case scenarios as they relate to all the perils identified in the previous step. 3. Rank the risks in order of the most severe and likely to the least 4. Develop an understanding of how the risks develop and manifest 5. Create a plan on how the identified risks can be avoided or minimised.	A reduction in the severity of losses and greater awareness of potential hazards.

Risk	Discussion	How to identify	Process	Outcome
Credit risk	Credit risk is the risk of default on, or deviation from, the terms of a financial contract. Credit risk is represented by four smaller risks, namely: downgrade risk, default risk, bankruptcy risk and settlement risk. Downgrade risk is the risk that credit rating agencies could determine that the credit rating of a business or counterparty might be downgraded and push businesses into default or increase credit premiums. Default risk is the inability or refusal of clients to meet debt obligations. Bankruptcy risk is the risk that the business assets was collateralised or escrowed. Settlement risk is the risk that a transaction is not going to be completely settled on the original terms agreed on as a result of differences in exchange rates over time zones. Settlement risk and counterparty credit risk are interchangeable terms. Credit risk can be fully avoided by not extending credit or creating vulnerabilities to changes in the prime interest rate by not taking on debt. Credit is, however, a powerful tool in a business context and as long as debt can be serviced and creditors be held accountable on the repayment of their debt it is a powerful managerial tool that should be developed.	Do the people or businesses that your business extends credit terms to, regularly fail to pay you back in the amount and at the time you agreed on?	1. Develop and/or employ a pre-existing creditworthiness assessment process. 1.1 Do not extend credit to people or businesses without ensuring they are willing and capable of repaying you 1.2 Determine the characteristics or collateral that the business requires potential debtors to have to justify the credit term. 1.3 Consider adding a deposit as part of the credit term. 1.4 Set up an agreement that provides your business with the ability to take legal recourse in the event that they do not abide with the credit terms. 1.5 Do not extend credit on item's whose sum value is less than the legal costs to recover it. Credit can be checked online with the explicit consent of a credit applicant.	Reduced credit risk. Credit terms that are reasonable to within the context that the business operates in.

Risk	Discussion	How to identify	Process	Outcome
Operational risks	Operational risks are risks that are derived from activities within the business that are characteristically non-financial in that they are non-speculative and only have the capacity to result in a loss. Operational risk has been defined by the and supported by as the loss or potential for loss that arises as a result of failed or insufficient internal human resources, failed or lawed processes, systems, technologies, or as the result of external events that a business cannot address. Human risk is a kind of operational risk; it is the risk of loss as a result of human misconduct or error. Human risk includes fraud and an over-dependency on a few key people. The latter can also lead to risk exposures on systems or processes depending on the position the individual filled. Technology risk is also known as systems risk. Systems risk exposure is determined by whether a business has sufficient technological capabilities in terms of data processing, protection, the reduction of programming errors and a means by which to minimise fraudulent activity. Operational risk comes from insufficient operational integrity and process risk. Operational integrity addresses the sufficiency of operational and governance controls and service delivery. Process risk is the risk that those processes that must be in place for proper service delivery, are not sufficiently in place, do not address available data, nor incorporate contemporary innovations	Do the people in your business make mistakes? Do the processes or systems (payment and money management systems, inventory management systems, fleet tracking systems, production processes) in your business fail from time to time, record incorrect information, or produce faulty products?	1. Create a register of the operations the business participates in. 2. Go through the register and identify where operational failures can result in losses or reduced operational capacity. 3. Compare historical operational failures with the listed operations and highlight unrealised operational failures that have a high capacity to damage the business. 4. Once highlighted set up a plan to minimise the risk at those points. 4.1 Determine whether current operational processes can be improved. 4.2 Set up operational checks that can be systematically incorporated into business procedures. 5. Implement plans, monitor the results and revise systematically. 6. Audit the business for operational and process integrity along with revisions.	A means by which operational risk can be better managed. A process by which operational risks can be systematically identified, addressed and better managed over time.

Risk	Discussion	How to identify	Process	Outcome
Strategic risks	Strategic risks are a type of risk that threaten the sustainability of business through environmental, social human or financial concerns. Strategic risk includes the exposure created by the interplay of strategies between the business and competitors resulting in losses and reputational damage if not correct. Because strategic risk is not entirely in the hands of the business, although the business plays a large role in its vulnerability to it, it cannot strictly be defined as a Type 2 risk. However, as there is a component that can be affected by the business it is included here. Because strategic risk relates to how a business positions itself in the market environment, it is an unavoidable risk that must be taken to create the possibility for profits. As such, this tool has arranged a second step that allows the business to position itself within its environment in a way that assesses risks as a part of the process.			
Reputation risk	Reputation risk exposure grows as a business's actions support the narrative of being a good business as greater reputational loss is incurred when acting against that narrative. Reputation risk addresses the perceived capacity of a business to meet creditor and counterparty claims; and that the practices of business are ethical. Organisations are under increasing pressure to prove that their actions account for the social, environmental and ethical concerns according to a global standard. Due to the global interconnectedness through the internet, the reputational risk does not just arise from operational failures but can be propagated if there is a perception thereof.	Has the reputation of your business come under attack? Do your customers give your business negative reviews often? Has your business been accused of ethical violations, environmental damage, or been accused of damaging to the society within which it exists?	1. Determine the dynamics of the business environment within which you want to operate. 1.1 Determine what is considered ethical in the environment your business will operate in. 1.2 Analyse the society surrounding the business to determine whether the product or service was met with resistance. 2. Set up a plan to address the environmental and health issues that could be associated with your business assuming it is offensive to the population. 3. Set up a process through which complaints are internalized and addressed within the business. 3.1 Create a feedback system through which customers or concerned citizens can directly interact with the business and vent their concerns. 3.2 Establish a process through which an inquiry was made into the concern and reasonable assurance can be given to the concerned party in a public forum so that group sentiment can be governed more easily.	The outcome of these steps is to create a beginning point in controlling the dialogue relating to the image of the business in such a way as to justify the efforts being made and representing it in a way that amplifies the business reputation or providing a basis from which to repair it.

Risk	Discussion	How to identify	Process	Outcome
Legal and regulatory risks	Legal and regulatory risks come about from rules established and enforced by authoritative institutions who punish violations of non-compliance. Legal risk arises when an operational failure results in some violation of pertinent legislation. To void legislative and regulatory risk it is required that a business proves that it has done everything it can to avoid violating the law. This includes doing everything in its power to ensure that the business has taken appropriate action to inform itself of the legislative expectations on the nation within the business operates and the regulatory legislation that is relevant to the particular business type and industry sector.	Has the business failed to investigate the legislative environment it finds itself in? Has the business been sued? Has the business failed to research what legislative changes have occurred in the last 3 months that relate to your business?	1. Go to the local government offices, such as your local municipality or nearest authority and request that they guide you to the appropriate governmental source. 2. Get legal advice from qualified lawyers.	There is no alternative for legal or regulatory risk intervention.

Source: Author compilation

6.2.3 Step 3: Guide to reduce Type 1 risks

As was shown in Step 2, risk can be separated into Type 1 and Type 2 risk categories. Type 2 risks can be managed by the business because Type 2 risks exist because of how a business chooses to do business. Type 2 risks are unavoidable and a natural part of the business and your exposure is determined by how much of each of those risks you are willing to take on. Type 1 Risks, on the other hand, cannot be controlled unless a business is so big that it can control the political, social and economic climate of any nation or group of nations that could threaten it. It is highly unlikely that a business will have this degree of power and a distinct impossibility for a small business in isolation to have that kind of power. Despite the fact that Type 1 risks cannot be eliminated, the business can position itself in a way that minimises the risk to it from Type 1 risks and thereby minimise its possibility of failure.

Strategic management is a three-part process consisting of a strategy formulation step, a strategic implementation step and a strategic evaluation step. Do not worry if these sound complex; it is actually a lot simpler than you might think. What is important is that you do not just do this once. As with all managerial actions, strategic management must be repeated as is needed in the business, it should be done at least every 3 to 6 months (David & David, 2015:39-40).

Strategy formulation is the process by which a business sets up and picks a strategy. Different strategies are required for different businesses. As a result, there are so many strategies that it is impossible for a business to work through all of them. This is why it is important to select the best strategy that the business can come up with. Now the question becomes, how to select a strategy if there are so many to choose from. The best answer is to make one that serves the business best. To select the best strategy, the advantages, disadvantages, trade-offs, costs and benefits of different strategies need to be compared. If you pick up a textbook on strategic management, it will discuss multiple approaches on how to do this, which can also be used in combination. Some of the better ones are strength, weakness, opportunity and threat (SWOT) analysis, strategic position and action plan (SPACE) matrix analysis, the Boston Consulting Group matrix, the grand strategy matrix and the quantitative strategic planning matrix.

The majority of these processes are complex and can take time to understand and implement. The majority of these processes also require specialised knowledge into a great number of advanced business metrics. Although it is suggested that the business develops its complexity towards using these metrics over time as it gains experience, training and skilled personnel it is unreasonable to expect a small business to be proficient in them from the beginning. For a small business or a

business that wants to incorporate a more formal approach to risk management, it is important to become proficient in the simpler strategic formulation processes and develop into the more complex strategies over time, as the business masters the basics of the process.

For this reason, the easiest strategic tool, the SWOT matrix, was explained here so that it serves as the starting point for strategic management and as the first steps in managing Type 1 risks. SWOT analysis was chosen since the implementation and evaluation stages of the strategic process are some of the most important general considerations that must be assessed in any business. In order to achieve this task, the process must follow an input stage, matching stage, output stage, strategy implementation and strategy evaluation (David & David, 2015:216-245).

The **input stage** begins with an internal factor analysis that is performed using an i**nternal factor evaluation (IFE) matrix**. An IFE matrix is fundamentally a list of major strengths and weaknesses in the business set in relation with each other. This process is something that is based on the businessperson's understanding of their business. Thus, this tool becomes more powerful the more a business exercises it.

The first step in developing an IFE is to list the key strengths and weakness of the business. It is important to include the insights of as many people in the business as possible. Thus, it is encouraged to question employees on potential strengths and weaknesses, in addition to those discovered by management. It is also important to research the resources the business will need, production and operational details, the culture of the working area, managerial efforts over the subfields of planning, organising, motivating, staffing and controlling marketing and product/services planning.

After identifying all of the strengths and weaknesses, select the top strengths and weaknesses and list them similar to Table 6.4. List all the key strengths first then the key weaknesses, be as specific as possible, but do not exceed 10 strengths or 10 weaknesses in total. Make sure that the strengths are phrased in an actionable manner so that it keeps the discussion oriented towards what the business can do about it. For instance, an actionable statement would be "Our turnover rate increased from twice a month to three times a month." instead of saying something like "Our turnover rate per month is twice as high as the industry average". The reason that you want to ensure that the statements are actionable is so that you can improve the conditions surrounding your business instead of resting on the achievements of the past. In the odd event that a weakness can also be argued as a strength, it must be included twice. It is also best to state the strengths and weaknesses in numerical terms such as a change in money, or the number of customers.

The second step is to assign a weight to the strengths and the weaknesses in the business from zero to one. If the score is zero it means that the factor is not important at all, if the number is 0.5 it means it is worth half of the total business concern and if it is weighted as one it means that nothing except it is important. The weight indicates how important a factor is to the business in its own relative context, thus, it must be performed per business. Heavier weights would have to be assigned to the factors that are considered to carry the greatest effect. The third step is to assign a rating from one to four. The ratings of one and two are reserved only for weaknesses and three and four are only reserved for strengths.

A major weakness is rated as one, a minor weakness is rated as two, a minor strength is rated as three and a major strength is weighted as four. The fourth step is to multiply each factor by the weighted score for each variable. The fifth step is to sum the weighted scores for each variable to determine the total weighted score (2.50 in the example). The total weighted score can only be between one and four; 2.5 is an average score. When below average (2.5) it suggests that the business has very significant internal weaknesses. When above average (2.5) it signals a strong business position.

Table 6. 4: Internal factor evaluation matrix example

Key internal factors (1)	Weight (2)	Rating (3)	Weighted score (4)
Strengths (S):			
S1	0.05	3	0.15
S2	0.07	4	0.28
S3	0.10	3	0.30
S4	0.05	3	0.15
S5	0.02	3	0.06
S6	0.15	3	0.45
S7	0.05	4	0.20
S8	0.03	3	0.09
S9	0.02	3	0.06
Weaknesses (W):			
W1	0.10	2	0.20
W2	0.15	2	0.30
W3	0.02	1	0.02
W4	0.02	1	0.02
W5	0.04	1	0.04
W6	0.05	2	0.10
W7	0.03	1	0.03
W8	0.05	1	0.05
Total	**1**		**2.50 (5)**

Source: David and David (2015:216)

Once the internal matrix has been set up, it is time to set up an understanding of the external opportunities and threats that your business faces. To do this, your business must research into the external forces of the industry the business is in, the economic forces that influence the industry,

the social, cultural, demographic and natural environment, political governmental and legislative forces and competitive forces. This information can come from various sources and will vary in terms of the business size, industry and its vision and mission. After having done this research, or at least the research a business feels confident in, it can begin putting the opportunities and threats in the context of the business. This is done using an e**xternal factor evaluation (EFE) matrix.** The process of setting up an EFE is very similar to setting up an IFE. However, there are variations in that the focus is shifted to opportunities and threats and that the rating system (Step 3 in IFE) is differentiated in the meaning associated with the numbers.

The grading of opportunities and threats are arranged on a scale from one to four, as with the IFE but the numbers have a different meaning. As opposed to the strength and weakness analysis in an IFE, which showed which major/minor strengths and weaknesses a business has, the EFEs analysis measures how strongly a current strategy responds to a particular factor. A rating of one means that the response is poor, two means a response is below average, three means a response is above average and four means a response is superior. All of these ratings are based on the subjective interpretations of the business, which is why the identified opportunities and threats should be measured numerically as much as possible. The ratings are also used to measure the rating you assign to your business based on your business's capacity to respond to it. This is not about comparing your businesses to other businesses, it is about maximising the strategic considerations of your business so that you can minimise exposure to Type 1 risks as best as the business can.

Besides the variation in what the rating means and the fact that a rating of 1-4 can be given on the response to any threat or any opportunity, the weighted score at the end of the process can be interpreted in exactly the same manner as it has been done in an EFE and as has been discussed. The total weighted score can only be between one and four; 2.5 is an average score. When below average (2.5), it suggests that the business is not taking advantage of its opportunities or addressing its threats, while a score above average (2.5) signals that the business is actively responding to opportunities or threats.

Table 6. 5: External factor evaluation matrix example

Key internal factors (1)	Weight (2)	Rating (3)	Weighted score (4)
Opportunities (O):			
O1	0.10	2	0.20
O2	0.07	4	0.28
O3	0.10	3	0.30
O4	0.04	1	0.04
O5	0.02	3	0.06
O6	0.15	3	0.45
O7	0.03	1	0.03
O8	0.03	3	0.09
O9	0.02	1	0.02
Threats (T)			
T1	0.05	1	0.05
T2	0.15	2	0.30
T3	0.02	3	0.06
T4	0.02	1	0.02
T5	0.05	3	0.15
T6	0.05	2	0.10
T7	0.05	3	0.15
T8	0.05	4	0.20
Total	**1**		**2.50**

Source: Author compilation

What has been described in the IFE and the EFE is the first stage in forming a comprehensive and practical business strategy that takes advantage of risks. The next stage is the matching stage. In the matching stage, internal and external key factors are matched so that areas can be dealt with together. Matching is the process by which key factors are combined and strategies are developed. The tool that we will use to execute this function was a strengths-weaknesses-opportunities-threats (SWOT) matrix.

As a matching tool, a SWOT matrix allows you to produce four strategies that exist as a combination (a matching) of strengths (S), weaknesses (W), opportunities (O) and threats (T) that come together as strength-opportunity (SO), strength-threat (ST), weakness-opportunity (WO), weakness-threat (WT) strategies. This is the most difficult aspect of the strategic process, as it requires a deep understanding of the business processes and is limited by the awareness that the business has gathered in the IFE and EFE.

Table 6. 6: Fillable SWOT table

	Strengths	**Weaknesses**
	S1: We doubled pickle sales	W1: Our pickle brine only lasts a few days
	S2:	W2:
	S3:	W3:
	S4:	W4:
	S5:	W5:
	S6:	W6:
	S7:	W7:
	S8:	W8:
	S9:	W9:
	S10:	W10:
Opportunities	**SO Strategies**	**WO Strategies**
O1: There's a pickle convention in town	Pitch our pickle business to raise capital for expansion (S1,O1)	Find longer-lasting pickle brine at the convention (W1, O1)
O2:		
O3:		
O4:		
O5:		
O6:		
O7:		
O8:		
O9:		
O10:		
Threats	**ST Strategies**	**WT Strategies**
T1: Big pickle wants to push us out of the market		
T2:		
T3:		
T4:		
T5:		
T6:		
T7:		
T8:		
T9:		
T10:		

Source: Author compilation

Different combinations are tools to be used in different scenarios. SO strategies are there to take advantage of opportunities that the business is well suited to meet. WO strategies are strategies to reduce internal weaknesses by making use of external opportunities. ST strategies are strategies that the business uses in which it mobilises its strengths to avoid threats. WT strategies are the exact opposite of SO strategies in that they are purely defensive, they reduce internal weakness and avoid threats. Which strategy the business will use will depend on where it finds itself and what strengths, weaknesses, opportunities and threats the business faces. To easily compare strategies, the IFE and EFE matrix can be combined to produce the SWOT matrix. To do this, the business must list the strengths, weaknesses, opportunity and threats. Thereafter, the individual factors must be drawn together into one of those strategies. A template has been given above in

table 6.6. It should be noted that you do not need to match every opportunity with every strength. Multiple opportunities and multiple strengths can be linked together so that two or three of them might be brought together. What is important is that the business really thinks about what can be combined in each of the strategy areas. The factors can also be used more than once in each strategic field. Once they have matched the factors into strategies, the business has created a strategic output.

Once the strategies have been formulated, the most difficult aspects of the process can be considered done. Next, you need to choose, which strategies are best to implement, in terms of which could have the best effect and then to implement them. A strategic implementation just means doing what you have planned in the strategic formulation process. Once implemented, you need to check up on what effect the strategy has had in the business and this is done by means of evaluating the chosen strategy. To evaluate a strategy means to ask whether the strategy has led to the desired outcome or if something can be done to improve it. After finding the flaws or shortcomings of your strategy, you must revise the strategies by repeating and expanding on the process given as the business continues to grow.

6.2.3.1 Note to the reader

Section 6.1.3 is not intended to be a comprehensive guide on small business strategic management, however, if it were not included, the tool could not be considered sufficient for the purpose of directing a business on how to manage risk. Strategic management is an essential consideration as it moderates a business's Type 1 risk exposures and maximises small business survivability by analysing the internal and external contexts of the business and aligning its actions to the best possible outcome. Small businesses can still benefit from this type of revision and the smaller or younger the business is the greater the possibility to modify itself to take advantage of the tools they employ The strategic management part of the tool aims to amplify the strategic considerations of the small business and guide managerial action towards the best strategic position the business can take. For the business to benefit from strategic management, it must first identify where it is, what internal strengths and weaknesses it has developed and what opportunities and threats are to be expected from the external environment. This process is not intended to be prescriptive, nor can it be comprehensive because of the variation that exists not only between industries but individual businesses in a single industry. This tool is used to establish the most essential components of sound strategic management in the business and is general in its purpose. As the business grows it should expand its outputs from just the strategies in this guide to strategies relating to its markets, its products, its positioning and its finance and accounting. Due to the focus of this study, these

additional strategic analyses have been excluded. The primary function of this tool was to create a means by which the business could place itself strategically to offset and manage Type 1 risks and revise their strategic position to minimise the risks that they face as is needed. To this end, the sub-tool provided here has provided the theoretical framework to accomplish this task as well as provisioned any user of this tool with a template to apply in the process. For the purpose of making this process more understandable and easier to follow for a broader audience, colloquial language was intentionally used.

6.2.4 Step 4: Risk assessment

Risk assessment can be time consuming the first time it is done because it is the process by which a businessperson determines how the risks identified affect the business and which risks need to be given priority. Do not let the initial difficulty scare you, once this has been done once, the follow up assessments are quick, because business risks tend to be consistent over the three-month evaluation period. The second assurance is that this guide will walk you through the process step by step. Risk assessment is the three-part process of analysis, evaluation and estimation of risk.

Risk analysis looks at the cause and effect of risk events as it relates to the business. Risk analysis determines the details of how particular identified risks interact within the business and the business itself and whether the business can respond effectively while maintaining sustainability, fairness, political and legal acceptability, ethical acceptability and public acceptance. As shown in the risk identification step of this guide, the cause of a risk event can come from the internal or external risk environment. Risk assessment measures the magnitude of those risk events and establishes context for the treatment of those risks.

To aid you in your risk analysis process, this guide provides an example of a risk assessment process with step-by-step instructions to set it up for yourself using a program like Microsoft Office Excel. Step one is to grab a piece of paper, a pen and a ruler, or your laptop and open up an Excel sheet. Now that you have a clear working space, you are going to create two initial columns. Name column one ‘Important considerations’. This column should be large enough to note considerations that you might have about the risk. Before you note considerations specific to any one particular risk it is advised that you set up the general considerations of sustainability, political and legal acceptability, reputational and public acceptability, fairness and ethical acceptability. An example of this is shown in Table 6.7. The second column expands on the consideration by asking a question or making a statement that explains why a particular risk consideration is worth noting. Once these initial questions have been stated it is important to put them in in relation to the risks

you identified as relevant to your business. To do this you must create a column for every risk that has been identified and then use the important considerations to rank the risks from zero to four.

What is important to note in this regard is that zero must still be the lowest possible result and that the maximum value still represents a devastating loss. In the example, a score between zero and four is given and used arbitrarily and assumes four degrees of variation in effect. In the case of this guide, a zero represents a negligible risk that the business might revise at a later date. A one represents a risk that is considered under control but needs to be actively observed. A two represents a risk that is important enough to qualify for managerial intervention but is not considered a priority for treatment. A three represents a risk that is significant and requires day-to-day managerial intervention. A four represents a potentially devastating risk that is of the utmost priority in reducing.

Once scores have been assigned to all the particular considerations associated with the risks, which relate to them, the scores can be added up in rows and columns. This will produce two measures, namely TSA, which is a score given to every column of risk and TSB, which gives a score for every important consideration. As you can see, some considerations are not relevant to all risks. If a consideration is relevant to more than one risk, it is advised that you give a score for the other risk that it is relevant to it as well (such as with Risk 2 consideration 1 in the example Figure 6.5). Once all the scores have been added up, the higher score represents a risk of greater importance. Once you have all the scores for all the risks, you can then rank the risks in an order of importance and list the important considerations that are relevant to them underneath them.

Table 6. 7: Risk analysis tool examples

Important considerations	**Rate the following questions and considerations from 0 to 4**	**Risk 1: Credit risk**	**Risk 2 Operational risk**	**Risk 3 Liquidity risk**	**Risk 4: Reputational risks**	**TSB**
Sustainability	How close is the business from no longer being able to sustain the way that the business is dealing with the risk?	1	4	3	2	10
Politically and legally acceptable	How damaging could the way that the business is dealing with the risk be to the business if brought before the courts?	1	4	3	2	10
Reputationally/ publicly acceptable	How damaging is the way that the business is dealing with the risk to the business's reputation?	1	4	3	2	10
Fairness	How unfair is the manner in which I am addressing this risk to my suppliers, my clients and my personnel?	0	4	3	2	9
Ethically acceptable	How damaging is the way that the business is dealing with the risk to the environment and to stakeholders surrounding the business?	1	4	0	2	7
Risk 1 consideration 1	*Customers are defaulting on their credit agreements	1	4	3	2	10
Risk 1 consideration 2	*	1				1
Risk 2 consideration 1	*	1	4	2		3
Risk 3 consideration 1	*			3	2	5
Risk 4 consideration 1	*				2	2
TSA		7	28	20	16	**Sum score AB:** **71**

*Your own considerations

Source: Author compilation

In the case of the example, this would generate a list that looks like this:

For all the risks:

- Sustainability
- Political and legal acceptability
- Reputationally/publicly acceptable
- Fairness
- Ethically acceptable.

For specific risks

- Risk 2 Operational risk- Score of 28
    - Risk 1 consideration 1
    - Risk 2 consideration 1
- Risk 3: Liquidity risk- Score of 20
    - Risk 1 consideration 1
    - Risk 2 consideration 1
    - Risk 3 consideration 1
- Risk 4 Score of 16
    - Risk 1 consideration 1
    - Risk 3 consideration 1
    - Risk 4 consideration 1
- Risk 1- Score of 7
    - Risk 1 consideration 1
    - Risk 1 consideration 2
    - Risk 2 consideration 1

By listing the risks in order of importance, the risks have been brought into the context of the business. This is important because it creates a sense of which risks need to take priority and how the risks relate to each other. Evaluation is the process of comparing analysis results with predefined, or historical reference levels. If the business used the risk analysis tool, this would manifest in the process of comparing the old and new TSA and TSB scores against each other and determining if there was a movement towards a lower score. In the event that the prescribed risk analysis tool is used, a cross sectional qualitative evaluation will have been produced and the order and magnitude of managerial intervention required for every risk was set.

Although this is a good starting point, it does not explain what the rand value losses are that might be experienced and this makes it hard to determine how much time and money needs to be spent in treating the risk. To determine the rand value of a potential risk requires that it be estimated. To make a reasonable estimation of the possible overall losses the probability that a risk might occur and the possible loss attached to a risk event, must be calculated. This is called a loss estimation and is used to create a reference point for the potential losses. Probability and loss estimation might sound intimidating but do not let yourself get frightened off. The potential losses are well within what you have already been dealing with in your business and you probably have a better idea of how probable risk events are than you know.

The first step is to determine the average loss that can be experienced by the business. The business has already faced many of the risks that you have identified. Therefore, to determine what a realistic loss is you can draw on the historical insights that you, as the business owner and your employees have. Start by looking at a particular risk and then determining what the maximum and minimum potential losses surrounding a possible risk event can be.

The average of historical losses can be used since there will always be variations in the particularities of a risk event, however, the average tends to remain consistent. For example, if a cashier misses checking out an item every week and sometimes it is worth R750 and sometimes worth R25 there exists great variability. However, if we know the highest and lowest losses that can be expected we can add them together and divide them by two so that the business can find a simple average. In this example the average would be R775/2=R387.50. The more accurate and numerous the data the business has on historical losses experienced in the business, the more closely the average loss estimation was to the actual overall loss. Knowing how much can be lost is only the first stage of estimation.

Knowing how likely the business is to suffer those losses is the second part of the process. Probability is the chance that something will happen over a particular period of time expressed as a percentage. Determining the probability of a risk event can be done by tracking historical occurrences to determine how often over a given period a particular risk event is likely to manifest. For example, if a cashier misses checking out an item every week that means this operational risk is realised 52 times a year. Since a year is 365 days, this means that the probability of this particular risk event is 52/365 or 14.24 percent per day.

Once the probability and the loss is known, a probability adjusted average loss (PAAL) can be estimated over a period, depending on the regularity of the input data. In Table 6.8, we illustrate

how the two concepts play off each other and how the PAAL can be used to validate the results from Table 6.6 and augment them using the quantitative data. The order of the scores from Table 6.6, when arranged from highest to lowest, might vary from the PAAL, however, they should, for the most part, confirm each other. Losses might not be listed in the same order that the TSA from Figure 6.4 ranked them in. Where this is the case, small variations like that shown between Risk 3 and Risk 4 in Table 6.8 are negligible. However, large variations should be challenged and reviewed as it is indicative of an error in judgement during the analysis portion or an error in estimation of the possible loss or probability of loss relating to a particular risk. Greater variation is to be expected where the business is young and likely to reduce as the business becomes better equipped and develops. As the business grows, it will develop better ways of gauging the possible losses that the business can face. By setting a range of losses that can be realistically expected from individually identified risks, the business can generate realistic estimations and set up reserves to address the risks.

Table 6. 8: Risk estimation table

Risks	**TSA sore**	**Average loss expressed in Rands: (1)**	**Probability: (2)**	**PAAL (1 x 2)**
Risk 2	28	1 000 000.00	1%	10 000
Risk 3	20	20 000.00	5%	1 000
Risk 4	16	5 500.00	20%	1 100
Risk 1	7	1 000.00	50%	500
Risk example	5	387.80	14.24%	55.18

Source: Authors compilation

In many cases, the potential loss associated with risk can be devastating but the probability of such an event can be so low that no historical precedent for it exists. Analysis, evaluation and estimation are important in this sense as well, as it can inform the business of what a reasonable cost to cover that risk might be. To select the correct way to treat risk can be made clearer and smoother through the application of good risk assessment but is worthless unless treatment is applied from it.

6.2.4.1 Note to the reader

In regard to Section 6.1.4 it should be noted that in any business, the degrees of variation in the effect of a risk event can be either dramatic or gradual. It is for this reason that the scale can effectively be a single degree of variation or any degree of variation larger than a single degree of variation. At the one extreme, the degree of variation could be binary (0 and 1), zero meaning that the possible effect is non-existent or one implying that the risk event could devastate the business.

In the event that all the resources of a business could be eliminated by a single event, a binary scale would be representative. However, a binary scale would be one of extremes and thus inferior to a scale that accounted for the capabilities of the business in addressing its risks and thereby providing a greater degree of variation in the scale. The cost of a larger scale is that it requires a more accurate analysis of individual risks and the nuances relating to the business. The payoff of a larger scale is that it will give a fairer representation of the risk relative to the business.

What is important to note in this regard is that zero must still be the lowest possible result and that the maximum value still represents a devastating loss. In the example, Table 6.7, a score between zero and four is given and used arbitrarily and assumes four degrees of variation in effect. In the case of this guide, a zero represents a negligible risk relative to the business's activities, but still needs to be accounted for. A one represents a risk that is considered under control but needs to be actively observed. A two represents a risk that is important enough to qualify for managerial intervention but is not considered a priority for treatment. A three represents a risk that is significant and requires day-to-day managerial intervention. A four represents a potentially devastating risk that is of the utmost priority in reducing.

A risk analysis table modified to include relative risk considerations can be used to make this process comparable over working periods and to establish a clear awareness of the effects of current actions. Table 6.7 illustrates what the business would set up to run the analysis. By making use of Tables 6.2 and 6.3, the risks to be incorporated into the risk analysis step will already have been identified. Each of the identified risks will create important considerations relative to the business. A score is given from zero to four as an early indication of the perceived risk exposure that each risk can cause. By making use of Table 6.3, the business can get a total score A (TSA) and a total score B (TSB). TSA produces a score for a particular risk and TSB produces a score relating to every consideration as is relevant to all the risks. The sum of all A and B risk scores will always be the same (112 in the case of the example). The closer the score is to zero, in regard to particular risks (TSA), particular considerations (TSB), or overall (sum score AB), the better the business's perceived risk position. TSA and TSB scores can be used to rank the order in which management must intervene. Cells are left empty if the consideration is not relative to a risk. In the event that a consideration that originates from risk X is relevant to risk Y, an additional score must be added in risk Ys corresponding box (such as Risk 2 consideration 1 being relevant to Risk 3 and Risk 3 consideration 1 also being relevant to Risk 4).

6.2.5 Step 5: Risk treatment

Complete risk assessment allows the business to decide how best risk should be avoided, reduced, transferred or retained by accurately putting the risk in context to the business. However, for all of that analysis to have value requires that action be taken. To do this, risks must be treated while incorporating the considerations generated by risk assessment. Before a business can select a risk treatment strategy, a few considerations will frame that consideration. First, it is important to note that the degree to which a business is capable of treating risks is dependent on its size and its financial strength and must, therefore, ensure that its limited resources are being spent most effectively. Secondly, risk treatment must be put in context to the business's risk tolerance. Every business has a risk tolerance that is driven through management and in larger businesses through shareholders and upper management.

A business with higher risk tolerance is likely to accept more risk, possibly too much. Similarly, a business that is not willing to take on or is reserved in taking on risk, might miss out on important opportunities to make a profit. To aid businesses in finding the middle ground where risks are in line with returns, there are certain strategies that can be applied based on their particularities. These strategies are described below and Table 6.9 guides the reader on which strategy to apply:

- Where the probability of a risk event is low and the possible losses fall within the capacity of a business to absorb, risk is to be tolerated;
- When risks have a high probability to occur, regardless of the possible losses, the risk is to be treated;
- When a risk event has a low probability of occurring but has a large possible loss, a risk transfer is a preferred strategy; and
- When a risk event has a high probability and a high possible loss, it is in the interest of the business to avoid it.

Using the risk estimation table, Table 6.8, the exposure (represented by the average loss) and the probability can be mapped out in Table 6.9. On the x-axis, the probability is set out from zero percent to 100 percent. To arrange exposure on the y-axis can be more challenging as what is considered a large or a small exposure is relative to the business. For the business to graph this out, it begins with zero rands and then increases to what can be considered a high loss for the business.

Table 6. 9: Risk strategy chart

High loss	Strategy: Transfer	Strategy: Avoid	Risk treatment is the process by which risks are actively managed within the business. Risk treatment takes form in developing processes, training staff, or actively managing exposure to identified risks. To tolerate a risk means that the risk registers as a business concern, however, these risks are the last priority. Tolerating risk means that it is measured and tracked but not actively interfered with. Risk transfer is the process by which the exposure of risks is transferred to a third party at a premium or at the very least a loss of possible profits, the most common means of doing this is through taking out insurance.
Low loss	Strategy: Tolerate	Strategy: Treat	
	Low probability	High Probability	

Source: Author compilation

Risk transfers require that the business pays a monthly premium relative to the risk that they transfer. This produces a cost, thus the order of priority by which risks are to be transferred should be determined by the scope, severity and probability of a risk event occurring with reference to the risks relative to the business. Precedence must be given to risks that have wide scopes, catastrophic severity and a high likelihood. Since risk can only be avoided by closing an exposure and withdrawing all possibility of making a profit, it should only be reserved for high probability and exposure. Risk should only be terminated when the likelihood and severity of loss are outside of the risk appetite of the organisation. How a business chooses to transfer, tolerate and treat risk is dependent on the business's particularities and thus the plans that the business comes up with should be developed with the particularities of the business in mind. If help is required, Table 6.3 can be referenced for a guiding process to get the business started.

6.2.6 Step 6: Reaction planning

Although the above steps will already have provided your business with a strong beginning point for risk management, not all risks can be managed and some risk events will occur despite the managerial efforts to control or avoid them. In order to prepare for these scenarios, a business must set up a reaction plan for each risk that the business cannot manage for whatever reason. Reaction planning is the process of developing contingencies and setting up reserves for disaster recovery, pure risk and to engage with potential business community alliances outside of the business's immediate concerns. To set up reaction plans requires a well-grounded understanding of the risks that the business faces. It must understand the risk, how it comes about, the losses attributable to it and what can be done to reduce the possibility of complete failure. As the risks attributable to

the business are a matter stemming from the particularities of the business, the considerations was particular to the individual businesses and thus variable between businesses.

Reaction planning begins with identifying which risks and opportunities are outside of the scope of the business to address. A list can be created in this regard from the risk identification step and by using the estimations from the risk assessment step the risks can be arranged into a priority list. The order in which contingencies are set up is the same as the order in which risks were rated in the risk analysis step.

Having identified the risks that need to be checked upon, the action-based part of reaction planning can begin. The first action that must be taken, is determining what is a reasonable contingency concerning the various risks faced. For instance, you should not fire an employee for making a small and simple mistake if that mistake did not make it impossible to keep them in the business of keeping a million rand in liquid capital for stationary the business might need. Reaction planning must be reasonable; however, this was dependent on the particularities of the business. It might be reasonable to fire an employee that makes a small and simple mistake if that mistake was at a power plant and it resulted in the death of another person, it might also be reasonable to keep a million rand in liquid capital if it is needed for a bid on stationary to stock a chain of stationery stores. As such, there is no universal guide on how this can be done but it is essential that the underlying characteristics of the risks be laid out explicitly.

The risk analysis step also provides estimations of the possible losses. This serves as an upper indicator of how much of the business's resources could be used to plan for the eventuality of a risk event. For example, if the estimated loss for a fire is R10 000.00 and the insurance refuses to cover it then at most you should spend R10 000.00 to deal with the risk, any plan that exceeds that value should be ignored. In any case, not doing anything about a risk you can do nothing about is the best course for a business to take.

Once the strategic considerations have been included and the risks that can be treated have been treated, all the risks that have not been crossed off serve as candidates for reaction planning. Once risks have been identified, analysed, estimated, evaluated and treated, the business was aware of where the business's limitations are in what they can do to manage risks you will find that the small business has already identified the risks, opportunities and threats to the business and is aware of the gaps in their risk management.

The use of the strategic tool can also serve as a guide in the reaction planning phase. The strategic insights produced through it can augment the competitive capabilities of businesses by allowing them to avoid or take advantage of shifts in the external environment. Some of the most common reaction plans are capital reserves or training staff in how to handle situations that carry risk and thereby holistically bringing the business in line with business and national policy. To build a capital reserve can be challenging for small businesses. Gathering resources to actuate control is conceptually easier in a large firm when compared to smaller firms primarily because larger firms are likely to have larger reserves and better liquidity.

6.2.7 Step 7: Risk reporting and communication

The reader might be tempted to assume that reaction planning is the final step of the risk management process as it addresses future concerns. However, risk management must also be continuous, meaning that it is a process that runs in line with day-to-day business activities on a day-to-day basis. What separates reaction planning from a risk management system is the manner by which the information and experiences gathered through the risk management process is incorporated and integrated into the managerial risk consciousness of a business. To make risk management continuous requires that the business build up a means by which information on risk is reported, monitored and reviewed.

Reporting is the process of capturing relevant information consists of performance evaluations, event and action reports, business audits, procedures used to audit the organisation and new experiences and information that was gathered between reviews. Practical reporting and integration strategies are required to ensure that relevant information flows to the right parties within the business. First, a business must develop a system by which they report on the risks they have. This will vary from industry to industry. In a silo, for instance, if an air pump stops working it could be a matter of an hour or two before the agricultural stock in it begins to rot or ferment. Risk needs to be reported as close to immediately, in this case, and is done by means of electronic sensors.

Alternatively, a small retail business must take stock to ensure there are not thefts. This can be done once a day or once a week if need be. Reporting creates the data the business needs to move over to monitoring. The essential output required from the reporting stage is a clear understanding of the real world outplay of Type 1 and Type 2 risks as they relate to the business. What is important in this step is to direct the discussion to practical events. Let us say, for instance, that the business is one that focuses on the resale of second-hand goods, risks would be things like

stock theft, excessive petrol use in the delivery vehicle, a supplier that sold your stock to another person. What is important is that risk reporting is practical and systematic, daily or more often is preferable but it needs to be in line with what the business can make a reality. Reporting can be as simple as the example below (Table 6.10) or as complex as the business requires it to be. Not everything is as important or irrelevant to different businesses and thus this is individualistic. What is reported on is also something that is relevant to the business particularities and as such, the formal outlay of reporting was very different between businesses.

Table 6. 10: Example of a simple report

Date	Employee I.D.	Nature of the risk event	Estimated loss

Source: Author compilation

Once the risks have been reported they still need to be communicated to the people who can do something about them. Communication of risk information to the right people gives value to the reporting stage since without it the business only has records of what went wrong. Communication is about getting the right reports to the right people so that the risk reported on can be addressed. For example, a salesperson needs to know if there are delays in stock arrival, not whether there is an office stationery shortage. Setting up communication lines allows people to get to the reports they need quickly. This allows for rapid responses and minimised losses.

6.2.8 Step 8: Monitoring risk

As risks are reported, new risks was identified, analysed, treated and reported on again. This is how a risk management system maintains itself and how it becomes integrated into the business. It is also through this step that risk management becomes second nature to business. Once risk has been reported and communicated, all that remains is integrating the considerations that they generate into the long-term considerations of the business and monitoring them over time. The process by which communicated risks are integrated into the business's risk management profile is called risk monitoring. Monitoring can be aided through database systems or through dedicated functional groups within the business.

Risk monitoring is similar to risk communication and reporting in that it is very specific to the business, however, the underlying principle is the same regardless of what business you have. The underlying principle is the observation and integration of risks into the risk management process of the business between the major revision periods.

6.3 CONCLUSION

By applying the processes outlined in this guide, the small business will have implemented every process and consideration required to develop and maintain a functional risk management system. Furthermore, the small business owner can develop, customise and evolve the risk management system in their business so that it meets their unique needs whilst being assured that they are proactively managing their risks. With this tool, the small business owner will continue to improve its risk management, strategic management and general management. The primary objective (Empirical objective 9) of this study has been achieved through the development of this tool. It is recommended that this tool be tested and that further development be tailored to the various sectors within which the businesses operate.

This tool serves as a first contact point for risk management in small businesses. However, it also expands into other managerial sciences through the interventions presented in it. This translates into the development of interdisciplinary synergetic reinforcement and business specific contexualisation of management functions and activities. As such the benefit to the small business in applying the SBRMIT outweighs the costs from a theoretical perspective. What remains now is that the SBRMIT be tested in practice and developed into a governmentally acknowledged standard.

CHAPTER 7

SUMMARY, RECOMMENDATION, AND CONCLUSION

"Innovation comes from, one, acknowledging yourself; two, studying and understanding the problem; and three, finding a solution." ~ Marley Dias

7.1 INTRODUCTION

Risk management has proven its value globally, as evidenced by the pervasive use and governmental enforcement thereof. However, the benefits of risk management do not extend to small businesses due to the limitations that are embodied by them. For the small business, risks exist as abstractions that only gain pertinence when a risk event is realised in the business. This, in turn, does not allow the small business to set up sufficient managerial interventions and results in losses. Although larger businesses address risk management as a compliance issue, small businesses do not have the same legally enforced compliance requirements. The absence of legally enforced compliance results in both insufficient risk management and a lack of awareness of existing risk management frameworks. Although the lack of policy motivation contributes to ignorance on good risk management practices, there are inhibiting factors that are characteristically associated with small businesses that further limit their capacity to apply risk management.

Small businesses lack skills and financial resources to successfully manage risk. It was found that due to their small size and simplistic risk perceptions, small businesses resort to risk avoidance, unstructured crisis management, or risk transfer by means of taking insurance. Moreover, risk interventions applied by small businesses were found to be unsystematic and sporadic and tended to be neither sufficient nor incorporate observed considerations into the business. When applying risk management in a small business, an additional level of complexity is added as it requires simplicity and affordability in not only applying but in maintaining risk management processes once established (Le Roux, 2016:154). For risk management to add enough value to be voluntarily pursued by small businesses requires that the risk management process expands risk awareness and provides risk management strategies to address risk, affordably and within the business's operating context (Ebrahim *et al.*, 2019).

To provide small businesses with the aid required to overcome the problems that they face, the primary goal of this study was the development of a SBRMIT that is simple enough for easy and cost-effective, yet comprehensive, risk management. The SBRMIT breaks up the risk management

processes into small, individual steps that account for all the considerations that a business needs to take into account for their risk management.

7.2 OVERVIEW OF THE STUDY

This section provides a synthesis of the chapters of the study.

7.2.1 Chapter 1: Introduction and background to the study

The study was introduced in Chapter 1. Consequently, the background was given on the problem statement and discussed (Section 1.2), the primary, theoretical and empirical objectives of the study (Section 1.3) were included. Thereafter, the research design and methodology (Section 1.4) were discussed and considerations such as the literature review, the population from which the sample would be selected, sample demographics, sampling technique, sample size, measuring instrument and which statistical analysis would be employed were addressed. The proposed contribution was then stated (Section 1.5), followed by an outline of the proposed chapters (Section 1.6).

7.2.2 Chapter 2: Theoretical analysis of risk management frameworks

Chapter 2 was the first of two theoretical chapters and addressed risk and risk management considerations in regard to their role in small businesses. The goals sought to be met in this chapter were:

- Theoretical objective 1: Conduct a literature review on the theories, definitions and principles that pertain to risk management;
- Theoretical objective 2: Conduct a literature review to ascertain the importance of sound risk management and the underlying principles, structures and benefits thereof; and
- Theoretical objective 3: Construct a taxonomy of risks that allow for comprehensive risk awareness and the systematic incorporation of additional risk categories.

The chapter begins by building a comprehensive foundation of risk and risk management. This was achieved by first defining risk and the natural characteristics that embody it (Section 2.2). Secondly, a broad basis for classifying risk was established and illustrated (Section 2.3). Having developed a robust comprehension of risk, the study then proceeded with its detailed observation of risk management (Section 2.4). Section 2.4 addressed the definition of risk management (Subsection 2.4.1), the benefits thereof (Subsection 2.4.2) and the individual processes/ steps that the risk management process consists of (Subsection 2.4.3). The latter was discussed to extract the

fundamental outcomes required of each. These would serve to inform the SBRMIT as to what would be required of it.

The major risk management standards were studied (Subsection 2.4.4) and used to cross-reference the SBRMIT to ensure that the interventions were adequate in scope and differentiated significantly to ensure that copyrights were not violated. Subsection 2.4.4 was also used to ensure that the SBRMIT would be able to serve as the beginning point through which small businesses could begin to adopt established risk management standards. Having ensured the aforementioned, the next consideration that had to be incorporated into the SBRMIT was the principles that frame risk management. The discussion of the fundamental principles of risk management was added in response to the results from Kruger (2017:116) in which it was found that risk management in small businesses tended to be reactionary as opposed to pre-emptive. In an attempt to motivate the small business to take a proactive stance and frame risk management better, the principles (Section 2.5) and objectives (Section 2.6) of risk management were included and discussed. Risk frameworks were discussed (Section 2.7) to provide a precedent and further describe and define the details relating to a good risk management process.

7.2.3 Chapter 3: Theoretical analysis of small businesses in South Africa

In order to discuss an intervention for small businesses, it is required that an understanding of them be present. To accomplish this task Chapter 3 was written to create an overview of small businesses. The objectives of this chapter were as follows:

- Theoretical objective 4: Discuss and define small businesses, small business characteristics, small business risk-taking characteristics, reasons for small business failure and factors that contribute to their success;
- Theoretical objective 5: Evaluate the current demographical characteristics of small businesses; and
- Theoretical objective 6: Identify and discuss policies and government interventions aimed to aid small businesses.

The chapter began by defining a small business (Section 3.2) and discussing the beneficial and detrimental characteristics that they have (Section 3.3). Once the fundamentals were dealt with the discussion extended into risk-taking behaviours for small businesses (Section 3.4) and then into a discussion for small business failure (Section 3.5) and small business success (Section 3.5). Once this was done, the business environment that small businesses operate in and their demographics

were discussed (Section 3.8). Policy support for small businesses was also investigated (Section 3.9) and the shortfalls of policy agents were discussed (3.10).

7.2.4 Chapter 4: Research design and methodology

Chapter 4 discussed the methodology and data collection tool employed in this study to address the research questions. The chapter begins by discussing research paradigms (Section 4.2), radical structuralism was selected as the most appropriate research paradigm. Thereafter the research design was discussed (Section 4.3) and a descriptive single-sample cross-sectional design approach was followed. Section 4.4 addressed the research approach and for this study, a quantitative approach was determined to be the best. To gather the quantitative data required in this study a non-probability sampling approach was used (Section 4.5). The data collection instrument, the questionnaire and the method of collecting them, physically administered, was discussed in Section 4.6 and Section 4.7 respectively. Section 4.8 addresses how the data were preliminarily analysed and prepared. Statistical analysis was discussed in Section 4.9. Factor analysis was discussed in Section 4.10 and ethical considerations were discussed in Section 4.11.

7.2.5 Chapter 5: Data analysis and discussion of results

The results and findings of the statistical analysis performed on the gathered data were analysed and discussed in Chapter 5. The objectives sought to be met in Chapter 5 were as follows:

- Empirical objective 1; Analyse the demographical data received from small businesses in the SDMA to determine the selected particularities of small businesses in the SDMA;
- Empirical objective 2: Apply exploratory factor analysis to determine if small businesses can differentiate between different categories of risks that they face (Section A);
- Empirical objective 3: Apply exploratory factor analysis to determine how willing small businesses are to take risks as laid out in DOSPERT (Section B);
- Empirical objective 4: Run a SCF to determine the risk appetite of small businesses in the SDMA (Section B);
- Empirical objective 5: Apply exploratory factor analysis to analyse how closely the risk management practices of small businesses within the Sedibeng district municipal area align with what is displayed in theory (Section C);
- Empirical objective 6: Apply frequency analysis and descriptive analysis to identify general shortcomings in small business' risk management within the Sedibeng district municipal area;
- Empirical objective 7: Run tests of differences using T-tests and ANOVA to determine if the components varied for different demographical groups; and

- Empirical objective 8: Run item-component and inter-component correlations to determine the relationships between components and selected demographical items.

To meet these objectives, Chapter 5 investigated the demographic characteristics of small businesses in the Sedibeng district municipality (Section 5.2). Thereafter, exploratory factor analysis and its accompanying tests were run (Section 5.3). The exploratory factor analysis allowed for the generation of components which were tested for reliability, a correlation between items and components (Section 5.7 and 5.8) and analysed to determine if the results were sensible when compared to theory (Section 5.4). Frequency and descriptive analysis were applied to interpret the meaning of the answers and determine the mean and standard deviation of the sample (Section 5.5). Having determined which factors were reliable, a select few were tested for differences in Section 5.6.

7.2.6 Chapter 6: Risk management intervention tool

The primary objective of this study and empirical objective 9 is the development of a risk management intervention tool for small businesses within the SDMA. Chapter 6 lays out the entire process and guides the small business in its risk management.

- Empirical objective 9: Create a risk management tool that aids in the development of small business risk management.

7.2.7 Chapter 7: Summary, conclusions and recommendations

This chapter will provide a summary, conclusion and recommendation for the study.

7.3 MAIN FINDINGS OF THE STUDY

This section provides an overview of the main findings of the study as laid out in the overview of the study as it relates to the empirical objectives.

The first objective was to analyse the demographical data received from small businesses in the SDMA to determine the characteristics of small businesses in the SDMA (Section 5.2). The sample was distributed over Lesedi, Midvaal and Emfuleni as close to the proportions outlined by Neethling (2016) and SDM (2017). The racial distribution of the sample was atypical when compared to the national figures given in 2016. The sampling was done by convenience, however, by employing multiple agents from multiple ethnical backgrounds the bias of any one data gatherer should have been offset by another. The sample only accounted for small businesses that had a physical location from which to do business. Thus, taking the limitation, the exclusion of informal businesses, into account the figures can be argued as being representative of formal small

businesses in the SDMA. It was found that although the majority of the small businesses in the sample were private companies and had the intention to pursue high growth − only 25 percent of them have managed to survive beyond the first five years. This is in line the SEDA (2018) that also stipulates that the failure rate for small businesses is 75 percent.

It was found that the majority of small businesses in the area were in trade and services. This differs from the Global-Insight (2016) report that stipulated that each of the municipality's primary sectors are in manufacturing. This variation is indicative of difficulty in entering the manufacturing industry. It was also found that 50 percent of small businesses had one to four employees. In regard to obtaining and maintaining more employees, there appears to be clearly identifiable thresholds in which the difficulty seems to more than double. It is reasonable to assert that this is an example of Price's law coming into play. Price's law argues that the square of a population is responsible for half of the work being done. Mathematically this would imply that as long as there are no more than four employees in the business, half the work is done by half the employees (Nicholls, 1988). What is shown is that there are major declines at four employees and again at nine employees. This is sensible because at four employees the workload is split perfectly between two pairs of employees. Any more employees than that and it disrupts efficiency by distributing productivity asymmetrically amongst the employees. This is confirmed as the business moves from four to five employees and again when the business moves from nine to ten employees, after which point there is a major decline in the number of businesses that can support additional employees.

When considering the distribution of the age of small business owners, it was also found that they followed an inverted U distribution and it falls in line with the inverted U theory which states that small businesses are generally only established once sufficient experience and resources has been gathered to pursue entrepreneurship as a viable option (Lévesque & Minniti, 2011:270). Inherently, it was shown that there was a high literacy rate with 80 percent of small business owners having a level of education that was equal or greater to a matric. Most small businesses were either home-based or in a business area outside of the central business district. In terms of the risk management practices of small businesses, 27 percent of small businesses claimed to have mangers, 23 percent of the small businesses claimed to employ a risk management standard and only 18 percent claimed to have a dedicated risk management officer. This indicated that 79 percent of small businesses that incorporated a risk management standard also employed a risk officer. This is significant because it provides a perspective of risk.

The second and third empirical objective was addressed in Section 5.3. The second empirical objective was to determine if small businesses can differentiate between different categories of risks that they face (Section A). This was done through exploratory factor analysis, which tests whether items of a proposed scale are addressed by the respondent in a way that groups similar ideas together. In order to test whether or not the small business respondent could group various risks they were asked questions about the same risk type multiple times. What the responses revealed was that the small business respondents did group their risks, but not to the degree of specification that is required for good risk management. Small business respondents could only identify liquidity risk and external risk.

The third empirical objective was to determine how willing small businesses were to take risks (Section B). To do this the DOSPERT scale was used to determine risk-taking over three of the five various domains. In this case a two-legged DOSPERT did not need to be applied because the study did not aim to test the effect of an intervention, but instead aimed to determine if any of the domains grouped together as it was proposed in the original scale. This was done to determine risk-taking in the domains of health and safety, financial risk-taking and social risk-taking. What was found is that the only domain in which the scale showed statistical significance was the scale that tested for the willingness to take health and safety risks. This is a significant finding because it means that the willingness to take both health and societal risks are not consistent between small business owners. The level of risk-taking in those domains cannot be conclusively indicated here. To supplement DOSPERT and determine the financial risk appetite of small businesses (Empirical objective 4) an SCF was conducted. The SCF showed that small businesses were financially risk adverse. This implied that small businesses were careful with the risks that they would take. The theory that small businesses failed due to management deficiencies as an alternative to the idea of reckless expenditure, thus, was affirmed. Chapter 3 speaks in detail of what the main reasons for small business failure are.

Having determined that small businesses are risk-averse, the next pertinent question was how small businesses managed their risks (Empirical objective 5). To answer this question using a quantitative instrument the questionnaire divided the steps of the risk management process into questions that were then asked in a randomised order. If the groupings generated through factor analysis matched the theoretical groupings it would imply that the small business was able to address individual risk management steps as separate processes. Thus, Scale C served as a proxy for the sufficiency of risk management practices within the businesses. What was found is that the small businesses did not group the individual components of Scale C according to the theory that

it was derived from. Instead what was found is that small businesses broke the entire risk management process into three steps, which were risk identification, risk intervention and reporting by employees. When this result is analysed in context of the findings of empirical objective two, it needs to be noted that the risk identification stage only extends to having sufficient capital on hand to address whatever situation befalls the small business. Cumulatively, the findings of Empirical objectives 2, 3, 4 and 5 provide a motivation for a risk intervention. Having determined that the small businesses could not identify different risks, nor differentiate between risk management processes, the SBRMIT was determined to be necessary.

Frequency analysis and descriptive analysis were then applied to identify general shortcomings in small business' risk management within the Sedibeng district municipal area. This was done by determining the frequency at which small businesses were applying risk management principles in their judgement. This is not ideal, since a small business can be biased in its answers. However, the alternative, which is to observe each of the sample businesses over time, was just not possible. Therefore, this study notes that frequency analysis should be used to identify those irregularities that deviate strongly from the monthly intervention mean that is maintained. If a risk was managed too often it implies that the small business does not come to a definitive conclusion and if it is not managed often enough it implies that the risk management step is neglected. The mean response for small businesses was a monthly intervention on each of the components What was found is that 53 percent of the risk management steps were being addressed daily. This number should be lower since many risk management steps are only meaningful when applied over time. The only exception to this is the risk identification and risk monitoring/ reporting, which should be exercised whenever applicable. The risk management behaviours of small businesses were used to inform the SBRMIT and incorporating the empirical and theoretical findings and considerations into it (Chapter 6).

The final two objectives employed in this study were aimed at determining potential future interventions and, as such, addressed tests of differences to identify what affected the components produced in this study and what the effect sizes of those differences were. Tests of differences, particularly T-tests and ANOVAs, were run to determine if the components were affected by demographical components; this met the empirical objective 7.

The tests of differences produced by hypotheses (H_01), (H_02), (H_03) and (H_04) were formulated. (H_01) addressed business style and (H_02) addressed the presence of a dedicated risk manager There was insufficient evidence to reject the null hypotheses for (H_01) and (H_02); thus it was concluded

that there were no significant differences between high-growth and lifestyle businesses or small businesses that did and did not have a dedicated risk manager. *$H_0$3*, component A2 External risk awareness, B Willingness of the owner/manager to take health and safety risks, C1 Risk identification, C2 Risk intervention and *C3* Employee risk feedback were all 0.000 and, thus, below the significance value of 0.05. Thus, in the case of the aforementioned components, there is sufficient evidence to reject the null hypothesis (*$H_0$3*) and the alternative hypothesis (*H_a3*) is accepted. This indicates that there were identifiable differences between them. However, for Component A1 Liquid capital management, there was insufficient evidence to reject the null hypothesis (*$H_0$3*), as its p-value exceeds 0.05.

Thus, only for component A1 Liquid capital management, there are no significant differences between different municipal areas. In the case of $H_0$4 the component C3, there is sufficient evidence to reject the null hypothesis (*$H_0$4*), thus, for Component C3 the null hypothesis was rejected and the alternative hypothesis (*Ha4*) was accepted. Concluding that for component C3 there are significant differences in relation to current level of education. In the case of components A1 Liquid capital management, A2 External risk awareness, B Willingness of the owner/manager to take health and safety risks, C1 Risk identification and C2 Risk intervention, A1, there was insufficient evidence to reject the null hypothesis, showing that there were no differences for the components in relation to level of education. No statistically significant difference is observed on any of the components by its business style or presence of a dedicated risk manager. What did have a major effect on the majority of the components is the municipality in which the small business was located (Section 5.7.3). Higher levels of education appeared to only bolster the frequency with which employees reported risk.

To determine if there were relationships between items and components, an additional correlation analysis was run (empirical objective 8). The correlations analysis (Section 5.8) showed that the strongest relationships existed between components that came from the same scales. This was as a result of the items being related in theory from which they were created (Hopkin, 2018). In terms of which, demographics had the strongest effects on the components, it was found that age and experience had the strongest effect on all of the risk management components (Section 5.8.1).

7.4 CONTRIBUTIONS TO THE FIELD OF THE STUDY

The SBRMIT is the primary practical contribution of this study and allows small businesses to apply risk management without formal training or expertise in a cost-efficient and functionally

uncomplicated manner; thus, supporting small business survival, growth and evolving risk management to include the concerns of small business owners as they use it.

In order to achieve the primary goal, other empirical and theoretical objectives had to be met. As shown in the main findings, secondary empirical contributions are an improved understanding of the demographical profile of small businesses within the Sedibeng district municipal area; a better understanding of the risk-taking behaviours of small businesses within the Sedibeng district municipal area as a function of managerial risk-taking; a better understanding of the risk management practices of small businesses within the Sedibeng district municipal area; and, a clear overview of the general shortcomings in small business' risk management within the Sedibeng district municipal area.

Theoretical objectives 1, 2 and 3 were addressed in Chapter 2 aided in the construction of the SBRMIT in that it created a backdrop of risk management, isolated the principle underlying elements of the various risk types, expanded on the definition of risk and highlighted those essential components of the risk management process that must be included to assure that it is comprehensively addressed. It was through the investigation of these principles that the fundamental component parts of the SBRMIT were constructed from. The taxonomy of risk serves as a collection of every risk type that was identified throughout this study and allows for the generation of a risk identification tool that is built into the SBRMIT so that it would be usable to the small business. To accomplish this, theoretical objectives, 4, 5, 6 and 7 were pursued. Theoretical objective 4 addressed small business characteristics, small business risk-taking characteristics, reasons for small business failure and factors that contribute to their success. It can be concluded that although risk management is not the only factor that can contribute to small business success it can function as an aid to nearly every area that was identified to be problematic in Chapter 3. The analysis of the demographics of small businesses also aided in constructing an overview of the particularities that must be considered when framing the SBRMIT towards small business needs.

7.5 LIMITATIONS

A number of limitations were encountered in this study. Firstly, the sample collected was limited to the SDMA this is appropriate in regards to the study taking into account the limitation that the study placed in regards to the sample, however the results cannot be generalised to the entire South Africa. From a quantitative research position many of the results are generalisable from a purely statistical position, taking into account the results discussed in section 5, however, the variation

that is possible between small businesses across municipalities engenders a degree of caution that requires that this be mentioned as a limitation. The SBRMIT could not be field-tested as a result of time delays. Moreover, the study found that many of the predetermined scales initially employed in this thesis did not function as per the theory that described them and, consequently, the objective to determine the risk appetite and risk-taking behaviours, although sufficient, is not as detailed as would be preferred. Chapter 5 addresses the failure of the scales to maintain their predefined reliability and validity. However, it was found that new themes were identified and shown to be both statistically reliable and valid when particular components within the predefined scales were grouped. Secondly, another limitation was the time extensive process of sampling that slowed down a great deal of the work.

7.6 RECOMMENDATIONS AND AREAS FOR FURTHER RESEARCH

7.6.1 Recommendations

Expand the research on the risk appetite and risk-taking behaviours of small businesses.

The main recommendation is that the RMIT be applied in extended trials, to field test and develop the RMIT into a free and easy-to-use instrument. It is recommended that RMIT be piloted in selected businesses as this would aid greatly in determining the shortcomings of the RMIT. The tool was developed explicitly with the intention of being applied by businesses.

It is recommended that a legal framework be developed to compliment the risk management framework so as to address the core legal considerations of the business.

It is recommended that all additional managerial functions and the details that compose them are incorporated into the RMIT so that it develops into a holistic managerial intervention tool.

It is recommended that workshops be provided for small businesses that train them in the application of the RMIT and develop integration strategies between other managerial considerations.

It is recommended that the RMIT be considered for application as a formal standard for risk management in the South Africa.

From a policy perspective, it is advised that governmental bodies aim their interventions into training that deals with the particular considerations of improving general management, legal continuation and better accounting practices.

7.6.2 Further research

Further studies can focus on a wider sample to generalise the results to the entire South Africa and furthermore expand the tool to account for risk behaviour specific to small SMMEs. It is suggested that further research be done to build the SBRMIT into a cumulative business intervention and amplification tool that addresses all managerial considerations from the basis of risk management. This is seen as a distinct possibility because of how risk management pervades throughout the entire business. Risk management highlights all issues if applied correctly. Thus, it can identify practical, actionable and immediately relevant challenges in the business and aid in planning on how to overcome them. By using risk management as the beginning point in expanding the managerial activities of an enterprise it can show the value of other managerial interventions. This allows for the cross-promotion of other management sciences and the incorporation of general best practice in a way that small businesses might find more actionable.

It is recommended that the questionnaire be revised and expansion should include the fields observed during the latter part of this study. During the study, there were multiple interesting observations, mentioned in the chapters, that prompted for the modification and expansion of the initial questionnaire to include more qualitative observations as well, that are intended to probe the participants' for deeper meaning and explanation.

It is recommended that the relationships between the number of employees and the survivability of businesses be explored from an economic perspective. Due to the limitation of time, there was not a sufficient period of time in which to test whether the observation that the frequency of a higher number of employees declined rapidly at certain points was by chance or whether there were underlying economic effects that were limiting them.

7.7 CONCLUSION

For small businesses to grow into large businesses it is essential to develop those skills and managerial structures that allow a business to survive, adapt and overcome the challenges it faces. Although risk management in and of itself cannot accomplish that task, it can function as a powerful support to all the activities of the small business. Even though the risk management tool provided by this study will surely allow small businesses to incorporate risk management practices into their businesses it only addresses a small part of the problem. This is perhaps the greatest limitation that small businesses will face as it is multidisciplinary in nature and requires the synthesis of multiple skills, expertise and government support to accomplish.

This study has accomplished the task it set out to achieve and created a meeting point for small businesses and risk management through the creation of a SBRMIT. In this study, a thorough discussion of risk, risk management, risk management principles and risk management standards have been related to small businesses. Small businesses have been thoroughly explored to build those considerations they generate into the RMIT. A thorough statistical analysis was done and the influences of various items were compared with the scales generated by this research.

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APPENDIX A: TYPOLOGY OF RISKS

Risk:	Discussion:	Source:
Type 1 Risks	Type one risk is classified as external risks and share those risks associated with terms such as fundamental risk, systematic risk and market risks as they adhere to the characteristic of being outside of the business's direct control. Measures must be taken, and a corporate culture developed to create a buffer against losses resulting from external risk. The primary measure taken is some form of insurance or the retention of a capital buffer `	(Foucault, 1991:197-210; Lewis, 2004:6).
External risk environment	That area of activities and events that is beyond the internal control context of the business to influence	(Lewis, 2004:6; Borghesi & Audenzi, 2013:20; Valsamakis *et al.*, 2013:34)
Fundamental risk	Fundamental risk originates in the external business environment and include political and socio-economic movements, natural disasters, legal or reputational events such as famine or natural disasters	(Valsamakis *et al.*, 2013:56).
Systematic risks	Systematic risks affect the business through fluctuations in market prices and rates thus it is also called market risk	(Mills, 2001:245-252) (Chatterjee & Lubatkin, 1990:256-259) (Valsamakis *et al.*, 2013:57).
Market risk	Through fluctuations in market rates and prices business assets, such as securities held by the business or the financial portfolio of the business can be devalued or severely damaged. Market risk is non-diversifiable and is represented by measures of market volatility defined as a deviation from some benchmark How closely a business's portfolio is correlated to the market determines the vulnerability of a business to market risk. Market risks can be further subdivided into: commodity price risk, equity price risk, interest rate risk and currency risk.	(Hamada, 1972:57-97; Bos & Newbold, 1984:39; Mills, 2001:253; Dowd, 2002b; Gençay *et al.*, 2005:56-62; Crouhy *et al.*, 2014:225-240)
Commodity price risk	Commodity price risk is the risk that the value of goods might change. Commodity price risk is exacerbated by a small number of suppliers, poor trading liquidity amongst suppliers and overheads such as the storage of the commodity	(Linsmeier *et al.*, 2002:354)
Equity price risk	Equity price risk is represented by the sensitivity a portfolio carries in relation to stock market indices volatility. The equity risk tied to the portfolio of a business can be diversified and thus reduced; however, market equity price risk that comes about from market activities cannot be eliminated through diversification.	(Constantinides, 1978:603-608; Crouhy *et al.*, 2014:225-234)
Interest rate risk	Interest rate risk is the risk that adverse in interest rate changes could lead to a decrease in net interest income	(Hull & White, 1990:581;

	of a business. Interest rate risk comes about from changes in market interest rates while the business interest rate maintains fixed. Interest rate risk becomes increasingly complex with the addition of interest-bearing instruments as asset maturities, asset cash flows, the gap between liability- and asset-like instruments and reset dates, must all be accounted for.	Hellwig, 1994:1372; Valsamakis *et al.*, 2013:35)
Basis risk	Basis risk can come about if the positions are not perfectly correlated. Basis risk is a term that represents the potential for a failure in the relationship between the price of a product and the price of the price-hedging instrument used to offset it	(Hull & White, 1990:580; Crouhy *et al.*, 2014:188)
Currency risk	Currency risk, also known as foreign exchange risk, is the risk that a change in currency values will adversely affect purchase and sales prices of goods; Imperfect correlations between currency pairs and international interest rate fluctuations actuate currency risk. Currency risk appears when assets or liabilities that are sold or purchased in the foreign currency. Fluctuations during a transaction period can lead to: losses on returns; operating losses; competitive disadvantage; and reduced investment.	(Greene & Serbein, 1983; De Santis *et al.*, 2003:427-431; Valsamakis *et al.*, 2013; Crouhy *et al.*, 2014:277-278; Chiu-Ming, 2017)
Systemic risk	Systemic risk is the risk that an entire system fails due to the failure of systemically significant institutions. Systemic risk is propagated through transactions and reactions to other institution's transactions that destabilise large economic units. Perception of excessive risk or institutional losses in highly correlated markets leads to large scale disruption, the disruption is transferred to healthy market segments that were formerly thought to be uncorrelated. This disruption leads to panic and panic leads to margin calls across the board, which leads to liquidity seeking behaviour by institutions at a significant devaluation, which leads to a drop-in asset values across the board, which in turn triggers another round of additional margin calls and asset devaluations. The size and interconnectedness of economic entities add to systemic risk, not only in the capacity of these enterprises, but also in regard to the time it would take to repair functional relationships between these entities.	(De Nicolo & Kwast, 2002:870; Das & Uppal, 2004:2819; Haldane & May, 2011:351-355; Billio *et al.*, 2012:542)
Type 2 risks	**Type 2 risks** are characteristically defined by their ability to be managed within an organisation. Type 2 risks include the categories of risks defined by terms such as internal risk, particular risk, or unsystematic risk.	
Particular risk	A particular risk is limited to an individual entity as a specific internal event that is directly responsible for potential losses. Particular risk originates from the internal environment and is thus within the range of	(Chicken, 1996:9; Frost *et al.*, 2001:77; Abkowitz, 2008:1-9;

	business to control. Businesses tend to be aware of internal risks as they are dealt with on a regular basis	Battiston *et al.*, 2012:4; Hopkin, 2018:45).
Unsystematic risks	Risks that are in control of the organisation are known as unsystematic risks. Risk managers primarily focus on managing unsystematic risks which can be broken down into: environmental risk, financial risk, marketing risk, resource management risk, property and personnel risk, and personnel and production risks. Within the managerial and corporate context unsystematic risk can be further classified into incidental or inherent risk	(Greene & Serbein, 1983:5; Doherty, 1985:167; Valsamakis *et al.*, 2013:20; Crouhy *et al.*, 2014:189)
Inherent risks	Inherent risks manifest in risks that are part and parcel of doing business. Examples of inherent risk are: sales variability, profit margin variability, turnover variability, leveraged operational positions, and the risk of not having the needed production resources. Sales variability is the deviation of sales from mean sales. Operating leverage is the percentage change in operating earnings over the percentage change in sales. Resource risk is the risk that cost, or availability of resources needed to produce a product are adversely affected. Competitive pressures force product margins down, subsequently reducing turnover and creating a risk to shareholder earnings	(Kaplan & Garrick, 1981:11-27; Graham *et al.*, 1995:318-319; Chicken, 1996:11; Investment Management Consultants Association, 2003:30; Aven, 2007; Aven & Renn, 2009:1-11; Marx & de Swardt, 2013:28)..
Incidental risks	Incidental risks include a range of financial risks such as: credit risks and currency risks, interest rate risks, investment/ capital risks, liquidity risks	(Grable, 2000:6; Jorion, 2006:60; Marx & de Swardt, 2013:32)
Business risk	Business risk is that risk that business structures are no longer competitive in their prescribed markets. Business risks comes about from poor business strategy, competition, the economic environment, the social and political environment, technological capacity, vulnerability of product value, capital limitations, compliance, credit foreign exchange, liquidity, commodity price risk, reputation risks and transaction risks.	(Duckert, 2010:112; Chapman, 2011:15-32)
Model risk	Model risk is the risk that a model used to represent business dynamics contains some internal error, cannot be applied or interpreted correctly, or that inputs are hard to produce. A model fails if it leads to outcomes that are not beneficial to the business. Wrong initial assumptions about the underlying processes that assets follow sets up a model for failure. Even if a model is mathematically correct and generally applicable within reality, there still exists the possibility that it might be misapplied within a situation.	(Hull & White, 1990:297-301; Dowd, 2002a; Olson & Wu, 2008)
Financial risks	Financial risks are those risks associated with capacity of a business to meet the financial claims it incurs using the financial assets it has acquired. Certain systematic	(Grable, 2000:6; Jorion, 2006:60;

	risks drastically affect financial risk profile of a business but are outside of the power of a business to manage. Commodity price risk, equity price risk, interest rate risk and foreign exchange risk are examples of these systematic risks. Major financial risks that are within the capacity of the organisation to control are capital, credit, and liquidity risks.	Marx & de Swardt, 2013:32)
Liquidity risk	Liquidity risk is the risk that a business has insufficient liquid capital to cover its operational needs. Short term liquidity is required to meet the day to day financial obligations of a business. Liquidity risk has a trading component and a funding component.	(Carey, 2001:24-27; Pástor & Stambaugh, 2003:666; Crouhy *et al.*, 2014:15)
Trading liquidity risk	Trading liquidity risk is the incapability of a business completing a transaction at the market price. Trading liquidity risk results in the inability to hedge adverse exposures, reduce market risk or meet capital needs during asset liquidation.	(Glosten, 1989:224)(Hui *et al.*, 2011)
Funding liquidity risk	Funding liquidity risk is the risk of inability to meet capital withdrawals, roll over debt, meet margin calls, meet collateral or counterparty claims. Funding liquidity risk is directly proportional to the size of transactions and inversely proportional to the rate at which it must be executed. Funding liquidity risk can be managed through holding cash and cash equivalents, setting credit lines in place and monitoring buying power.	(Brunnermeier & Pedersen, 2008:2222; Drehmann *et al.*, 2013:2178)
Capital risk	Capital risk is the risk of damage, degradation, devaluation or loss of human and non-human capital by means of perils the business is exposed to. Perils can be physical, financial, or human. observed that reducing human capital risk is an efficient driver of development within a business. Credit risk is the risk of default on, or deviation from, the terms of a financial contract.	(Carey, 2001:24-27); Krebs (2003:709-714); (Altunbas *et al.*, 2007:61)
Credit risk	Credit risk is represented by four smaller risks, namely: downgrade risk, default risk, bankruptcy risk and settlement risk. Downgrade risk is the risk that credit rating agencies could determine that the credit rating of a business or counterparty might be downgraded and push businesses into default or increase credit premiums.	(Bank for International Settlements, 2011:11-13; Crouhy *et al.*, 2014:351)
Default risk	Default risk is the inability or refusal of clients to meet debt obligations. Bankruptcy risk is the risk that the business assets was collateralised or escrowed. Settlement risk is the risk that a transaction is not going to be completely settled on the original terms agreed on as a result of differences in exchange rates over time zones. Settlement risk and counterparty credit risk are interchangeable terms.	(Altman & Saunders, 1997:1721-1733; Chapman, 2011:319; Crouhy *et al.*, 2014:26,62)
Operational risks	Operational risks are risks that are derived from activities within the business that are characteristically non-financial in that they are non-speculative and only	(Carey, 2001:25); Bank for International

	have the capacity to result in a loss. Operational risk has been defined by the, and supported as a, loss or potential for loss that arises as a result of failed or insufficient internal human resources, processes and systems or the result of external events that a business cannot address.	Settlements (2011:1-6); (Valsamakis *et al.*, 2013:134-150; Crouhy *et al.*, 2014:325-332)
Operational risk	Operational risk is made manifest as insufficiency in operational integrity and process risk. Operational integrity addresses the sufficiency of operational and governance controls, and service delivery. Process risk is the risk that those processes that must be in place for proper service delivery, are not sufficiently in place, do not address available data, nor incorporate contemporary innovations	(Carey, 2001:24-27; Frost *et al.*, 2001:224-245).
Human risk,	Human risk is the risk of loss as a result of human misconduct or error. Human risk includes fraud and an over-dependency on a few key people. The latter can also lead to risk exposures on systems or processes depending on the position the individual filled.	(Carey, 2001:24-27; Abkowitz, 2008:9-11; Valsamakis *et al.*, 2013:136-138)
Technology risk	Technology risk is also known as systems risk. Systems risk exposure is determined by whether a business has sufficient technological capabilities in terms of data processing, protection, the reduction of programming errors, and a means by which to minimise fraudulent activity.	(Scandizzo, 2007:75; Crouhy *et al.*, 2014:31)
Strategic risks	Strategic risks threaten the sustainability of a business through environmental, social human or financial concerns. Strategic risk can include the uncertainty that surrounds the profitability of significant investments. Strategic risk includes the exposure created by the interplay of strategies between the business and competitors resulting in losses and reputational damage if not correct.	(Frost *et al.*, 2001:120; Valsamakis *et al.*, 2013:40; Crouhy *et al.*, 2014:33-34)
Reputation risk	Reputation risk exposure grows as a business's actions supports the narrative of being a good business as greater reputational loss are incurred when acting against that narrative. Reputation risk addresses the perceived capacity of a business to meet creditor and counterparty claims; and that the practices of a business is ethical. Organisations are under increasing pressure to prove that their actions account for the social, environmental and ethical concerns according to a global standard. Due to the global interconnectedness through the Internet, reputational risk doesn't just arise from operational failures, but can be propagated if there is a perception thereof.	(Fombrun *et al.*, 2000:85-106; Carey, 2001:25; Aula, 2010:43-49; Crouhy *et al.*, 2014:34-36)
Legal and regulatory risks	Legal and regulatory risks come about from rules established and enforced by authoritative institutions who punish violations of non-compliance. Legal and regulatory risks are contingent to operational failures.	(Carey, 2001:26; Bank for International Settlements, 2011:11-17)

APPENDIX B: TABLE OF FREQUENCIES

Risk identification:				
Scale Item	**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**
A1	81	**117**	75	55
A2	62	**152**	81	34
A3	31	102	**132**	58
A4	24	105	**134**	62
RA5	49	**122**	109	47
RA6	60	104	**135**	29
RA7	49	116	**132**	31
RA8	72	**146**	71	38
A9	52	79	**126**	68
A10	41	97	**125**	64
RA11	52	114	**118**	41
A12	42	93	**116**	77
A13	43	82	**118**	83
A14	55	77	**124**	72
Risk tolerance and risk taking: SCF and amended DOSPERT				
SCF	**Very risk aggressive**	**Risk aggressive**	**Risk adverse**	**Very risk adverse**
B1	54	76	**97**	93
Scale Item	**Very unlikely**	**Unlikely**	**Somewhat likely**	**Very likely**
B2	**181**	54	55	36
B3	47	57	105	**117**
B4	57	76	**119**	70
B5	58	91	**130**	50
B6	**95**	94	74	56
B7	**145**	77	62	37
B8	48	70	**112**	97
B9	**155**	68	57	47
B10	75	**98**	**98**	52
B11	58	71	90	**107**
B12	73	**88**	78	84
B13	**152**	66	69	37
B14	**92**	81	87	66
B15	51	70	**119**	85
B16	58	74	**123**	73
B17	**130**	72	54	68

Risk management process						
Scale Item	**Never**	**Annually**	**Bi-Annually**	**Monthly**	**Weekly**	**Daily**
C1	36	35	18	72	61	**104**
C2	27	35	43	**75**	71	**75**
C3	27	38	41	**85**	66	69
C4	26	37	33	**83**	78	68
C5	19	36	30	73	72	**94**
C6	20	30	4	**87**	72	71
C7	29	23	32	69	72	**96**
C8	62	59	34	**87**	45	37
C9	32	31	35	75	57	**91**
C10	22	27	35	75	77	**87**
C11	16	41	30	**85**	80	64
C12	33	19	31	**92**	71	77
C13	21	19	36	77	80	**92**
C14	25	30	28	**86**	78	76
C15	14	30	34	**91**	86	70
C16	29	17	37	71	73	**98**
C17	33	21	36	56	64	**115**

APPENDIX C: GAMES HOWEL POST HOC TEST MULTIPLE COMPARISONS BETWEEN MUNICIPAL AREA

Multiple Comparisons
Games-Howell

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
A1 Liquid capital management	Lesedi	Midvaal	-0.18109	0.099	0.164	-0.4159	0.0537
		Emfuleni	-0.11597	0.089	0.397	-0.3281	0.0961
	Midvaal	Lesedi	0.18109	0.099	0.164	-0.0537	0.4159
		Emfuleni	0.06512	0.072	0.64	-0.1066	0.2368
	Emfuleni	Lesedi	0.11597	0.089	0.397	-0.0961	0.3281
		Midvaal	-0.06512	0.072	0.64	-0.2368	0.1066
A2 External risk awareness	Lesedi	Midvaal	-.60782*	0.117	0	-0.8858	-0.3298
		Emfuleni	-.22159*	0.082	0.022	-0.417	-0.0261
	Midvaal	Lesedi	.60782*	0.117	0	0.3298	0.8858
		Emfuleni	.38623*	0.098	0.001	0.1516	0.6208
	Emfuleni	Lesedi	.22159*	0.082	0.022	0.0261	0.417
		Midvaal	-.38623*	0.098	0.001	-0.6208	-0.1516
B Willingness of the owner/ manager to take Health and Safety risks	Lesedi	Midvaal	1.03571*	0.082	0	0.84	1.2315
		Emfuleni	.36250*	0.076	0	0.1811	0.5439
	Midvaal	Lesedi	-1.03571*	0.082	0	-1.2315	-0.84
		Emfuleni	-.67321*	0.068	0	-0.8353	-0.5111
	Emfuleni	Lesedi	-.36250*	0.076	0	-0.5439	-0.1811
		Midvaal	.67321*	0.068	0	0.5111	0.8353
C1 Risk identification	Lesedi	Midvaal	-1.08190*	0.169	0	-1.4849	-0.6789
		Emfuleni	-.68051*	0.144	0	-1.0233	-0.3377
	Midvaal	Lesedi	1.08190*	0.169	0	0.6789	1.4849
		Emfuleni	.40140*	0.133	0.009	0.0838	0.7189
	Emfuleni	Lesedi	.68051*	0.144	0	0.3377	1.0233
		Midvaal	-.40140*	0.133	0.009	-0.7189	-0.0838
C2 Risk intervention	Lesedi	Midvaal	-.93231*	0.185	0	-1.3719	-0.4928
		Emfuleni	-.50909*	0.142	0.001	-0.8458	-0.1724
	Midvaal	Lesedi	.93231*	0.185	0	0.4928	1.3719
		Emfuleni	.42321*	0.159	0.026	0.0425	0.8039
	Emfuleni	Lesedi	.50909*	0.142	0.001	0.1724	0.8458
		Midvaal	-.42321*	0.159	0.026	-0.8039	-0.0425
C3 Employee risk feedback	Lesedi	Midvaal	-1.17455*	0.277	0	-1.8334	-0.5157
		Emfuleni	-.92664*	0.207	0	-1.4208	-0.4325
	Midvaal	Lesedi	1.17455*	0.277	0	0.5157	1.8334
		Emfuleni	0.24791	0.226	0.52	-0.2935	0.7894
	Emfuleni	Lesedi	.92664*	0.207	0	0.4325	1.4208
		Midvaal	-0.24791	0.226	0.52	-0.7894	0.2935

*. The mean difference is significant at the 0.05 level.

APPENDIX D: GAMES HOWELL POST-HOC TESTS. MULTIPLE COMPARISONS BETWEEN LEVELS OF EDUCATION

Games-Howell

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
A1 Liquid capital management	Basic	Tertiary	0.02233	0.073	0.95	-0.1504	0.195
		Post	0.08891	0.1	0.649	-0.15	0.3278
	Tertiary	Basic	-0.02233	0.073	0.95	-0.195	0.1504
		Post	0.06658	0.092	0.751	-0.1547	0.2878
	Post	Basic	-0.08891	0.1	0.649	-0.3278	0.15
		Tertiary	-0.06658	0.092	0.751	-0.2878	0.1547
A2 External risk awareness	Basic	Tertiary	0.05315	0.079	0.78	-0.134	0.2403
		Post	0.1313	0.106	0.435	-0.1217	0.3843
	Tertiary	Basic	-0.05315	0.079	0.78	-0.2403	0.134
		Post	0.07816	0.091	0.668	-0.1405	0.2968
	Post	Basic	-0.1313	0.106	0.435	-0.3843	0.1217
		Tertiary	-0.07816	0.091	0.668	-0.2968	0.1405
B Willingness of the owner/ manager to take Health and Safety risks	Basic	Tertiary	0.09751	0.087	0.502	-0.1079	0.303
		Post	-0.07782	0.117	0.785	-0.3574	0.2018
	Tertiary	Basic	-0.09751	0.087	0.502	-0.303	0.1079
		Post	-0.17533	0.102	0.206	-0.4201	0.0695
	Post	Basic	0.07782	0.117	0.785	-0.2018	0.3574
		Tertiary	0.17533	0.102	0.206	-0.0695	0.4201
C1 Risk identification	Basic	Tertiary	-0.0142	0.145	0.995	-0.357	0.3286
		Post	-0.21175	0.184	0.485	-0.6492	0.2257
	Tertiary	Basic	0.0142	0.145	0.995	-0.3286	0.357
		Post	-0.19756	0.151	0.397	-0.561	0.1659
	Post	Basic	0.21175	0.184	0.485	-0.2257	0.6492
		Tertiary	0.19756	0.151	0.397	-0.1659	0.561
C2 Risk intervention	Basic	Tertiary	-0.22341	0.153	0.312	-0.5852	0.1384
		Post	-0.35971	0.2	0.175	-0.835	0.1156
	Tertiary	Basic	0.22341	0.153	0.312	-0.1384	0.5852
		Post	-0.13629	0.165	0.688	-0.5331	0.2605
	Post	Basic	0.35971	0.2	0.175	-0.1156	0.835
		Tertiary	0.13629	0.165	0.688	-0.2605	0.5331
C3 Employee risk feedback	Basic	Tertiary	-0.44901	0.199	0.064	-0.9189	0.0209
		Post	-0.46544	0.269	0.199	-1.1053	0.1744
	Tertiary	Basic	0.44901	0.199	0.064	-0.0209	0.9189
		Post	-0.01643	0.226	0.997	-0.5614	0.5286
	Post	Basic	0.46544	0.269	0.199	-0.1744	1.1053
		Tertiary	0.01643	0.226	0.997	-0.5286	0.5614

*. The mean difference is significant at the 0.05 level.

APPENDIX E: GRABLE AND LYTTON 13 ITEM SCALE

Q1	In general, how would your best friend describe you as a risk taker	1	A real gambler
		2	Willing to take risks after completing adequate research
		3	Cautious
		4	A real risk avoider
Q2	You are on a TV game show and can choose one of the following. Which would you take?	1	A cash prize of R1,000
		2	A 50% chance at winning R5,000
		3	A 25% chance at winning R10,000
		4	A 5% chance at winning R100,000
Q3	You have just finished saving for a "once-in-a-lifetime" vacation. Three weeks before you plan to leave, you lose your job. You would:	1	Cancel the vacation
		2	Take a much more modest vacation
		3	Go as scheduled, reasoning that you need the time to prepare for a job search
		4	Extend your vacation, because this might be your last chance to go first class
Q4	In terms of experience, how comfortable are you investing in shares?	1	Not at all comfortable
		2	Somewhat comfortable
		3	Very comfortable
		4	Not at all comfortable
Q5	If you unexpectedly received R20,000 to invest, what would you do?	1	Deposit it in a bank account, money market account or an insured Certificate of Deposit
		2	Invest it in safe, high-quality bonds or bond mutual funds
		3	Invest it in shares
		4	Deposit it in a bank account, money market account or an insured Certificate of Deposit
Q6	When you think of the word "risk," which of the following words comes to mind first?	1	Loss
		2	Uncertainty
		3	Opportunity
		4	Thrill
Q7	Some experts are predicting the value of assets such as gold, jewels, collectibles and real estate (hard assets) will rise, while bond prices may fall. However, experts tend to agree that government bonds are relatively safe. Most of your investment assets are now in high interest government bonds. What would you do?	1	Hold the bonds
		2	Sell the bonds, put half the proceeds into money market accounts, and the other half into hard assets
		3	Sell the bonds and put the total proceeds into hard assets
		4	Sell the bonds, put all the money into hard assets, and borrow additional money to buy more
Q8	Given the best and worst case returns of the four investment	1	A R200 gain best case; R0 gain/loss worst case.
		2	A R800 gain best case; R200 loss worst case
		3	A R2,600 gain best case; R800 loss worst case

	choices below, which would you prefer?	4	A R4,800 gain best case; R2,400 loss worst case
Q9	In addition to whatever you own, you have been given R1,000. You are now asked to choose between:	1	A sure gain of R500
		2	A 50% chance to gain R1,000 and a 50% chance to gain nothing
Q10	In addition to whatever you own, you have been given R2,000. You are now asked to choose between:	1	A sure loss of R500
		2	A 50% chance to lose R1,000 and a 50% chance to lose nothing
Q11	A relative left you an inheritance of R100,000, stipulating in the will that you invest all the money in one of the following choices. Which one would you select?	1	A savings account or money market mutual fund
		2	A mutual fund that owns shares and bonds
		3	A portfolio of 15 common shares
		4	Commodities like gold, silver and oil
Q12	If you had to invest R20,000, which of the following investment choices would you find most appealing?	1	Invest 60% in low-risk investments, 30% in medium-risk investments and 10% in high-risk investments
		2	Invest 30% in low-risk investments, 40% in medium-risk investments and 30% in high-risk investments
		3	Invest 10% in low-risk investments, 40% in medium-risk investments and 50% in high-risk investments
		1	Invest 60% in low-risk investments, 30% in medium-risk investments and 10% in high-risk investments
Q13	Your trusted friend and neighbour, an experienced geologist, is putting together a group of investors to fund an exploratory gold mining venture. The venture could pay back 50 to 100 times the investment if successful. If the mine is a bust, the entire investment is worthless. Your friend estimates the chance of success is only 20%. If you had the money, how much would you invest?	1	Nothing
		2	One month's salary
		3	Three months' salary
		4	Six months' salary

APPENDIX F: THE SCHEDULE

Column 1	Column 2	Column 3	Column 4
Sector or sub-sectors in accordance with the Standard Industrial Classification	**Size or Class**	**Total full-time equivalent of paid employees**	**Total annual turnover (≤ X Million)**
Agriculture	Medium	51-250	35
	Small	11-50	17
	Micro	0-10	7
Mining and Quarrying	Medium	51-250	210
	Small	11-50	50
	Micro	0-10	15
Manufacturing	Medium	51-250	170
	Small	11-50	50
	Micro	0-10	10
Electricity, Gas and Water	Medium	51-250	180
	Small	11-50	60
	Micro	0-10	10
Construction	Medium	51-250	170
	Small	11-50	75
	Micro	0-10	10
Retail and Motor Trade and Repair Services	Medium	51-250	80
	Small	11-50	25
	Micro	0-10	7.5
Wholesale Trade Commercial Agents and Allied Services	Medium	51-250	220
	Small	11-50	80
	Micro	0-10	20
Catering, Accommodation and other Trade	Medium	51-250	40
	Small	11-50	15
	Micro	0-10	5
Transport, Storage and Communications	Medium	51-250	140
	Small	11-50	45
	Micro	0-10	8
Finance and Business Services	Medium	51-250	85
	Small	11-50	35
	Micro	0-10	7.5
Community, Social and Personal Services	Medium	51-250	70
	Small	11-50	22
	Micro	0-10	5

Source: Republic of South Africa (2018:2)

APPENDIX G: ECONOMIC CLASSIFICATION

The main categories of the Standard Industrial Classification of all Economic Activities (SIC) are utilised for the purpose of this study (Statistics South Africa, 2012).

Agriculture, forestry and fishing

This sector includes the proactive use of vegetative or animal resources, natural or produced through human endeavour. This sector includes animal rearing, animal breeding and the harvesting of any animal or plant-based resource from a habitat considered natural for such a form of life. In addition to the aforementioned this also includes: trapping or hunting and similar activities; mixed farming; agriculture, animal and animal product production, hunting and related services; the growing of non-perennial crops; growth of cereals, oil seeds, and leguminous crops; market gardening, horticulture; the growth of vegetables, roots, tubers and melons; the growth of sugar cane, tobacco, fibre crop; grapes for use in wine; farming of animals; fruits; nuts and berries and the production of organic fertiliser.

Mining and quarrying

This sector includes the following: Stone quarrying, clay and sand-pits; Mining of metal ores, except gold and uranium; Extraction of crude petroleum and natural gas, service activities incidental to oil and gas extraction, excluding surveying Mining of coal and lignite; Other mining and quarrying; and Service activities incidental to mining of minerals.

Manufacturing

This sector includes the manufacturing of the following: Food products; tobacco products; textiles; wearing apparel; leather and related products; wood and of products of wood and cork, except furniture; articles of straw and plaiting materials; paper products; printing and reproduction of recorded media; coke and refined petroleum products; chemicals and chemical products; basic pharmaceutical products and pharmaceutical preparations; rubber and plastics products; non-metallic mineral products; basic metals; fabricated metal products, except machinery and equipment; computer, electronic and optical products; electrical equipment; machinery and equipment N.E.C.; motor vehicles, trailers and semi-trailers; transport; furniture; other manufacturing; and the repair and installation of machinery and equipment

Electricity, gas and water

This sector includes the following: Electricity, gas, steam, air conditioning supply; collection, purification and distribution of water; Sewerage; Waste collection, treatment and disposal activities; sewage materials recovery; remediation activities and other waste management services

Construction

This sector includes the following: Site preparation; Building complete constructions or parts thereof, civil engineering; and Building installation.

Trade

This sector includes the following: Wholesale and commission trade, except motor vehicles and motorcycles; Retail trade, except motor vehicles and motorcycles, repair of personal household goods; and Sales, maintenance and repair of motor vehicles motor cycles, retail trade in automotive fuel.

Transport and storage

This sector includes the following: Land and via pipeline transport; Water; Air; Supporting and auxiliary activities, travel agencies; and Post and telecommunications.

Financing and real estate activities**;**

This sector includes the following: Financial intermediation, except insurance and pension funding; Insurance and pension funding, except compulsory social security; Activities auxiliary to financial intermediation and all real estate activities

Professional, scientific and technical activities

This sector includes: legal and accounting activities; activities of head offices; management consultancy activities; architectural and engineering activities; technical testing and analysis; scientific research and development; advertising and market research; other professional, scientific and technical activities; and veterinary activities.

Public administration and defence; compulsory social security

This sector includes: Public administration and defence; compulsory social security.

Education

This sector includes education in all its forms.

Human health and social work activities

This sector includes: Human health activities; Residential care activities; and social work activities without accommodation.

Arts, entertainment and recreation

This sector includes: creative, arts and entertainment activities; libraries, archives, museums and other cultural activities; gambling and betting activities; and sports activities and amusement and recreation activities

Other service activities

This sector includes: Activities of membership organisations; repair of computers and personal and household goods; and other personal service activities. Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use.

APPENDIX H: Questionnaire

A risk management tool for SMME's: the case of Sedibeng District Municipality

My name is Niel Kruger and I am currently a registered PhD student in Risk Management at North-West University (Vaal Campus). You are invited to take part in a research project that forms part of my PhD study. The aim of the study is to improve the risk management of small businesses through the development of a risk management tool.

Please complete if you meet the following criteria:

- **You are the owner or manager of the business,**
- **Your business employs 50 people or less, and**
- **Your business is situated in the Sedibeng district municipal area.** (Emfuleni, Lesedi or Midvaal municipal areas).

To assure anonymity please do not include your name, surname, or any identifying marks on your questionnaire.

Furthermore, your participation is entirely voluntary, and you are free to decline participation. If you decide to decline, this will in no way affect you negatively whatsoever. The data will be **confidential,** and your results will be reported in aggregate (as part of the whole sample) and not individually. The questionnaire should take, on average, 15 minutes to complete.

You can complete the questionnaire in Word format by using the shading/fill function or mark with an **X**. After completion, save it and email back to me please. Please complete all the sections as half completed questionnaires cannot be used.

A1	A risk is an event that results in a pure loss.	1	2	3	4

Thank you for your important contribution to my study. Your time and input is greatly appreciated.

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SECTION A: Risk identification- This section aims to identify how risk is perceived and experienced by small business owners.					
Risk Identification How strongly do you agree or disagree with the following statements?		**Strongly disagree**	**Disagree**	**Agree**	**Strongly agree**
A1	A risk is an event that results in a pure loss.	1	2	3	4
A2	In order to make profit one does not need to take risks within the business.	1	2	3	4
A3	Risk is the uncertainty of the outcome of an event.	1	2	3	4
A4	Debtors pay me back on the terms we originally agreed on.	1	2	3	4
A5	Debtors do not repay me as agreed.	1	2	3	4
A6	I do not always have enough cash on hand to pay my creditors (e.g. banks, suppliers, etc.).	1	2	3	4
A7	I do not always have enough cash to purchase resources and supplies for the business.	1	2	3	4
A8	I do not always have enough cash to pay my employees.	1	2	3	4
A9	My employees often make mistakes that cost the business money.	1	2	3	4
A10	My business is often interrupted or delayed by activities outside of my control.	1	2	3	4
A11	My sales and purchases are not always processed and recorded correctly.	1	2	3	4
A12	Changes in government policy have negatively influenced my business before.	1	2	3	4
A13	Changes in interest rates have had an effect on my business.	1	2	3	4
A14	Changes in the exchange rate influences my business in some or other way.	1	2	3	4

SECTION B: Risk tolerance and risk taking			
SCF			
B1	Which of the following statements comes closest to the amount of financial risk that your business is willing to take?	1	Take substantial financial risks expecting to earn substantial returns.
		2	Take above average financial risks expecting to earn above average returns.
		3	Take average financial risks expecting to earn average returns.
		4	Not willing to take any financial risks.

Amended Dospert How likely are you to engage in the following activities?		**Very Unlikely**	**Somewhat Unlikely**	**Somewhat Likely**	**Very Likely**
B2	Betting a day's income at the horse races.	1	2	3	4
B3	Admitting that your tastes are different from those of a friend.	1	2	3	4
B4	Investing 10% of your annual income in a moderate growth mutual fund.	1	2	3	4
B5	Disagreeing with an authority figure on a major issue.	1	2	3	4
B6	Driving a car without wearing a seat belt.	1	2	3	4
B7	Betting a day's income at a high-stake poker game.	1	2	3	4
B8	Choosing a career that you truly enjoy over a more secure on.	1	2	3	4
B9	Riding a motorcycle without a helmet.	1	2	3	4
B10	Investing 5% of your annual income in a very speculative stock.	1	2	3	4
B11	Speaking your mind about an unpopular issue in a meeting at work.	1	2	3	4
B12	Moving to a city far away from your extended family.	1	2	3	4
B13	Betting a day's income on the outcome of a sporting event.	1	2	3	4
B14	Sunbathing without sunscreen.	1	2	3	4
B15	Starting a new career in your mid-thirties.	1	2	3	4
B16	Investing 10% of your annual income in a new business venture.	1	2	3	4
B17	Walking home alone at night in an unsafe area of town.	1	2	3	4

Section C: Risk management-This section aims to determine what aspects of risk management small business owners/managers implement							
How regularly do you, or those in your business do the following?		**Never**	**Annually**	**Bi-annually**	**Monthly**	**Weekly**	**Daily**
C1	I identify which risks may affect the business.	1	2	3	4	5	6
C2	I review risk solutions to ensure risks are dealt with effectively.	1	2	3	4	5	6
C3	I analyse the effect of identified risks on business objectives.	1	2	3	4	5	6
C4	I review risk solutions to ensure risks are dealt with at a reasonable cost.	1	2	3	4	5	6
C5	I avoid business activities that may expose the business to risk.	1	2	3	4	5	6
C6	I develop options and activities to reduce threats to the business.	1	2	3	4	5	6
C7	I identify new risks.	1	2	3	4	5	6
C8	I transfer risk (e.g. taking out insurance).	1	2	3	4	5	6
C9	I accept risk as a natural aspect of business.	1	2	3	4	5	6
C10	I apply corrective measures to reduce the effects of risk.	1	2	3	4	5	6
C11	Risk solutions increases business risk awareness.	1	2	3	4	5	6
C12	Risks are reported by management.	1	2	3	4	5	6
C13	Risks are monitored by management.	1	2	3	4	5	6
C14	The business minimises the negative effects of risk.	1	2	3	4	5	6
C15	I ensure proposed risk solutions are sustainable.	1	2	3	4	5	6
C16	Risks are reported by business employees.	1	2	3	4	5	6
C17	Risks are monitored by business employees	1	2	3	4	5	6

Section D: Demographics

D1. In which sector does your business operate?

1	Agriculture	6	Transport / Distribution
2	Manufacturing	7	Health Safety
3	Construction	8	Financial Services
4	Trade	9	Production
5	Education	10	Services (Salon, Hairdresser etc.)
11	Other: (Please specify)		

D2. What is your company's legal form?

1	Sole Proprietor	4	Private Company
2	Partnership	5	Public Company
3	Close Corporation	6	Not Registered
7	Other: (Please specify)		

D3. How many employees do you have?

D4. Where is the business premise located?

1	Home based (working from home)	4	Outlying areas (business zoned premises)
2	CBD (Central Business District)	5	Outlying areas (Not business zoned premises)
3	Industrial area	6	Agricultural land / farm
7	Other: Please specify:		

D5. Which option below best describes your business?

1	Life style business (only for income own income purposes, no desire to grow business into a large corporation)	2	High growth business (aimed at making maximum profit and growing the business into a large corporation)

D6. What is your p**osition in the business?**	Owner	1
	Manager	2
	Owner & manager	3

D7. In which ethnic group do you fall?

1	Black / African	4	White
2	Coloured	5	Indian
3	Asian		

D8. What is your age?

1	21 years and younger	4	41 to 50 years
2	22 to 30 years	5	51 to 60 years
3	31 to 40 years	6	61 years and above

D9. What is your current level of education?

1	Primary	5	Diploma (Technical College or similar)
2	Secondary school not completing matric	6	Degree (University)
3	Secondary school completed matric	7	Post Graduate degree
4	Certificate		

D10. In which municipality is your business situated in?

1	Lesedi
2	Midvaal
3	Emfuleni

D11. How many years of management experience do you have?

1	Less than 1 year	3	Between 1 and 3 years
2	If more than 3 years, please indicate how long:		

D12. How long have you owned/ managed this current business?

1	Less than 1 year	3	Between 1 and 3 years
2	If more than 3 years, please indicate how long:		

D13. Does the business have a dedicated risk manager or risk management department?

Yes	1
No	2

D14. Which of the following risk management frameworks do you comply with?

COCO	1	
ISO 31000	2	
COSO	3	
ARMS	4	
None	5	If none, specify the reason:
Other	6	If other, specify which one:

THANK YOU!

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18 November 2019

To whom it may concern

This is to confirm that I, the undersigned, have language edited the thesis (excluding references) of

Niël Almero Krüger

for the degree
Philosophiae Doctor
entitled:

A risk management tool for SMME's: the case of Sedibeng District Municipality

The responsibility of implementing the recommended language changes rests with the author of the thesis.

Yours truly,

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18 November 2019

Re: Thesis, Mr N Kruger, student number 23587202

We hereby confirm that the Statistical Consultation Services of the North-West University analysed the quantitative data of the above-mentioned student and assisted with the interpretation of the results. However, any opinion, findings or recommendations contained in this document are those of the author, and the Statistical Consultation Services of the NWU (Potchefstroom Campus) do not accept responsibility for the statistical correctness of the data reported.

Kind regards

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