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Evaluating value created by the use of Competitive Intelligence among Small and Medium Enterprises in South Africa

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A business venture proposal submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

September 2021

DECLARATION

I, Muhammed Khalid Fadal declare that this research report entitled “Evaluating value created by the use of Competitive Intelligence among SMEs in South Africa” is my unaided work. I have acknowledged, attributed, and referenced all ideas sourced elsewhere. I am hereby submitting it in partial fulfilment of the requirements of the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. I have not submitted this report before for any other degree or examination to any other institution.

Muhammed Khalid Fadal
Signed at Johannesburg on 05 September 2021

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ABSTRACT

Competitive Intelligence (CI) is the ability to obtain, evaluate, and apply information about rivals, consumers, and other market elements to help a company gain a competitive edge. A direct relationship exists between organisations who conduct CI and the profitability of the business. Large firms in South Africa have proven that increasing their use of CI increases their competitive advantage. While research on the application of CI utilisation by large firms has been sufficiently documented, Small and Medium Enterprises (SMEs) in South Africa have not been subjected to the same level of study.

This Business Venture Proposal aimed to determine the value created for firms that conduct CI in South Africa, with a focus on SMEs. The benchmark for value in this study is the increase in competitive advantage a firm may gain from using CI. Three independent variables, namely using formalised CI, sources of information, and building internal capacity, will be used to determine the change in value. This study will provide a proposed model for developing an independent CI service aimed at SMEs in South Africa. This will be done in the context of providing these firms with niche skills and services. Additionally, this will be provided in a convenient reporting application coupled to a remote consulting service.

This study is quantitative and used surveys as an instrument to gather the required data. However, once the surveys were sent to the database through email and social media, the researcher had no control over who responded to the survey, and therefore probability sampling was used.

Through statistical analysis, it was identified that firms that conducted formal CI could create additional value over firms that conducted the exercise informally or not at all. Firms showing a preference for secondary data sources, used an agile system, which combined both primary and secondary sources, with lesser important items using secondary data and more strategically important Key Intelligence Questions (KIQs) answered using primary data, returning the best reward. However, no support could be found for firms that invested in their own internal capacity to gather CI. While a positive linear relationship existed, it was statistically insignificant.

Further research studies are required, aiming specifically at SMEs to better understand the CI application and appetite per sector. This would help identify the trends of each sector and provide a better overview of the adoption of CI in each sector. This would also help determine the value attributed by each sector to CI, as well as identify any underlying barriers that may be synonymous with a specific sector. It is also recommended that future studies measure the effect an intervention, including training of employees, has on the long-term value perception of CI. This can be further enhanced by measuring the competitiveness of the firm prior to the intervention and post the intervention after a specified period.

SUPPLEMENTARY INFORMATION

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As J.R.R. Tolkien said, *“Not all those who wander are lost.”* However, this was quoted to me by a fabric seller on Bagamoyo Road, in Dar es Salaam which placed everything into context for me.

DEFINITION OF KEY TERMS AND CONCEPTS

BI	Business Intelligence
CI	Competitive Intelligence
CSR	Corporate Social Responsibility
DSBD	South African National Department of Small Business Development
KIQ	Key Intelligence Question/s
KM	Knowledge Management
KMO	Kaiser-Meyer-Olkin
MECE	Mutually Exclusive, Collectively Exhaustive
ROI	Return on Investment
SCIP	Strategic and Competitive Intelligence Professionals society
SMEs	Small and Medium Enterprises
SWOT	Strengths, Weaknesses, Opportunities and Threats
VIF	Variance Inflation Factor

1 INTRODUCTION TO THE RESEARCH

1.1 Background and Context

Large firms in South Africa have demonstrated an increase in use of Competitive Intelligence (CI) which has led to an increase in value creation for the firm (Ali & Anwar, 2021b; Calof, 2014; Ching & Zabid, 2017). This value can be demonstrated through an increase in competitive advantage. Félix (2019) argues that while increased competition may appear to reduce numbers of firms in an industry, various additional benefits including an increase in employment, efficiency in resource utilisation and increased innovation are apparent.

Large enterprises in South Africa have embraced CI, while Small and Medium Enterprises (SMEs) lag behind (Muller, Saayman, Viviers, & Calof, 2002; Nenzhelele, 2015). Viviers and Muller (2005) suggest South African businesses may increase their global competitiveness by increasing domestic competitiveness. The authors further suggest CI as a tool to increase domestic competitiveness. However, Nenzhelele (2015) argues that SMEs may indeed conduct CI, albeit in an unstructured manner, which may be mostly inefficient. In a concise study of the barriers to using CI, Wright (2005) identified knowledge and resources as the enormous hurdles facing SMEs. One question that needs to be asked, however, is whether SMEs that conduct CI exercises can gain a competitive advantage over enterprises that choose not to conduct any CI.

This study aimed to evaluate the value generated by SME's who carry out CI exercises in South Africa. Additionally, the study aimed to determine the level and extent of CI being conducted and to determine the level of formalisation of the process among SME's in South Africa. The outcome of this study will be used to develop a third-party CI business model to aid SMEs in conducting CI. Section 1.2 will introduce the scope of this study. Sections 1.2.1 to 1.2.5 will define the key terms and concepts used in this report. Section 1.3 discusses the report's research conceptualisation, while Section 1.4 discusses the limitations of the research study. Section 1.5 discusses the significance of this study. To close this chapter, Section 1.6 provides a summary while Section 1.7 outlines the objective of this research report.

1.2 Scope of the Business Venture Proposal

The scope of this Business Venture Proposal was to identify if an opportunity exists to provide SMEs with a third-party CI service. In a previous study conducted by Nenzhelele (2015), it was suggested that SMEs are conducting informal CI. With the aim of identifying a potential customer need, this Business Venture Proposal aimed to identify if an SME could garner additional value from using a formalised CI process. Carroll et al. (2017) identified that SMEs prefer secondary data due to its ease of access and low costs. This proposal also identified if an SME derives

additional value from using both primary and secondary data sources. If additional value is derived, this proposal intended to provide a service offering that helps SMEs collect both primary and secondary data in a flexible and cost-effective manner. The last key factor is to understand that if SMEs develop an internal capacity to conduct CI, is there an increase in perceived value? This question is critical to the scope of the business, as it relates to the possibility of substitution. If firms can invest in internal capacity and gain value from this investment, this business model will be rendered obsolete.

For SMEs, this proposal has provided the tools and expertise to conduct CI in a formalised and cost-effective manner. This proposal aimed to ensure sufficient customer needs are identified, and which can be actioned in this proposal's value proposition. Therefore, this proposal has aimed to create the link between the prospective service offerings and the needs of the customers.

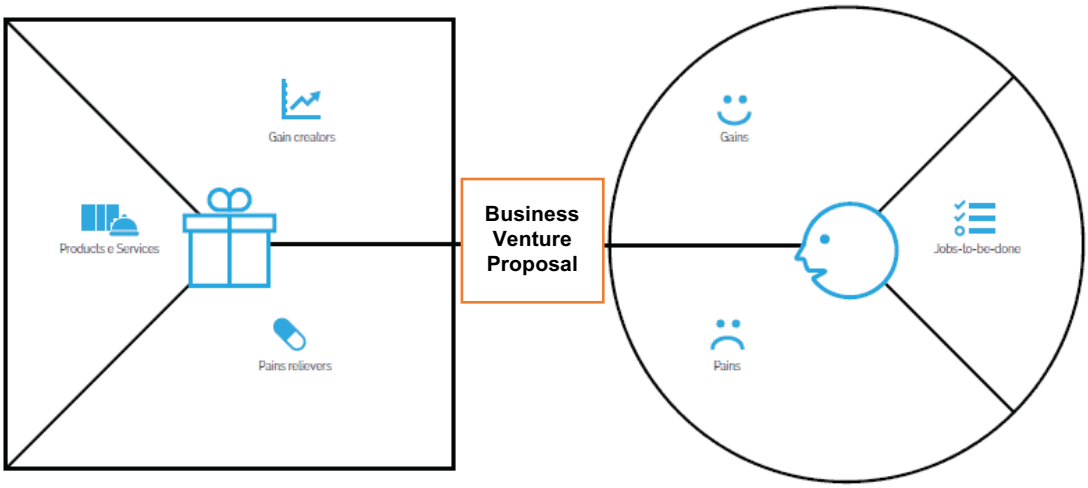


Figure 1: Linking the Customer Value Proposition to the Client Profile. *(Osterwalder, Pigneur, Bernarda, & Smith, 2014)*

1.2.1 Defining Competitive Intelligence

In their extensive study focused on defining CI, Wright, Pickton, and Callow (2002) identified CI was continuously referred to as Competitor Intelligence. However, this common misnomer among firms requires clarity, as CI focuses on gathering information on both friend and foe firms. However, competitor intelligence forms a subsection of the CI process by only collecting competitors' information (Grèzes, 2015). For a CI process to be regarded as formal, five distinct steps need to be implemented namely: Planning, Collection, Sorting, Analysis and Sharing (Pellissier & Nenzhelele, 2013).

According to the Strategic and Competitive Intelligence Professionals (SCIP) society, CI is defined as "a systematic and ethical program for gathering, analysing, and managing external information that can affect your company's plans, decisions, and operations" (Mackey, 2020). However, many

analysts argue CI has an internal function, where internal role-players may also be a CI source (Bartes, 2015; De Pelsmacker et al., 2005; Saayman et al., 2008).

1.2.2 Evaluating Value Creation

In their effective examination of the term “value” in a business context, Grover, Chiang, Liang, and Zhang (2018) suggest that value is determined by the growth of the business’ share value. However, Damilano, Miglietta, Battisti, and Creta (2018) argue that evaluating value purely on share value may not expose the true value, and the elements of “competitive advantage” should be included when evaluating the value of a business.

In 1980, Porter published a paper in which he succinctly described competitive advantage as a firm's strategic advantage over competitors and rival businesses inside the industry, allowing it to outperform competitors and rival firms. Further, Jatmiko, Udin, RIaharti, Laras, and Ardhi (2021) suggest a firm needs to focus on seven key elements when developing and maintaining a competitive advantage namely: business strategy; human resources; information technology; products; promotion; cooperation; and corporate social responsibility (CSR).

Porter (2011) further suggests that competitive advantage can be created in three silos, namely: being an industry cost leader, providing a differentiated product, and choosing to focus on a niche market. To identify how a firm intends to strategically position itself to maximise its competitive advantage, CI exercises are required to identify and map out the industry landscape.

1.2.3 The Small and Medium Enterprise Environment in South Africa

When identifying the link between CI and Small, Medium and Micro Enterprises in South Africa, stakeholders who either gather, use or intend to breach the competitive gap intelligence must understand the fundamentals of what constitutes an SME. The table below will be used as a reference throughout this study. The Department of Small Business Development (DSBD) in South Africa has provided a reference table that allows the business’s size to be determined based on the industry and scope of the sector of operation. Although the table below includes a micro-enterprises perimeter, this information will only be used to create a lower limit boundary.

According to the reference table provided by the DSBD, each sector is graded on two criteria, namely: the total amount of paid full-time employees and the total annual turnover. The amount of paid full-time employees is a fixed criterion across all sectors. It is defined as 11 to 50 employees for a small business, and 51 to 250 employees for a medium enterprise. However, the total annual income is a variable factor based on the type of industry being measured. Sectors that are capital intensive, including those in the resources sector and logistics, tend to have a

higher benchmark when determining their size versus industries in the services sector, like catering or community, social and personal services (DSBD, 2019).

Table 1: Adopted from the DSBD Guideline on Business Size Classification

Sectors or sub-sectors in accordance with the Standard Industrial Classification	Size or class of enterprise	Total full-time equivalent of paid employees	Total annual turnover
Agriculture	Medium	51 - 250	≤ 35,0 million
	Small	11- 50	≤ 17,0 million
	Micro	0 – 10	≤ 7,0 million
Mining and Quarrying	Medium	51 - 250	≤ 210,0 million
	Small	11- 50	≤ 50,0 million
	Micro	0 – 10	≤ 15,0 million
Manufacturing	Medium	51 - 250	≤ 170,0 million
	Small	11- 50	≤ 50,0 million
	Micro	0 – 10	≤ 10,0 million
Electricity, Gas and Water	Medium	51 - 250	≤ 180,0 million
	Small	11- 50	≤ 60,0 million
	Micro	0- 10	≤ 10,0 million
Construction	Medium	51 - 250	≤ 170,0 million
	Small	11- 50	≤ 75,0 million
	Micro	0- 10	≤ 10,0 million
Retail, motor trade and repair services.	Medium	51 - 250	≤ 80,0 million
	Small	11- 50	≤ 25,0 million
	Micro	0 – 10	≤ 7,5 million
Wholesale	Medium	51 - 250	≤ 220,0 million
	Small	11- 50	≤ 80,0 million
	Micro	0 – 10	≤ 20,0 million
Catering, Accommodation and other Trade	Medium	51 - 250	≤ 40,0 million
	Small	11- 50	≤ 15,0 million
	Micro	0 – 10	≤ 5,0 million
Transport, Storage and Communications	Medium	51 - 250	≤ 140,0 million
	Small	11- 50	≤ 45,0 million
	Micro	0 – 10	≤ 7,5 million
Finance and Business Services	Medium	51 - 250	≤ 85,0 million
	Small	11- 50	≤ 35,0 million
	Micro	0- 10	≤ 7,5 million
Community, Social and Personal Services	Medium	51 - 250	≤ 70,0 million
	Small	11- 50	≤ 22,0 million
	Micro	0 – 10	≤ 5,0 million

Source: Department of Small Business Development (DSBD, 2019)

1.2.4 The Use of CI to Gain a Competitive Advantage Among SMEs in South Africa

CI may be a driving factor for a business to grow and prepare for potential unseen events (Seyyed-Amiri, Shirkavand, Chalak, & Rezaeei, 2017). However, one of the main advantages of the correct application of CI is the ability of the business to create a competitive advantage (Nasri, 2012).

Nasri (2012) further defines competitive advantage as the means for a company to attract customers, providing an ultimately more valuable outcome. In their study on the impact of CI on sustainable growth, Stefanikova, Rypakova, and Moravcikova (2015) identified that CI helps firms remain agile while preparing for the future. CI also allows risk mitigation factors to be applied much earlier based on the intelligence gathered.

1.2.5 Using Consultants to Provide Specialised Skills

According to Bushe (2019) SMEs operate using limited resources. While Abdul-Mohsin, Halim, and Ahmad (2020) argue that SMEs cannot afford to employ specialists who do not contribute to the day-to-day income of the firm. Harvey, Morris, and Müller Santos (2017) suggest that SMEs could breach the specialised knowledge gap by using consultants who provided services to the firm on an ad hoc basis. Consultants provide the firm with a skill set which may have been out of reach of the firm.

1.3 Research Conceptualisation

1.3.1 The Research Problem

Firms of all sizes need to create and sustain a competitive advantage to increase their chances of survival and growth (Porter, 2011). Competitive advantage is a comparative advantage created when a company can produce a good or service more efficiently than its competitors, resulting in higher profit margins (Pawlina & Kort, 2006). However, it is not only the firm's competitors that should be monitored to identify market movements. Porter (2011) suggests the market forces at play which control industry rivalry include customers and suppliers. Therefore, to better understand the market environment, firms need to understand their competitors, customers, and suppliers to extract a competitive advantage (Porter, 2011). Being able to outcompete the rivals of the firms may also be identified through internal knowledge, also known as Knowledge Management (KM) (Caseiro & Coelho, 2019). KM is the process where knowledge in the firm is harvested and monitored to create additional value for the firm by understanding the firm's strengths and weaknesses. While firms may have full control over internal knowledge and partial control over market forces, they must also actively monitor the macro-environment to identify opportunities and threats which may affect the firm.

With multiple dynamics in constant motion, large firms have developed comprehensive CI tools and procedures to identify areas of risk and opportunity to maintain their competitive advantage. Earlier studies have shown that large firms that conduct formal CI practices and use the intelligence findings to drive their strategy were able to identify and sustain their competitive advantage Calof (2014). Large firms can develop internal departments staffed by CI professionals, whose sole responsibility is to gather insights using advanced systems to generate

reports for strategic role-players in the firm. While large firms can deploy resources to CI exercises, SMEs in a South African context are bound by limited resources. Studies on SMEs in South Africa have identified that most firms in this size classification are indeed conducting CI, albeit informally. Existing research recognises SMEs have increasingly limited resources, and the effective application of these resources may ultimately determine the success of the firm (Guo, Zhang, & Gao, 2018; Kabanda & Brown, 2017; Martdianty, Coetzer, & Susomrith, 2020). The value of the generated intelligence remains undefined. However, SMEs in South Africa have remarkably high failure rates, and it could be argued that insufficient understanding of the firm's operating environment may be a key factor in this high failure rate. While large firms have access to both primary and secondary sources of data to gather insights, many SMEs prefer to use secondary sources which are easier and cheaper to gather but may lack relevance (Carroll et al., 2017). Lastly, SMEs may not be able to afford advanced systems or dedicated staff to conduct CI practices. However, the development of some internal capacity may replicate some advantage, as observed among large enterprises.

1.3.2 Study Thesis Statement

SMEs in South Africa should use formal CI processes to develop and maintain a competitive advantage in their industries by using both primary and secondary data sources.

1.3.3 The Research Purpose Statement

The aim of this Business Venture Proposal was to identify if an opportunity exists to provide SMEs with a third-party CI service. The feasibility of the study includes analysing through a literature review and a survey if firms who conduct formal CI can create additional value over firms who do not conduct CI or conduct CI informally. The study aimed to identify if a positive relationship between the conducting CI and perceived value created was apparent. Additionally, this study intended to compare the value created by companies who use of both primary and secondary data sources against those who use only one source of information. The last key factor under analysis is whether firms can create additional value by investing in internal capacity to conduct CI. As this venture proposal intends providing a service to SMEs, if additional value can be created through developing internal capacity, then firms may substitute the proposed business offering in favour of internal capacity development.

1.3.4 The Research Questions and Accompanying Hypotheses:

1.3.4.1 Question 1:

What is the relationship between firms that conduct formal CI practices and the perceived value created for the firms?

Null Hypothesis:
There is a positive relationship between firms that conduct **formal CI** practices and **value** created.

Alternate Hypothesis (Non-directional):
There is no relationship between firms that conduct **formal CI** practices and **value** created.

1.3.4.2 Question 2:

What is the relationship between firms that use both primary and secondary sources of data for CI in comparison to firms who are only using one source of data, and the value derived from the CI exercise?

Null Hypothesis:
There is a positive relationship between firms that interrogate **both primary and secondary sources** of data when conducting CI, and the **value** derived from the exercise.

Alternate Hypothesis (Non-directional):
There is no relationship between firms that interrogate **both primary and secondary sources** of data when conducting CI, and the **value** derived from the exercise.

1.3.4.3 Question 3:

SMEs in South Africa may face limitations in resources. Does a relationship exist for SMEs that invest in developing internal CI capacity and being able extract additional value from the CI process?

Null Hypothesis:
There is a positive relationship between firms that actively **invest in developing internal capacity** to conduct CI exercises and deriving additional **value** from CI.

Alternate Hypothesis (Non-directional):
There is no relationship between firms that actively **invest in developing internal capacity** to conduct CI exercises and deriving additional **value** from CI.

1.4 Delimitations and Assumptions of the Research Study

1.4.1 Delimitations

The aim of this Business Venture Proposal was to identify if an opportunity exists to provide SMEs in South Africa with a formal third-party CI service.

Only formal SMEs were included in this study. The floor and ceiling limitations were in accordance with the DSBD guidelines on firm size. Therefore, micro and large firms were omitted from this study. Additionally, the proposed business model intends to operate within the borders of South Africa, so only firms that operate within South Africa were involved in the study. While this study aimed to provide a national context, the study sample was gained through networks predominantly in the Gauteng Province and may therefore not be representative of the entire country.

This study focused on the perception of the strategic role-players in SMEs in South Africa. Therefore, only individuals who held strategic responsibility were invited to complete the survey. These strategic role-players had the power to make decisions that may affect the long-term trajectory of the firm. Such role-players include business owners, founders, and managers with delegated strategic power.

This study chose to omit large firms, as substantial research has been conducted on the adoption and use of CI in large firms. Large firms tend to have their own capacity to conduct CI, and therefore would not be part of the Proposed Business Venture's target market. Similarly, micro-enterprises were omitted from this study, as price sensitivity would be the strongest. While these firms may need the service, it may be unaffordable in its current form.

This research was a quantitative study into the value created using CI among SMEs in South Africa. The data was collected through an online survey, which allowed respondents to respond to each question based on a five-point Likert scale.

1.4.2 Assumptions Made During this Study

The following key assumptions were made during this study. The level of understanding of the recipient's CI knowledge was not tested and it was assumed that strategic decision-makers in a firm understand the topic. The survey used CI terminology and it was assumed that any terminology in the study instrument would be understood.

1.5 Significance of the Research Study

While CI is well studied and documented at a large business level (Ali & Anwar, 2021b; Calof, Arcos, & Sewdass, 2018; De Pelsmacker et al., 2005), SMEs are not subjected to the same level of analysis (Leite, Pedrosa, & Bernardino, 2019; Mbonyane & Ladzani, 2011). SMEs need to balance risk and reward, while maximising the limited resources available to them. CI provides firms with a mechanism to monitor the internal, market and macro-environments in which they operate, while identifying possible opportunities to develop a competitive advantage and risks that need to be mitigated.

This study and associated research will aim to support the author's goal of creating a CI service provider in South Africa. A well-designed data analytics dashboard will ensure that interventions are implemented as quickly as feasible to minimise the impact on operations.

This research project helps plot the current CI landscape of SMEs in South Africa and whether SMEs who conduct CI can derive value from the process. The findings of this research paper will inform strategic business decision-makers and CI practitioners on the focal points of where CI value can be maximised, and the level of CI maturity required in the firm to derive value. These focal points include whether the firm should formalise its CI processes, whether it should invest in CI tools and skills, and where to gather the data, which may provide strategic decision-makers with direction on how to deploy its scarce resources to derive value. The findings will be incorporated into a business model, which will provide SMEs with an outsourced CI service to formalise client firms' CI practices, policies, and strategies to gain the maximum perceived value from the practice.

1.6 Summary

In conclusion, this Business Venture Proposal intends identifying if SMEs can benefit from the use of a third-party CI service. Past research has identified that SMEs are conducting CI, however, it is unclear whether formalised CI provides any additional value to SMEs. This study aimed to identify through a literature review and a survey if firms are able to create additional value through the use of formal CI. Additionally, further analysis will be conducted on whether firms gain additional value by using both primary and secondary data sources rather than one of the two options. As this business proposal intends providing a service to firms, the risk of substitution will be assessed through identifying if firms can create additional value by investing in internal capacity.

1.7 Preface to this Research Report

This research report consists of seven chapters. Chapter one, which introduced this research report, is followed by Chapter two, which provides a literature review on CI. Existing literature on the subject is reviewed to comprehend, critique, and ultimately explain the CI practices of SMEs in South Africa, and an overview of operating an SME in South Africa. Chapter three describes the research approach used by detailing the research paradigm, research strategy, research design, research procedure, and methods used for this study. Chapter four presents the analysis of the collected data, while Chapter five discusses the findings to interrogate the research questions. Chapter six discusses a potential business model to address the findings of this research study. Lastly, Chapter seven provides the summary and conclusion of this research report.

2 LITERATURE REVIEW

This literature review aims to unpack the literature surrounding the three research questions. This will be covered in Sections 2.1 to 2.3. Section 2.4 of the literature review will also focus on identifying theories relating to the proposed business venture, which will be expanded upon in Chapter six. This literature culminates in Section 2.5 which provides the framework for analysing the research findings and Section 2.6 which closes off the chapter.

2.1 Introduction to Competitive Intelligence

2.1.1 Defining of a Formal CI System

The SCIP, which is a leading body on the topic, defines CI as a discipline that enables firms to decrease strategic risk and boost revenue potential by having a thorough awareness of what has occurred, is occurring, and may occur in their operating environment. Additionally, CI experts are adept in ethical gathering of data from various sources, applying various structured analytical approaches, and communicating findings to stakeholders in various formats. While this definition sets a high-level guideline for what the practice aims to achieve, it remains unclear in terms including operating environment, sources of information and communicating the findings. In his detailed analysis of the definition of CI, in which he attempts to breach this gap, Mackey (2020) identifies four phases which, when conducted in a linear timeline, constitute a formalised CI process. Phase one includes the planning phase, which aligns business goals to smaller deliverables, including Key Performance Indicators. The second phase is the collection of ethical data from internal and external sources. This data is analysed in phase three and shared in phase four. After the sharing of the information, the CI process begins again.

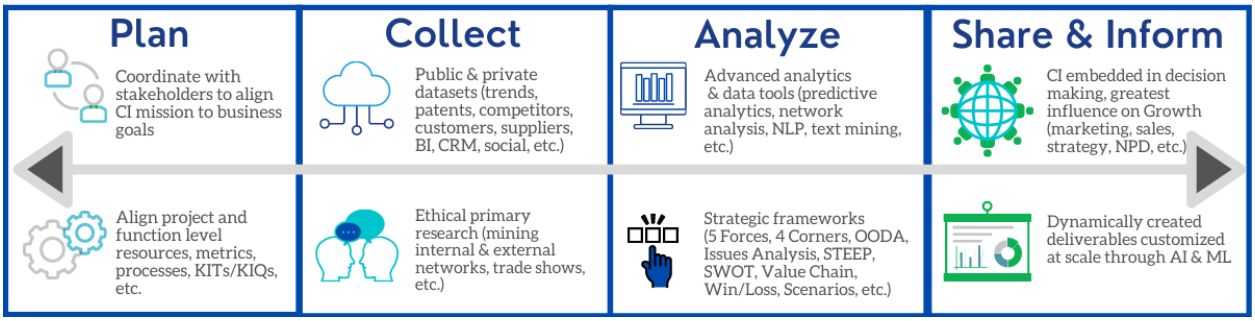


Figure 2: Adapted from Competitive & Market Intelligence Topic Hub *(Mackey, 2020)*

Somiah, Aigbavboa, and Thwala (2021) recent analysis of CI provides a strong critique of Mackey (2020) four-phased approach to CI. Somiah, Aigbavboa, and Thwala (2021) argue CI should not be conducted in a linear format. Instead, the process should be an ongoing process, which is continually updated to ensure the latest information is gathered. This view is echoed by Pellissier

and Nenzhelele (2013) who suggested the CI process is a continuously recurring process, with the previously gathered intelligence determining the planning and direction of the next CI cycle.



Figure 3: Adapted from "Towards a universal CI process model" *(Pellissier & Nenzhelele, 2013)*

Although the above studies have successfully identified the steps that a formalised CI system should have, one critique is it does not with complete certainty determine whether the process is conducted in a formal manner. However, Maungwa and Fourie (2018) point out that an additional key factor in determining whether a firm conducts CI formally is "how" the information is collected, analysed and shared. Priporas (2019) argued that firms with documented structures and policies for collecting, analysing, and sharing CI information were able to maximise their competitive advantage. Contrary to earlier findings, however, Dewi and Darma (2019) argue against using rigid structures and policies for conducting CI. The authors argue that by increasing rigidity, the CI process may lose its ability to identify elements outside the company's policy and procedures.

Considering the literature reviewed, it can be determined that firms need to complete four distinct phases in the CI process, namely: planning, collection, analysing and sharing of collected data. Additionally, for a firm's intelligence process to be formal, the firm needs documented policies and procedures on how the four phases of the intelligence process will be conducted.

2.1.2 The Impact of CI on a Firm's Strategy

A growing body of published work provides evidence the strategy of a firm needs to be aware of and account for the impact of external forces on the firm (Mueller, 2019; Ukko, Nasiri, Saunila, & Rantala, 2019). One well-known definition often cited in strategy research is that of Porter (1980), who suggests that firms need to understand the market competition and determine a strategic path based on this. Considering the above definitions, a firm in devising a strategy needs to be aware of the market and external factors which may affect the firm. However, insufficient emphasis is placed on what strategic factors are the recipients of this data. Commenting on key reasons why CI is integral to strategy formulation, Mackey (2021) argues that firms conduct CI to decrease strategic risk while increasing revenue.

In their comprehensive report on strategic risk, Deloitte (2013) defines four key factors that constitute strategic risk, namely: Strategic risks are those that are influenced or caused by a company's business strategy and strategic goals. Operational risks are significant threats to a company's capacity to carry out its strategic plan. Financial risks include financial reporting, valuation, market, liquidity, and credit risks, among others. Legal and regulatory compliance are compliance risks. To date, several studies have identified the link between using CI and mitigating strategic risk. In their study of this relationship, López-Robles, Otegi-Olaso, Porto-Gómez, H. Gamboa-Rosales, and N.K. Gamboa-Rosales (2020) suggest firms should identify all forms of strategic risk by taking an overcautious standpoint. The authors further suggest these risks provide the direction for the CI exercises by providing the basis of the Key Intelligence Questions (KIQs) and providing the best return, as the intelligence gathered is linked to a KIQ associated with an identified risk. However, the main limitation of excessive formalising of the CI process to abate strategic risk is that practitioners tend to focus purely on the scope questions and limit viewing "outside the box", which may lead to key intelligence which may not be associated with a KIQ being missed (Tahmasebifard, 2018). Oubrich, Hakmaoui, Bierwolf, and Haddani (2018) call for a decentralised intelligence system, which has a CI Officer who reports on the collected information. The collecting phase is the entire firm's responsibility and is done in two forms. An active form in which the Intelligence Officer requests the collection of specific information, and a passive form where any information of interest is reported. The authors suggest this methodology may provide the best returns in answering KIQs and gathering other intelligence of potential interest.

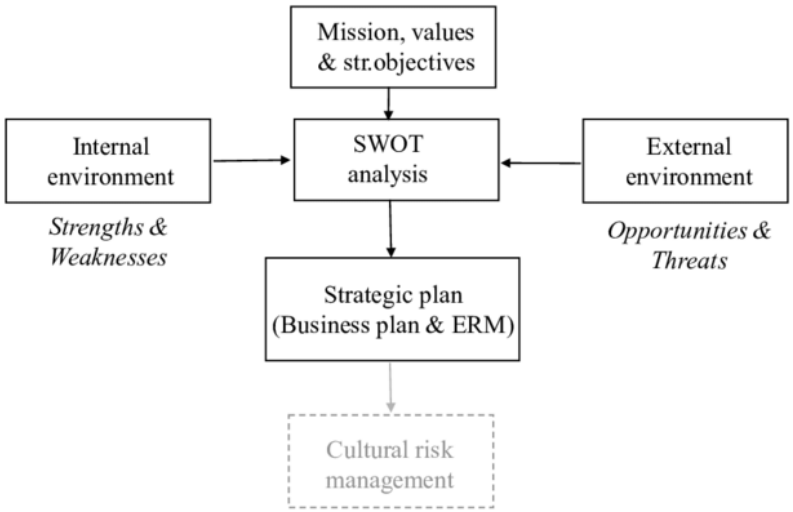


Figure 4: Adapted from "How to deal effectively with major corporate exposures" *(Andersen, 2011)*

The second key factor on the importance of CI, as suggested by Mackey (2021) is the need to increase revenue. While various definitions of 'revenue' have been suggested, this research will use the definition of the income gained from standard business operations (Tidhar & Eisenhardt,

2020). Revenue in accounting terms, however, is numbers of units sold multiplied by the price of each unit. One criticism of Mackey (2021) view on increasing revenue is that it omits the cost factors. Results from earlier studies demonstrate a strong and consistent association between CI and increase in profit (Cavallo, Sanasi, Ghezzi, & Rangone, 2020; Pellissier & Nenzhelele, 2013). Chawinga and Chipeta (2017) identified a synergy in collecting CI on suppliers and competitors; and identified what their cost structures were and the profitability of these firms. This provided additional insight when adopting a strategic revenue model and applying Porter (1980) Generic Strategies to achieve a competitive advantage.

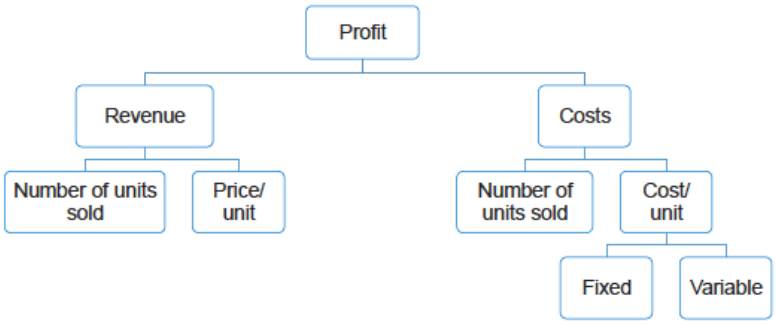


Figure 5: Adapted from Revenue and Cost Sharing mechanism for effective remanufacturing supply chain *(Inaba, 2018)*

In an investigation into strategy development, Shujahat et al. (2017) found that firms that actively scanned their environment and adjusted their strategy were the most resilient. What is known about the impact of CI on strategy is based on studies investigating the link between the two topics. One such study conducted by Cavallo, Sanasi, Ghezzi, and Rangone (2020) found that every phase of the Strategic Formulation Process (from setting strategic objectives to strategy monitoring) and at all strategic levels (strategic, tactical, and operational) benefit from CI. Gilad (2011) likens the process of developing a business strategy without CI to a ship captain navigating foggy treacherous waters with no visual questions. However, Gilad (2011) warns firms excessively focusing on competition and adjusting the strategy accordingly may lead to more harm than good.

To further tie in the link between CI and the firm's strategy the implementation of a Resource-Based Management Theory can be applied. This theory suggests that firms have resources which allow them to gain a competitive advantage over other firms, and if cemented can lead to a superior long-lasting advantage (Barney, 2018). This theory has an application for both the home firm and by understanding the competitor's strategy. According to McGahan (2021) if a firms holds a valuable resource linked to value-creating strategy it will create a competitive advantage. However McGahan (2021) further states that the resource needs to be rare and owned by one firm for it to be a source of competitive advantage. This advantage may be durable if opponents are unable to completely copy this strategic asset. Chawinga and Chipeta (2017) suggest that

firms need to understand their strengths and weakness, which could be mapped using a SWOT analysis. Porter (2011) suggests that using the Porter's Five Forces tool may identify the potential competitive advantage competing firms may hold. Therefore, by understanding the differences in competitive advantage between the home firm and the competing firms, the home firm can map the environment it operates in. It can then develop strategies which maximise its own strengths while attacking its competitors' weaknesses (Cavallo, Sanasi, Ghezzi, & Rangone, 2020). However, Makadok, Burton, and Barney (2018) caution that taking up a resource-based approach to analysing competitors' strategies may lead to an overcompensation and requires a risk- based approach. The authors raised this concern as competitive advantage is not "merely" owning the rare product, but also what is done with the product. This view is also supported by Biggadike (1981) who argued that if competitive advantage was held only by those who owned scarce resources, all markets would end in a monopoly, yet over time large firms have given way to new market entrants.

To maximise the firm's strengths and mitigate against its weaknesses, Porter (1980) introduces three generic strategies that firms can apply to create a competitive advantage. These strategies are:

- **Cost Leadership Strategy**: This is attained by reducing costs to increase profits, while maintaining an industry equivalent price. Alternatively attempting to increase the firm's market share by lowering the selling price.
- **Differentiation Strategy**: This is created by distinguishing the firm's offering from competitors in the industry by focusing on the value proposition to the customer. This is attained by providing a distinguished feature that distinguishes it from competitors where the value proposition is stronger to specific customers.
- **Focus Strategy:** This strategy is developed when a firm chooses to concentrate on a specific market, and by completely understanding that market can provide a niche value proposition to customers in that market.

However, a question that needs to be asked is: Once a firm has completed a SWOT and Porter's Five Forces analysis, how does it convert the CI into a generic strategy? Islami, Mustafa, and Latkovikj (2020) provide guidance on linking the findings of the SWOT and Porter's Five Forces to Porter's Generic Strategies by internally responding to the following questions: How can the firm reduce or control the customer and supplier power? How can the firm reduce or mitigate against the threat of new entrants or substitution? What can the firm do to win competitive rivalry? These questions can be answered by conducting comprehensive CI, as the frameworks described by Mackey (2020) and Pellissier and Nenzhelele (2013) require CI on competitors, customers and suppliers. Cavallo, Sanasi, Ghezzi, and Rangone (2020) succinctly suggest that CI helps firms in "connecting the dots" when developing a strategy.

2.1.3 Targets of CI: Who are Firms Looking at?

In a study conducted by Calof, Arcos, and Sewdass (2018) on the practices of CI among European businesses, it was identified that while most firms actively used the term CI, the core focus of the gathering exercise was to monitor their competition. In addition to Calof, Arcos, and Sewdass (2018) , Faizal, Nor, and Yusoff (2018) found SMEs increased their scope of intelligence gathering the larger they grew. Other writers have argued CI's aim is to be a market leader through developing foresight (Arrigo, Liberati, & Mariani, 2021). Mackey (2020) recommends using a SWOT analysis tool to gather key intelligence. According to Aydin Temel, Konuk, Turan, Ayeri, and Ardali (2018), a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) is a framework for assessing a company's competitive position and developing strategic plans. Both internal and external elements, as well as existing and future possibilities, are all evaluated in a SWOT analysis. A SWOT analysis is a tool for taking a realistic, fact-based, data-driven look at an organisation's initiatives, or industry's strengths and weaknesses.

It can be ascertained to complete the SWOT analysis, gathering intelligence on the firm's competition would not be sufficient. The firm needs to identify future market trends by focusing on all factors, like suppliers, customers, regulators, to name a few. This definition produces an inconsistency between what is being practised in industry and what is required by a firm to conduct comprehensive CI. In their comprehensive literature review, Obonyo and Kilika (2020) identified that knowledge of CI was a barrier to who the intelligence gathering targeted. The authors suggest the target scope of the intelligence effort directly related to the practitioners' knowledge of CI. Calof, Arcos, and Sewdass (2018) further argue that firms may narrow their intelligence gathering scope to focus most of their resources on competitors, as there is an underlying assumption that this is the greatest source of developing a competitive advantage.

Target	of time focused on the target (%)
Competitors	48
Customers	21
Government	7
Suppliers	6
Partners	6
Universities	3
Professional associations	4
Other research institutions	5

Figure 6: Targets of Intelligence *(Calof et al., 2018)*

To remedy insufficient target scope, Simões (2020) suggests that CI practitioners use the SWOT analysis in conjunction with a PESTLE analysis and Porter's Five Forces analysis to ensure that sufficient targets are included in the CI process. Perera (2017) defines a PESTLE analysis as a strategy framework that breaks down possibilities and hazards into Political, Economic, Social, Technological, Environmental, and Legal elements to evaluate a company's external

environment. PESTLE analysis is a useful tool for determining the benefits and drawbacks of a business strategy in corporate strategy planning. In Porter's argument on defining industry attractiveness, Porter (1980) introduced the Porter's Five Forces tool. According to Porter (1980), competitiveness does not come solely from competitors, according to this theory. Rather, the threat of new entrants, supplier negotiating strength, buyer bargaining power, threat of replacement products or services, and existing industry rivalry all influence the status of competition in each business. The combined strength of these influences defines an industry's profit potential, and consequently its desirability.

Figure 9 below provides a holistic framework that encompasses the views of Perera (2017), Andersen (2011), Mackey (2020) and Simões (2020) into a roadmap for firms who intend to implement a CI procedure. This framework aims to mitigate the risks posed by Obonyo and Kilika (2020) and Calof, Arcos, and Sewdass (2018), who bring forth the risk of narrow intelligence targeting due to insufficient skills and knowledge.

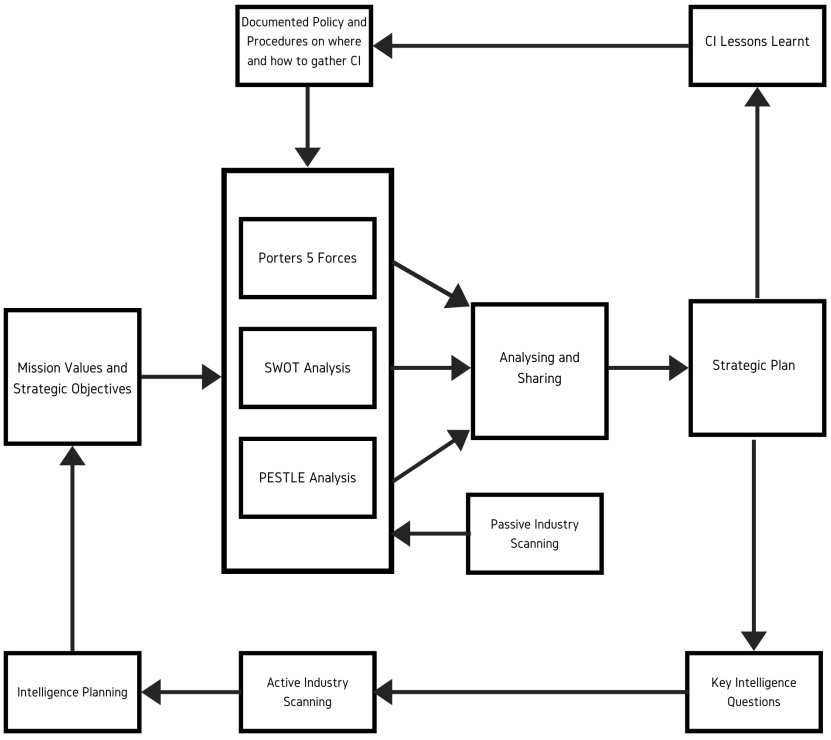


Figure 7: Proposed Combined CI Framework *(Andersen, 2011; Mackey, 2021; Pereira, Jerónimo, & Ramos, 2017; Simões, 2020)*

2.1.4 Barriers to the Application of CI for SMEs

In their study of CI practices among European firms, Calof, Arcos, and Sewdass (2018) identified that most firms used the term CI and believed they were actively conducting the process. However, most firms reported to have only used the SWOT analysis due to their insufficient knowledge of CI practices. Kettunen (2021) found that many businesses were concerned about

the ethical considerations of CI and were concerned about potential reputational damage if it was brought to light the firm was conducting intelligence practices. Insufficient or poor execution of CI may be linked to insufficient understanding of the term (Nenzhelele, 2015).

According to Groom and David (2001), many SMEs do not have the formal methods to convert the gathered information into more effective, strategically valuable information. Many analysts argue that failure to adequately analyse the collected CI into practical insights for the end-user leads to the largest competitive advantage loss (Botos, 2018; Köseoglu, Chan, Okumus, & Altin, 2019). As discussed by Adeyelure, Kalema, and Bwalya (2018), the cost implication of acquiring a business intelligence system, which includes getting the required analyst to provide the necessary insights from the gathered intelligence, may be a barrier to the successful CI process.

Tarraf and Molz (2006) argue that the success of CI's application may indeed be at the mercy of the attitudes and perceptions of decision-makers in the SMEs. Priporas, Gatsoris, and Zacharis (2005) support this view, and write that traditions may be a barrier to the application of CI. Calof, Arcos, and Sewdass (2018) found that while many managers requested added intelligence and were able to derive a competitive advantage from the process, their superiors did not resonate that sentiment, and therefore limited investment into the process.

SMEs face multiple barriers to successful application of CI. The barriers can be combined into three key factors, namely: knowledge, cost, and support. Knowledge barriers include not understanding the term CI, and how and why it is conducted. This led to a poor application, which yielded unsatisfactory results. The second barrier is the cost. This is limited to the analysis and reporting of the gathered intelligence. Lastly, many end users of the collected intelligence can derive value from the process, but other decision-makers may choose to use the firm’s limited resources for other activities.

Superior intelligence is not enough to create a winning strategy (Herring, 1992). By understanding the firm’s strategic risks, KIQs can be developed. These questions provide the scope for the CI collection process. The findings of these intelligence exercises guide the firm in mitigating strategic risks. CI is therefore intertwined with a firm's strategy, as changes in the firm’s operating environment are identified during the intelligence gathering process and are actioned in a firm's strategic direction.

2.2 Understanding the Relationship Between Conducting Formal CI and Value Creation

2.2.1 Relevance of CI and the Perceived Value for SME's

According to Cavallo, Sanasi, Ghezzi, and Rangone (2020), all firms have access to the same data. However, not all firms can collect, analyse and use the data to develop a competitive advantage. Ali and Anwar (2021b) argue that while CI may be a strategic function for a large enterprise, for SMEs, it may be the key to survival in a competitive market. According to Nenzhelele (2015), SMEs in South Africa face many barriers to their survival. However, increased competition may increase businesses' resilience and stimulate innovation among SMEs in a domestic setting. In South Africa, competition among SMEs remains low (Sewdass & Du Toit, 2014). Strauss and Du Toit (2010) argue that an increase in domestic competitiveness among firms is required for South Africa to be competitive globally.

Many SMEs tend to carry out CI, albeit not in the theoretical manner expected of them (Nenzhelele, 2015). The level of application of CI among SMEs has many underlying factors that are more customary. These include looking like a follower if the SMEs carried out this process (Koseoglu, Karayormuk, Parnell, & Menefee, 2011). Other factors include believing that customer satisfaction only drives competition. Insufficient understanding of the CI may be the reason for the non-traditional and ad hoc application of CI.

Several studies were conducted investigating the value created using CI in multiple countries. A relationship exists between organisations that conduct CI, and profitability (Cantonnet, Aldasoro, & Cilleruelo, 2015). Nenzhelele (2015) suggested that profitability is noted as the SME's CI increases. However, difficulties arise when an attempt is made to identify the true extent of the relationship between these factors. Cantonnet, Aldasoro, and Cilleruelo (2015) suggest that businesses that performed better spent more resources on CI. Alternatively, this relationship could be linked to the application of CI, which led to higher profitability. However, existing studies fail to identify the causal factors of the relationship, why an increase in CI leads to an increase in profitability.

Groom and David (2001) found the smaller the SMEs, the less perceived value was placed on CI. One of the limitations of this explanation is that it does not explain the causal factors that lead to insufficient value perception, and at what point in a business's lifespan does CI increase in perceived value. In a study conducted by Priporas, Gatsoris, and Zacharis (2005), which examined the effect of CI on SMEs in Greece, one-third of respondents collected CI mainly for the sake of collecting information with no intent to use the information gathered.

SMEs might increase the benefit received from CI if they were willing to share intelligence information. This may provide additional benefits, including increased use of economies of scale, less duplication of tasks and better staff utilisation. In a study to determine CI behaviour among grape exporters in Peru, Bisson and Tang Tong (2018) found that firms that shared intelligence with competitors could harness increased perceived value. Adeyelure, Kalema, and Bwalya (2018) reported that in developing countries, firms that shared information between suppliers and customers could lever on better relationships due to this. Some analysts, like Sogunro (2002), have attempted to draw fine distinctions between sharing and oversharing of CI information with any party, except the key recipients of this information. This analyst argues that due to the fluidity of information, the risk of information leakage, especially to non-recipients of the information, is high. Simonova, Lyapina, Kovanova, and Sibirskaya (2017) further add that the primary purpose of a firm is to maximise profits for its shareholders. Therefore, a receiver of shared information may use the knowledge to lever its own position. It is imperative that a firm assesses what information it is willing to share to derive value from sharing it, and what information is critical to its strategy, which would cause the firm's competitive advantage to be diminished.

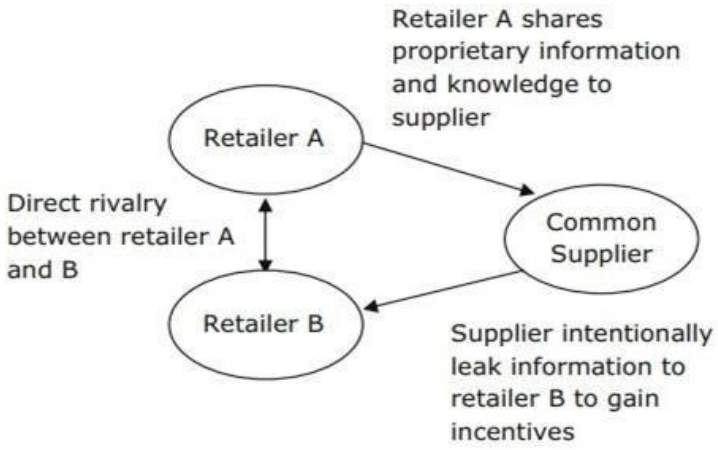


Figure 8: Information leakage in a supply chain *(Thanh et al., 2020)*

2.2.2 Formal Versus Informal CI Among SMEs

With reference to the above literature, it can be ascertained that a formal CI process follows the four distinct steps, as stipulated by Mackey (2021). Additionally, a formalised system has internal company policies and procedures which govern the CI process (Maungwa and Fourie (2018). The last key factor is that the collected intelligence should be used as a strategic driver to increase profit and decrease risk to the firm (Bartes, 2015; López-Robles, Otegi-Olaso, Porto-Gómez, Gamboa-Rosales, & Gamboa-Rosales, 2020). When considering the above factors, it can be determined that a CI process that does not meet each of the above factors will be considered an informal system.

According to Köseoglu, Chan, Okumus, and Altin (2019), organisations with formal CI processes may reap better value. However, if a company does not have an established CI, managers may follow their own techniques, which may lead to misunderstanding and compatibility issues among departments. Furthermore, due to the lack of a structured methodology, these managers may have difficulty contributing to the broader organisational plan. According to Nenzhelele (2015), SMEs are more likely to use an informal CI system than a formalised one. The key reasons for this are insufficient knowledge of the topic and insufficient resources to implement a formalised system. Chawinga and Chipeta (2017), however, argue an SME that has strategic decision-makers involved in daily operations may benefit from an informal system. The authors add these decision-makers know what to ask, who to ask, and have the power to change the business strategy. Hassani and Mosconi (2021) further argue that while information is available, how it is collected, analysed, and used determines the competitive advantage and value the firm can derive from it. Therefore, while an unstructured and informal approach may provide benefits to certain SMEs, a guiding framework which provides some structure is recommended.

2.3 Understanding the Relationship Between Data Sources and Value Creation

2.3.1 Gathering of CI from Internal and External Sources Using Primary and Secondary Data

In a comprehensive global study conducted by Bond (2019) on the application of CI for large companies, it was identified that large firms actively monitored both internal and external sources of information and extracted this information from both primary and secondary sources. Internal sources of information are directly gathered from the persons working in the firm, while external sources of information are derived from persons or sources not working in the firm (Shaitura, Ordov, Lesnichaya, Romanova, & Khachaturova, 2018). Johnston (2017) defines a primary source as one which the firm has direct access to and can extract first-hand data directly from the source. The author further describes secondary data as information gathered indirectly and may focus on describing a primary source. While all sources of information are valuable to a CI process, Chalendard (2017) provides a cautionary sentiment on using secondary data. The author argues that secondary data sources may not hold all the details that the practitioner may be looking for. Additionally, this data may be out of date and may not provide information to answer the KIQs. Yet, the benefit of this approach is that information is more easily accessible and costs less to retrieve (Carroll et al., 2017). Kumar, Saboo, Agarwal, and Kumar (2020) have offered valuable advice on specific aspects of using primary and secondary data sources for CI purposes. The authors suggest that the larger the impact on the firm's strategy, the more in-depth

and relevant the sources need to be. Conversely, the less relevant the data collection sources need to be.

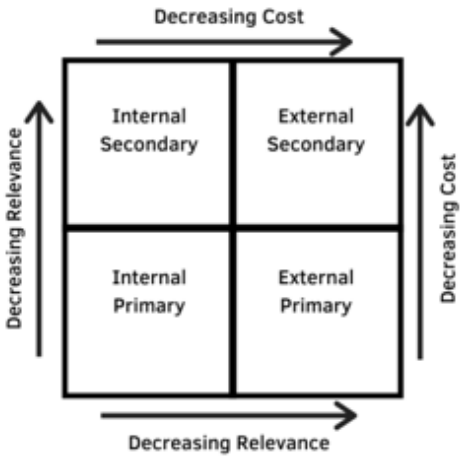


Figure 9: Relevance to cost matrix *(Carroll et al., 2017; Kumar, Saboo, Agarwal, & Kumar, 2020)*

Internal and external sources of data refer to whether the data is sourced from inside the organisation or through an outside party (Chawinga & Chipeta, 2017). Internal sources of information include interviewing employees and management of the firm and using the internal staff members to gather information from customers, suppliers and competitors (Shujahat et al. (2017). Information can be gathered by allowing staff to visit trade shows to identify competitor and supplier trends and briefing them on KIQs. External sources of information are gathered through a third party not directly employed by the firm (Hassani & Mosconi, 2021). One example is finding out how much a competitor is buying from a mutual supplier or quizzing a customer on the price offered by a competitor. According to many analysts in the field of CI, it is vitally important to use both internal and external sources to gain a holistic view of the environment under investigation (Adeyelure, Kalema, & Bwalya, 2018; Garcia-Alsina, Cobarsí-Morales, & Ortoll, 2015; Mackey, 2020). When gathering intelligence through both internal and external sources, extreme care should be taken to avoid sharing confidential information which may diminish the firm's competitive advantage (González-Díaz, Acevedo-Duque, Santos, & Cachicatari-Vargas, 2021). The author further argues that all firms are looking for intelligence and through relations with common suppliers, customers and the movement of employees, CI can easily be gained from other firms, but without practising caution, information can be inadvertently shared with the firm's competitors. Muller, Saayman, Viviers, and Calof (2002) suggests that while a firm may have procedures to gather intelligence, counter-intelligence systems need to be integrated into the firm to maximise the value of collected information. Considering the above literature, to maximise the value of a CI system, firms need to actively monitor all sources of internal and external information. However, firms need to prevent information leakage. This can be done by developing a corresponding counter-intelligence system to supplement the intelligence gathering system.

2.3.2 Where are Firms Gathering Intelligence from?

In a study on data quality, Kilkenny and Robinson (2018) aptly refer to poor data collection and expecting superior results as garbage in, garbage out. The importance of collecting relevant and accurate CI data cannot be underestimated. The gathering of CI forms the backbone of the firm's CI system (Saddhono, Chin, Toding, Qadri, & Wekke, 2019). However, while firms may prefer primary data, (Ezenwa, Stella, and Agu (2018), time and resource constraints may not always be favourable to the collection of this type of data. In a study conducted by Bond (2019), it was identified the main point of intelligence gathering was viewing and harvesting information from a competitor's website. This was followed by monitoring the competitor's marketing and social media movements. Bond (2019) confirms Calof, Arcos, and Sewdass (2018) sentiment that the preferred intelligence target is the competitor. However, Langlois and Chauvel (2017) expand on the need to gather intelligence on suppliers and customers, with equal emphasis on competitors.

Jeong and Yoon (2017) argue that employees are an underutilised resource in gathering intelligence. The authors further suggest employees on the ground can feel the subtle movements in the industry due to their continuous engagement with suppliers and customers. However, Ottonicar, Valentim, and Mosconi (2018) introduce that human interaction is slowly diminishing with digitalisation of supply chains, and with that the opportunity to gather intelligence through casual conversation. Asare, Addo, Sarpong, and Kotei (2020) further expand on this decline, especially when faced with insufficient business continuity as experienced during the Covid-19 pandemic. These authors argue that comprehensive intelligence is needed during times of uncertainty, but the ability to gather intelligence decreases. This may explain why many firms prefer to draw on secondary data sources to gather their intelligence.

While internal sources of intelligence remain underutilised, this trend may continue soon, as businesses shift from physical presence to a more digitalised version. This has a knock-on effect, with firms relying more on secondary data sources to gather intelligence. With businesses entering phases of uncertainty, up to date and relevant information is critical to develop and maintain a competitive advantage. However, with the increased use of secondary data, more firms have access to the same data, which leads to the assumption that who uses the data the best will develop the biggest advantage.

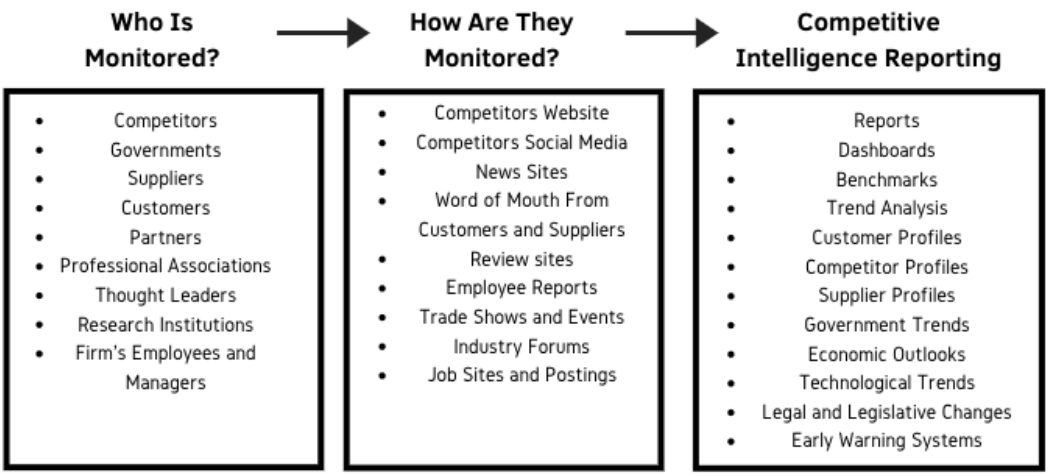


Figure 10: Monitoring Process *(Ali & Anwar, 2021b; Bond, 2019)*

2.4 Exploring the Relationship Between CI Internal Capacity and Value

2.4.1 Knowledge Management and CI

In their extensive literature review, Shujahat et al. (2017) argue that KM and CI have significant consequences and repercussions on the organisation's strategy. Rothberg and Erickson (2017) define organisational KM as the interdisciplinary process of developing, utilising, sharing, and managing an organisation's information and knowledge. It is a multi-pronged approach to maximise the value of an organisation's knowledge assets to meet business goals, including increasing competitive advantage, improving performance, promoting innovation, sharing insights, and continually improving the organisation. Du Plessis (2007) further suggests KM is defined as a planned, structured approach to managing the creation, sharing, harvesting, and leveraging of knowledge as an organisational asset to improve a company's ability, speed, and effectiveness in delivering products or services to clients in accordance with its business strategy. Some analysts, like Chawinga and Chipeta (2017), have attempted to draw fine distinctions between KM and CI. The authors suggest KM and CI appear independent topics of study, but both play critical roles in business contexts, regardless of an enterprise's size or industry. What remains unclear, however, is how KM and CI interact, and to what extent are these two fields related.

In a comprehensive literature review of the synergy between CI and KM, Ghannay and Zeineb (2012) identified five significant differences between the two topics. The first difference is CI is externally focused and collected in a proactive manner, while KM is internally focused and collected in a reactive manner. CI is applied through all time frames, while KM is applied in the long term. However, the most critical difference is CI is gathered through various data sources, while KM relies on employees to contribute to the system. The relationship between CI and KM

has attracted conflicting interpretations from many analysts. Some authors, including Rothberg and Erickson (2017) and Shujahat et al. (2017), argue that KM is conducted reactively, while Du Plessis (2007) and Chawinga and Chipeta (2017) provide a counter-argument suggesting that KM is conducted proactively. The second conflicting view between CI and KM is the function of gathering information from internal sources. According to Mackey (2020), CI can interview internal sources, including employees and managers, to gather CI. Razzaq et al. (2019) provide a counter-argument suggesting that using employees to provide insights to identify firm strengths and weaknesses is a KM function. Chang, Liao, and Wu (2017) provide a much needed defining line when determining the responsibilities between the two topics. The authors suggest when an employee gathers information after interacting with a source, this would be regarded as CI. Such an example would include gaining pricing insights on a competitor after having a discussion with a common supplier. When an employee is the source of information and is willing to share their own knowledge and experience, this would be considered KM. An example would be that an employee who worked for a competitor can share insights on their experience.

Understanding the relationship between KM and CI for SMEs may be key in using the limited resources available to the firm to maximise competitive advantage (Chawinga & Chipeta, 2017). There is a growing body of literature that recognises the importance of creating synergy between KM and CI for SMEs. Shujahat et al. (2017) conducted a literature study to identify key factors that could lead to an increased competitive advantage by creating synergy between the two topics. The authors suggest CI should focus on firms' opportunities and threats, be procedural, and be reported through a formalised system. KM should, however, focus on the strengths and weaknesses and should be less formal with reporting being open and encouraged. One criticism of much of this viewpoint is that it does not deal with sharing information of the two topics, particularly in areas where there may be overlap of information. Tarek and Adel (2016) attempted to provide clarity on this matter by suggesting that firms identify the areas of overlap and nominate a single gatekeeper to create synergy between the two information pipelines. In figure 11 below, a SWOT analysis template was used to synthesise various analysts' viewpoints on the relationship between CI and KM for SMEs. The SWOT analysis is a tool used by both topics and could therefore lead to the most duplication of information (Simões, 2020). The map incorporates a gatekeeper to synthesise information that may be applicable to both topics, and ensures the quality of both streams of data prior to the analysis (Correia, 2017).

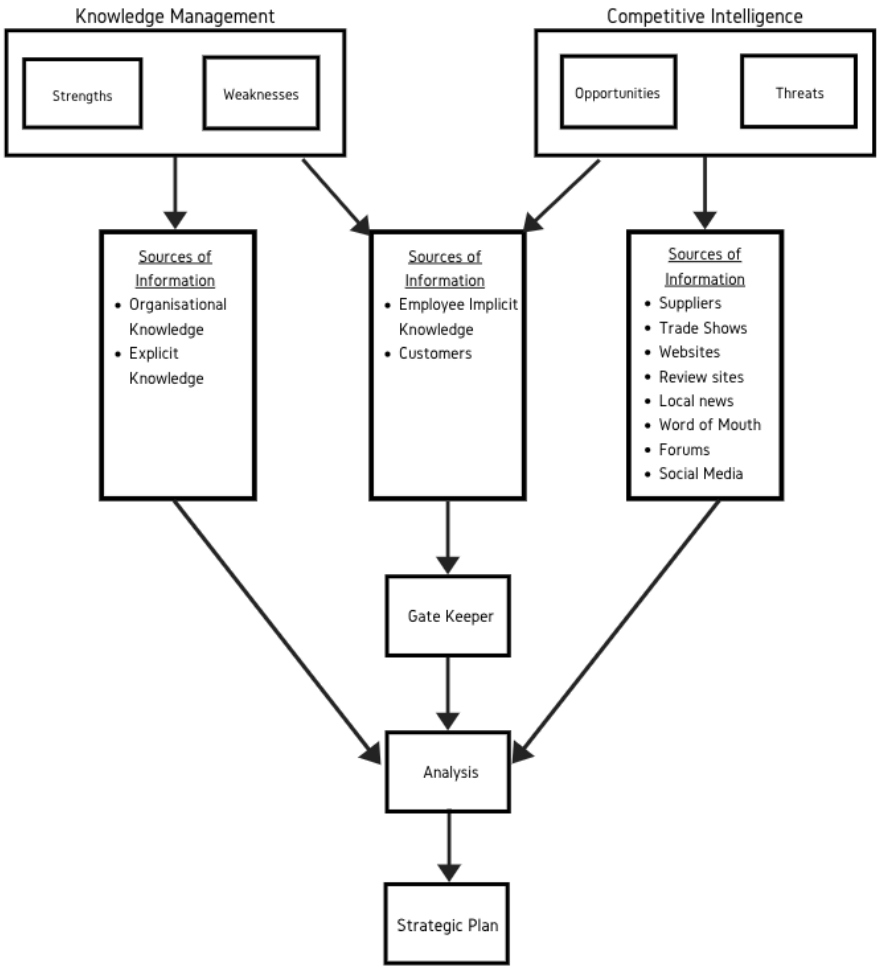


Figure 11: Macro level suggestion on creating synergy between KM and CI *(Chawinga & Chipeta, 2017; Mackey, 2020; Tarek & Adel, 2016)*

2.4.2 The Use of Internal Capacity and the Creation of Business Intelligence Systems

The definition of business intelligence varies in literature, and there is terminological confusion. Many analysts use the term business intelligence interchangeably with CI (Liebowitz, 2006; Zheng, Fader, & Padmanabhan, 2012). However, more recent studies have shown that business intelligence, while interlinked with CI, may be regarded as a separate practice (Soumeya & Brahim, 2020). A comparison conducted by Caseiro and Coelho (2019) of CI and business intelligence reveals CI is any material information that a company has that enables it to make better-informed decisions than the average company in its field. It does so to be more efficient. Conducting CI enables a company to identify market opportunities and outperform its competition. The physical equipment and software that a firm uses to gather intelligence and conduct research are referred to as business intelligence. Companies then make judgements based on the information they have gathered. These tools and software work together to form systems that allow a corporation to collect, store, and analyse raw business data to make better decisions. In their study on the impact of business intelligence on SMEs, Cheng, Zhong, and Cao (2020)

identified that firms that integrated business intelligence systems could increase innovation and agility. Delen, Moscato, and Toma (2018) further suggest a well-developed business intelligence system helps maximise the value of collected CI by allowing rapid contrast between collected information and giving decision-makers an advantage in making better strategic decisions. Many analysts have suggested the impact of implementing a business intelligence system to augment CI has led to increased competitive advantage (Eidizadeh, Salehzadeh, & Esfahani, 2017; Mehrara, Ghasemi Hamedani, & Atf, 2019).

While the value of business intelligence systems cannot be underestimated, the topic has also been subjected to criticism. Rajesh and Saravanan (2017) argue that the cost of implementing a business intelligence system may be a stumbling block for SMEs with limited resources. Mathew (2021) further argues that even with the best business intelligence systems, it is the end user who creates the most value. Therefore, large firms are willing to remunerate business intelligence analysts, leaving a void among the SMEs. To compensate for these barriers, Adeyelure, Kalema, and Bwalya (2018) suggest firms could pool their resources together to acquire a shared system with skills analysts. However, the authors provide a word of caution, noting that firms will not exploit the same value as if they had their own implemented system.

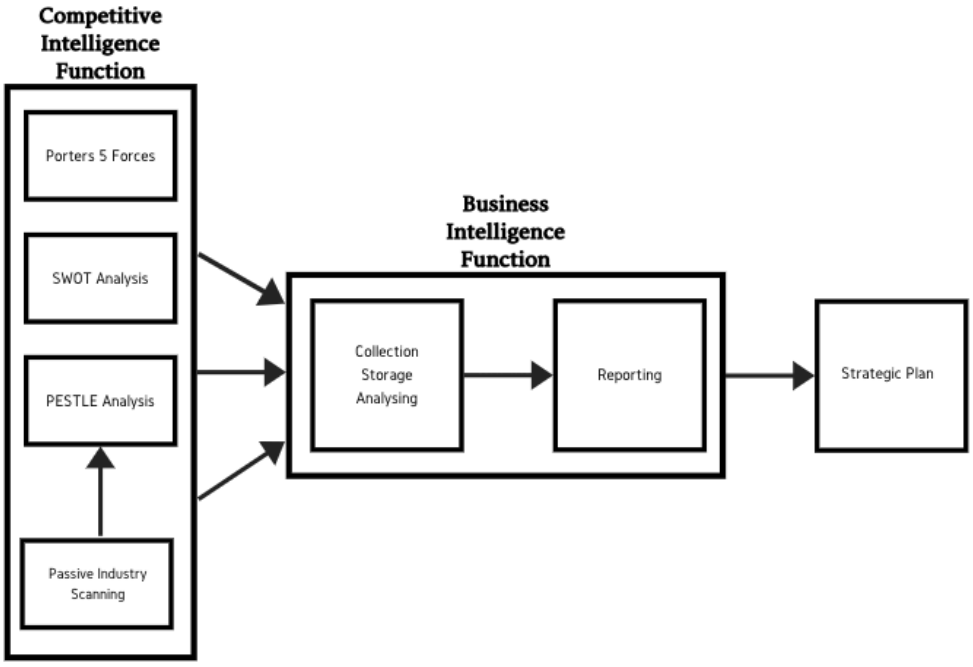


Figure 12: Business Intelligence Data Pipeline *(Mackey, 2021; Rajesh & Saravanan, 2017)*

2.5 Developing a CI Business Service

The planned outcome of this research study is to determine the viability and create a venture based on the research results. The following literature review discusses the generic process of developing an idea into a business in South Africa and the barriers facing SMEs. This area of the

literature review, while focusing on generic business factors, highlights the importance of understanding the firm's operating environment from ideation to maturity, a factor which comprehensive CI can address. The final portion describes how CI should be integrated into a firm and the use of external consultants.

2.5.1 Management Theories

Strategy is the general direction a firm sets as it embarks on its journey to achieve its preconceived goals (Moktadir et al., 2020). Management is the actions which help the firm reach its strategic goals by conducting actions including planning, organising, directing, and controlling (Ali & Anwar, 2021b). Considering the above definitions, an interrelation exists between management and strategy. Farrukh, Meng, Wu, and Nawaz (2020) suggest that a firm sets a strategy first, as this will provide guidance on the management tasks required to make the strategy a reality. Olson, Olson, Czaplewski, and Key (2021), however, disagree with this sentiment. The authors argue that in the changing dynamics facing the firm, long-term planning is merely a guideline, and it is the management processes which should drive strategy to allow the firm to remain agile. One common thread among analysts is that a firm requires a robust management system to achieve its strategy, and a strategy alone is insufficient to achieving success (Siltaloppi, Rajala, & Hietala, 2020; Zhong, Sun, Zhou, & Lee, 2020). Khorasani and Almasifard (2017) recommend that firms adopt a set of management theories to help managers effectively lead their organisations, as firms move towards accomplishing their strategy.

The need for management theories was identified in the 18th century when firms were faced with rapid rates of industrialisation (Maclean, Harvey, & Clegg, 2017). In a study of the history of management theories, Joullié (2018) identified that during the industrial revolution, leaps in technology were made which led to production costs being lowered. However, as production costs decreased, consumer demand increased, leading to the need for more employees. While managers found it easy to set production goals, managing a team to meet those goals was a challenge. As time progressed towards the modern era, management theories evolved to meet the needs of the time; however, all theories still provide guidance to firms today (Siltaloppi, Rajala, & Hietala, 2020).

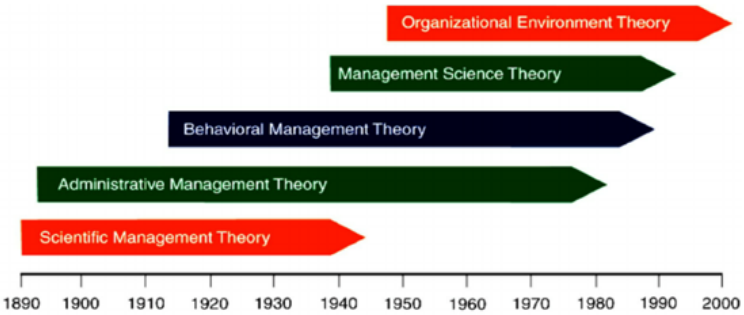


Figure 13: Evolution of Management Theories *(Smit, Cronje, Brevis & Vrba, 2007)*

The Scientific Management theory was devised by Frederick Taylor, who suggested that tasks should be simplified, equally shared and motivation should be driven by monetary incentives (Shulga, Poperechna, Kondratiuk, Petryshyn, & Zubchyk, 2021). Taylor's Scientific Management theory aimed at maximising efficiency and productivity, with employees being paid based on the level of output they produced (Hill & Van Buren, 2018). For the implementation of the Scientific Management theory Taylor (1914) provided the following guidelines:

- Step one: Analyse each task and develop the most efficient method of completing it.
- Step two: Choose the best person for the job and train them to carry out the task in accordance with the maximum level of efficiency.
- Step three: Supervisors are only responsible for ensuring that employees are carrying out the task as per the predefined guidelines.
- Step four: Employees are remunerated based on each individual's output.

While this theory provides guidelines on maximising efficiency and ultimately profitability of the firm, Palla and Billy (2018) have been critical of this theory. The authors argue that firms do not operate in isolation and the impact of the firm on the greater community needs to be completely understood. Additionally, Palla and Billy (2018) state that increasing efficiency should not be detrimental to other stakeholders. Su (2017) identified that firms may be more innovate and adopting of new technologies in their pursuit of efficiency. However, a major criticism for this theory is the human impact. Taylor (1914) assumed that if employees were a good fit for the role and were trained to carry out the role, by using money as a motivator, employees would be motivated to increase output. Klikauer (2018) was exceptionally critical of the human element of this theory. The author argued that employees are motivated by more than income and require self-development and satisfaction from their vocation, rather than just being regarded as machinery. Additionally, employees may overextend themselves in a bid to earn more income which may lead to more downtime. While many analysts remain critical of this Ellis, Found, Kumar, and Harwell (2018), identified that the use of scientific methodologies to employ the best person for the job is still applicable due to its impact on efficiency.

The Administrative Theory was created by Henri Fayol in response to the need to allow managers to coordinate internal activities in a firm (Edwards, 2018). Hatchuel and Segrestin (2019) describe the Administrative Theory as the process of giving upper management the responsibly to lead the firm with the employees following suit. The management responsibilities are separated into six distinct activities namely:

- **Technical:** These managers are responsible for the production of products.
- **Commerce:** The managers for the buying and selling function.
- **Finance:** Finding, securing, and ensuring efficient use of capital.
- **Accounts:** Monitoring, controlling, and displaying the financial health of the firm.
- **Security:** Protection of the firm's assets and resources.

- **Managerial:**
    - **Planning:** Strategy development and setting objectives.
    - **Organising:** Ensuring coordination and task definitions.
    - **Commanding:** Leading and instructing employees.
    - **Coordinating:** Ensuring the entire firm is working towards the same goals.
    - **Controlling:** Measuring the outcomes of the firm.

The Administrative theory has received much support with many analysts suggesting that this theory was the foundation for the modern management theories of the 21st century (Berber, Harding, & Mughal, 2020; Narula, 2020).

While the Administrative and Scientific theories focused on developing efficiency the Behavioural Management Theory addresses employees as humans and not machines (Khorasani & Almasifard, 2017). This shift in paradigm led theorists to focus on the human motivations and behaviour (Zimmerman, Carnaby, Lazarus, & Malandraki, 2020). However, managers were still not able to identify what truly motivates their employees. Maslow and Lewis (1987) suggested that human needs can be classified in five areas namely:

- Physiological needs: These are human survival needs such as food and water.
- Safety needs: Security and protection leading to a reduction in fear.
- Belonging needs: The need to form meaningful relationships.
- Esteem needs: Self-confidence, status, and glory.
- Self-Actualisation needs: The need to find one's inner self.

Maslow and Lewis (1987) further suggest that as the basic human needs are met, the person shifts into the next category and so forth. The Behaviour Management theory was further enhanced by Douglas McGregor to include the study of management and supervisory staff. This leads the Behaviour Management theory towards the Theory of X and Y. McGregor (1960) suggests that there are two types of managers. The Theory X manager has a negative attitude towards employees and believes they are lazy, untrustworthy, and incapable of taking responsibility. The Theory Y manager, on the other hand, assumes that employees are not only trustworthy and capable of taking on responsibility, but also highly motivated. Madero-Gómez and Rodríguez-Delgado (2018) suggest that Behavioural Management theory stresses the importance of leadership styles that emphasise concern for people and collaboration. It encourages participatory decision-making and team development by meeting individual needs and connecting individual and group objectives. It assists managers in evaluating and understanding how their behavioural style as a manager affects their relationship with their team and fosters dedication and contribution to company goals. While the shift from an efficiency approach to a human approach was ground-breaking at the time, Stefanovska-Petkovska, Bojadjiev, and Blazevski (2021) argue that leaders cannot be classified into two groups as leaders

need to be able to change their style depending on the circumstance with the need to be autocratic in difficult times, to allowing employees free rein.

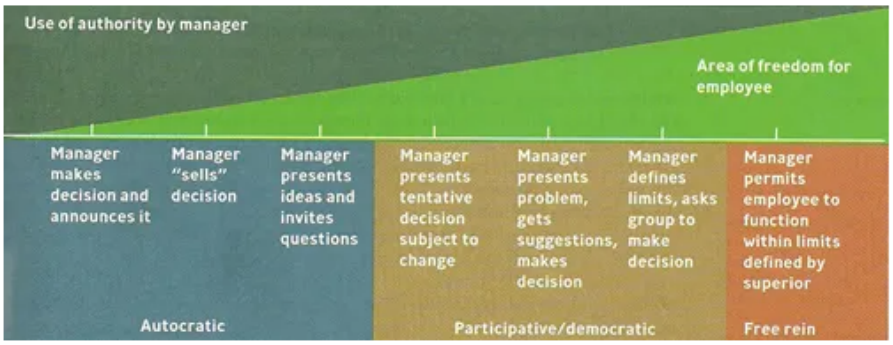


Figure 14: The Evolution of Leadership Styles *(AcqNotes, 2021)*

Modern management approaches examine organisational management in its current setting. They take a holistic perspective to organisations, viewing them as a collection of interconnected pieces influenced by both internal dynamics and the larger external environment (Tabatadze, 2020). When taking a Systems-Based Approach the firm understands that it cannot operate in isolation with its outside environment and therefore needs to be aware of the market and macro-environmental concerns (Adams, 2019). The Systems Approach can be classified into two systems:

- Open System: An open system is one that interacts with its surroundings. Whether deploying a new product or service which may affect the organisation's employees, the organisation must consider the role and influence of environmental elements.
- Closed System: A closed system is a firm that does not interact with its surroundings.

While the systems-based approach suggests that firms need to be aware that all decisions have an effect on a firm's surrounding markets, Djamolovhich (2019) argues that it is highly unlikely that a modern-day firm would be able to achieve a complete closed system. Geseleva and Proniuk (2018) support Djamolovhich (2019) by suggesting that with globalisation and the lowered costs related to outsourcing, firms are increasingly exposed to factors outside of their control.

While the systems-based approach understands the impact of the outside influences the Contingency theory charters a course of action based on the internal, market and macro-environment (Csaszar & Ostler, 2020). This theory was devised by Fred Fiedler who suggested that:

- There is no one best way to lead a firm.
- Leaders need to identify the suitable management style based on the current circumstances.
- Leaders should build relationships with employees to be able to exert more influence over them.

While Modern Management theories provide the most flexibility for managers, Uslu (2019) argues that leaders need to develop self-awareness to implement the right leadership at the right time. Berry, Broadbent, and Otley (2019) suggest that the ultimate effectiveness of modern-day theories is how well a firm can gather and act on information which may affect its strategy.

2.5.2 Using CI in Applying Management Theories in a Business

SMEs face high rates of failure coupled to limited resources in mitigating against these failures. According to Turner and Endres (2017), SMEs need to be agile in how they apply their strategy especially in turbulent environments. Ferreira, Mueller, and Papa (2018) recommend that SMEs operate in a lean manner, conserving resources and avoid unnecessary usage of these resources. Based on these suggestions, the Modern-Day Open System Theory appears to be the most applicable. However, Coda, Krakauer, and Berne (2018) argue that while multiple theories exist which can guide an SME, it is the leadership style of the key strategic decision makers that ultimately leads to success. Using strategic tools as a framework, the application of CI can aid firms in mapping their internal, market and macro environments (Mackey, 2021). While, certain theories appear more relevant, SMEs can draw on all theories at various occasions.

KM is the arm of CI which deals with management of internal knowledge (Chawinga & Chipeta, 2017). The use of the Scientific Theory requires firms to select employees based on best technical fit for the role. Bolander and Sandberg (2013) suggest that the use of a Scientific process ensures that staff have the aptitude to conduct the required work and are not selected due to their personality. Zo'or (2017) however, argues that employees in an SME can wear multiple hats, and scientifically choosing a specialist may be less rewarding than employing a generalist. Arbussa, Bikfalvi, and Marquès (2017) recommend that firms apply the principles of the Administrative Theory by isolating skills which are mutually exclusive such as accounting or security and applying Scientific Theories to identify the right candidates for these specialist roles. However, generalist employees can be selected based on their overall fit in the firm. To ensure that generalist employees are able to be develop into their roles in the SME, the use of teams, which promotes the sharing of information, skills and knowledge as described in the Human Relations Theory can be applied (Nicotera, 2019). Yadav, Sharma, and Singh (2018) suggest that the leadership of the firm is as critical as the employee selection process. The authors argue that the leaders in the firm need to adopt the right style, at the right place and time. The use of a SWOT analysis is regarded as a valuable tool for monitoring KM. Karyono and Agustina (2019) suggest that firms who have identified their strengths and weaknesses are better able to identify the key KM resources the firm lacks, and are able to strategically mitigate against the identified weaknesses.

	Commanding	Visionary	Affiliative	Democratic	Pacesetting	Coaching
The leader's modus operandi	Demands immediate compliance	Mobilizes people toward a vision	Creates harmony and builds emotional bonds	Forges consensus through participation	Sets high standards for performance	Develops people for the future
The style in a phrase	"Do what I tell you."	"Come with me."	"People come first."	"What do you think?"	"Do as I do, now"	"Try this."
Underlying emotional intelligence competencies	Drive to achieve, initiative, self-control	Self-confidence, empathy, change catalyst	Empathy, building relationships, communication	Collaboration, team leadership, communication	Conscientious-ness, drive to achieve, initiative	Developing others, empathy, self-awareness
When the style works best	In a crisis, to kick start a turnaround, or with problem employees	When changes require a new vision, or when a clear direction is needed	To heal rifts in a team or to motivate people during stressful circumstances	To build buy-in or consensus, or to get input from valuable employees	To get quick results form a highly motivated and competent team	To help an employee improve performance or develop long-term strengths
Overall impact on climate	Negative	Most strongly positive	Positive	Positive	Negative	Positive

Figure 15: Summary of Leadership Styles *adapted from Goleman (2017)*

Firms need to be agile and aware of their surroundings. According to Paschen (2017) SMEs have a perception that they operate in a silo and external forces do not affect them. Barnes (2019) further states that the lack of environmental scanning is a key failure factor for SMEs. By taking an Open System Theory Approach, SMEs are in tune with their operating environments (Yun, Zhao, Park, & Shi, 2020). Vidal, Campdesuñer, Rodríguez, and Vivar (2017) further suggest that SMEs can benefit from a flexible, contingent based strategy which is based on the current environment the firm is operating in. Strategic frameworks completed using comprehensive and relevant CI will allow firms to identify opportunities and threats allowing them to change their strategy to maximise their competitive advantage (Sánchez-Cambronero, González-Cancelas, & Serrano, 2020).



Figure 16: Impact of CI on Internal Departments *(Querry, 2021)*

2.5.3 The Foundation to Starting a Business

According to Robinson (2021), the key to a successful start-up is the combination of having the right entrepreneurial mindset, a validated idea, and an environment that will allow the idea to flourish into a business. In his study on SMEs, Rubin (2016) identified that the three key pillars all hold equal importance, and a minor disturbance in the synergy between the pillars may lead to a business failure.

To date, several studies have investigated the importance of intention regarding the success of a business. In a study conducted by Çera and Çera (2020), on entrepreneurs who passed through an incubator programme, it was found that having the right intention led to increased success. Wardana et al. (2021) define the term intention as the reason the business exists, the impact it intends to make, and what outcomes the business endeavours to achieve. Şahin, Karadağ, and Tuncer (2019) suggest that the rise of billion-dollar superstar entrepreneurs has created an entrepreneurial mindset, that starting a business may lead to rapid acquisition of wealth. In a study conducted by Vodă and Florea (2019), where the aims of the entrepreneur were examined,

it was identified that entrepreneurs who ranked societal impact over wealth creation fared better than their counterparts during times of economic downturn. Robinson (2021) suggests when money is the key motivator, and the flow of money dries up, the entrepreneur may lose motivation. However, if social impact is the driver, the entrepreneur may feel the need to push through in support of society.

While the above sentiments may ring true for an entrepreneur who has the option of starting a business, many entrepreneurs start a business to escape poverty or unemployment (Nenzhelele, 2015). Subsistence entrepreneurship is when an entrepreneur enters a business with the intention of merely earning an income (Ferreira, Sousa, & Gonçalves, 2019). Ferreira, Sousa, and Gonçalves (2019) further suggest that in underdeveloped economies, subsistence entrepreneurship should be encouraged not only to alleviate social ills, but also to form an entrepreneurship talent pipeline. However, this sentiment contradicts Robinson (2021) and Çera and Çera (2020), who require entrepreneurs to be change makers. Venugopal and Viswanathan (2021) provide a solution to help subsistence entrepreneurs develop a holistic view of simply earning an income. The authors argue subsistence entrepreneurs learn immense business skills simply by trading. Therefore, incubators should be created, which help subsistence entrepreneurs formalise their ideas and provide them with micro-loans and grants to scale their business.

A question should be asked: How does an entrepreneur set an intention? Rahimi (2021) provides a suggestion to aid this process. The first element is deciding on the entrepreneur's goals, while the second element unpacks the goals and develops a path to achieve the goals. Kononova, Shpatakova, and Holovchenko (2019) suggest businesses should apply the "SMART" framework when setting goals, as this systematically unpacks each goal. However, Swann et al. (2021), while supporting the "SMART" framework, suggest that the goals need to appeal to the entrepreneur who should have an internal drive to accomplish them. To ensure that the entrepreneur's goals move from paper to completion, checks and balances need to be applied. Waljee, Chopra, and Saint (2020) suggest entrepreneurs may operate in a silo and lack accountability to achieve their goals. This can be overcome by a mentor who holds the entrepreneur accountable and provides advice to achieve their goals.

The creative process or procedure that a company uses to solve various complex challenges is known as idea generation (Spiegler & Halberstadt, 2018). This process involves selecting the best idea or ideas, developing a plan to implement the idea, and then putting that idea into action (Kornish & Hutchison-Krupat, 2017). The concept can be tangible, which the end-user can transfer ownership of, referred to as a product or intangible, with only a once-off consumption referred to as a service (Olya & Al-Ansi, 2018). Based on the above analysts' viewpoints, simply having a thought to start a business is insufficient. The idea needs expansion, which entails what

the idea intends to solve and how it intends to solve it. However, the idea lacks validation and is still at risk of failure to launch. According to Bhaskaran (2019), idea validation is the process an entrepreneur carries out to test an idea before committing excess resources to develop the idea into a business. The author further suggests an idea validation exercise is critical in not only identifying market acceptance, but also to understand the logistics and day-to-day operations required once the idea passed the validation stage. Filomena and Sarkar (2018) suggest entrepreneurs begin the validation phase with friends and family and incrementally shift towards the target market. Kumar, Guirish, Umale, and Ganjewar (2018) suggest using machine learning modelling to find what the potential market is searching for online and if interest can be generated by using systems including social media to gather the opinions of potential users.

However, conducting a successful idea validation exercise does not mean the idea will be successful when converted to a business (Schweitzer & Mai, 2021). The idea validation provides key insights to the entrepreneur in confirming a need, if a market exists, that will pay for the need to be solved, and a possible price point when attempting to sell the solution (Filomena & Sarkar, 2018). While an idea validation exercise allows the idea to be tested, the process may be subjected to biases. These biases may originate internally with the entrepreneur or externally while testing the sample population. Riani (2019) identified three types of internal biases, namely: availability bias, confirmation bias and belief bias. Availability bias is created either by insufficient competitive research or simply by ignoring the competition. Confirmation bias occurs when the entrepreneur only seeks out information that proves their idea and omits negative feedback. Riani (2019) has a last bias, which is excessive belief and overconfidence in the idea. The author suggests this occurs when the entrepreneur receives negative feedback, but believes the idea will still be successful. Addis (1996) suggests that idea validation may be subjected to external biases when the test sample provides untrue feedback. This may occur when testing the idea on friends and family who do not provide an honest review, instead providing a review the entrepreneur wants to hear.

While an entrepreneur may have the right intention with a validated idea, the business environment needs to be conducive to the business to flourish (Čepel, Stasiukynas, Kotaskova, & Dvorský, 2018). Belas, Belás, Čepel, and Rozsa (2019) refer to the business environment as the set of internal and external conditions or forces that influences how a business operates. These conditions can be classified based on how much power the firm must apply to change the condition (Vasilev, Bakhvalov, Prikhod'ko, & Kazakov, 2017). Butarbutar and Lisdayanti (2020) further expand on this by defining the internal environment as the area of maximum control, the market environment with partial control, and the macro-environment where the firm has no control. To assess the impact of each environment, various tools and frameworks can be utilised. To better understand the internal environment, which includes factors such as company culture,

competitive advantages, internal resources and strategy, the Strengths and Weaknesses portion of the SWOT analysis can be utilised (Thamrin, Herlambang, Brylian, Gumawang, & Makmun, 2017). Strengths describe what an organisation excels at and what differentiates it from competition, including a strong brand, loyal customer base, genuine supplier relations and unique technologies (Gurl, 2017). Inversely, Gurl (2017) suggests weaknesses prevent an organisation from performing at its best. A weak brand, higher-than-average staff turnover, an inadequate supply chain, or insufficient capital are examples of areas where the company must improve to remain competitive (Cuomo, Tortora, Festa, Ceruti, & Metallo, 2020). The market environment is where the firm competes and includes suppliers, customers, financiers and special interest groups (González-Díaz, Acevedo-Duque, Santos, & Cachicatari-Vargas, 2021). Porter (2011) provides a comprehensive framework to analyse the firm's operating environment. Porter's Five Forces analyse the bargaining power of buyers and suppliers, and the threat of substitutes and new entrants to determine the industry rivalry. Low intensity of rivalry makes an industry more appealing and increases profit potential for firms already competing in that industry (Porter, 2011). Yet, intense rivalry makes an industry less appealing and reduces profit potential for firms already competing in that industry. To analyse the macro-environment in which the firm has no control, Perera (2017) suggests using the PESTLE analysis. This is a framework for analysing the key external factors influencing an organisation, namely: Political, Economic, Sociological, Technological, Legal, and Environmental (Achinas, Horjus, Achinas, & Euverink, 2019). Thamrin, Herlambang, Brylian, Gumawang, and Makmun (2017) suggest the findings generated by the PESTLE analysis will be used to complete the Opportunities and Threats part of the SWOT framework.

While strategic frameworks provide a direction to the entrepreneur as they seek to understand the forces which will affect their prospective business, it comes with words of caution. Srivastava (2017) refers to alignment as the key to maximising the value gained from using the strategic tools to understand the firm's operating environment. The author suggests that by viewing all the collected information, it provides a complete view of the environment, as viewing each framework in a silo may portray a skewed perspective. The biases raised by Riani (2019) are also applicable to the entrepreneur when conducting strategic exercises, which need to be conducted in an impartial manner. Vacek, Vonkova, and Gabrhelík (2017) have shown poor quality data collection during this phase as an implicit failure of the firm when developing the data into a strategy. The authors recommend the data collection process when developing the frameworks is as accurate as possible. However, Abuarqoub (2018) argues that while the development of the frameworks is critical, the process should not halt other operations or lead to continuous changes in operations as new data is mined. A critical factor is that strategy formulation and development are ongoing, and therefore completing the frameworks as part of a business plan, as an example, should not

mean the process is complete (Methner, Bruckmüller, & Steffens, 2020). Instead, this should form the core of the live and ongoing strategy plan into the future.

2.5.4 Root Causes for the High Failure Rates Among SMEs in South Africa

An entrepreneur is a person who starts a new firm, bearing the most risks and reaping most of the reward (Kanama, 2021). While entrepreneurs may receive reward for their endeavours of accepting risk, businesses also contribute to society. Asongu and Odhiambo (2019) maintain firms contribute to society by reducing unemployment, increasing the standard of living, and contributing to the stated Gross Domestic Product. Bruwer and Smith (2018) suggest SMEs may act as a catalyst for innovation, by looking to maximise profit by reducing risk and with limited resources. However, while the above benefits have a global application, South Africa has observed a rise in entrepreneurship due to its high unemployment levels (Beresford, 2020). Mahadea and Kaseeram (2018) suggest that while entrepreneurship may be a key to alleviating the unemployment rates faced by the country, it creates an increasing volatile environment in which business failure is excessive.

In his extensive literature review on the success rates of SMEs in South Africa, Bushe (2019) identified key factors that led to over 70% of all SMEs failing in their first five to seven years of operation. Bushe (2019) siloed these failures into three key elements, namely entrepreneur failure, environment failure and enterprise failure. Thanh et al. (2020) argue entrepreneurs need to be visionaries, be continuously willing to learn, and have passion and energy to convert their idea into a working model. Arranz, Arroyabe, and Fdez. de Arroyabe (2019) found a direct relationship between the entrepreneur's technical skills to run a business and the success rate of the business. The better technical skills, including industry experience, managerial competency, leadership and business acumen, the higher the chances of success for the business. Brixiová, Kangoye, and Said (2020) argue that the most overlooked item which leads to the entrepreneur failing is insufficient support for the entrepreneur by friends and family. Yasir and Majid (2018) found that entrepreneurs who received positive support from friends and family had a reduced level of fear and performed better, leading to the increased probability of business success. To overcome the hurdles which lead to the entrepreneur failing, Howard, Zwicky, and Phillips (2018) suggest using a mentor as the guiding light for entrepreneurs. In a study conducted by Howard, Zwicky, and Phillips (2018), it was identified that mentorship provided a safe space for the entrepreneur to discuss internal concerns. This process exposed the entrepreneur's shortcomings and allowed the creation of mitigating plans. Hassan (2020) calls for incubators to encourage entrepreneurs to discuss their shortcomings. This allows the entrepreneur to find their shortcomings and create plans to correct them.

The second key concern is failure of the business environment. The business environment is made up of various outside organisations and influences that can be classified into eight primary sub- environments: economic, political, legal, demographic, social, competitive, global, and technical. Each of these industries presents its own obstacles and opportunities for enterprises (Bushe, 2019). Sibindi and Samuel (2019) argue that despite the entrepreneur having the skills to run a business, coupled with a viable idea, the business environment needs to be conducive to the idea. Swartz and Kawajiri (2019) suggest that many prospective businesses shift from the idea phase directly into an operational phase without conducting any diligence on the operational environment. This leads to an increased risk of failure. However, Tsangas, Jeguirim, Limousy, and Zorpas (2019) argue the entrepreneur needs to extensively investigate the operating environment they intend to operate in. The authors further suggest that SWOT and PESTLE analyses provide a solid starting block to begin this process. Additionally, Sánchez-Cambronero, González-Cancelas, and Serrano (2020) suggest that environmental scanning is an ongoing process that begins before the business enters operations and continues through the life-span of the firm.

The third key concern is enterprise failure. Hope, Chew, and Sharma (2017) define enterprise failure as the inability of the firm to conduct its operations due to various operational barriers. In their study into the failure of firms, Cunningham, Ingram, Kadati, and Maduarta (2017) identified that SMEs fail for various reasons. However, the key failures were insufficient access to friendly financing options, a poor business case and insufficient competitiveness. In their study of the impact of business financing, Prohorovs, Bistrova, and Ten (2019) found that the financing options and success rates were low. However, financing was offered to firms with a robust business model and the skills to successfully operate the business. Makhele and Barnard (2020) argue that while internal sources may provide start-up funding, including owners' equity, the external funding provides the firm with a platform to test the viability of the business model. Zheng, Ahsan, and DeNoble (2020) call for the creation of incubators, which create a funding pipeline. The authors suggest that entrepreneurial skills must be coupled with an understanding of the industry, and a robust business model must be applied. By meeting these three criteria, firms would be more competitive when fund-raising.

2.5.5 CI in an SME

Many analysts have identified that firms who conduct CI have shown increased performance (Božič & Dimovski, 2019; Tahmasebifard, 2018), while Chawinga and Chipeta (2017) suggest such firms can increase profitability. This is further substantiated by Nenzhelele (2015), who found that SMEs who conducted CI had an increase in profitability.

CI is the ability to gather, analyse, and apply information gathered about competitors, customers, and other market factors that contribute to a company's competitive advantage (Mackey, 2020). While an entrepreneur may have the right intention with a validated idea, the business environment needs to be conducive to the business to flourish (Čepel, Stasiukynas, Kotaskova, & Dvorský, 2018). Belas, Belás, Čepel, and Rozsa (2019) refer to the business environment as the set of internal and external conditions or forces that influence how a business operates. A relationship exists between organisations that conduct CI, and profitability (Cantonnet, Aldasoro, & Cilleruelo, 2015). By analysing the above statements of the definition of CI, the need for an environmental analysis during ideation and the ability to create a competitive advantage while operating all require internal and external environmental analyses. Therefore, CI should be part of the business decision-making through the entire lifespan of the business. However, while the relationship between CI and the firm's strategy appears intertwined, it does not describe why all firms do not actively develop independent CI systems.

Shujahat et al. (2017) suggest increased competition and turbulent environments lead to firms changing or correcting strategy, as well as measuring and evaluating performance. To achieve this, the authors suggest it is necessary to continuously update key internal and external evaluation matrices developed during the strategic planning stage, as well as identifying other internal and external factors that emerge. Furthermore, it involves comparing actual performance to planned performance. If key internal and external factors change during the continuous assessment of environments, or if new factors are identified, corrective actions need to be taken. Shapira (2021) suggests that as firms develop a strategy, CI processes, including a SWOT analysis, are conducted to understand the operating market. However, due to lag in changing strategy, the associated CI function is only conducted when the strategy is considered. In their study of the application of CI among European firms, Calof, Arcos, and Sewdass (2018) found that many firms placed the CI responsibility on the marketing team. Tahmasebifard (2018) argues that many firms choose to place CI as a marketing function, as it helps companies understand their position regarding major competitors in the competitive environment by providing knowledge of competitors, their marketing strategies, objectives, research activity, strengths and weaknesses, and other information. However, as a marketing function, only competitors are analysed, which does not provide maximum value from the exercise.

In a study of placing CI in a firm, Søilen (2017) identified that firms with a dedicated CI team that provided information to all departments in the firm gained the most value from the process. However, Bisson and Tang Tong (2018) found that many firms lacked internal resources. Therefore, it was convenient to place CI as a secondary marketing role or use blanket terms, including "it is everyone's responsibility". Köseoglu, Chan, Okumus, and Altin (2019) identified that while small firms with direct reporting lines benefit from the decentralised system, the value

decreased as additional reporting lines are added to the firm. Salguero, Resende Jr, and Fernández (2017) argue that knowledge of CI is a key driver, as the level of CI value will be based on this.

Asghari, Targholi, Kazemi, Shahriyari, and Rajabion (2020) propose SMEs could benefit from external CI specialists to carry out the firm's CI function. Tooranloo and Saghafi (2019) suggest firms can gain value from using third-party services that specialise in the entire CI process. The authors further suggest that third-party firms focus purely on CI and can invest in business intelligence infrastructure, as it is the core of their service offering. Torres-Baches (2017) suggests that intelligence gathered by external consultants may be impartial and not influenced by internal company politics. However, using external contractors or a third-party service may be limited in the firm requesting the service, which lacks the knowledge of CI. Firms may be reluctant to use a third-party service if they do not trust the safety of their confidential data or understand how to use the reported data efficiently (Priporas, Gatsoris, & Zacharis, 2005). However, firms may benefit from introductory training to CI. In a study conducted by Calof (2014) on Canadian firms who had access to introductory CI training offered by the Canadian Government, firms reluctant to conduct intelligence practices had changed their perspective on the matter and were more willing and open to developing CI practices.

2.5.6 Can an External CI Firm be Beneficial to SMEs through Their Life Cycle?

The business life cycle of a firm is defined as the progression over time, usually split into five distinct phases, namely: launch, growth, slow-down, maturity and decline (Kabanda & Brown, 2017). While this definition can be accepted in its generic representative form, Escrivão Filho, Albuquerque, Nagano, Junior, and de Oliveira (2017) argue that an SME's life cycle cannot be classified in the same definition, which covers large and micro-enterprises, as each classification may be subjected to different market forces. Figure 12 below provides a brief description of each phase in the life cycle of an SME.

Table 2 SME's life cycle stages

Stage	Description
Genesis (0)	Preliminary preparation for starting the business. It is an aspiration of the owner-manager who has a business idea and sees the possibility to satisfy a personal need and/or a gap in a visualized target-market.
Existence (1)	Beginning of the struggle for consumers and results of the business. It is a market test for the offered product of the SME. The owner-manager seeks a market share to reaches positive results for business.
Survival (2)	SME's economic viability with satisfied customers and positive cash flow. At this stage the owner-manager has to make an important decision: remain at this survival stage without greater investments in personal dedication and capital or seeks to grow in size and profitability, reaching the next stage.
Growth (3)	Profitability increase (3a) or size increase (3b). At stage 3a the SME has achieved economic and competitive success (earn regular profits or above average) and can remain at this stage indefinitely. At stage 3b the SME consolidates and transfer resources for business growth. The main objective is to keep current profitability and positive cash flow finding new business opportunities to improve growth.

Figure 17: SME Life Cycle *Adapted from Escrivão Filho, Albuquerque, Nagano, Junior, and de Oliveira (2017)*

When determining a firm's life cycle, two key metrics are used. The income of the firm and the duration of the firms existence (Paschen, 2017). However, Lim, Zheng, and Chen (2019) argue against using only these two metrics, as income may not adequately describe the competitiveness of the firm or consider the state of the market the firm is operating in. Schlipf, Keller, Lutzenberger, Pfosser, and Rathgeber (2019) suggest the cost implication of remaining in a life cycle phase or attempting to scale up or down needs to be also considered. Porter (2011) suggests that by simply maintaining a superior competitive advantage, a firm may avoid declining over time.

Nenzhelele (2015) suggests SMEs are conducting informal CI. While Bushe (2019) argues that a key reason why firms are failing is their insufficient understanding of their environment. The question arises: If firms conduct at least some CI, why would failure be attributed to insufficient market understanding? Belas, Belás, Čepel, and Rozsa (2019) argue firms may not conduct adequate research due to insufficient skills, knowledge and understanding of the topic, while Riani (2019) suggests firms may bias their own research in inadvertent ways. Ervas (2017) suggests that strategic role-players in SMEs through their entire life cycle are at risk of ownership bias. The endowment effect describes a situation in which an individual places a higher value on an object they already own than if they did not own it (Babaioff, Dobzinski, & Oren, 2018).

2.5.7 The Use of External Consultants in an SME

In their investigation into using external consultants on SMEs, Bruhn, Karlan, and Schoar (2018) identified that many of the listed barriers facing an SME, particularly when focusing on strategy, can be mitigated by using external consultants. Ribes (2020) suggests that large firms have drawn upon the skills of external consultants for many years, particularly when looking at drawing upon external management knowledge which the firm may lack. While consultants can bring in various benefits, Poulfelt and Olson (2017) suggest that a lack of bias, specific knowledge pool and experience are key factors that consultants bring to the firm. However, Pereira, Jerónimo, and Ramos (2017) suggest that consultants do not form the SME's workforce, and are a lesser financial burden, as they can be used on a project basis.

An external consultant acts as an objective third party, conducting extensive research and analysis before providing an unbiased opinion and perspective on complex matters and complex business problems and issues (Ribes, 2020). However, using consultants has disadvantages that a firm needs to be aware of. Harvey, Morris, and Müller Santos (2017) raise concerns about cost. While consultants can bring in specialist skills, they may sometimes cost more than hiring a full-time employee. Poulfelt and Olson (2017) suggest that a major disadvantage is the ownership of knowledge that the consultant brings on-board. Consultants are specialists in a particular field, and if the relationship between the firm and the consultant is ended, the firm loses the entire skill

set, and it is required to develop new relationships to maintain some continuity (Poulfelt & Olson, 2017). The last key concern, as raised by Seifert and Nissen (2018), is that while consultants are called upon to provide an out-of-the-box view of the problem, the risk of complacency may set in where consultants adopt a one-size-fits-all approach.

When incorporating consultants into a firm, the Agency Management theory can be applied. This theory has its roots in the field of economics but has seen an increase in implementation in the field of management due to factors such as outsourcing (Zhu, Ng, Wang, & Zhao, 2017). According to Payne and Petrenko (2019), Agency theory is directed at the ubiquitous agency relationship, in which a principal (the SME) delegates work to an external consultant who performs that work. Panda and Leepsa (2017) suggest that Agency theory is concerned with resolving two problems that can occur in agency relationships. The first is the agency problem that arises when the desires or goals of the principal and agent conflict and it is difficult or expensive for the principal to verify what the agent is doing. The problem here is that the principal cannot verify that the agent has behaved appropriately. The second is the problem of risk sharing that arises when the principal and agent have different attitudes towards risk. Khakurel, Penzenstadler, Porras, Knutas, and Zhang (2018) remind the hiring firm that their reputation is linked to their contractors. As Mackey (2021) mentioned, ethics is the heart of CI. Therefore, a consultant may be willing to breach ethics to collect CI while such an ethics breach may have detrimental impacts on the hiring firm. Ritov and Schurr (2020) further compound this concern, and suggest consultants work in decentralised environments to complete a task. How the task is completed is up to the consultant, and the hiring firm may not have any control over this. Additionally as the SME has limited knowledge on the subject, it may be difficult to ensure the quality and behaviour of the consultant (Payne & Petrenko, 2019). While Agency theory introduces the disconnect between firms and consultants, it can be used as a framework to enhance relationships. Evans and Tourish (2017) suggest that the underlying assumptions of Agency theory should form part of the contractual obligations between the hiring firm and the consultant. Millar and Price (2018) recommended that an open communication policy be implemented. This will ensure that the consultant does not work in a silo and the hiring company can provide guidance on its own principles such as ethics guidelines, which the consultant should abide by. The following table provides a summary of various analysts' key points on ensuring a successful working relationship between firms and consultants:

Table 2: Developing a Firm/Consultant Relationship

Author	Key Point	Description
Lalji (2019)	Integration	Make the consultant feel part of the business. Discuss the firm's mission, vision, and goals, including non-negotiables such as ethics and request buy-in from the consultant.

	Scope	The firm and the consultant need to agree upon the terms of the project prior to starting.
	Role	Define the roles and responsibilities of all stakeholders involved.
Gassam and Salter (2020)	Start Small	Start with short-term low budget projects and develop a working relationship which is mutually amicable before scaling.
	Support	The firm needs to support the consultant where required to achieve the determined outcome
	Communication	Agree on the lines of communication and when communication is required.
Thine (2020)	Feedback	Firms should develop a continuous feedback loop to keep abreast of the consultants' progress.
	Expectations	While the scope will guide the consultant, expectations need to be discussed such as meeting planning and feedback sessions.
	Monitoring and corrective action	Firms need to be able to decipher when a consultant is not performing to the agreed upon expectations and be willing to take bold and corrective action.

Source: (Gassam & Salter, 2020; Lalji, 2019; Thine, 2020)

While external consultants could be regarded as a partner of the firm through its life cycle, SMEs face a conundrum of deciding when to use a consultant versus employing the skill set. Ritov and Schurr (2020) suggest that the more centralised the problem is to the business strategy, the more reason the firm should hire an employee. Rondinelli (2017) defines a centralised structure, where stakeholders are monitored and required to use specific tools to accomplish the task, while a decentralised system allows an unmonitored and creative approach to problem solving. Yang, Yang, Lei, Zheng, and Leung (2018) suggest the time frame of the problem should determine the decision to choose an employee or consultant. Short-term problems should be passed on to consultants, while longer-term problems may warrant employment. As CI provides insights to the firm, it may not be considered a core competency for the day-to-day operations (Cantonnet, Aldasoro, and Cilleruelo (2015). While CI should be an ongoing process, it may be more suited to being shifted to a consultant. Iwu-James, Haliso, and Ifijeh (2020) argue that a consulting firm that specialises in a niche field can develop internal capacity through economies of scale to provide the service at a lower cost. Therefore, SMEs would benefit by maximising the limited resources they have to achieve maximum benefit.

2.6 Framework for Interpreting Research Findings

Daudt, van Mossel, and Scott (2013) argue a framework provides clarity to the study's prevailing chaos. The framework should make sense of the research, how the research is interrogated, and how the findings are collated and shared. In their study of artificial intelligence, Perkowitz and Etzioni (2000) suggest that a study's framework is the underlying structure that connects the study elements to create a cohesive output.

Many CI analysts have attempted to provide guidance on developing a standardised research framework to analyse collected results. Asghari, Targholi, Kazemi, Shahriyari, and Rajabion (2020) recommend analysts consider four driving factors, namely organisational culture, knowledge sharing, competitor information and information technology. Du Toit (2003) suggests that research findings should be compared to the firm's strategy. This will allow the measurement of the entire CI cycle, including the application of analysed information. While both these frameworks may be viable when measuring firms with comprehensive CI systems, it may be difficult to apply in the SME arena, as firms have varying levels of CI integration (Nenzhelele, 2015; Sewdass & Du Toit, 2014). Additionally, as some SMEs conduct informal CI, which may not follow the CI cycle, it would be difficult to determine the true impact of the collected data. Garcia-Alsina, Cobarsí-Morales, and Ortoll (2015) provide a framework which suggests that organisational function should measure CI, application of resources, frequency and orientation. This study will use the CI framework proposed by Garcia-Alsina, Cobarsí-Morales, and Ortoll (2015), as it will allow the measurement and analysis of both formal and informal CI systems.

The following proposed framework will be used to map out the Business Venture Proposal. Research questions one and two will be used to better understand the impact and application of CI on SMEs in a South African context. The aim of these research questions is to identify if SMEs derive value from conducting CI. If the study finds that firms who conduct formal CI derive more value than firms who conduct either informal or no CI, then the business proposal will regard this as a need which can be solved. Research question two intends finding the relationship between using both primary and secondary sources of data and the value created. If firms that use both sources of data derive more value than SMEs that only use one source of data, this Business Venture Proposal will create a service offering to fulfil this need for firms that are not using both sources.

Research question three, however, takes a different approach to this study. The aim of research question three is to identify if firms that develop their own internal capacity are able to create additional value over firms that do not invest in internal capacity. The premise of this question is to understand if the business model can be replaced and made redundant if a client chooses to develop their own capacity. If there is a positive increase in value, the business model may be ineffective and may risk being made redundant. However, if no evidence of additional value is found, the business can shift into the ideation phase.

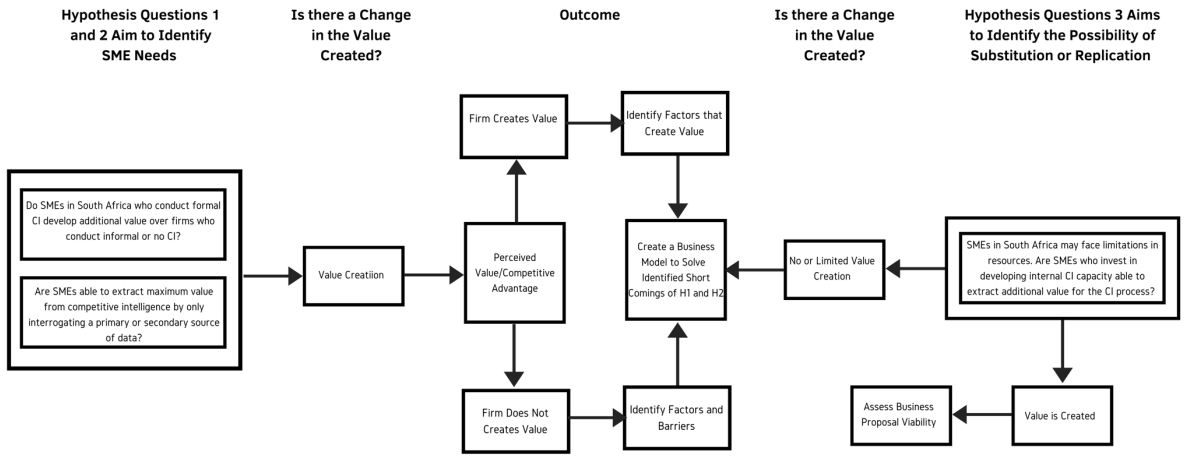


Figure 18: Proposed Framework

2.7 Summary of Literature Reviewed

There remains a misconception that CI is only used to gather information on the firm's competitors. The Merriam Webster dictionary defines competitive as:

> *"Having a strong desire to win or be the best at something. As good as or better than others of the same kind: able to compete successfully with others."*

Considering the above definition, firms should be driven to be the best they can be. However, many firms focus only on their competition and omit gathering information from suppliers, customers or internal knowledge sources. This provides the firms with a skewed view of their competitiveness. While firms may have difficulty placing CI in the firm, it was identified that firms that placed CI into a department as a secondary function derived less value, with the collected intelligence focusing more on this department than on the whole company.

Formalised CI consists of four key phases, namely: planning, collection, analysing and sharing. Ideally, the firm conducting the CI exercise should have documented policies and procedures for how the firm conducts the intelligence process ethically. Many studies have identified a relationship between large firms who conduct CI and the positive value generated from the exercise. Researchers in previous studies have suggested that many SMEs conduct CI, albeit not in a formalised manner. It remains unclear if SMEs gain a competitive advantage from conducting CI.

While most firms conduct CI, the key target for intelligence gatherers is to look at the competition. This is due to insufficient knowledge of the practitioners conducting the intelligence exercise. However, this shortcoming can be overcome by supplementing the SWOT analysis with additional tools such as Porter's Five Forces and a PESTLE analysis. Previous studies have identified that large firms use both internal and external sources, including primary and secondary data. However, the cost of data collection may pose a barrier to choosing primary data collection methods over secondary data sources. While secondary data may cost cheaper, the relevance of primary data cannot be overstated. Therefore, it was identified that large firms that used primary and secondary data could extract the most value from the CI process.

Many firms face the proverbial question of where to place a CI system in the firm and which departments use the collected intelligence. Many firms believe intelligence is a marketing function and therefore should be adopted by the marketing team, with the intelligence gathering task assigned as a secondary responsibility. The second key factor is whether a firm needs to invest in business intelligence software to help understand the collected information. It was identified that large firms with a dedicated CI department could interact directly with the strategic role-players in the firm and had access to business intelligence systems to make "sense" of the collected intelligence, therefore gaining the most value from the exercise.

SMEs face further barriers to the application of CI such as limited skills, knowledge and resources to conduct intelligence exercises. It was identified that many firms carried out CI exercises, including a SWOT and PESTLE analysis, during the ideation phase of the business, and have not updated the exercises once in operation. Many SMEs failed due to insufficient marketplace understanding. This risk may be mitigated by actively and passively conducting a CI exercise. However, this leads back to the resource constraints facing these businesses.

Many SMEs indeed, conduct some level of CI. During the literature review, it was identified that the level of collected information may not be valuable in providing additional benefits to the firm. The root causes for this were the reliance on only secondary data sources due to the low cost and ease of access to the data, as well as inadvertently biasing the data collection by viewing the intelligence with a preconceived positive opinion. Lastly, the cost of business intelligence software used to analyse the collected data may be outside the budget of these firms, forcing them to use rudimentary methods to extract insights from the collected intelligence, which may be time-consuming and cumbersome.

Through the reviewed literature, it was identified that external consultants may be used to overcome the limitations faced by SMEs when conducting CI. Consultants can be used on a per project basis, with the sole purpose of gathering CI, using specialist analysts and tools to develop

strategic insights for a firm. This allows SMEs to tap into a knowledge pool which they may not have had access to. However, consultants do come with disadvantages such as a high-cost factor and limited oversight from the SME.

Based on the reviewed literature, it is evident that large firms actively conducting formalised CI gained additional value. However, these firms had access to data sources, human resources and technical tools to accomplish the CI role. SMEs, however, preferred informal CI and secondary data sources due to the low cost and ease of access.

The literature showed SMEs could benefit from multiple sources of data, instead of interrogating only a primary or secondary source. SMEs face a high risk of business failure, with a key reason being insufficient understanding of their operating environment. This could be circumvented by continuously conducting robust CI to identify opportunities and threats. However, many SMEs that conducted CI during the ideation phase failed to update their findings, leading to obsolete insights for their strategy.

Due to the informal way SMEs conduct CI, a considerable amount of intelligence is wasted or not properly actioned due to the skills and resource gap facing SMEs in developing and implementing CI systems. Firms who had invested in internal capacity were able to generate better insights. However, it is critical that the end-user of these insights knows how to understand them and how it affects the firm’s strategy.

3 RESEARCH STRATEGY, DESIGN, PROCEDURE AND METHODS

This chapter will discuss and describe the research methodology for this study. One question that needs to be asked is what defines research methodology. Sekaran and Bougie (2019) imply that the approach used is intimately related to the nature and phenomena that the researcher wishes to investigate. Goddard and Melville (2004) highlight that to achieve substantial research, the process needs to be planned and systematic, focusing on a specific outcome. This chapter will aim to identify and expand upon the research strategy being utilised, the research design, the research procedures and methods, the reliability and validity of the data, and the limitations of this study.

While many authors use the terminology of research methods and methodology interchangeably, Tharenou, Donohue, and Cooper (2007) suggest that research methods generate data for the planned research. Section 3.1 discusses the research strategy while Section 3.2 expands the research design of this study. The purpose of Section 3.3 is to expand on the following six elements, namely information collection instruments (Section 3.3.1), the target population and sampling of respondents (Section 3.3.2), the ethical considerations during the research process (Section 3.3.3), data and information collection process and storage (Section 3.3.4), data and information processing and analysis (Section 3.3.5), and the background description of the respondents who provided empirical evidence for this research study (Section 3.3.6), which provides the foundation of the research method for this study.

3.1 Research Strategy

In their attempt to define the term research strategy, Costanzo and MacKay (2009) suggest this is the framework that governs the topic's collection and study. To further expand on Costanzo and MacKay (2009) argument, Wagner, Kawulich, and Garner (2012) recommend selecting a research strategy based on effectively answering the research question. Ercikan and Roth (2006) argue that research strategies fall into one of the three primary groups: qualitative, quantitative, or mixed. The authors further expand this argument by suggesting that this opposite effect requires emphasising the type of data collection procedures necessary for the study.

This study was conducted using a quantitative research strategy. Many analysts have provided their view on quantitative research. Sukamolson (2007) argues this strategy offers a numerical representation to explain the studied population phenomena. Further to this definition, Creswell and Creswell (2005) briefly summarise this strategy as the "explaining phenomena by collecting numerical data analysed using mathematically based methods". Quantitative research provides

many advantages, including allowing anonymous research to be performed remotely, generalising findings and easier data collection (Nelson, Kielhofner, & Taylor, 2017). However, while Morgan (2018) suggests quantitative methods are cheaper and quicker to deploy, they have inherent disadvantages, like the lack of deeper insight and the inability to follow-up with respondents.

3.2 Research Design

In an attempt to categorise various research designs, Bryman (2012) brings forth five generic designs: cross-sectional, longitudinal, case study, comparative, and experimental. A question could be asked about the factors that drive the choice of a specific research design. In her attempt to breach this gap, Nasser (2001) suggests that the process of data collection should be the driving factor in deciding on the research design model. O'Hara, Sandler, Wolchik, and Tein (2019) indicate that although many research designs can be used independently or simultaneously, the planned outcome, time, and resource constraints, need to be considered.

This study used Bryman (2012) cross-sectional research design process, as this study intended to view a snapshot in time on the state of CI among SMEs in South Africa. Levin (2006) outlines a few advantages of this research model, including the low cost and time implications; and the ability to conduct follow-up research based on the findings. However, in their critique of this model, Montanari and Adelman (1987) caution that a cross-sectional study providing only a snapshot that may be beneficial to certain studies, may be limiting to others. Simultaneously, a second consideration is insufficient ability to make causal inferences.

In a study conducted by Luu (2014), which sought to identify the links between knowledge sharing and CI, a quantitative cross-sectional survey was conducted. The author used questionnaires sent to middle management in shipping companies in Vietnam to prove the hypothesis. Using a questionnaire at a single time frame, Luu (2014) extracted a snapshot of CI's role. The other perceived benefit was that the author could send many surveys with a low cost but high benefit return. This study sought to draw on the above-listed advantages, including the low cost and time resources, and the ability to send out many surveys.

3.3 Research Procedure and Methods

3.3.1 Research Data and Information Collection Instrument(s)

During the past 30 years, much more information has been available on the various procedures or instruments of collecting data for research purposes. Further to this, Rahi (2017) suggests a distinct difference between the two essential research methods: qualitative and quantitative. Once

the researcher has clearly defined the method to use in the study, the researcher can begin identifying the instrument to gather data. According to Kielhofner and Coster (2006), some examples of research instruments include questionnaires, interviews and observations.

This quantitative study used a structured survey with a Likert scale scoring system. This allowed the researcher to send surveys to the sample, and on completion, receive the survey responses to be studied. Due to the time and resource limitations facing SMEs in South Africa, this method allowed maximum participation due to convenience. The study intended to use both Likert-type questions and Likert scale analysis. Boone and Boone (2012) describe Likert-type questions as those which receive a “greater than” response, but the difference between responses cannot be implied. Likert scale items are produced by generating a composite score using the sum or mean of multiple Likert-type items. The composite score for Likert scales should be examined at the interval measurement scale. Wu and Leung (2017) suggest Likert-type questions should be treated as ordinal data, and Likert scale items should be treated as interval data.

This study used a self-administered survey as the collection instrument. However, a question that needs to be asked is: how much input is required from the researcher when gathering the data? Qu and Dumay (2011) have succinctly expanded on the three levels, namely: unstructured, semi-structured, and fully structured, and have suggested structured processes are those where the questions are formulated, and only a set number of responses are available to the respondent. Therefore, this study followed a structured approach by providing recipients with a list of pre-set questions and limited responses based on a sliding scale system.

In their ground-breaking study on the level of CI among firms in Canada, Calof and Breakspear (1999) developed a self-administered questionnaire to gather the required data. This questionnaire allowed respondents to answer with a "yes" or "no". In their comprehensive study into CI in a South African setting, Muller, Saayman, Viviers, and Calof (2002) expanded on this questionnaire by creating a Likert scale scoring system. By expanding on the questionnaire developed by Calof and Breakspear (1999), Muller, Saayman, Viviers, and Calof (2002) were able to grade the responses on a scale out of five to create a broader view of the respondents' answers. These questions will be used to develop the instrument. However, the questions may be restructured to be more relevant for the size and scope of the SMEs being studied.

This Business Venture Proposal used the questionnaire created by Calof and Breakspear (1999) as the question bank to answer the three hypothesis questions raised to gather information regarding the problem statement. According to Hyman, Lamb, and Bulmer (2006), the advantage of utilising a pre-existing set of questions for a survey or questionnaire is the ability to draw on highly skilled and knowledgeable researchers' skills. Calof, Wright, and Dishman (2008) have

immense CI experience and have co-authored CI journals in a South African setting. The second benefit suggested by Hyman, Lamb, and Bulmer (2006) is that experienced researchers can develop succinct questions focusing on critical inquiry. By drawing on the advantages, as stated by Hyman, Lamb, and Bulmer (2006), this business venture proposal drew upon the questions created by a subject matter expert. In their study of the CI environment in South Africa, Muller, Saayman, Viviers, and Calof (2002) had also utilised the question bank of Calof and Breakspear (1999), except for replacing the format of answering. Muller, Saayman, Viviers, and Calof (2002) used a five-point Likert scale for respondents to provide feedback on. This Business Venture Proposal utilised the scoring scale used by Muller, Saayman, Viviers, and Calof (2002).

3.3.2 Research Target Population and Selection of Respondents

3.3.2.1 Research Target Population

When conducting a research process, the target population needs to be identified to ensure that the correct respondents gather the data. Macfarlane (1997) succinctly describes the target population as people, but this may be siloed into groups including a household, a town or demographic character. The author further expands on this by suggesting that membership to a population is considered closed if a study is conducted at a single time, including cross-sectional studies, or open if the study is conducted over multiple time frames.

The population for this research study focused on business owners and managers who actively control the strategy of an SME in South Africa. This study focuses on the value gained from the use of CI and does not gather demographic information on the target population, like age, gender, and education levels.

According to the DSBD, two key factors are used to partition the various business sizes. The first is the number of full-time employees the firm employs, and the second the income of the firm. Therefore, the target population must meet the above two requirements of an SME. Micro and large firms are outside this study. As this study focuses only on firms from South Africa, the target population must be in South Africa.

3.3.2.2 Sampling or Selecting Respondents from the Target Population

Once a population has been identified, a sample of the population needs to be extracted, which will be indicative of the entire population (Landreneau & Creek, 2009, p. 1). The authors provide the following recommendation for the sampling of quantitative studies:

> "In quantitative studies, the representativeness is the important quality of a sample. A question you should ask yourself is: 'Does this sample represent the key characteristics of the population we are studying?' Specific sampling procedures are less likely to result in biased samples than others, but there is no guarantee of a representative sample. Researchers operate under conditions in which error is possible. As a quantitative researcher, we are to minimize or control for errors."

According to Schreuder, Gregoire, and Weyer (2001), two types of sampling are conducted for research purposes. The first is non-probability sampling, where the sample selection is controlled and completed in a non-random manner. The second is probability sampling, where the researcher has no control over who responds to the survey. This study was quantitative and used surveys as an instrument to gather the required data. However, once the surveys are sent to the database, the researcher has no control over who responds to the survey, and therefore probability sampling was used.

This study aimed to sample firms who met the criteria of an SME, as stipulated by the DSBD (2019). There was no limitation on specific industries. However, it would have been preferred if responses were aligned with each sector's market share. To isolate the target sample, the three conditional questions had to be answered before proceeding to the question bank. The conditional questions aimed to receive small and medium responses and prevent micro and large enterprises from answering the questionnaire. The first conditional question posed to the respondent was to select the industry the firm operates in. The second conditional question required the respondent to choose an annual income band for the firm. These questions acted as step one in the classification process based on the parameters set out by the DSBD. The third question required the respondent to stipulate numbers of full-time paid employees in the firm, which allowed the classification of the business size. Any firm outside of the study was prevented from continuing the questionnaire. Firms that fell into SMEs were permitted to continue with the questionnaire.

Taherdoost (2017) suggests using a formula that considers the estimated size of the population, the confidence level, and the margin of error, to determine the ideal sample size. With a confidence level of 95%, a margin of error of 5% and an estimated population of 20000, the number of respondents needs to be 377. Adam (2020) argues once a population under study reaches 20000 or more, numbers of respondents above 377 become negligible. As an example, with a population of 60000, numbers of respondents rise by 5 to 382. This study used a population of 20000, as current statistics cannot provide an accurate population of SMEs in South Africa.

3.3.3 Ethical Considerations when Collecting Research Data

Research needs to be conducted ethically. However, this statement remains expansive, and further clarity is required to develop the ethical approach to be used in this study. Resnik (2011)

provides some expansion on the purpose of ethics in research by suggesting that ethical research promotes the study's aim; it creates collaborative opportunities while maintaining social and moral values. Therefore, conducting an ethically sound study is vital to ensure the real value of the research study findings.

As a modular Master of Business Administration student, my research is purely academic. The study which was conducted has not been commissioned or sponsored by a third party, nor do I stand to gain any potential benefit through this research.

To ensure the research study remains ethical, the following items, as recommended by Resnik (2011), were expanded upon:

Honesty

The research and the findings created will be provided honestly, no matter the outcome of the research findings.

Objectivity

The researcher will ensure a non-biased approach is maintained throughout the research. The researcher will avoid taking a subjective stance during this process.

Integrity

This study aimed to identify items in a business that some respondents may consider competitive advantage. Therefore, no findings will be shared between respondents.

Privacy

Once the data was retrieved from the online survey tool in use, the file was immediately encrypted using a password and stored offline.

Page one of the online questionnaires (please refer to Appendix 2.2) provided the recipients with the study's purpose. This information was replicated in the accompanying email. However, the purpose of adding the study information to the front page of the questionnaire was to ensure that recipients who had received the link through other means, including social media or instant messaging, were treated to the same information as those contained in the email correspondence. Due to the limitations of using an online questionnaire, recipients had to complete an online consent form (please refer to Appendix 2.3) before starting the questionnaire. The above process was mandatory and would not allow participation unless all check boxes were selected.

No personal data was captured during the completion of the questionnaire. However, the business's annual revenue was required to classify the organisation's size correctly. To mitigate the risk of an inadvertent data breach, the organisation's name was not captured. Therefore, the revenue could not be referenced to any firm, as the names of the firms were not captured.

3.3.4 Research Data and Information Collection Process

Research data collection is a critical part of any research study and is a significant factor in its cost and success (Wilcox, Gallagher, Boden-Albala, & Bakken, 2012). Neuman (2014) succinctly summarises the definition of research data collection as the systemic process of designing, recording, and validating quantitative data. This author further suggests that once the data is collected, it should be transformed and studied using various computer programs.

In previous CI studies conducted in South Africa, it was identified that low response rates were received compared to other countries conducting similar research (Muller, Saayman, Viviers, & Calof, 2002; Saayman et al., 2008). This collection process followed a two-tier dissemination strategy. The first tier involved sharing the survey with known networks. This allowed the reduction of uncertainty around CI, and follow-up questions could be directed back to the researcher. The first-line respondents were asked to share the survey within their network. The second method used was posting the survey on social media. This allowed mass dissemination, with limited to no control over the survey once it was posted. This was conducted by sharing the survey on LinkedIn groups relating to SMEs in South Africa, with a weekly repost cycle. The LinkedIn Sales Navigator tool was used to identify individuals with access to SME networks.

Once the survey was closed on the portal used to disseminate the survey, the data was downloaded and encrypted using a file password. The file is stored offline, not on a cloud storage platform.

3.3.5 Research Data and Information Processing and Analysis

3.4 Research Data and Information Processing

This study was quantitative and used a Likert scale scoring system. Once the respondents had completed the survey, and the survey was subsequently closed, the results were downloaded and coded for interrogation. According to Ma, Derksen, Hong, and Wright (2007), this is the process of developing silos based on the variables the study is focused on. This study had three streams which focused on the three hypotheses under examination. Data cleansing is the process of identifying and correcting errors in the respondents' answers (Chu, Ilyas, Krishnan, & Wang, 2016). The authors further expand on identifying errors by suggesting three questions be posed:

What the errors are, where are the mistakes, and who will fix the errors? From a repairing perspective, the authors suggest that the need to identify what is to be repaired, where is the repair required, and who will repair it needs to be identified.

Bujang, Omar, and Baharum (2018) expand on the Cronbach's Alpha as a measure of internal consistency, or how intricately linked a group of items is. It is regarded as a scale dependability metric. A high alpha number does not mean the measure is one-dimensional. Additional studies can be done if you want to offer proof the scale in question is unidimensional. Cronbach's Alpha is not a statistical test, but a measure of reliability (or consistency). Gliem and Gliem (2003) define this as:

> "Cronbach's alpha reliability coefficient normally ranges between 0 and 1. However, there is actually no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale."

Considering the definition posed by J. Gliem and R. Gliem (2003), this study used the IBM SPSS statistical program to analyse the data for errors and repair the data accordingly. Each of the variables underwent an independent Cronbach Alpha test. Variables with low internal consistency underwent further analysis to remove items which might not be representative of the variable under study.

3.4.1.1 Research Data and Information Analysis

Once the respondents' data had been cleaned and repaired, the data was analysed. Due to this study being quantitative in nature, only the methods applicable to this study will be introduced. According to Cramer (2003), quantitative data can be analysed using descriptive statistics or inferential statistics. Descriptive statistics are concise descriptive coefficients that describe a particular data set, which could represent the complete or sample of a population. Descriptive statistics are divided into measures of central tendency and variability. The mean, median, and mode are examples of measurements of central tendency, while standard deviation, variance, minimum and maximum variables, kurtosis, and skewness are examples of measures of variability (Oja, 1983). Inferential statistics allow one to describe data and draw inferences and conclusions from that data. By using sample data, an individual may deduce what a population may believe or how it has been influenced using inferential statistics (Lowry, 2014). Lowry (2014) expands on three inferential statistics tools that are utilised. Correlation looks at the relationship between variables, while regression displays and may predict the relationship between variables, and lastly variance, which identifies how different the variables are.

This study used a mix of descriptive and inferential statistics. The descriptive statistics were used for trend descriptions. Comparatively, inferential statistics were used to identify the correlation between the data sets. This mix allowed the study to identify critical factors regarding the respondents, and the data sets were tested for correlation to identify potential root causes.

3.4.2 Description of the Research Respondents

The purpose of the study was to identify if SMEs which carried out CI exercises gained value from the process. Therefore, to provide the required strategic level responses, only decision-makers who were able to change and direct the firm's strategy were targeted. The respondents held titles like founder, co-founder, or manager. The level of education, gender and age of the research respondents was not measured.

3.5 Research Strengthens—Reliability and Validity Measures Applied

The importance of accurate research, which is focused on limiting errors, cannot be understated. Murphy, Dingwall, Greatbatch, Parker, and Watson (1998) refer to objective research as the hallmark of a study process. Reliability and validity are the elements used to describe the authenticity of the study (Roberts & Priest, 2006). In their concise explanation of validity and reliability, Noble and Smith (2015) define validity in a quantitative study as the accuracy of the findings based on the collected data. The authors further define reliability as the consistency of analytical procedures throughout the study.

In a study conducted by Luu (2014), which focused on internal knowledge sharing in applying CI, a statistical tool was used to measure reliability. Luu (2014) tested the internal consistency of the multivariate scales by using Cronbach's Alpha, with the target score as close as possible. However, Luu (2014) set a minimum benchmark of 0,7966 and above as the minimum score for the reliability of the study.

Luu (2014) used pretested scales used in other common studies from a validity perspective. Further to this, the questionnaire was scrutinised in a three-tier process. The first level was conducted from an academic context, 10 business managers performed the second tier, and the last general tier was conducted by Luu's classmates (Luu, 2014).

This Business Venture Proposal applied the Cronbach Alpha test to ensure the reliability of the scales in use. The Cronbach Alpha was applied through the SPSS statistical analysis program. Further to this, the scales previously adopted by Muller, Saayman, Viviers, and Calof (2002) were

utilised. By utilising a scale system previously used in a similar research study, the scale would have been previously tested for reliability.

To ensure the validity of the questionnaire, a pretested set of questions was used, which was initially developed by Calof and Breakspear (1999), and further expanded upon by Muller, Saayman, Viviers, and Calof (2002), who replaced a "yes" and "no" scoring tool with a Likert scale. Further, once the questionnaire had been formulated, it was shared among classmates who held the target sample titles.

3.6 Research Weaknesses—Technical and Administrative Limitations

This study was conducted using an online survey tool to gather the required data, which introduced technical limitations. While these tools have substantial advantages, like access to unique populations while saving resources, including time and money, it also has many disadvantages (Wright, 2005). In their study using surveys for research, Rice, Winter, Doherty, and Milner (2017) have identified vital disadvantages: surveys measure an attitude or perception rather than a behaviour. Another such disadvantage is that many surveys do not collect information, like contact details, for follow-up purposes on the study.

Previous studies have identified that firms are reluctant to discuss CI (Botos, 2018; Seyyed-Amiri, Shirkavand, Chalak, & Rezaeei, 2017; Teo & Choo, 2001). Ali and Anwar (2021b) suggest that the lack of knowledge of CI may be a driving factor in firms not being willing to discuss the topic. Calof, Arcos, and Sewdass (2018) recommend every effort should be made to equally study the reluctant group, as studies focused only on the supportive group will provide a skewed view of CI practices.

Administrative limitations for this study included the possible omission of businesses who may not be active on LinkedIn or form part of a broader SME network. These businesses may provide a product or service independently and outside the scope of an industry governing body.

The survey used a Likert scale measuring system. While the system easily allows respondents quantifiable answer options, it can also lead to neutral clustering (Chyung, Roberts, Swanson, & Hankinson, 2017). This phenomenon occurs when respondents may be unfamiliar with the question or express no opinion, and therefore choose the neutral response (Mircioiu & Atkinson, 2017).

The third limitation is the inability of respondents to expand on their answers. As with the disadvantage of measuring an attitude rather than behaviour, as stated by Rice, Winter, Doherty, and Milner (2017), the study may not truly unearth the root causes. Lastly, there is no mechanism to gain further insights or information from the respondent once the survey has been submitted.

4 PRESENTATION OF RESEARCH RESULTS

This chapter introduces and analyses the data gathered as part of this research project. The data was gathered by distributing a link to a structured online questionnaire aimed at strategic decision-makers from SMEs in South Africa. The aim of this study was to identify if the population under observation gained any value from conducting CI practices. The chapter begins with a summary of the respondents' characteristics, followed by exploratory factor analysis to assess the validity and reliability of scale measurement and regression analysis.

4.1 Data Screening and Cleansing

The survey received 702 responses. Of these responses, 332 were not eligible to participate in the survey, as the respondents' represented firms that did not meet the criteria of an SME, as stipulated by the DSBD. Of the respondents eligible to complete the survey, 69 surveys were incomplete and were omitted from the study. The 299 completed surveys which met the criteria of the DSBD were used for further analysis.

Table 3: Case Processing Summary

	Case Processing Summary	N	%
Cases	**Valid (Met Survey Criteria and completed the survey)**	**299**	**42.3%**
	Excluded (Met entry criteria but provided insufficient survey responses)	73	10.4%
	Excluded (Did not meet Criteria to complete the survey)	332	47.3%
	Total	**702**	**100%**

Source: (based on online survey questionnaire results, 2021)

After cleansing, it was determined that due to the small sample size (less than 374 responses), the result of this study might not be truly representative of the population of the SMEs under study.

4.2 Sample Characteristics

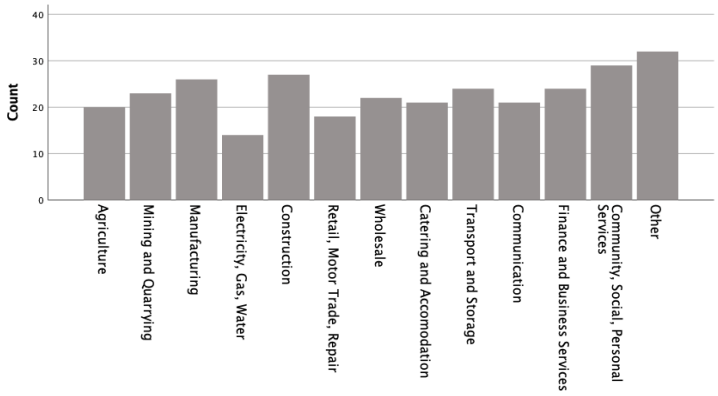


Figure 19: Industry of Valid Respondents *(based on online survey questionnaire results, 2021)*

Respondents could select one of 13 possible options to define the industry in which the respondent's firm operates. However, 10.6% of the firms lacked a specific industry representation and respondents selected the "other" option. This insufficient industry representation may have led to industries being inflated by respondents choosing the "best" possible option. No demographic and geographic information was collected during this survey process.

While the sample may not be representative of the population under study, based on the industry of respondents, the motor vehicle industry appears to be the most adopting of CI practices. The community, social and personal services reported the lowest mean score of 145 points for the survey.

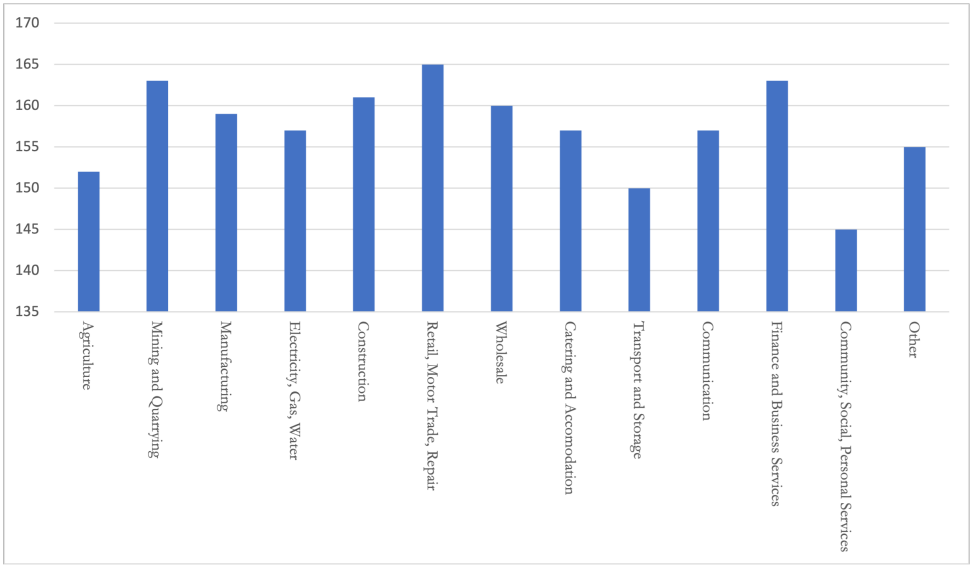


Figure 20: Mean Total Score per Industry *(based on online survey questionnaire results, 2021)*

The delimitations of this study focused on the following:

- Only SMEs as stipulated by the DSBD.
- Businesses which are a going concern.
- The stakeholder has access to an internet connection.
- The business would be willing to share information regarding the topic.
- Only businesses in South Africa.

4.3 Descriptive Statistics

This section provides descriptive statistics for the use of CI scale, primary and secondary data scale, and the building of internal capacity scale.

4.3.1 Question Placement

The survey consisted of 51 questions of a Likert scale type. The questions were divided into three independent and one dependent variables. Each question's Likert Scale response is treated as ordinal data, but the combined variables are treated as interval data.

Table 4: Questions for Each Combined Variable

CI Usage	Data Sources	Internal Capacity	Value Creation
Q15	Q16	Q24	Q20
Q18	Q17	Q30	Q36
Q23	Q19	Q31	Q49
Q24	Q21	Q32	Q54
Q26	Q22	Q33	
Q27	Q25	Q37	
Q29	Q28	Q39	
Q33	Q36	Q40	
Q34	Q37	Q41	
Q35	Q43	Q44	
Q38	Q46	Q46	
Q42	Q53	Q47	
Q45	Q55	Q48	
Q49	Q58	Q50	
Q52	Q59	Q51	
Q57	Q63	Q52	
Q61		Q56	
Q62		Q60	
Q65		Q62	
Q66		Q64	

The combined variables were subjected to a descriptive statistics analysis. This provided an overview of the means, standard deviation and distribution of the data sets.

Table 5: Descriptive Statistics for the four Combined Variables

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
CI_Conducting	300	1	5	3.07	.025	.438	.526	.141	1.274	.281
CI_Sources	301	1	5	3.10	.026	.446	.452	.140	.951	.280
CI_Capacity	300	1	5	3.06	.027	.463	.123	.141	1.243	.281

CI_Value	300	1	5	3.12	.045	.779	.067	.141	-.544	.281

Source: (based on online survey questionnaire results, 2021)

4.3.2 The Use of CI

Use of CI was measured by 20 questions based on a Likert scale scoring system. The 20 questions used were homogenous to the Use of CI Scale as described in Table 5. The scale was considered equal scoring, and scores above three indicated firms are conducting CI practices. The combined variable was referred to as CI_Conducting. Using descriptive statistics, it was identified that the mean for CI_Conducting was 3.07 with a standard error of 0.025 and a standard deviation of 0.438. The distribution shows a normal curve with acceptable levels of skewness or kurtosis.

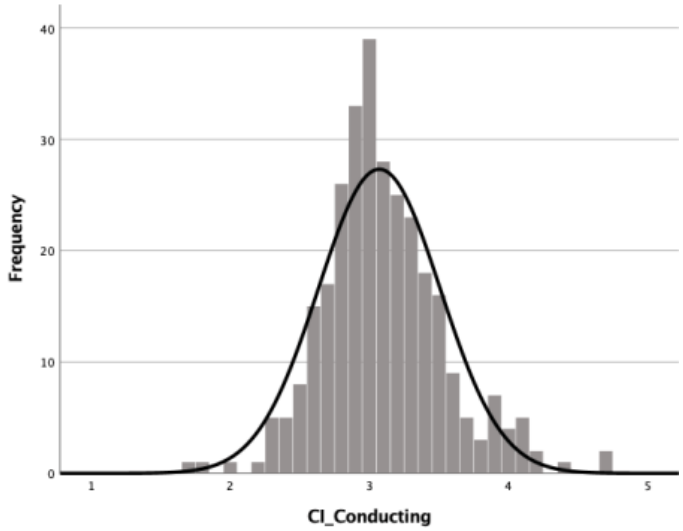


Figure 21: CI Usage Distribution *(based on online survey questionnaire results, 2021)*

4.3.3 Primary and Secondary Data Sources

Using multiple data sources was measured by 16 questions based on a Likert scale scoring system. The 16 questions used were homogenous to the Data Sources Scale and described in Table 5. The scale was considered equal scoring, and scores above three indicated firms are conducting CI practices. The combined variable was referred to as CI_Sources. Using descriptive statistics, it was identified that the mean for CI_Sources was 3.1 with a standard error of 0.026 and a standard deviation of 0.446. The distribution shows a normal curve with acceptable levels of skewness or kurtosis.

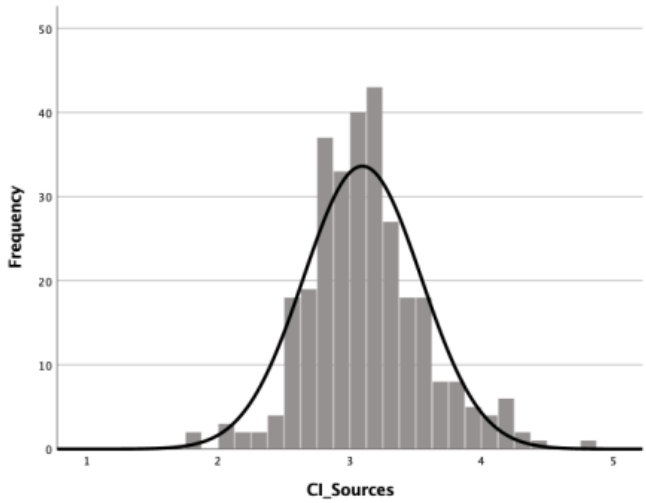


Figure 22: Using Multiple Sources Distribution *(based on online survey questionnaire results, 2021)*

4.3.4 Building of Internal Capacity

Using internal capacity was measured by 20 questions based on a Likert scale scoring system. The 20 questions used were homogenous to the Building of Internal Capacity Scale as described in Table 5 The scale was considered equal scoring, and scores above three indicated firms are conducting CI practices. The combined variable was referred to as CI_Capacity. Using descriptive statistics, it was identified the mean for CI_Capacity was 3.06 with a standard error of 0.027 and a standard deviation of 0.463. The distribution shows a normal curve with acceptable levels of skewness or kurtosis.

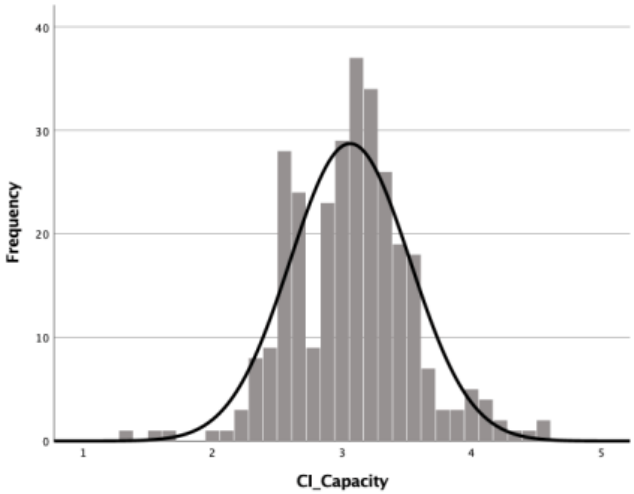


Figure 23: Building Internal Capacity Distribution *(based on online survey questionnaire results, 2021)*

4.3.5 Value Derived

Four questions measured the perceived derived value based on a Likert scale scoring system. The scale was considered equal scoring, and scores above three indicated firms are conducting CI practices. The combined variable was referred to as CI_Value. Using descriptive statistics, it

was identified the mean for CI_Value was 3.12 with a standard error of 0.045 and a standard deviation of 0.779. The distribution shows a normal curve with acceptable levels of skewness or kurtosis.

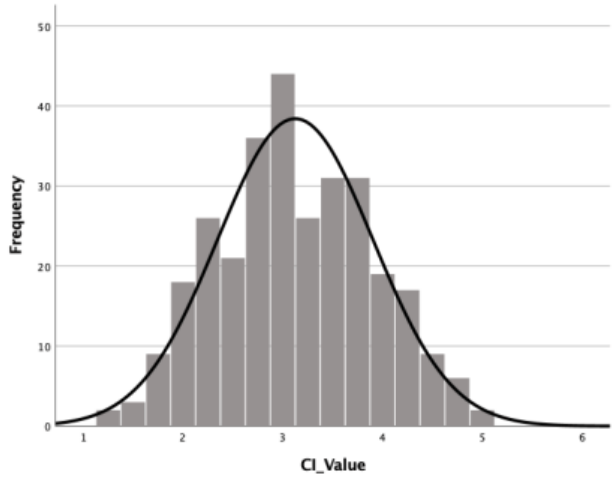


Figure 24: Value Distribution *(based on online survey questionnaire results, 2021)*

4.4 Data Validity and Reliability

The valid survey results of the respondents were analysed using the IBM SPSS program to ensure that collected data met validity and reliability criteria. This chapter discusses each analysis in more detail. This Business Venture Proposal applied the Cronbach Alpha test to ensure the reliability of the scales in use. The Cronbach Alpha test was applied through the SPSS statistical analysis program. Further to this, the scales previously adopted by Muller, Saayman, Viviers, and Calof (2002) were utilised. By utilising a scale system previously used in a similar research study, the scale would have been previously tested for reliability.

To ensure the validity of the questionnaire, a pretested set of questions was used which was initially developed by Calof and Breakspear (1999), and further expanded upon by Muller, Saayman, Viviers, and Calof (2002), who replaced a "yes" and "no" scoring tool with a Likert Scale.

4.4.1 Sample Adequacy

According to Bucci et al. (2018), sampling adequacy can be measured using the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test. Liu et al. (2019) recommended a KMO score of above 0,6 accompanied by a Bartlett's Test significance of less than 0,05. After conducting the Kaiser-Meyer-Olkin and Bartlett's Test, the KMO score for this study was 0,617 with a significance of 0,000.

Table 6: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.617
Bartlett's Test of Sphericity	Approx. Chi-Square	1733.385
	df	1326
	Sig.	0.000

Source: (based on online survey questionnaire results, 2021)

4.4.2 Sample Size

According to Shrestha (2021), accurate factor analysis requires at least four times the numbers of respondents to the numbers of questions or variables. This survey had 51 questions and required at least 204 respondents to ensure a valid factor analysis. There were 299 valid responses for this survey, which met the sample size requirements to carry out a factor analysis.

4.4.3 Extraction of Factors (Principal Axis Factoring)

Previous studies using the same questionnaire had not employed an Extraction of Factors exercise, as the questions showed a low level of correlation. As this process had not been conducted on previous studies, and the questions of this study were adopted for the target population, an Extraction of Factors was conducted to ensure that no factors were evident, which may have an underlying impact on the study. By extracting factors, items which serve the same purpose can be removed, especially in questionnaires with many questions. These items tend to be highly correlated and tend to duplicate specific question results (Samuels, 2017).

In their study of Principal Axis Factoring as the method for the extraction of factors, Watkins (2018) suggests that factors with a total initial Eigenvalue of more than one can better explain the data set than scores less than one, which are considered less reliable. Factors are the opinions of the respondents identified through a collection of questions. In this data set, 21 factors scored an Eigenvalue of one or higher, which can describe 59.882% of the underlying factors of the data set. However, Samuels (2017) argues that the purpose of conducting an extraction of factors exercise is to extract the least amount of factors while still ensuring sufficient interpretable data. Therefore, the first 16 factors were utilised, as they constituted a cumulative value of 50%, despite the 5 dropped factors scoring an Eigenvalue of more than one.

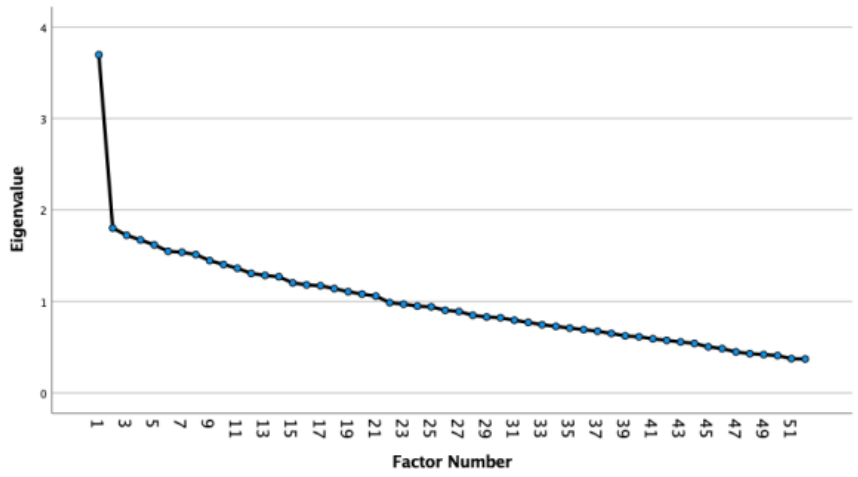


Figure 25: Scree Plot Displaying the Factors above and below an Eigenvalue of one *(based on online survey questionnaire results, 2021)*

Noble and Smith (2015) suggest that factors should have at least two items with an ideal loading factor 0,4, however, the minimum acceptable loading factor is 0,3. The pattern matrix below shows the factors which meet the minimum requirement and the associated items (questions). Questions which provided a loading factor of less than 0,3 were also removed. While factors with less than two items were also removed. Therefore, only six factors were retained for further analysis.

Table 7: Pattern Matrix

	Formal Active and Passive CI	Competition Monitoring	Monitoring External Stakeholders Using External Sources	CI Internal Promotion	Strat Team Support Accurate CI	CI Flexibility
Q59	0.586					
Q27	0.484					
Q48	0.439					
Q52	0.321					
Q55		0.546				
Q35		0.460				
Q45		0.403				
Q21		0.364				
Q17			0.710			
Q22			0.374			
Q46			0.620			
Q32			0.496			
Q33			0.388			
Q53				0.752		
Q29				0.308		

Q37				0.637		
Q36				0.348		
Q64				0.329		
Q38					0.773	
Q40					0.436	
Q61					0.625	
Q28					0.419	
Q57						0.850
Q16						0.748
Q42						0.419

Source: (based on online survey questionnaire results, 2021)

4.4.4 Data Reliability

To ensure the collected data was reliable, each question was subjected to a Cronbach Alpha test. In a study conducted by Saayman et al. (2008), the method used to test the validity of the responses was the Cronbach Alpha test. Gliem and Gliem (2003) suggest that the closer the coefficient is to 1, the greater the internal consistency of the items measured. However, Taber (2018) recommends a Cronbach Alpha score of above 0,7 be considered reliable.

Arrigo, Liberati, and Mariani (2021) suggest a Cronbach Alpha may display a skewed response for analysis with less than 10 items. The factors identified have between three and five items, so a low Cronbach Alpha can be expected even after attempting a correction. A key decider on whether to continue accepting a Cronbach Alpha, which is below 0,7, is to identify the risk associated with this study (Gilad, 2011). This study is considered a low risk study. Hinton (2014) suggests every effort should be made to exceed 0,7, but many items 0,5 are considered moderately acceptable, while any number below this should be rejected.

On completion of the Cronbach Alpha testing, it was identified that no factors identified during the extraction of factors exercise were adequately reliable for further analysis. Therefore, no inadvertent items which may have led to a high correlation between questions were added. This finding was in line with previous studies, which had used the questionnaire mutually exclusively, and had identified low levels of correlation between the questions. Further analysis of this study was conducted with the combined variables.

Table 8: Unreliable Cronbach Alpha Scores for Factors

Factor	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items

Formal Active and Passive CI	0.401	0.400	4
Competition Monitoring	0.430	0.431	4
Monitoring External Stakeholders Using External Sources	0.454	0.451	5
CI Internal Promotion	0.411	0.410	5
Strat Team Support Accurate CI	0.358	0.359	4
CI Flexibility	0.316	0.315	3

Source: (based on online survey questionnaire results, 2021)

4.4.5 Data Reliability of Combined Variables

The following table provides an overview of the Cronbach Alpha scores for each of the combined variables.

Table 9: Cronbach Alpha Scores for the Combined Variables

Combined Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
CI_Conducting	0.737	0.736	22
CI_Sources	0.770	0.767	14
CI_Capacity	0.712	0.711	22

Source: (based on online survey questionnaire results, 2021)

The Cronbach Alpha of all three combined variables were above 0,7 and therefore deemed reliable and consistent.

4.5 Assumption Testing

Flora, LaBrish, and Chalmers (2012) suggest that statistical modelling, such as a multiple regression analysis, carries a set of assumptions that need to be tested to ensure that these assumptions are not violated or influenced by disproportionate observations.

4.5.1 The Independent and Dependent Variables have a Linear Relationship

According to Gogtay and Thatte (2017), the first key assumption is that each independent variable needs a linear relationship with the dependent variable. Figures 23, 24 and 25 below demonstrate that each independent variable has a linear relationship with the dependent variable. Therefore, this assumption has not been violated.

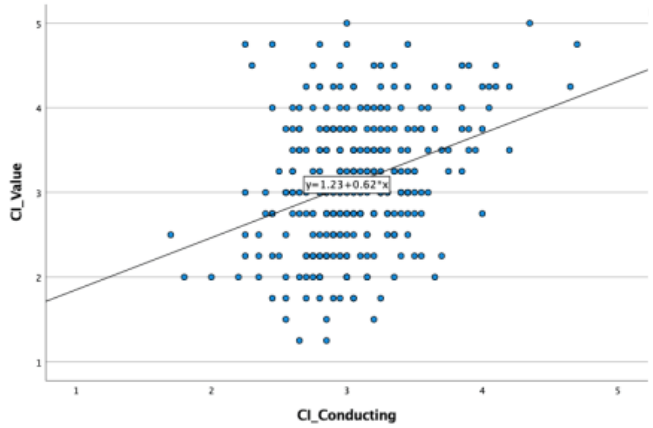


Figure 26: Linear Relationship between CI_Value and CI_ Conducting *(based on online survey questionnaire results, 2021)*

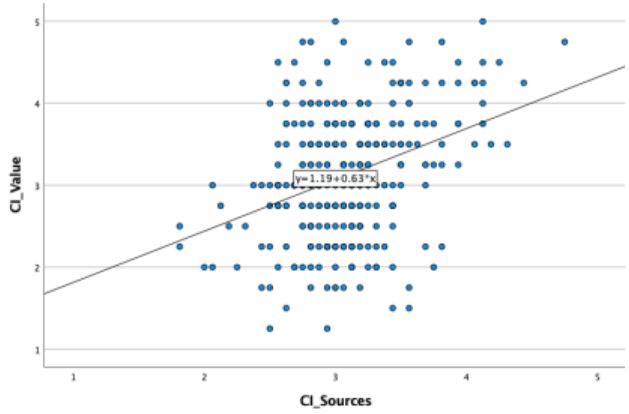


Figure 27: Linear Relationship between CI_Value and CI_Sources *(based on online survey questionnaire results, 2021)*

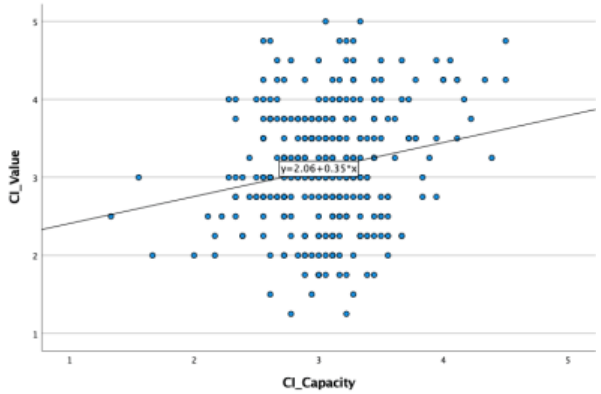


Figure 28: Linear Relationship between CI_Value and CI_ Capacity *(based on online survey questionnaire results, 2021)*

4.5.2 No Multi-Collinearity

Multi-collinearity occurs when two or more independent variables are highly correlated (Johnston, Jones, and Manley (2018). Multi-collinearity leads to one independent variable able to predict a second independent variable. The authors suggest a Variance Inflation Factor (VIF) of 10 is acceptable, but an ideal score is closer to 2. The VIF for the independent variables for this study is on 1.676, 1.601 and 1.677 respectively. All three VIFs are close to 2, therefore this assumption has not been violated.

Table 10: Variance Inflation Factor

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.743	.345		2.157	.032		
CI_Conducting	.438	.124	.245	3.544	.000	.597	1.676
CI_Sources	.465	.119	.264	3.919	.000	.625	1.601
CI_Capacity	-.131	.116	-.078	-1.128	.260	.596	1.677
a. Dependent Variable: CI_Value							

Source: (based on online survey questionnaire results, 2021)

4.5.3 Residual Values are Independent

Uyanto (2020) suggests a Durbin-Watson test be conducted to ensure that residual values are independent. This test has a scale from 1 to 4 with an ideal score of 2. The Durbin-Watson test conducted for this study was 1.947, which demonstrates the residuals are uncorrelated and independent. Therefore, this assumption has not been violated.

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.402[a]	.162	.153	.717	1.947
a. Predictors: (Constant), CI_Capacity, CI_Sources, CI_Conducting					
b. Dependent Variable: CI_Value					

Source: (based on online survey questionnaire results, 2021)

4.5.4 Constant Residual of Variants (Homoscedasticity)

According to Tabachnick, Fidell, and Ullman (2007), the difference between the achieved and projected dependent variable scores should be explained, and the variance of the residuals should be the same for all predicted values. If this is true, the assumption is satisfied, and the scatter plot scores will be concentrated on the zero mark in the centre and spread in a rectangular pattern.

The scatter plot below shows a clustering around the zero mark and the resemblance of a rectangle. Therefore, the Homoscedasticity assumption has not been violated.

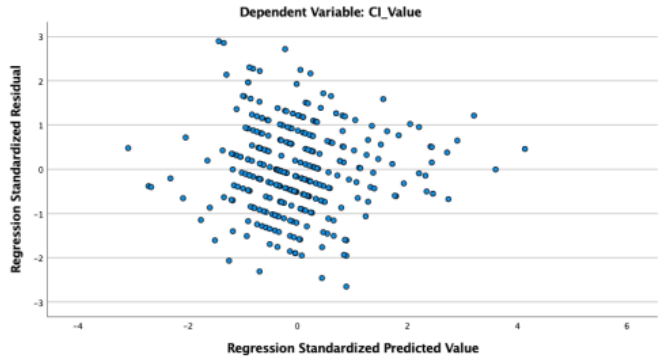


Figure 29: Variance of Residuals' Scatter Plot *(based on online survey questionnaire results, 2021)*

4.5.5 Normal Distribution of Residuals

According to Pereira (2019), the residuals would be deemed to have a normal distribution when they are as close to the 45 degree diagonal line as possible. Here, the residuals appear close to the diagonal line, and are therefore deemed to have a normal distribution. Therefore, the Homoscedasticity assumption has not been violated.

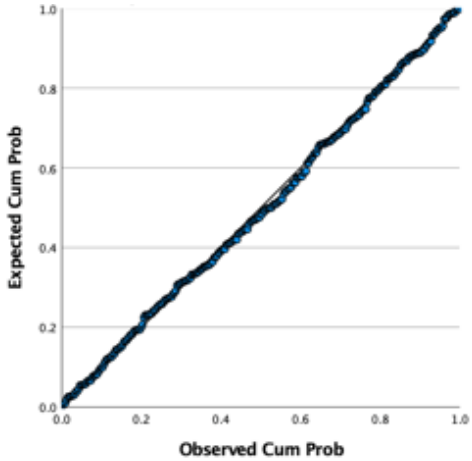


Figure 30: P-P Plot of Standardised Residuals *(based on online survey questionnaire results, 2021)*

4.5.6 Lack of Bias Cases

Emami (2017) recommends using a Cook's Statistic to identify any extreme outliers that may bias the data set. Any statistic above 1 is considered influential and will need to be removed from the data set. In this study, no items were found above 1, and therefore this assumption was not violated.

Table 12: Cook's Distance

N	Valid	299
	Missing	4
Mean		.0030867
Median		.0012804
Std. Deviation		.00528313
Range		.03844
Minimum		.00000
Maximum		.03844

Source: (based on online survey questionnaire results, 2021)

4.6 Regression Analysis

The outcomes of the hypothesis testing are shown in Table 16. This table demonstrates how the predictors, also known as the independent variables (CI_Capacity, CI_Sources and CI_Conducting), influence the dependent variable, CI_Value. The R Square score shows that the sum of the three values explains 16.2% of what happens in the model on CI_Value.

Table 13: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.402[a]	.162	.153	.717	1.947
a. Predictors: (Constant), CI_Capacity, CI_Sources, CI_Conducting					
b. Dependent Variable: CI_Value					

Source: (based on online survey questionnaire results, 2021)

According to Blanca Mena, Alarcón Postigo, Arnau Gras, Bono Cabré, and Bendayan (2017), the ANOVA test compares more than two variables simultaneously to determine whether there is a relationship between them and the significance of that relationship. Using the ANOVA, the significance of the relationship can be identified. In this study, it was 0.002, which is less than 0.05, and regarded as significant.

Table 14: ANOVA Analysis Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.290	3	9.763	18.980	.002[b]
	Residual	151.754	295	.514		
	Total	181.044	298			
a. Dependent Variable: CI_Value						
b. Predictors: (Constant), CI_Capacity, CI_Sources, CI_Conducting						

Source: (based on online survey questionnaire results, 2021)

Table 16 below provides a breakdown of each independent variable's impact on the dependent variable. After determining the beta coefficient, a regression equation can be written for each

independent variable. For CI_Conducting (y=0.245x+c), y denotes the outcome variable, x denotes the predictor variable, 0.245 denotes the beta coefficient, and c is a constant. CI_Conducting and CI_Sources (y=0.264x+c) has a positive significant impact on CI_Value with both variables achieving a significance of less than 0.05. CI_Capacity (y=-0.078x+c) has a negative impact on CI_Value. However, this impact is insignificant (r=0.260).

Table 15: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.743	.345		2.157	.032
CI_Conducting	.438	.124	.245	3.544	.001
CI_Sources	.465	.119	.264	3.919	.000
CI_Capacity	-.131	.116	-.078	-1.128	.260

a. Dependent Variable: CI_Value

Source: (based on online survey questionnaire results, 2021)

4.7 Results Pertaining to Question One:

Question one is restated below.

> *What is the relationship between firms that conduct formal CI practices and the perceived value created for the firms?*

CI_Conducting was split into two groups. Group one included responses that scored three and above, while group two scored below three. Based on the independent samples t-test, firms that had conducted formal CI practices reported increased levels of perceived value (M =3.28, SE =0.058, SD = 0.737) than those that had not implemented a formal CI program (M =2.94, SE =0.068, SD = 0.791). The difference in means was deemed significant, with t (297) = 3.865, p =.0.001.

Firms that conduct formal CI gain more benefit from the practice than firms that conduct CI informally. Therefore, there is support to accept the null hypothesis for question one.

4.8 Results Pertaining to Question Two:

Question two is restated below.

> *What is the relationship between firms that use both primary and secondary sources of data for CI in comparison to firms who are only using one source of data, and the value derived from the CI exercise?*

CI_Sources was split into two groups. Group one included responses that scored three and above, while group two scored below three. Based on the independent samples t-test, firms that had used both primary and secondary sources of data reported increased levels of perceived value (M =3.24, SE =0.058, SD = 0.782) than those that had only used a single source of primary or secondary data (M =2.95, SE =0.068, SD = 0.746). The difference in means was deemed significant, with t (298) = 3.171, p =.0.002.

Firms that gathered data from both internal and external sources derived more value than firms that only gathered data from a primary or secondary source. Therefore, there is support to accept the null hypothesis for question two.

4.9 Results Pertaining to Question Three:

Question three is restated below.

> *"Does a relationship exist for SMEs that invest in developing internal CI capacity and being able extract additional value from the CI process?".*

CI_Capacity was split into two groups. Group one included responses that scored three and above (invested in additional capacity), while group two scored below three (did not invest in additional capacity). Based on the independent samples t-test, firms that had developed internal capacity to conduct CI, reported only a slight increased level of perceived value (M =3.16, SE =0.062, SD = 0.824) than those firms which had not invested in developing CI capacity (M =3.07, SE =0.064, SD = 0.709). The difference in means was deemed insignificant, with t (297) = 1.003, p = 0.317.

To further investigate this relationship, a Pearson Correlation was conducted. It was identified that CI_Capacity and CI_Value had a positive but weak correlation which was statistically significant (r = 0.206, n = 299, p =.000).

Figure 31: Pearson Correlation

		CI_Value
CI_Capacity	Pearson Correlation	.206**
	Sig. (2-tailed)	.000
	N	299
**. Correlation is significant at the 0.01 level (2-tailed).		

Source: (based on online survey questionnaire results, 2021)

Therefore, there is insufficient support to accept the null hypothesis for question three.

4.10 Summary

In total, 702 responses were received, of which 299 (42%) were considered fit for this study. The sample studied consisted of SMEs operating within the borders of South Africa. Using the guidelines set out by the DSBD, the survey eliminated respondents from micro and large enterprises. The target recipients of this study were decision-makers in the SME actively involved in the business strategy in the SME.

While most firms suggested they were conducting CI, only 163 firms had formalised the CI process in their firms. Additionally, most firms conducting CI use both primary and secondary sources for data collection. While 177 firms had invested in developing internal capacity to conduct CI, little additional value was identified.

Table 16: Summary

Null Hypothesis Summary	Outcome
There is a positive relationship between firms that conduct formal CI practices and value created.	Supported
There is a positive relationship between firms that interrogate both primary and secondary sources of data when conducting CI, and the value derived from the exercise.	Supported
There is a positive relationship between firms that actively invest in developing internal capacity to conduct CI exercises and deriving additional value from CI.	Insufficient Support

Source: (based on online survey questionnaire results, 2021)

5 DISCUSSION OF RESULTS

The purpose of this chapter is to present the analysis and interpretation of the research findings from Chapter four. The findings are discussed, and the empirical findings are contrasted with the literature review presented in Chapter two. This study aimed to determine if carrying out CI created value for the firm in developing a competitive advantage. This chapter provides an overview of the respondents, leading to a discussion on each of the hypothesis questions.

The results indicate that SMEs who conduct formal CI using both primary and secondary data sources can extract additional value from conducting a CI exercise. However, by investing in internal capacity, SMEs had not been able to derive additional value.

5.1 General Observations of Research Findings

Previous studies on CI among SMEs in South Africa identified that many firms are conducting CI, albeit not always in a formalised manner (Nenzhelele, 2015). Maritz and Du Toit (2018) identified that large firms outside this study could develop additional value through formalised CI systems. To develop a CI framework, Pellissier and Nenzhelele (2013) identified a five-stage approach to CI. These phases include a planning stage, information collection phase, information sorting (including capturing and storage), information analysis and intelligence dissemination.

5.1.1 Planning

CI planning is the process of identifying KIQs based on the firm's strategic requirements and developing actions to gather the required intelligence (Mackey, 2021; Nenzhelele, 2015). The research found that firms that actively developed plans to conduct CI and mitigate against competitor strategies derived the most value from the process. However, while firms were developing plans to conduct CI, various shortcomings were identified. The first key finding is that most firms do not have documented procedures for ethical intelligence collection. The second key finding is that while firms actively monitor their competition, actions to mitigate competitor strategies remained reactive. Lastly, firms do not place sufficient emphasis on ensuring that the collected data is accurate and valid.

The findings of planning are in line with Shapira (2021), who suggested that firms with a structured approach to conducting CI can extract more value from the process. This finding is also in line with Nenzhelele (2015), who suggested that while many SMEs in South Africa are conducting CI, informal CI has led to poorer results. However, this does not necessarily imply that firms who do not have formal processes to apply CI are not interested in the process. In total 115 firms reported

not to have found satisfactory value in conducting CI, but still believe it is an important strategic tool.

5.1.2 Information Collection

CI's collection is the phase in which data sources are identified and interrogated for validity (Köseoglu, Chan, Okumus, & Altin, 2019). Additionally, these sources can be categorised as internal and external based on where the data source originates. The research found that SMEs encourage internal stakeholders to report any intelligence. However, competitors are the largest target for SMEs conducting CI, with many respondents choosing not to actively monitor external stakeholders, like non-governmental, action groups and regulatory bodies, to mitigate any risks that such groups may pose. This is in line with Bond (2019) sentiment that the preferred intelligence target is the competitor.

5.1.3 Information Sorting, Capturing and Storage

Collected intelligence should be checked for accuracy and validity (Saayman et al., 2008). However, this research identified that the quality assurance aspect of data collection appears lacking. Previous studies identified that SMEs may lack the understanding of relevance and validity when using secondary data (Bisson & Tang Tong, 2018). Many respondents claimed to provide guidance to internal stakeholders on how to collect secondary data from prospects. While secondary data has cost and time benefits, Johnston (2017) cautions that this type of data may be biased, not current or relevant to the needs of the CI KIQ. Therefore, it is a point of concern that respondents have chosen to prefer secondary data sources but are not applying adequate quality measures.

5.1.4 Information Analysis

Information analysis is the process of converting the collected CI into valuable and actionable strategic insights (Gilad, 2011). Ali and Anwar (2021b) suggest that the key to successful transformation of collected data to strategic insights occurs during the analysis phase. While most firms agree an in-depth analysis is generated once intelligence is gathered, with a preference for using SWOT and Gap Analysis, there is insufficient to identify as many outcomes as possible that the competitor may embark on and create mitigating actions for each risk posed. This finding is in line with Chawinga and Chipeta (2017), who identified that firms do not adequately take a risk-based approach to collected data, instead choosing to take an inquisitive view of how the competitor operates their business. Previous studies have shown that firms with tools and personnel to analyse collected data have developed concise strategic insights (Adeyelure, Kalema, & Bwalya, 2018). Most firms surveyed have access to some capacity for data analysis,

including both tools and personnel. However, the study did not identify the complexity, as systems can vary from simple spreadsheets to advanced machine learning models.

5.1.5 Intelligence Dissemination

Cavallo, Sanasi, Ghezzi, and Rangone (2020) suggest that the key to effective analysis of the firm's operating environment is using gathered intelligence to drive the firm's strategy. This research provided a contrasting stance on whom the final recipients were for the gathering of CI. Some firms reported an open sharing policy that allows all staff members to access the collected information, while others reported that only those privy to the collected data would have access to it. González-Díaz, Acevedo-Duque, Santos, and Cachicatari-Vargas (2021) suggest intelligence should be graded based on strategic importance, with the highest grading only available to those who were privy to it. However, this research identified that firms did not practise adequate counterintelligence, which may lead to critical internal information being leaked out to other competitors.

5.1.6 A Case for Using Secondary Data

While all sources of information are valuable to a CI process, Chalendard (2017) provides a cautionary sentiment on using secondary data. The author argues that secondary data sources may not contain all the details that the practitioner may be looking for. Additionally, this data may be outdated and may not provide information to answer the KIQs. Comparatively, the benefit of this approach is that information is more easily accessible and costs less to retrieve (Carroll et al., 2017). Respondents to this study preferred secondary data, with 74% agreeing that secondary sources of information are the preferred source when gathering CI about key competitors. Abdul-Mohsin, Halim, and Ahmad (2020) found that firms that required CI would turn to open sources, including websites and news portals. Firms surveyed use these secondary sources to actively scan the market for new technology, which may create a competitive advantage.

5.1.7 Data Source Impact on Strategy

Kumar, Saboo, Agarwal, and Kumar (2020) have offered valuable advice on specific aspects of using primary and secondary data sources for CI purposes. The authors suggest that the larger the impact on the firm's strategy, the more in-depth and relevant the sources need to be. Conversely, the less relevant the data collection sources need to be.

Some 68% of the firms agreed that CI has a direct impact on the firm's strategy. According to Cavallo, Sanasi, Ghezzi, and Rangone (2020) firms that were agile in their collection of CI by combining sources to lower the costs of data collection, were able to provide accurate insights to

decision-makers. Firms believed they were agile in the way CI was gathered and could maximise the data gathering process. However, less than half of the firms reported that once the information was gathered, the source is classified according to the reliability of the information gained.

While all means and resources could be directed to gathering CI, strategic decision-makers in a firm need to actively support and use the gathered intelligence. Many firms reported that strategic decision- makers in a firm do not support CI processes. However, 71% of firms actively generated reports on competition and possible competitive advantages that have the potential to be exploited. According to Calof (2017), decision-makers may be sceptical of CI due to insufficient knowledge or historically poor insights, which may have negatively affected strategic decisions. While most firms in the survey identified the importance of CI as a key strategic decision-making tool, many firms had not conducted quality control to ensure data validity and accuracy.

5.1.8 Business Intelligence Systems

According to Groom and David (2001), many SMEs do not have the formal methods to convert the gathered information into more advantageous, strategically valuable information. Many analysts argue that failure to adequately analyse the collected CI into effective insights for the end-user leads to the largest competitive advantage loss (Botos, 2018; Köseoglu, Chan, Okumus, & Altin, 2019). Some 42% of the firms surveyed had invested in CI-specific software. However, the survey did not identify the complexity and insights which the program could provide. Additionally, most firms agreed to having convenient internal reporting. Again, the survey did not determine the type of system implemented.

Adeyelure, Kalema, and Bwalya (2018) raise the concern around the cost implication of acquiring a business intelligence system, which includes getting the required analyst to provide the necessary insights from the gathered intelligence, may act as a barrier to the successful CI process. While 58% of the firms suggest they have dedicated personnel to conduct CI, it is unclear if the practitioner's primary responsibility is conducting intelligence, or if this function is a secondary role above other job functions.

5.1.9 Knowledge Management

Most firms agree that staff in the firm, whether involved in CI gatherings or not, understand the topic. Chawinga and Chipeta (2017) discuss the point that many firms have vast internal knowledge, which remains untapped or unexposed due to poor internal knowledge of management processes. However, most respondents had used knowledge registers and allowed employees to participate in or request CI training. Additionally, firms relied on strategic decision-makers' insights when developing KIQs.

5.2 Conclusion

Firms that conduct CI have gained additional benefits in terms of a competitive advantage in their industries. However, even for firms conducting CI formally, space for improvement exists. The literature review for this study provided a comprehensive backdrop for the survey conducted on the sample. It was identified that many firms believe CI is an important strategic tool. However, maximum value has not been achieved due to the limited application, including having a preference of secondary data over primary data. The following key factors can be drawn from the analysis, which will have an impact on the proposed business model: Firms may have processes to monitor competition, but the planning for mitigating action against competitors' strategy appears reactive. Ethical data collection needs to be placed at the heart of the collection process. Data needs to be cross-checked for accuracy and validity. Firms must ensure that collected data is valid for the KIQ under investigation.

After conducting a data analysis of the respondents' surveys, it was identified that firms who followed a formalised structure when conducting CI received additional value. These firms in theory followed the key items in CI frameworks. Question One focused on comparing if firms who formalised their CI process achieved additional value over firms who conducted the practice informally. This research identified that SMEs in South Africa are conducting CI through various levels of maturity. Firms conducting formalised CI still have space for improvement in ethics and quality assurance of secondary data. However, the more formalised the CI practice was in the firm, an increase in perceived value was identified. Based on the data analysis and literature reviewed, we can **accept** the **null** hypothesis and reject the alternative hypothesis.

By analysing the respondents' surveys, it was found that firms that used both primary and secondary data sources in an agile manner received additional value. While secondary data costs less, and firms tend to favour secondary data sources, firms would be more inclined to use primary data sources based on the increasing impact on the firm's strategy. Firms also agreed that CI plays a major role in defining future strategy and were willing to invest in primary data to meet the KIQs posed. Question Two focused on identifying if firms that used both primary and secondary data sources for intelligence gathering achieved additional value over firms that only elected to use either primary or secondary data. Based on the data analysis and literature reviewed, we can **accept** the **null** hypothesis and reject the alternative hypothesis.

Lastly, it was shown that firms with internal capacity received marginal additional value. SMEs have limited resources and investing in CI capacity may divert skills and resources from day-to-day operations. Question Three focused on identifying if firms that developed internal capacity to

conduct competitive intelligence could extract additional value from the exercise. Based on the data analysis and literature reviewed, there is insufficient evidence to prove that developing internal capacity leads to an increase in value. Therefore, we can **reject** the **null** hypothesis and **accept** the alternative hypothesis.

6 PROPOSED BUSINESS VENTURE

6.1 Introduction

The aim of this Business Venture Proposal is to develop a CI solution aimed at SMEs in South Africa. Through the literature review it was identified that SMEs face high rates of failure. One of the key factors for this high rate of failure is the lack of internal, market and macro-environment understanding. Analysts also suggested that firms are conducting CI; however, it remains in an unstructured form. To further analyse this matter in a South African context among SMEs, a survey was distributed and on return, subjected to statistical analysis.

After analysing the responses and comparing it to reviewed literature, it was identified that firms are able to extract additional value from formalising their CI processes. Additionally, firms can derive value from using both primary and secondary data sources. This chapter will provide a foundation of converting the analysed information into a Business Venture Proposal.

6.2 Adopting and Applying Management Theories for the Business Venture Proposal

In the reviewed literature, various management theories were discussed; however, four theories are going to be drawn upon and applied in this proposal. The business proposal will be structured to adopt the theories and frameworks will be used as the assumptions for decision-making. The following table summarises the adopted theories.

Table 17: Management Theories Adopted for this Proposal

Approach	Theory
Scientific Theory	Use science to decide on work processes
	Ensure the most efficient processes are adopted
	Staff must be selected based on the best person for the job
	Training must be conducted to ensure staff work at maximum efficiency
	Pay staff based on output
Administrative Theory	The firm should be split into separate specialised management tasks: • Security • Financial • Technical • Commercial • Accounting • Managerial (Plan, organise, command, coordinate, control)
Open System Theory	All activities are impacted by the external environment
	Feedback loop among internal stakeholders
	The entire firm is inter-related

Contingency Theory	There is no best way to lead an organisation
	The strategy of the firm will be decided on the internal and external environment at the time

Source: (Joullié, 2018; Khorasani & Almasifard, 2017)

6.3 The Business Plan

In a study conducted by McKenzie and Sansone (2017) on the success of a business, it was identified that firms that created a business plan had and displayed increased levels of success in comparison to firms that did not create a business plan. However, Tipu (2018) argues that a business plan needs to be comprehensive and well understood internally for the plan to create any value. Barrow, Barrow, and Brown (2018) agree with this sentiment and suggest that a business plan needs to be developed by the strategic team of the firm. Alonso-Vazquez, del Pilar Pastor-Pérez, and Alonso-Castañón (2018) have identified that during the development of a business plan, the application of the Administrative Management theory will lead to splitting key roles and responsibilities and it is through this process that the strategic team can identify the key missing personnel links.

Business plans are created to provide the founders of the business with a process to expand on an idea, identify the risks and benefits of that idea and commit resources to the idea (Botos, 2018; Spiridonova, 2016). Abrams (2003), suggests that even firms with sufficient resources should create a business plan as the plan will provide the following benefits:

- Provides strategic guidance
- Clearly defines roles and responsibilities
- Allows firms to adapt to change
- Controlling of resources
- Becomes the firm's Standard Operating Procedures

Analysts have contrasting views on how in-depth a business plan should be. Burke, Fraser, and Greene (2010) suggest that firm should commit resources to ensuring a robust and comprehensive business plan is developed. Mullins and Komisar (2010) argue that a business plan needs to be fluid and constantly changing, therefore would benefit more from keeping the plan simple and implementing lessons learnt as the plan progresses. Yakovleva (2017) suggests that firms need to use their prerogative in deciding what is critical to the business; however, the author suggests that no matter the process, the plan should at least incorporate the following elements:

- The opportunity
    - The problem identification
    - The planned solution
- An industry analysis

- Customer analysis
- Timeline
- Marketing Plan
- Financials

While analysts have provided various views on the level of implementation of a business plan, the resounding common factor is that firms that have a plan in place are more likely to increase their chances of success over firms that do not have a plan in place.

6.4 Executive Summary of the Proposed Business

Block (2009) describes the executive summary as the overall description of the business plan. According to the author the executive summary should contain: the current state of the business, the products and services on offer, customer needs, the firm's goals and aims and a summary of the finances. While the executive summary is written as a single introduction to the business plan, this research paper will separate the sections into individual topics to accommodate analyst guidelines.

6.4.1 Problem Worth Solving

Kyas, Springer, Pedersen, and Chkoniya (2021) suggest that the business plan problem statement identifies the problem faced by the target market. Stueben (2018) suggests that a problem statement needs to focus on a clearly defined problem, the impact it has on the target population and the solution.

In this business proposal, the Value Proposition Canvas Framework will be adopted to unpack the problem and describe the solution on offer. According to Osterwalder, Pigneur, Bernarda, and Smith (2014) the Value Proposition Canvas enables the firm to more precisely characterise its value propositions and target customer segments, as well as assess the "fit" between the value the firm plans on producing and the expectations the target segment has. The Value Proposition Canvas is separated into two halves. In the customer profile half, research is required to identify:

- Jobs: What function can the prospective client complete using the proposed product or service?
- Pains: By adopting the proposed product what problems can the customer internally eliminate?
- Gains: How does the customer benefit from using the proposed product or service?

The second half of the Value Proposition Canvas introduces what the proposed firm brings to the customer. The following elements need to be addressed:

- Products and Services: What are the products or services on offer?

- Pain Relievers: How does the proposed service offering relieve the problems that the proposed customers are facing?
- Gain Creators: How does the proposed offering create value for the prospective customer?

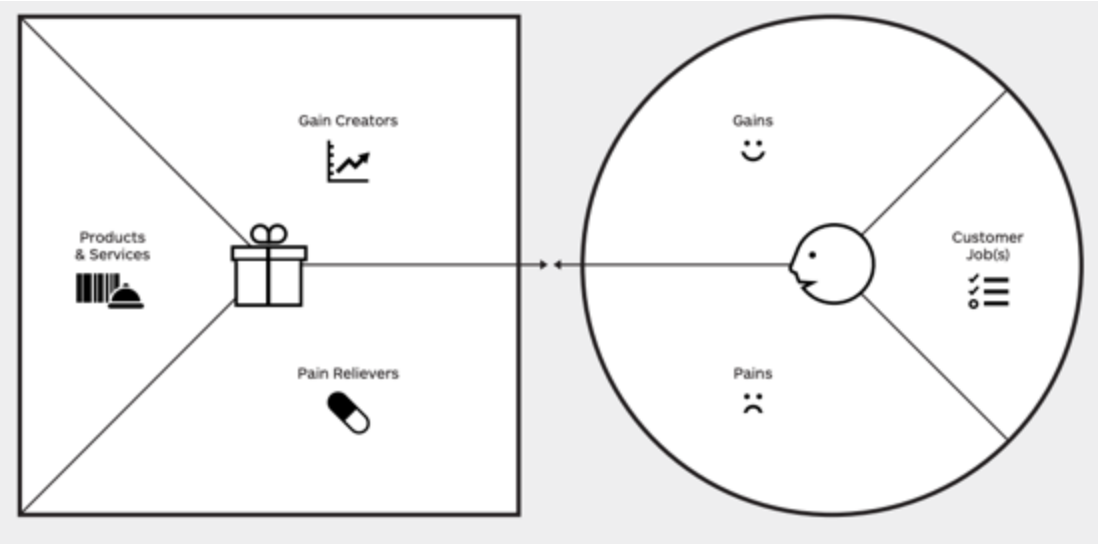


Figure 32: The Value Proposition Canvas *(Osterwalder, Pigneur, Bernarda, & Smith, 2014)*

6.4.1.1 Customer/client (target market of the proposed firm)

Before a firm can take a strategic decision, it is required to collect as much intelligence possible concerning its internal market and external environments. This aspect includes identifying internal knowledge, scanning the market environment, and analysing the macro-environment. While this intelligence may drive strategy, it also has other implications such as precision marketing and supplier decision drivers.

However, while SMEs conduct some level of CI, they still face high levels of failure. Through the literature review and survey, it was identified that SMEs conduct informal CI which may not be effective. The lack of effectiveness could be linked to the lack of resources to adequality collect, analyse and convert the CI into useful strategic insights. SMEs understand the importance of CI but lack effective application.

Through research, it was identified that SMEs can benefit from using formal CI. The most fundamental benefit is access to market insights. A key factor as to why SMEs fail is due to a lack of operating market understanding. Therefore, at minimum, SMEs can increase their survival by having access to a comprehensive CI system which provides strategic and actionable insights.

6.4.1.2 The Value Proposition on Offer

This venture proposal intends offering SMEs in South Africa, a formalised CI tool which is cost effective and uses both primary and secondary data sources.

SMEs in South Africa agree that CI is an important strategic tool. However, many firms gather ineffective CI. Research has shown that firms may not have a complete understanding of collecting effective CI. The proposed venture will use the CI framework suggested by Pellissier and Nenzhelele (2013) to ensure the entire cycle is integrated into the client firm. Additionally, the client firm only pays a subscription fee which entitles them access to CI specialists who in turn collect data from internal and external sources as well as using primary and secondary sources. This data will be analysed and provided to the client using business intelligence software.

It was identified through this study that firms may not have access to CI subject matter experts, data analysts and collection and reporting systems. This can be mitigated by using the proposed venture's product. Firms can benefit from having access to subject matter experts who are able to analyse the collected data and converting the wealth of collected data into small strategically actionable steps.

6.4.1.3 The Proposed Value Proposition Statement.

The Proposed Business Venture is specifically designed and optimised for small and medium enterprises in South Africa that are experiencing limited access to actionable strategic insights in highly competitive markets. The formalised competitive intelligence offering is a leading consulting service that helps a firm gain strategic insights through business intelligence, access to multiple data sources, and access to high level competitive intelligence, and unlike competitors, this service offers SMEs access to CI practices which are usually limited to large companies.

6.5 Business Strategy

A business strategy is the sum of all the decisions made and actions taken by the company to achieve business objectives and maintain a competitive position in the market. It is the business's backbone since it is the blueprint that leads to the intended goals. Any flaw in this path might lead to the company becoming lost in a sea of overpowering rivals (Ali & Anwar, 2021a). Farrukh, Meng, Wu, and Nawaz (2020) suggest business strategies are increasingly more critical as the changes in the market environment have increased levels of competitiveness. According to Albert and Van der Auwermeulen (2017), historically firms would agree on a long-term strategy and navigate towards it. Liu, Wu, and Chan (2021) argue that with an ever-growing impact from the

market and macro-environments, firms need to be more agile in their strategy. Additionally, external stakeholders such as climate activists, trade unions and government regulations are changing the way firms do business and in turn their strategy of doing business. Hassani and Mosconi (2021) recommend that while firms should decide on the duration of their strategy based on the forces applicable to the business, the strategy should at minimum contain a vision, mission, goals, and an industry analysis.



Figure 33: Strategy Pyramid *(Schrader, Freimann, & Seuring, 2012)*

6.5.1 Vision

A business vision is a clear mental image of what you want your company to be in the future, based on your objectives and desires. A vision will give your firm a clear focus and might prevent you from going in the wrong direction (Bora, Borah, & Chungyalpa, 2017). When developing a business vision, Darma (2017) suggests including the following three items:

- Objective: Why does the firm exist?
- Advantage: What benefit does the firm bring to the market?
- Scope: Who is the business targeting?

Our vision is to make competitive intelligence accessible to SMEs on the African continent.

6.5.2 Mission

While the vision provides the destination the firm intends routing towards, the mission statement is the vehicle that will move the firm to the goal (Raisiene & Urmanavičienė, 2017). Hull (2014) provides some guidance on writing a mission statement by recommending that it contains:

- What does the firm do?

- Who is the target market?
- Why does the firm do what they do?

To be the catalyst for SME's success, by converting comprehensive intelligence into actionable strategic insights.

6.5.3 Goals

While the vision represents the target for the business and the mission is the vehicle which gets the business to that target, goals can be seen as the steps along the way which guide the business to achieving its target (Raisiene & Urmanavičienė, 2017). Candi, Melia, and Colurcio (2019) argue that goals are imperative to the success of the overall firm's strategy as they provide difficult yet attainable wins for the firm. While many analysts suggest multiple methods of setting goals, Kononova, Shpatakova, and Holovchenko (2019) suggest using the SMART methodology for setting goals. This includes:

- S – Specific – Goals need to be narrow and Mutually Exclusive, Collectively Exhaustive (MECE).
- M – Measurable – The goal needs to have metrics in place to allow the measurement of progress.
- A – Attainable – The goal needs to be realistic and achievable, however, it needs to pose a challenge and not be too easy to reach.
- R – Relevant – The goals need to align with achieving the firm's overall strategy.
- T – Time – All goals need to have a realistic period in which it needs to be achieved.

The goals for the proposed Business Venture are:

- To grow the customer base by reaching 100 clients by counting new subscriptions in the first two years of operation.
- To enter neighbouring markets by monitoring interests of firms in the next two years.
- To develop subject matter expert status by monitoring blog post interaction with the aim of reaching 1000 interactions per post in the next two years.

6.6 Industry Analysis

Industry analysis is the process a firm undertakes in understanding the environments of operation (Kurpayanidi, 2020). This analysis aids a firm's forecasting of demand and supply, as well as industry's competitiveness (Culot, Nassimbeni, Orzes, & Sartor, 2020). Chase, Stewart, Schilling, Smith, and Walk (2018) suggest that comprehensive industry analysis covers the internal

operations of the firm, the market environment in which the firm competes and the macro-environment in which the firm has no control. Muhuri, Shukla, and Abraham (2019) recommend that a combination of a SWOT Analysis, a PESTLE Analysis and Porter's Five Forces Frameworks be answered to provide sufficient industry coverage.

6.6.1 The SWOT Analysis

The SWOT analysis provides a structured framework for understanding the internal strengths and weaknesses of a firm while identifying the opportunities which can be capitalised on and the threats which require mitigation (Longhurst et al., 2020). Muhuri, Shukla, and Abraham (2019) suggest that while the SWOT analysis provides valuable insights, it may be subjective to the view of the person doing it. Falcone, Tani, Tartiu, and Imbriani (2020) support this view by suggesting that the SWOT analysis is subject to continuous change and needs to be conducted often using accurate and relevant research.

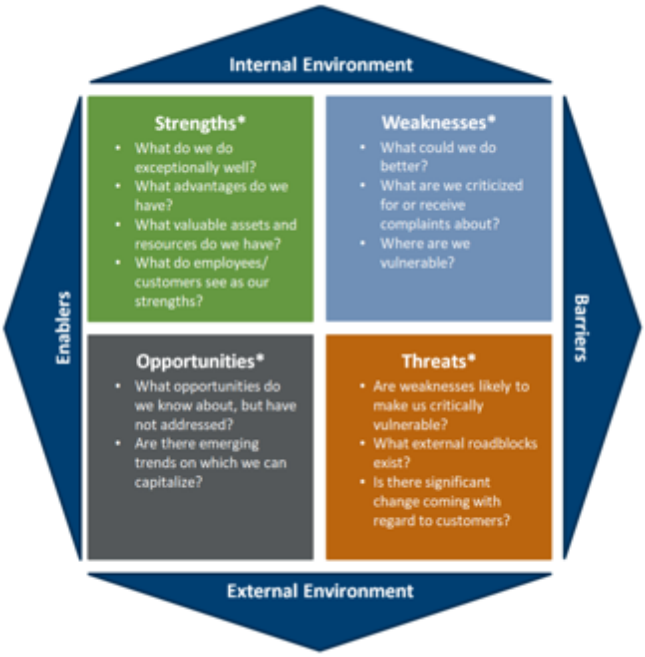


Figure 34: SWOT Analysis Framework *(Trees, 2021)*

Table 18: The SWOT Analysis for the Proposed Venture

Internal Factors		External Factors	
Strengths	**Weaknesses**	**Opportunities**	**Threats**
Highly skilled team	Lack of testing	Increasing the scope of data analysis	Another "task" for clients
Easy to use process	Limited access to data	Choosing a niche market and developing it	Lack of data buy-in

Access to networks	Need for added market research	Shifting into a consulting role	Potential to replicate the business
Experience running a small business	Outsourcing large portions of the development	Being able to find potential acquisitions	Cost cutting mechanisms
Remote operation	Lack of business development skills		Survivability of small firms in the short term
Low resource requirements	Potential time constraints		Lack of trust in CI
Uses pre-existing software			Incorrect or poor data inputs
Low-cost model			

6.6.2 The PESTLE Analysis

The purpose of a PESTLE analysis is to identify the external factors the firm operates in and has no control over (Perera, 2017). In a study of applying the PESTLE as a tool of SMEs, Nandonde (2019) identified that the tool was easily applied and it forced decision-makers to think outside the business and identify risks and opportunities which may lead to increasing the firm's sustainability. Islam and Mamun (2017), while in favour of using a PESTLE analysis, recommend that when compiling a PESTLE, the decision-maker suitably understands each topic to avoid under-researching each factor or adding excessive information. Additionally, as the macro-environment is continuously changing, the PESTLE analysis needs to be regularly updated to be valuable (Perera, 2017).

Table 19: PESTLE Analysis for the Proposed Venture

Factor	Impact on the Firm
Political	
Positive view of the current president of South Africa	A positive outlook may create investment opportunities for both local and foreign firms.
Rioting and looting	Rioting and looting in July 2021, affected SMEs that are the target market of the firm.
Corruption at Government Level	With widespread corruption during the earlier presidential tenures, President Ramaphosa has taken active steps to eradicate this burden and retrieve ill-spent public funds.
Economic	

Poor investment ratings	Major investment rating agencies have downgraded South Africa to below an investment level grading.
Member of BRICS	As a member of the BRICS community, South Africa has access to the largest growing economies.
Cost of fuel and electricity	The rising cost of commodities has led to an increased cost of living, placing added pressure on businesses.
Social	
High unemployment rates	South Africa currently has an unemployment rate of 32.6%, which is at a record high level.
Wealth disparity between rich and poor	South Africa has one of the highest Global Gini coefficients meaning the disparity between rich and poor is extreme.
Technological	
Technologically advanced	Businesses have access to high-speed internet with low censorship, allowing access to CI.
High data costs	While bundled and contract packages may be affordable, South Africa has some of the highest per megabyte data costs.
Legal	
Protection of Personal Information Act	The POPI act has been introduced to ensure businesses act in a responsible manner when handling personal information.
Ease of doing business in South Africa	South Africa is ranked 82nd globally for ease of doing business and 6th in Africa.
Environmental	
Water Scarcity	South Africa is still a water scare country with large metros at risk of running dry.
Use of coal power stations	South Africa has historically been reliant on coal due to its large natural deposits; however, natural gas reserves may shift this reliance away from coal in the long term.

Source: (Buys, 2017; Crookes, Hedden, & Donnenfeld, 2018; Gilbert, 2020; Ngcukana, 2021; StatsSA, 2021; Stoddard, 2021; Udi, Bekun, & Adedoyin, 2020; Vilakazi, 2018)

6.6.3 Porter's Five Forces

According to Bruijl (2018), a valuable framework in understanding the market environment which a firm operates in, is the Porter's Five Forces tool. The market environment is one the firm has

some control over, depending on its power (Sirenko, Burkovska, Lunkina, & Mikulyak, 2019). The Porter's Five Forces tool is separated into five key items for further investigation:

- Rivalry among existing firms
- Bargaining power of suppliers
- Bargaining power of buyers
- Threat of substitution
- Threat of new entrants

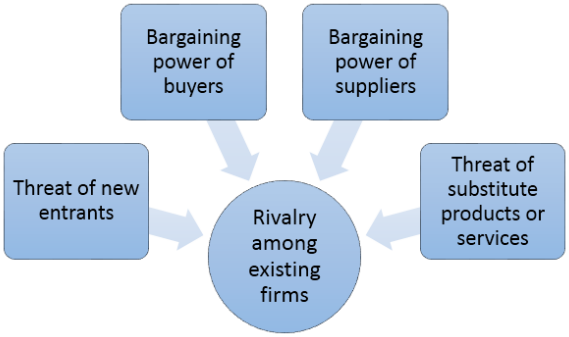


Figure 35: Porter's Five Forces *(Dudovskiy, 2016)*

The Porter's Five Forces Analysis for the Proposed Venture:

6.6.3.1 Competitive Rivalry

The competitive landscape for the offering remains limited as a large number of firms operating in the CI environment focus on large firms where rewards remain high. The greatest risk of competition comes from the firm attempting to internally conduct CI. As the survey results demonstrated, firms that conduct CI place a higher value on CI. Converting firms that have partial success in conducting CI on their own may prove to be difficult.

6.6.3.2 Supplier Power

In the initial phases of operation, the business will be highly reliant on external, contract-based consultants to develop and deploy systems. This poses a high risk to the firm in the event of price collusion by the consultants. However, one method to mitigate against this is to use an increased pool of consultants who each provide a module to the system rather than one consultant developing an entire project.

6.6.3.3 Buyer Power

Buyers have a moderate power; however, this may be increased with the negotiating power of larger enterprises looking to implement the system. Small firms have less power because the service is subscription-based. While there is limited competition, the aim of the business is to

develop “maximum advanced yet acceptable” technology which is easy to use but uneconomical to attempt to replicate.

6.6.3.4 Threat of Substitution

The threat of substitution remains a moderate risk. This is due to the possibility that a client would choose to develop an in-house system. However, to mitigate against this risk, the business venture will act as a consultant to aid the client in the transition to an independent system. This may develop a source of recurring consulting income.

6.6.3.5 Threat of a New Entry

This remains the greatest risk to the firm. While the landscape has limited competition, it would be easy for a large reputable firm to develop a similar system and enter the market. The plan would be to launch and capture as many clients as possible.

Table 20: Competitive Landscape

	Short Term	Medium Term	Long Term
Competitive Rivalry			
Supplier Power			
Buyer Power			
Threat of Substitution			
Threat of a new Entry			

6.7 Marketing Plan Extract

A marketing plan is a strategic roadmap that firms use to organise, implement, and track their marketing strategy over time. Larger firms may have a separate marketing strategy for each marketing team within the firm that might be included in marketing plans, however they are all structured towards the same business objectives (Chernev, 2020). However, while definition may be suitable for large firms, SMEs may have limited resources in developing a stand-alone strategy for conducting marketing. In a study conducted by Girton (2018) on SME marketing, it was identified that complex marketing plans led to sluggish responses and overload when the firm had no dedicated marketing team and the responsibility fell onto a single person. Prath (2021) recommends that no matter the size of the firm, in-depth research into marketing needs to be conducted to maximise the Return on Investment (ROI) of marketing spend. Gilmore and Carson (2018) further add that a marketing plan should be able to define who the customer is and provide guidance on attracting the customer to the firm in the most cost-efficient manner.

6.7.1 The Marketing Mix (Four Ps)

The purpose of conducting a Marketing Mix exercise is to place the right product with the right customer at the right price at the best possible place and time (Agaltsova & Ilyuschenko, 2021). The Marketing Mix is made up of four key components namely:

- Product – This defines the specifications of the product or service such as size, weight, features, added value
- Place – This is where the customer may encounter the product or service
- Price – How much does the product or service cost and how can the customer pay for it
- Promotion – This is how the customer is made aware of the product or service offering.

Khorsheed, Abdulla, Othman, Mohammed, and Sadq (2020) recommended that all marketers, no matter the size of the firm, carry out this exercise as it provides a combined view of how the four marketing elements work together. Additionally, it makes marketing ROI monitoring easier and more targeted. However, many analysts now argue that customer preferences and buying habits are rapidly changing, which then requires a Marketing Mix exercise to be conducted for each product and customer type, which may be laborious and inefficient (Išoraitė, 2020; Khalil, 2017). While many analysts have differing views on the Marketing Mix, Lim (2021) argues that the Marketing Mix is especially important for SMEs who do not have a dedicated trained marketer, as the Marketing Mix provides a framework to better understand how to satisfy the customers' needs.

6.7.1.1 Product

The service is provided via a mobile phone application. Staff members can take a snap or make a note of a critical piece of information. The data inputs are collected on a central database which both the client and the business have access to. Secondary data is added to the database to increase the accuracy and reliability of the data. Once the data is cleansed and accuracy is confirmed, it is displayed in a dashboard format which is updated on a weekly basis.

6.7.1.2 Place

Due to the remote capability of the application, the service will be conducted remotely. Training and induction are completed via remote video conferencing platforms. The additional pre-recorded video training will be available on demand.

6.7.1.3 Price

The application will be based on a monthly subscription fee with the modular adoption process. This will be tiered to suit the budget of SMEs.

- **App System**
    - Tier one between 5 and 10 users
    - Tier two between 10 and 20 users
    - Tier three over 20 users

- **The app subscription includes:**
    - App development and deployment
    - App maintenance and upgrades
    - Database monitoring

- **Retainer**
    - Access to CI recommendations
    - Development and maintenance of a dashboard
    - Early warning for risks and advantages

6.7.1.4 Promotion

The topic of CI and the benefits derived from it may remain a murky topic. Therefore, all promotion activities will be conducted by cold-calling and personal one-on-one demonstration with the clients. Referral bonuses will be allocated to clients who introduce additional customers to the business. Expansion into neighbouring countries will be conducted by piggybacking on South African clients who operate in adjacent territories.

6.8 Five Ws of Customer Analysis

The purpose of the 5Ws model of Customer Analysis is to allow the firm to research potential consumers, their purchasing habits, and how they utilise products in a structured manner (Data & Jakaria, 2021). The framework is implemented by asking five key questions during the research phase (von Leipzig et al., 2017):

6.8.1 Who is the target market?

- The target audience for this product and associated services are SMEs that have five or more staff members.
- The firm must be based in South Africa
- The firm should be willing to compete on a local and international stage

- The firm is willing to sign an ethics declaration

6.8.2 What tools will be used?

- The system will be app-based with the end-user having access to the mobile application once a package has been subscribed to
- The app will offer a convenient reporting process for the subscribers' employee, such as recording, photography and quick notes
- This information will be uploaded to a database where it will be cleansed and prepared for reporting
- The cleansed data is then presented to the strategic management staff for decision-making purposes

6.8.3 When can this offering be utilised by the client?

- The service offering may be suited for roll-out at any phase of the client's business life cycle
- Start-up:
    - Provides an environmental overview of the future playing field
- Pivot:
    - Assessing market readiness and adoption of the expansion
- Peak:
    - What actions can be taken to prolong the growth stage?
    - Is it time to expand into new areas?
    - Which products or services are now creating drag?

6.8.4 Why should the client choose this offering?

- Cost-effective and convenient platform
- App-based, therefore, no added technology resources needed
- Scarce skills such as programming and CI specialists are availed on demand without having to pay a salary to these individuals
- Immediate pipelines specific to the business are created
- Daily/weekly/monthly CI insights are provided

6.8.5 Where is this offering going to be launched and operated?

- As a large amount of research has been conducted in a South African specific environment, the initial launch and operations will be conducted in South Africa.

- However, due to the offering being remote and application-based, the expansion into neighbouring countries will be based on the market research on that country.
- Once sufficient traction has been achieved, further expansion into the rest of Africa will be conducted.

6.8.6 Products and Services

The product and service line-up will be tiered to best meet the need of the client. The entry level application deployment will be targeted at small businesses which will allocate a maximum of five "data collectors" from the firm. Enterprises services, however, could be higher and therefore the business is unable to price the service until the true needs can be ascertained.

Figure 36: Tiers of Services Offered

	Entry	Medium	Level Up	Enterprise
	5 users	10 users	20 users	More than 20 Users
	R100/Month	R200/Month	R400/Month	Contact Us
Basic Features	✓	✓	✓	✓
Secure Sign-in using your company details	✓	✓	✓	✓
Photo and URL capture	✓	✓	✓	✓
Company CI checklists		✓	✓	✓
Mission Notes		✓	✓	✓
Decision Maker Notifications			✓	✓
Custom branding			✓	✓
Offline mode			✓	✓
Sensitive data encryption			✓	✓
Live Support			✓	✓
Custom Features				✓

The allied service on offer to the client base is the ability to deploy subject matter experts to the client on a project basis. These subject matter experts will provide items such as ethical and technical CI training, recommendations based on collected data and policy development.

6.8.7 Ansoff Matrix

The purpose of the Ansoff Matrix is to help marketers identify opportunities to expand the business offering by entering new markets, introducing new products or a combination of both (Ansoff, Kipley, Lewis, Helm-Stevens, & Ansoff, 2019). The model has four distinct quadrants:

- **Market Penetration:** Increasing sales to the current market using the current product offering
- **Market Development:** Entering a new market with the current product offering

- **Product Development:** Targeting the current market with a new product
- **Diversification:** Entering a new market with a new product

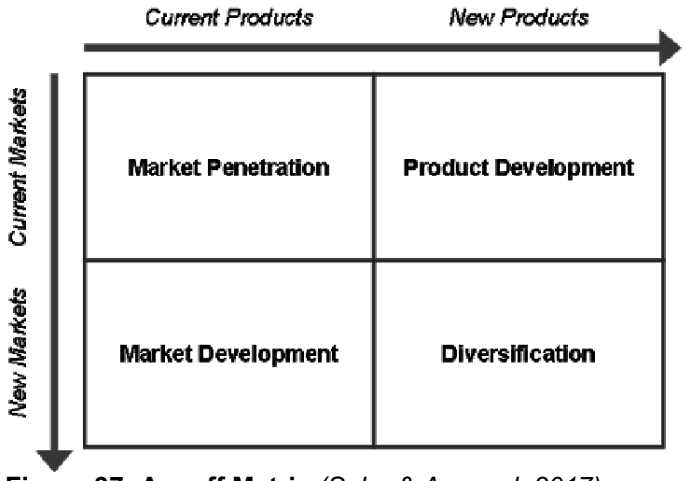


Figure 37: Ansoff Matrix *(Sahu & Agarwal, 2017)*

While the Ansoff Matrix assists the firm in developing a plan to introduce new products or enter new markets, it also can help firms identify the risk of such endeavours (Loredana, 2017). With reference to figure 36, the diversification strategy has the highest risk of failure. Mendoza-Abarca and Gras (2019) argue that a firm on start-up tends to assume that by default they are in the market penetration segment which is the lowest risk. However, the authors argue that this is untrue as a firm may be introducing a new product to a new clientele at start-up and would face the same risks as an established firm entering the diversification segment.

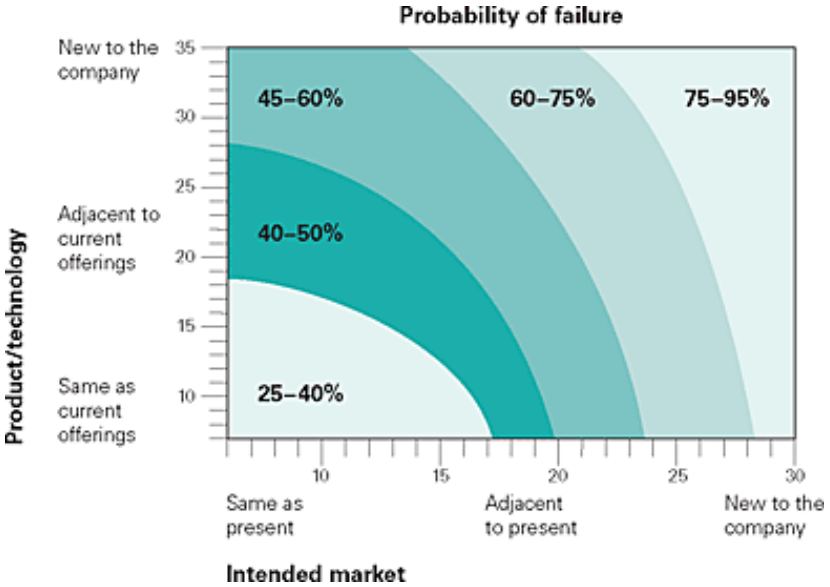


Figure 38: Probability of Failure *(Day, 2015)*

The proposed business venture will implement a two-phase approach.

6.8.7.1 Phase One:

From a risk-based approach, the firm will assume it is in the diversification segment. The rationale is that the firm is introducing a new service offering which the consumer may not be familiar with. The firm is a start-up so there is no current market, meaning the firm is entering a new market. The plan of action is to shift from the diversification mindset into the market penetration segment. During this time, we will develop the target market and focus on supplying a quality offering. Once this market appears to be reaching saturation, we will shift into phase two.

6.8.7.2 Phase Two

Phase two will see the business shift from focusing on the South African market to expansion on to the African continent. The core service offering will remain the same; however, local adjustments will be made to the offering to suit the new target markets.

6.8.8 Porter's Generic Strategies

During the literature review process, Porter's Generic Strategies were expanded upon. The purpose of this framework is to help firms identify a specific portion of the market where competitive advantage can be gained (Porter, 2011).

The proposed business venture will apply the differentiation strategy. According to Porter (2011) the differentiation strategy requires that the prospective offering is more appealing than any rival or substitute offerings. However, for the firm to successfully apply this strategy, the following items will be considered:

- A well-developed and innovative offering
- High quality service to the client
- A well-planned marketing campaign to ensure the client understands the benefits of the offering

6.9 Prospective Timelines

The purpose of a timeline is to provide guidance on when tasks need to be accomplished, what impact an overrun may have and what planning is required to mitigate against an overrun (O'Kane, 2018). Chao et al. (2007) recommend that when setting timelines, a project management approach is adopted. This aids firms in identifying critical tasks and determining the

inter-reliance between tasks. Kerzner (2018) suggests the following guidelines for creating project management-based timelines:

- Determine the project scope statement
- Break down the scope into smaller deliverables
- Identify which tasks are interdependent
- Estimate the duration to complete the task
- Define deadlines
- Set firm milestones

The planned timeline is based on an eight-month goal.

Table 21: Prospective Timeline

Task #	Task	Start Date	Due Date	Dependant
1	Finalise Customer Research	15 September 2021	30 November 2021	None
2	Proof of Concept Development	30 October 2021	31 December 2021	None
3	Beta Testing	01 January 2022	15 February 2022	2
4	Apply Lessons Learnt	15 January 2022	28 February 2022	3
5	Start Marketing	16 February 2022	MILESTONE	1,2,3
6	Finalise Business Admin	15 February 2022	31 March 2022	1,2
7	Update Strategy	16 February 2022	15 April 2022	4
8	Business Launch	30 April 2021	MILESTONE	1,2,3,4,5,6,7

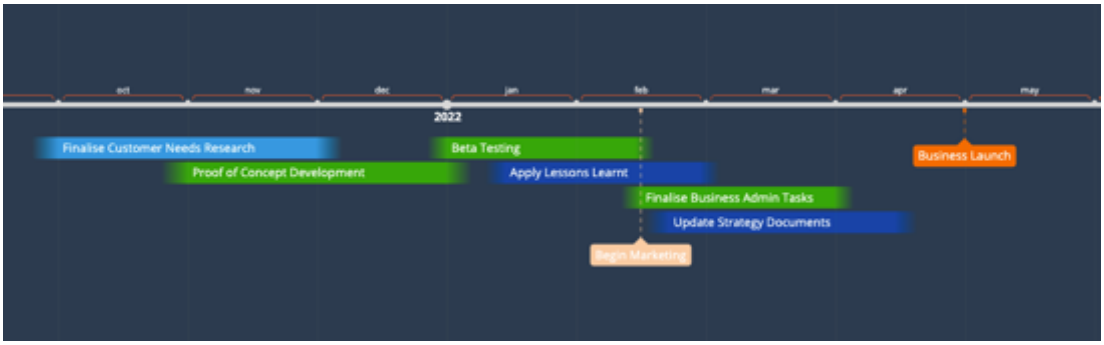


Figure 39: Prospective Timeline

6.10 Projected Financials

6.10.1 Financial Assumptions

The following financial projections are limited by the following assumptions:

- The future projections are based on current pricing.

- As the business has not launched, the staff complement may need to be amended to meet client needs at the time of business.
- While the cost to develop the application is based on the most viable service provider, the future needs of the business may warrant a change in provider.
- While a pragmatic stance has been adopted in forecasting future growth, it is not possible to predict the future growth on CI. As such, the growth may be more than documented.

6.10.2 Projected Profit and Loss

	FY2022	FY2023	FY2024
Revenue	**R444,600**	**R486,400**	**R554,600**
Direct Costs	**R242,400**	**R263,600**	**R301,490**
Gross Margin	R202,200	R222,800	R253,110
Gross Margin %	**45%**	**46%**	**46%**
Operating Expenses			
Marketing	R66,690	R72,960	R83,190
Office Space	R18,000	R18,000	R18,000
Total Operating Expenses	**R84,690**	**R90,960**	**R101,190**
Operating Income	**R117,510**	**R131,840**	**R151,920**
Interest Incurred			
Depreciation and Amortisation	R3,000	R3,000	R3,000
Gain or Loss from Sale of Assets			
Income Taxes	R32,063	R36,075	R41,698
Total Expenses	**R362,153**	**R393,635**	**R447,378**
Net Profit	**R82,447**	**R92,765**	**R107,222**
Net Profit / Sales	**19%**	**19%**	**19%**

6.10.3 Projected Balance Sheet

	FY2022	FY2023	FY2024
Cash	R283,241	R393,836	R529,549
Accounts Receivable	R0	R0	R0
Inventory			
Other Current Assets			
Total Current Assets	**R283,241**	**R393,836**	**R529,549**
Long-Term Assets	R15,000	R15,000	R15,000
Accumulated Depreciation	(R3,000)	(R6,000)	(R9,000)
Total Long-Term Assets	**R12,000**	**R9,000**	**R6,000**
Total Assets	**R295,241**	**R402,836**	**R535,549**
Accounts Payable	R6,243	R5,357	R6,129
Income Taxes Payable	R32,063	R36,075	R41,698
Sales Taxes Payable	R124,488	R136,192	R155,288
Short-Term Debt			
Prepaid Revenue			
Total Current Liabilities	**R162,794**	**R177,624**	**R203,115**
Long-Term Debt			
Long-Term Liabilities			
Total Liabilities	**R162,794**	**R177,624**	**R203,115**
Paid-In Capital	R50,000	R50,000	R50,000
Retained Earnings		R82,447	R175,212
Earnings	R82,447	R92,765	R107,222
Total Owner's Equity	**R132,447**	**R225,212**	**R332,434**
Total Liabilities & Equity	**R295,241**	**R402,836**	**R535,549**

6.10.4 Projected Cash Flow Statement

	FY2022	FY2023	FY2024
Net Cash Flow from Operations			
Net Profit	R82,447	R92,765	R107,222
Depreciation & Amortisation	R3,000	R3,000	R3,000
Change in Accounts Receivable	R0	R0	R0
Change in Inventory			
Change in Accounts Payable	R6,243	(R886)	R772
Change in Income Tax Payable	R32,063	R4,012	R5,623
Change in Sales Tax Payable	R124,488	R11,704	R19,096
Change in Prepaid Revenue			
Net Cash Flow from Operations	**R248,241**	**R110,595**	**R135,713**
Investing & Financing			
Assets Purchased or Sold	(R15,000)		
Net Cash from Investing	**(R15,000)**		
Investments Received	R50,000		
Dividends & Distributions			
Change in Short-Term Debt			
Change in Long-Term Debt			
Net Cash from Financing	**R50,000**		
Cash at Beginning of Period	R0	R283,241	R393,836
Net Change in Cash	R283,241	R110,595	R135,713
Cash at End of Period	**R283,241**	**R393,836**	**R529,549**

6.10.5 Profit and Loss Statement (With Monthly Detail)

FY2022	Sept '21	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	June '22	July '22	Aug '22
Total Revenue	**R31,000**	**R32,100**	**R33,200**	**R34,300**	**R35,400**	**R36,500**	**R37,600**	**R38,700**	**R39,800**	**R40,900**	**R42,000**	**R43,100**
Total Direct Costs	**R14,150**	**R15,250**	**R16,350**	**R17,450**	**R18,550**	**R19,650**	**R20,750**	**R21,850**	**R22,950**	**R24,050**	**R25,150**	**R26,250**
Gross Margin	R16,850	R16,850	R16,850	R16,850	R16,850	R16,850	R16,850	R16,850	R16,850	R16,850	R16,850	R16,850
Gross Margin %	**54%**	**52%**	**51%**	**49%**	**48%**	**46%**	**45%**	**44%**	**42%**	**41%**	**40%**	**39%**
Operating Expenses												
Marketing	R4,650	R4,815	R4,980	R5,145	R5,310	R5,475	R5,640	R5,805	R5,970	R6,135	R6,300	R6,465
Office Space	R1,500	R1,500	R1,500	R1,500	R1,500	R1,500	R1,500	R1,500	R1,500	R1,500	R1,500	R1,500
Total Operating Expenses	**R6,150**	**R6,315**	**R6,480**	**R6,645**	**R6,810**	**R6,975**	**R7,140**	**R7,305**	**R7,470**	**R7,635**	**R7,800**	**R7,965**
Operating Income	**R10,700**	**R10,535**	**R10,370**	**R10,205**	**R10,040**	**R9,875**	**R9,710**	**R9,545**	**R9,380**	**R9,215**	**R9,050**	**R8,885**
Interest Incurred												
Depreciation and Amortization	R250	R250	R250	R250	R250	R250	R250	R250	R250	R250	R250	R250
Gain or Loss from Sale of Assets												
Income Taxes	R2,926	R2,880	R2,833	R2,788	R2,741	R2,695	R2,649	R2,602	R2,557	R2,510	R2,464	R2,418
Total Expenses	**R23,476**	**R24,695**	**R25,913**	**R27,133**	**R28,351**	**R29,570**	**R30,789**	**R32,007**	**R33,227**	**R34,445**	**R35,664**	**R36,883**
Net Profit	**R7,524**	**R7,405**	**R7,287**	**R7,167**	**R7,049**	**R6,930**	**R6,811**	**R6,693**	**R6,573**	**R6,455**	**R6,336**	**R6,217**
Net Profit / Sales	**24%**	**23%**	**22%**	**21%**	**20%**	**19%**	**18%**	**17%**	**17%**	**16%**	**15%**	**14%**

	FY2022	FY2023	FY2024
Total Revenue	**R444,600**	**R486,400**	**R554,600**
Total Direct Costs	**R242,400**	**R263,600**	**R301,490**
Gross Margin	R202,200	R222,800	R253,110
Gross Margin %	**45%**	**46%**	**46%**
Operating Expenses			
Marketing	R66,690	R72,960	R83,190
Office Space	R18,000	R18,000	R18,000
Total Operating Expenses	**R84,690**	**R90,960**	**R101,190**
Operating Income	**R117,510**	**R131,840**	**R151,920**
Interest Incurred			
Depreciation and Amortization	R3,000	R3,000	R3,000
Gain or Loss from Sale of Assets			
Income Taxes	R32,063	R36,075	R41,698
Total Expenses	**R362,153**	**R393,635**	**R447,378**
Net Profit	**R82,447**	**R92,765**	**R107,222**
Net Profit / Sales	**19%**	**19%**	**19%**

6.10.6 Balance Sheet (With Monthly Detail)

FY2022	Sept '21	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	June '22	July '22	Aug '22
Cash	R57,840	R77,616	R97,535	R117,597	R137,802	R158,150	R178,641	R199,275	R220,052	R240,972	R262,035	R283,241
Accounts Receivable	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Total Current Assets	**R57,840**	**R77,616**	**R97,535**	**R117,597**	**R137,802**	**R158,150**	**R178,641**	**R199,275**	**R220,052**	**R240,972**	**R262,035**	**R283,241**
Long-Term Assets	R15,000	R15,000	R15,000	R15,000	R15,000	R15,000	R15,000	R15,000	R15,000	R15,000	R15,000	R15,000
Accumulated Depreciation	(R250)	(R500)	(R750)	(R1,000)	(R1,250)	(R1,500)	(R1,750)	(R2,000)	(R2,250)	(R2,500)	(R2,750)	(R3,000)
Total Long-Term Assets	**R14,750**	**R14,500**	**R14,250**	**R14,000**	**R13,750**	**R13,500**	**R13,250**	**R13,000**	**R12,750**	**R12,500**	**R12,250**	**R12,000**
Total Assets	**R72,590**	**R92,116**	**R111,785**	**R131,597**	**R151,552**	**R171,650**	**R191,891**	**R212,275**	**R232,802**	**R253,472**	**R274,285**	**R295,241**
Accounts Payable	R3,460	R3,713	R3,966	R4,219	R4,472	R4,725	R4,978	R5,231	R5,484	R5,737	R5,990	R6,243
Income Taxes Payable	R2,926	R5,806	R8,639	R11,427	R14,168	R16,863	R19,512	R22,114	R24,671	R27,181	R29,645	R32,063
Sales Taxes Payable	R8,680	R17,668	R26,964	R36,568	R46,480	R56,700	R67,228	R78,064	R89,208	R100,660	R112,420	R124,488
Short-Term Debt												
Prepaid Revenue												
Total Current Liabilities	**R15,066**	**R27,187**	**R39,569**	**R52,214**	**R65,120**	**R78,288**	**R91,718**	**R105,409**	**R119,363**	**R133,578**	**R148,055**	**R162,794**
Long-Term Debt												
Long-Term Liabilities												
Total Liabilities	**R15,066**	**R27,187**	**R39,569**	**R52,214**	**R65,120**	**R78,288**	**R91,718**	**R105,409**	**R119,363**	**R133,578**	**R148,055**	**R162,794**
Paid-In Capital	R50,000	R50,000	R50,000	R50,000	R50,000	R50,000	R50,000	R50,000	R50,000	R50,000	R50,000	R50,000
Retained Earnings												
Earnings	R7,524	R14,929	R22,216	R29,383	R36,432	R43,362	R50,173	R56,866	R63,439	R69,894	R76,230	R82,447
Total Owner's Equity	**R57,524**	**R64,929**	**R72,216**	**R79,383**	**R86,432**	**R93,362**	**R100,173**	**R106,866**	**R113,439**	**R119,894**	**R126,230**	**R132,447**
Total Liabilities & Equity	**R72,590**	**R92,116**	**R111,785**	**R131,597**	**R151,552**	**R171,650**	**R191,891**	**R212,275**	**R232,802**	**R253,472**	**R274,285**	**R295,241**

	FY2022	FY2023	FY2024
Cash	R283,241	R393,836	R529,549
Accounts Receivable	R0	R0	R0
Inventory			
Other Current Assets			
Total Current Assets	**R283,241**	**R393,836**	**R529,549**
Long-Term Assets	R15,000	R15,000	R15,000
Accumulated Depreciation	(R3,000)	(R6,000)	(R9,000)
Total Long-Term Assets	**R12,000**	**R9,000**	**R6,000**
Total Assets	**R295,241**	**R402,836**	**R535,549**
Accounts Payable	R6,243	R5,357	R6,129
Income Taxes Payable	R32,063	R36,075	R41,698
Sales Taxes Payable	R124,488	R136,192	R155,288
Short-Term Debt			
Prepaid Revenue			
Total Current Liabilities	**R162,794**	**R177,624**	**R203,115**
Long-Term Debt			
Long-Term Liabilities			
Total Liabilities	**R162,794**	**R177,624**	**R203,115**
Paid-In Capital	R50,000	R50,000	R50,000
Retained Earnings		R82,447	R175,212
Earnings	R82,447	R92,765	R107,222
Total Owner's Equity	**R132,447**	**R225,212**	**R332,434**
Total Liabilities & Equity	**R295,241**	**R402,836**	**R535,549**

6.10.7 Cash Flow Statement (With Monthly Detail)

FY2022	Sept '21	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	June '22	July '22	Aug '22
Net Cash Flow from Operations												
Net Profit	R7,524	R7,405	R7,287	R7,167	R7,049	R6,930	R6,811	R6,693	R6,573	R6,455	R6,336	R6,217
Depreciation & Amortization	R250	R250	R250	R250	R250	R250	R250	R250	R250	R250	R250	R250
Change in Accounts Receivable	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0	R0
Change in Accounts Payable	R3,460	R253	R253	R253	R253	R253	R253	R253	R253	R253	R253	R253
Change in Income Tax Payable	R2,926	R2,880	R2,833	R2,788	R2,741	R2,695	R2,649	R2,602	R2,557	R2,510	R2,464	R2,418
Change in Sales Tax Payable	R8,680	R8,988	R9,296	R9,604	R9,912	R10,220	R10,528	R10,836	R11,144	R11,452	R11,760	R12,068
Change in Prepaid Revenue												
Net Cash Flow from Operations	**R22,840**	**R19,776**	**R19,919**	**R20,062**	**R20,205**	**R20,348**	**R20,491**	**R20,634**	**R20,777**	**R20,920**	**R21,063**	**R21,206**
Investing & Financing												
Assets Purchased or Sold	(R15,000)											
Net Cash from Investing	**(R15,000)**											
Investments Received	R50,000											
Change in Long-Term Debt												
Net Cash from Financing	**R50,000**											
Cash at Beginning of Period	R0	R57,840	R77,616	R97,535	R117,597	R137,802	R158,150	R178,641	R199,275	R220,052	R240,972	R262,035
Net Change in Cash	R57,840	R19,776	R19,919	R20,062	R20,205	R20,348	R20,491	R20,634	R20,777	R20,920	R21,063	R21,206
Cash at End of Period	**R57,840**	**R77,616**	**R97,535**	**R117,597**	**R137,802**	**R158,150**	**R178,641**	**R199,275**	**R220,052**	**R240,972**	**R262,035**	**R283,241**

	FY2022	FY2023	FY2024
Net Cash Flow from Operations			
Net Profit	R82,447	R92,765	R107,222
Depreciation & Amortization	R3,000	R3,000	R3,000
Change in Accounts Receivable	R0	R0	R0
Change in Inventory			
Change in Accounts Payable	R6,243	(R886)	R772
Change in Income Tax Payable	R32,063	R4,012	R5,623
Change in Sales Tax Payable	R124,488	R11,704	R19,096
Change in Prepaid Revenue			
Net Cash Flow from Operations	**R248,241**	**R110,595**	**R135,713**
Investing & Financing			
Assets Purchased or Sold	(R15,000)		
Net Cash from Investing	**(R15,000)**		
Investments Received	R50,000		
Dividends & Distributions			
Change in Short-Term Debt			
Change in Long-Term Debt			
Net Cash from Financing	**R50,000**		
Cash at Beginning of Period	R0	R283,241	R393,836
Net Change in Cash	R283,241	R110,595	R135,713
Cash at End of Period	**R283,241**	**R393,836**	**R529,549**

6.11 One Page Business Plan Summary

Business Overview	
Mission	To be the catalyst for SME success, by converting comprehensive intelligence into actionable strategic insights.
Vision	Our vision is to make competitive intelligence accessible to SMEs on the African continent.
Market Analysis	
Target Market	SMEs in South Africa that are looking to develop their competitive advantage.
Problem	While SMEs conduct some level of CI, they still face high levels of failure. Through the literature review and survey, it was identified that SMEs conduct informal CI which may not be effective. The lack of effectivity could be linked to the lack of resources to adequality collect, analyse, and convert the CI into useful strategic insights. SMEs understand the importance of CI but lack effective application.
Value Proposition	The Proposed Business Venture is specifically designed and optimised for SMEs in South Africa that are experiencing limited access to actionable strategic insights in highly competitive markets. Our formalised CI offering is a leading consulting service that helps you gain strategic insights through business intelligence, access to multiple data sources, and access to high level CI and unlike competitors, our services offer SMEs access to CI practices which are usually limited to large companies.
Marketing and Sales	
Channels	Relationship building through physical interaction such as networks, cold calling, and referrals
Pricing Strategy	Differentiation Strategy
Expansion Strategy	From a risk-based approach, the firm will assume it is in the diversification segment. The rationale is that the firm is introducing a new service offering which the consumer may not be familiar with. The firm is a start-up so there is no current market, meaning the firm is entering a new market. The plan of action is to shift from the diversification mindset into the market penetration segment. During this time, we will develop the target market and focus on supplying a quality offering. Once this market appears to be reaching saturation, we will shift into phase two. Phase two will see the business shift from focusing on the South African market to expansion on to the African continent. The core service offering will remain the same; however, local adjustments will be made to the offering to suit the new target markets.
Goals and Objectives	
Goal One	To grow the customer base by reaching 100 clients by counting new subscriptions in the first two years of operation.
Goal Two	To enter neighbouring markets by monitoring interests of firms in next two years.
Goal Three	To develop subject matter expert status monitoring blog post interaction with the aim of reaching 1000 interactions per post in the next two years.

Time frame		
Task	**Start Date**	**Due Date**
Finalise Customer Research	15 September 2021	30 November 2021
Proof of Concept	30 October 2021	31 December 2021
Beta Testing	01 January 2022	15 February 2022
Apply Lessons Learnt	15 January 2022	28 February 2022
Start Marketing	16 February 2022	MILESTONE
Finalise Business Admin	15 February 2022	31 March 2022

Update Strategy	16 February 2022	15 April 2022
Business Launch	30 April 2021	MILESTONE

7 SUMMARY, LIMITATIONS, AND RECOMMENDATIONS

7.1 Summary

The aim of this research study was to determine if SMEs in South Africa can extract value from conducting CI formally, using both primary and secondary data sources, and investing in CI-specific internal capacity. The outcome of this study was used to determine if a third-party CI firm can be developed to address the CI needs of SMEs in South Africa. The research considered the benefits large firms with increased resources could extract from CI. The target sample of SMEs in South Africa was then studied to determine if the same value can be derived while considering the resource barriers facing SMEs.

It was identified that formalising a CI process led to increased value. The literature reviewed provided a guideline of defining what a formal system is. Firms which conducted all the processes as stipulated by the framework and had company policies governing CI extracted more value from the process than firms which conducted CI outside the framework.

According to the sample under study, the preferred data source for CI is secondary sources. However, multiple authors argued that secondary data sources, while more cost effective and easier to attain, may need adequate quality control to ensure it is valid and reliable. Most firms reported secondary sources were not subjected to quality control measures. The collection of primary data was driven by the importance of the KIQ being answered. This was in line with previous research and showed that for firms that invested more in gathering quality data, the more pertinent and strategically important the outcome was.

The cost of specialist CI personnel and systems may be a barrier to the application of CI. While most firms reported to have invested in systems, the definition of “system” was ambiguous, and the complexity of the system was not studied. While large firms have been able to create additional value from implementing and developing internal capacity to conduct CI, there was insufficient support to prove that SMEs can generate the same level of value after investing in CI systems and personnel.

7.2 Limitations

This study focused on understanding the CI mindset of SMEs in South Africa. To gather the data on the sample population, a survey with a five-point Likert scale was introduced. This study would have benefited from a four-point scale with no neutral responses. While the survey received 701 responses, only 303 were valid for use. Of the respondents 57% were not eligible to complete the survey, as they fell outside the confines of this study, which focused only on SMEs. To be

representative of the population, the study required 377 valid responses. Only 303 valid responses were received, which means the study is not descriptive of the population.

7.3 Recommendations

It is recommended that future studies identify the CI appetite per sector. This would help identify the trends of each sector and provide a better overview of the adoption of CI in each sector. This will help determine the value attributed by each sector to CI, as well as identify any underlying barriers that may be synonymous with a specific sector.

It is also recommended that future studies measure the effect an intervention, including training of employees, has on the long-term value perception of CI. This can be further enhanced by measuring the competitiveness of the firm prior to the intervention and post the intervention after a specified period.

Lastly, further studies could consider analysing other factors which may have an impact on CI, such as:

- The firm's geographic location
- Strategic stakeholders' education
- Analysing business insights such as the firm's finances.

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APPENDIX 1:

Data collection instrument

The Business Venture Proposal utilised the following questions that were developed by Calof and Breakspear (1999). Muller, Saayman, Viviers, and Calof (2002) added a Likert scale to quantitatively measure the responses received by the recipients. The questions were amended to focus on the scope of the size of the organisations being studied.

The attached questions were inserted into an online questionnaire system and the link to the questionnaire was sent to the recipients.

Table 22: Question Bank

Nr.	Conditional Questions	Perimeters derived from DSBD (2019) guidelines: (Please refer to figure one)
1	Please select the firm's industry of operation	Column One of Guidelines
2	Please select the income band of the firm	Column Three of Guidelines

The conditional questions acted as a filter to ensure that only the target sample complete the questionnaire. Respondents who did not meet the criteria were routed to an exit page. The respondents who did meet the target sample perimeters were permitted to continue on to question bank.

Nr.	Question	Scoring Scale as devised by Muller, Saayman, Viviers, and Calof (2002): Likert Scale from 1 – 5 with 1 being disagree to 5 being absolutely agree
15	The company regularly profiles direct and indirect competitors	1 – 5
16	CI exercises are conducted on all stakeholders whether a competitor, customer or supplier.	1 – 5
17	Secondary sources of information are the preferred source when gathering CI about key competitors	1 – 5
18	The firm has guidelines to aid the individual or team conducting the Intelligence exercise to ensure that legal and ethical boundaries are not overstepped.	1 – 5
19	Only companies that compete with the firm need to be monitored	1 – 5
20	The firm actively generates reports on competition and possible Competitive advantages that have the potential to be exploited.	1 – 5
21	Global business and technology trends are monitored to identify potential new competitors or substitute products.	1 – 5

22	External stakeholders such non-governmental, action groups and regulatory bodies are actively monitored to mitigate any risks that may be posed by such groups.	1 – 5
23	An in-depth analysis is generated once Intelligence is gathered. This includes identifying as many outcomes as possible that the competitor may embark on and creating mitigating actions for each risk posed.	1 – 5
24	Employees actively report possible CI to the strategic stakeholders in the firm.	1 – 5
25	The firm uses external networks who can assist the CI individual or team in gathering and understanding the information.	1 – 5
26	The firm interrogates competitors' strategies to create mitigation plans for their actions	1 – 5
27	Tools such as SWOT and Gap analysis are carried out to identify potential risks or advantages.	1 – 5
28	The company profiles the management of competing companies	1 – 5
29	Strategic decision makers in the enterprise supports Intelligence activities.	1 – 5
30	The company renumerates employees who actively partake in CI activities	1 – 5
31	The Intelligence needs of the firm are actively communicated with the employees	1 – 5
32	Employees have access to a convenient platform for reporting CI.	1 – 5
33	CI reporting is promoted among all internal stakeholders and easily passed on to the required end user.	1 – 5
34	Scheduled meetings are held to understand the strategic teams CI requirements.	1 – 5
35	The strategic team regularly use the gathered Intelligence for decision making.	1 – 5
36	The company actively scans the market for new technology which may create a competitive advantage.	1 – 5
37	The firm is agile in the way CI is gathered and can maximise the data gathering process.	1 – 5
38	Only those privies to the CI findings are eligible to receive feedback	1 – 5
39	The firm has dedicated business Intelligence software to aid in the gathering, analysing, and disseminating of CI.	1 – 5
40	The firm uses a data sharing system which is specifically designed to facilitate and support our CI activities.	1 – 5
41	An internal register in maintained for skills and knowledge of employees regarding CI	1 – 5
42	Strategic decision makers are continuously surveyed to gather their needs regarding CI. Key corporate decision-makers are regularly surveyed/interviewed to verify that the Intelligence products produced for them, satisfy their needs, and provide value.	1 – 5
43	Information is checked for accuracy by cross referencing at least one additional data source.	1 – 5
44	Employees are briefed on what Intelligence to gather when attending trade shows, networking events or similar.	1 – 5
45	The mindset and risk appetite of the strategic role players in competing firms is studied and understood.	1 – 5
46	The initial and exit interviews of staff members are used to gather as a CI tool.	1 – 5

47	The firm has a single funnel for receiving CI	1 – 5
48	Employees can request CI training	1 – 5
49	CI results have a direct impact on the direction and strategy of the firm.	1 – 5
50	The firm has multiple tools and templates to ensure that CI is reported in the most effective manner	1 – 5
51	The firm has dedicated staff to conduct CI	1 – 5
52	Majority of the employees whether involved or not, understand CI	1 – 5
53	CI exercises are evaluated for accuracy and validity	1 – 5
54	Efficient use of CI creates Competitive advantage	1 – 5
55	All available information on the firms' competitors is continuously gathered.	1 – 5
56	All staff involved in the gathering of CI have attended more than one training intervention	1 – 5
57	The company is open to sharing information internally	1 – 5
58	Sources are graded and recorded based on reliability	1 – 5
59	CI is conducted both actively (when requested to gather information) and passively (as a surveillance task)	1 – 5
60	Employees have received training to conduct CI. This may include how to gather secondary data or the ability to ask pertinent questions from the prospective knowledge source.	1 – 5
61	The firm has developed and documented long term plans for conducting CI	1 – 5
62	The individuals or team responsible for conducting CI can present their findings to the strategic decision makers in the firm.	1 – 5
63	Once the information has been gathered, the source is classified according to the reliability of the information gained	1 – 5
64	The firm knows the strengths of the employees and their ability to conduct CI whether formally or informally.	1 – 5
65	Conducting CI in an on-going process	1 – 5
66	Conducting CI is an important strategic management tool	1 – 5

APPENDIX 2.1:

One-page bio of the researcher including declaration of interest in the research and funders, if any

WORK EXPERIENCE

Founder/Chief Executive Officer (2021–Present)
Aviate Innovate Navigate (Pty) Ltd

Aviation Advisor (2020 – 2020)
SGS South Africa

Accident and Serious Incident Investigator (2017 – 2020)
South African Civil Aviation Authority

Aircraft Maintenance Engineer (2009 – 2017)
South African Airways Technical

Soldier (2004 – 2006)
South African Army

EDUCATION

Master of Business Administration (2019 – 2021)
University of The Witwatersrand

PG Diploma in Business Administration (2017 - 2017)
University of The Witwatersrand

Bachelor of Commerce (Management) (2011 – 2016)
University of South Africa

APPENDIX 2.2:

Ethics documentation (Information Sheet)

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Dear Sir / Madam,

My name is Muhammed Khalid Fadal (Student number:17646464) and I am a Master of Business Administration Student at the University of the Witwatersrand, Johannesburg. As part of my studies, I must undertake a research project, and I am investigating to understand the CI landscape in South Africa, with a specific focus on SMEs under the supervision of Ms. Semukele Mlotshwa. This research project aims to identify the key gaps, namely: knowledge, resource and application shortcomings which prevent SME's from conducting formalised CI.

As part of this project, I would like to invite you to take part in answering an online questionnaire. This activity will involve the use of an online questionnaire and will take twenty minutes to complete.

There will be no personal costs to you if you choose to participate in this project. You will not receive any direct benefits from participation, but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The online questionnaire will be completely confidential and anonymous as I will not be asking for your name (except for completing the consent form) or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else.

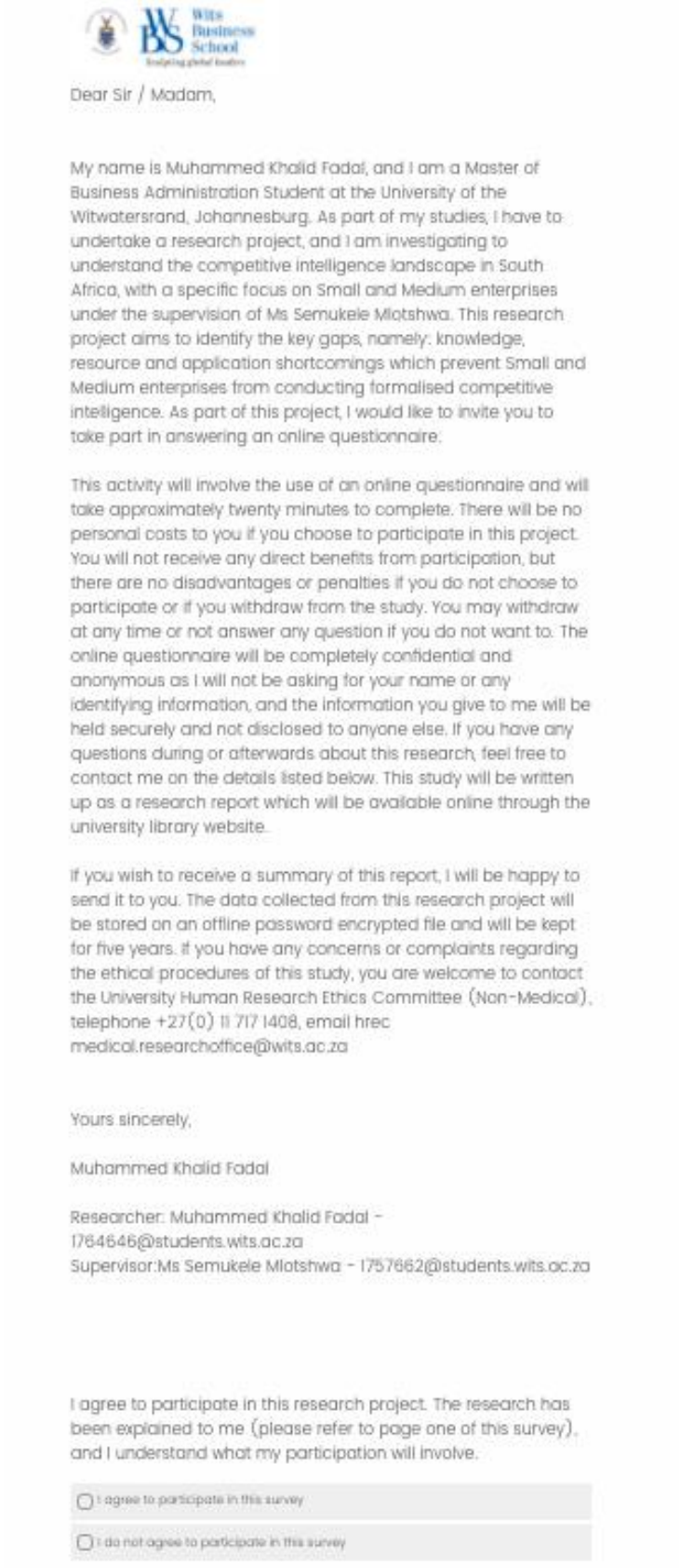
If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. The data collected from this research project will be stored on an offline password encrypted file and will be kept for five years. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrec-medical.researchoffice@wits.ac.za

Yours sincerely,
Muhammed Khalid Fadal

Researcher:
Muhammed Khalid Fadal
1764646@students.wits.ac.za

Supervisor:
Ms. Semukele Mlotshwa
1757662@students.wits.ac.za

Figure 40: Page one of online Questionnaire



Dear Sir / Madam,

My name is Muhammed Khalid Fadal, and I am a Master of Business Administration Student at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating to understand the competitive intelligence landscape in South Africa, with a specific focus on Small and Medium enterprises under the supervision of Ms Semukele Mlotshwa. This research project aims to identify the key gaps, namely: knowledge, resource and application shortcomings which prevent Small and Medium enterprises from conducting formalised competitive intelligence. As part of this project, I would like to invite you to take part in answering an online questionnaire.

This activity will involve the use of an online questionnaire and will take approximately twenty minutes to complete. There will be no personal costs to you if you choose to participate in this project. You will not receive any direct benefits from participation, but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The online questionnaire will be completely confidential and anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website.

If you wish to receive a summary of this report, I will be happy to send it to you. The data collected from this research project will be stored on an offline password encrypted file and will be kept for five years. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrec medical.researchoffice@wits.ac.za

Yours sincerely,

Muhammed Khalid Fadal

Researcher: Muhammed Khalid Fadal - 1764646@students.wits.ac.za
Supervisor:Ms Semukele Mlotshwa - 1757662@students.wits.ac.za

I agree to participate in this research project. The research has been explained to me (please refer to page one of this survey), and I understand what my participation will involve.

- [ ] I agree to participate in this survey
- [ ] I do not agree to participate in this survey

APPENDIX 2.3:

Ethics documentation (Consent Form)



Evaluating value created by the use of Competitive Intelligence among Small and Medium Enterprises in South Africa

Muhammed Khalid Fadal (Student Number:1764646)

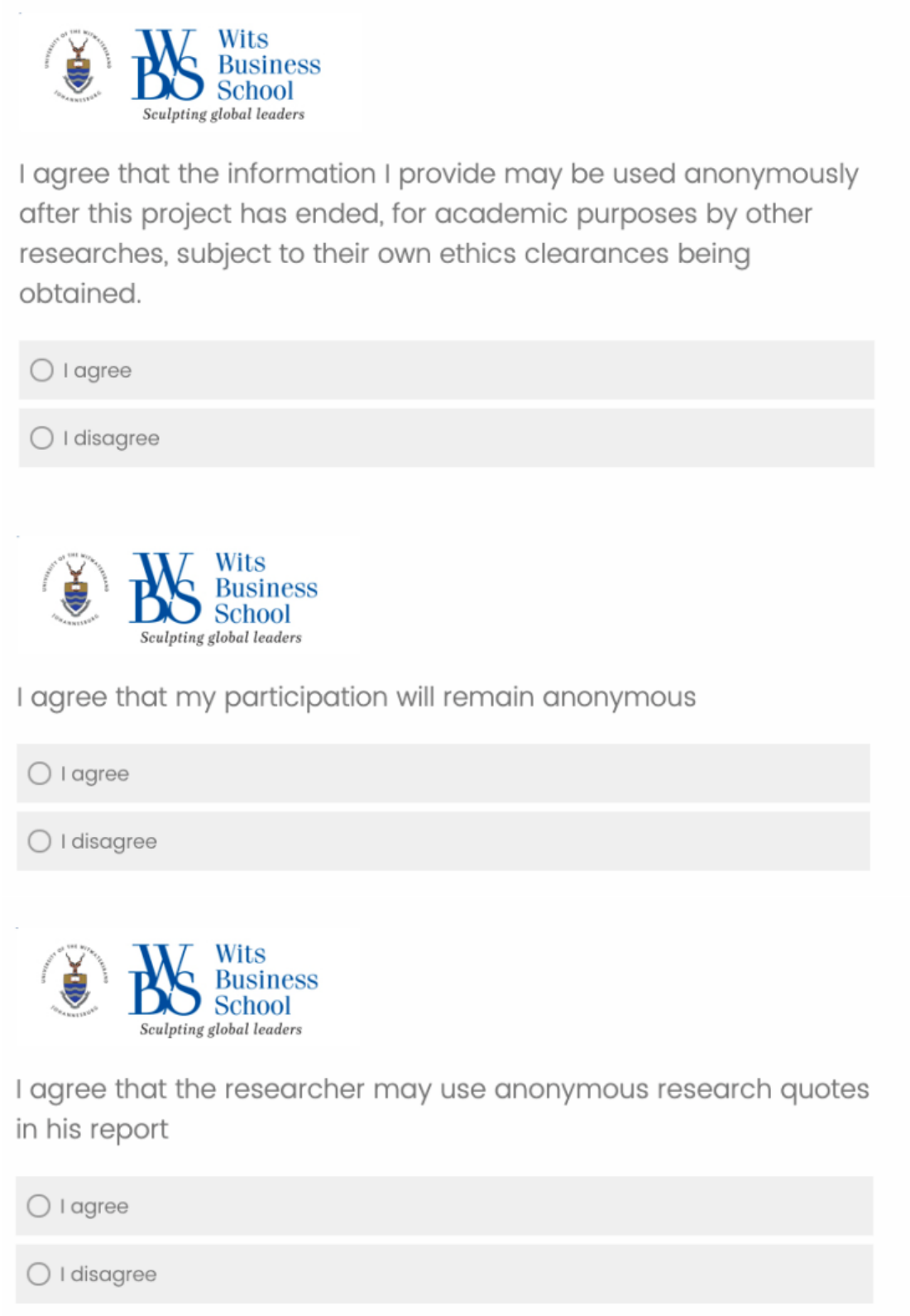
I, ……., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below).

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
I agree that the information I provide may be used anonymously after this project has ended, for academic purposes by other researchers, subject to their own ethics clearance being obtained.	YES	NO

…… (signature)
…… (name of participant)
…… (date)

Figure 41: *Consent Questions requiring participants to agree prior to starting with the Questionnaire*



APPENDIX 3.1

Table 23: Mean Score Per Question for CI_Conducting

Question Nr.	Question	Average Score
Q15	The company regularly profiles direct and indirect competitors	2,96
Q18	The firm has guidelines to aid the individual or team conducting the Intelligence exercise to ensure that legal and ethical boundaries are not overstepped.	3,12
Q23	An in-depth analysis is generated once Intelligence is gathered. This includes identifying as many possible outcomes as possible that the competitor may embark on and creating mitigating actions for each risk posed.	3,10
Q24	Employees actively report CI to the strategic stakeholders in the firm.	3,16
Q26	The firm interrogates competitors' strategies to create mitigation plans for their actions	3,12
Q27	Tools such as SWOT and Gap analysis are carried out to identify potential risks or advantages.	3,16
Q29	Strategic decision makers in the enterprise supports Intelligence activities.	2,90
Q33	CI reporting is promoted among all internal stakeholders and easily passed on to the required end user.	3,13
Q34	Scheduled meetings are held to understand the strategic teams CI requirements.	3,03
Q35	The strategic team regularly use the gathered Intelligence for decision making.	3,02
Q38	Only those privy to the CI findings are eligible to receive feedback	3,01
Q42	Strategic decision makers are continuously surveyed to gather their needs regarding CI. Key corporate decision-makers are regularly surveyed/interviewed to verify that the Intelligence products produced for them, satisfy their needs, and provide value.	2,92
Q45	The mindset and risk appetite of the strategic role players in competing firms is studied and understood.	3,04
Q49	CI results have a direct impact on the direction and strategy of the firm.	3,24
Q52	Majority of the employees whether involved or not, understand CI	3,04
Q57	The company is open to sharing information internally	3,13
Q61	The firm has developed and documented long term plans for conducting CI	3,06
Q62	The individuals or team responsible for conducting CI can present their findings to the strategic decision makers in the firm.	3,14
Q65	Conducting CI in an on-going process	3,08

Q66	Conducting CI is an important strategic management tool	3,10

APPENDIX 3.2

Table 24: Mean Score Per Question for CI_Sources

Question Nr.	Question	Average Score
Q16	CI exercises are conducted on all stakeholders whether a competitor, customer, or supplier.	3,17
Q17	Secondary sources of information are the preferred source when gathering CI about key competitors	3,42
Q19	Only companies that compete with the firm need to be monitored	3,14
Q21	Global business and technology trends are monitored to identify potential new competitors or substitute products.	3,10
Q22	External stakeholders such non-governmental, action groups and regulatory bodies are actively monitored to mitigate any risks that may be posed by such groups.	2,91
Q25	The firm uses external networks who can assist the CI individual or team in gathering and understanding the information.	3,06
Q28	The company profiles the management of competing companies	3,30
Q36	The company actively scans the market for new technology which may create a competitive advantage.	3,03
Q37	The firm is agile in the way CI is gathered and can maximise the data gathering process.	3,10
Q43	Information is checked for accuracy by cross referencing at least one additional data source.	2,87
Q46	The initial and exit interviews of staff members are used to gather as a CI tool.	3,05
Q53	CI exercises are evaluated for accuracy and validity	3,01
Q55	All available information on the firms' competitors is continuously gathered.	3,04
Q58	Sources are graded and recorded based on reliability	2,94
Q59	CI is conducted both actively (when requested to gather information) and passively (as a surveillance task)	3,07
Q63	Once the information has been gathered, the source is classified according to the reliability of the information gained	3,08

APPENDIX 3.3

Table 25: Mean Score Per Question for CI_Capacity

Question Nr.	Question	Average Score
Q24	Employees actively report possible CI to the strategic stakeholders in the firm.	3,16
Q30	The company renumerates employees who actively partake in CI activities.	3,11
Q31	The Intelligence needs of the firm are actively communicated with the employees	3,04
Q32	Employees have access to a convenient platform for reporting CI.	2,98
Q33	CI reporting is promoted among all internal stakeholders and easily passed on to the required end user.	3,12
Q37	The firm is agile in the way CI is gathered and can maximise the data gathering process.	3,10
Q39	The firm has dedicated business Intelligence software to aid in the gathering, analysing, and disseminating of CI.	2,95
Q40	The firm uses a data sharing system which is specifically designed to facilitate and support our CI activities.	3,04
Q41	An internal register in maintained for skills and knowledge of employees regarding CI	3,02
Q44	Employees are briefed on what Intelligence to gather when attending trade shows, networking events or similar.	3,16
Q46	The initial and exit interviews of staff members are used to gather as a CI tool.	3,05
Q47	The firm has a single funnel for receiving CI	2,98
Q48	Employees can request CI training	3,13
Q50	The firm has multiple tools and templates to ensure that CI is reported in the most effective manner	3,12
Q51	The firm has dedicated staff to conduct CI	3,10
Q52	Majority of the employees whether involved or not, understand CI	3,04
Q56	All staff involved in the gathering of CI have attended more than one training intervention	3,03
Q60	Employees have received training to conduct CI. This may include how to gather secondary data or the ability to ask pertinent questions from the prospective knowledge source.	3,01
Q62	The individuals or team responsible for conducting CI can present their findings to the strategic decision makers in the firm.	3,14
Q64	The firm knows the strengths of the employees and their ability to conduct CI whether formally or informally.	3,19

APPENDIX 3.4

Table 26: Mean Score Per Question for CI_Value

Question Nr.	Question	Average Score
Q20	The firm actively generates reports on competition and possible Competitive advantages that have the potential to be exploited.	3,08
Q36	The company actively scans the market for new technology which may create a competitive advantage.	3,03
Q49	CI results have a direct impact on the direction and strategy of the firm.	3,24
Q54	Efficient use of CI creates Competitive advantage	3,15