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Assessment of the relationship between location decision factors and performance of SMMEs in Johannesburg

by

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ABSTRACT

Location decision is one of the ten major decisions in operations management. It is among the most vital decisions any SMME and any other businesses will ever make. The aim of this dissertation is to presents the results of the relationship between location decision factors and the performance of manufacturing and services SMMEs in Johannesburg.

Besides all opportunities and advantages South African SMMEs may offer, such as stimulate both economic growth and job opportunities, they face numerous challenges including poor location decisions that affect their performance. Location decision determines the success and failure of any businesses. Therefore, when a location decision process is not properly executed, they eventually lead to the failure of a business.

Based on existing relevant literature, this dissertation identified location decision factors and sub-factors used in this study. A convergent mixed method approach which included a self-administered questionnaire and semi-interviews were used. Purposive sampling was implemented for quantitative and qualitative methods. The quantitative data were collected from a sample of 211 manufacturing and service SMMEs owners/managers. The interviews were conducted on five SMMEs owners/managers. The quantitative data was analysed with the Statistical Package for the Social Sciences (SPSS) software Version 26. Descriptive statistics were used to describe the characteristics of the sample. Reliability analysis with Cronbach's alpha was used to verify the internal uniformity of the data. Thereafter, an exploratory factors analysis was used to reduce and summarise variables as well as to explore the theoretical structure of the phenomena. A dependent sample T-test was conducted to determine whether a gap between the importance and satisfaction of location decision factors exists. Lastly, Pearson correlation analysis and multiple regression analysis were used to explore the relationship between location decision factors and business factors to predict the result of the research.

The findings reveals that ten factorised variables which include cost, employment creation, safe environment, basic needs, social climate, proximity to supplier, proximity to competitors, proximity to customers, rental rate, and green building presented a significant gap between the importance and satisfaction of location decision factors.

In terms of the importance of location factors, the Pearson correlation analysis reveals that cost, basic needs, social climate, proximity to supplier, proximity to competitors, proximity to customers, rental rate, and green building have positive relationships with business performance. On the other hand, workforce in place and labour qualification present negative correlations with business performance. In terms of the satisfaction, costs, safe environment, basic needs, social climate, proximity to competitors, and green building revealed positive correlations with business performance. Lastly, the multiple regression analysis developed regression equations to predict the dependent variables (business performance).

The qualitative analysis used semi-structured interviews and the thematic analysis was used to analyse the data collected. A central theme emerged from the thematic analysis method. The central theme refers to the SMMEs owners/managers experience on location decision. Five theme extracted from the semi-interview were developed. The results show that all the five respondent are satisfied with their current business due to their past experiences of location decision.

This study is one of the few empirical studies on location decision that contributes to the theory, knowledge, and practice of operations management research. This research also aims to update the literature on location decision, since very few research on this topic have been conducted during the past years, particularly in South Africa.

Future study should be conducted in other region of South Africa and internationally for comparative purposes. Another comparative study should be conducted on different type of SMMEs industries. An empirical investigation should be conducted on what could be the cause of the significant gap identified between the importance and satisfaction of location decision factors. Lastly, interviews on a large sample should be conducted in order to determine whether new theme emerges.

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LIST OF ABBREVIATIONS

EFA:	Exploratory Factor Analysis
FA:	Factor analysis
GP:	Gauteng Province
KMO:	Kaiser-Meyer-Olkin and Bartlett's test
N:	Population
NSB Act:	National Small Business Amendment Acts
n:	Sample size
SPSS:	Statistical Package for the Social Sciences
SA:	South Africa
SMMEs:	Small, Micro, Mediums Enterprises
OP:	Operations management
PIC:	Provincial Investment Portfolios
USA:	United States of America
UN:	United Kingdom
REC:	The Regional Economic Communities
AEC:	African Economic Community
UMA:	Arab Maghreb Union
COMESA:	Common Market for Eastern and Southern Africa
CEN-SAD:	Community of Sahel-Saharan States
EAC:	East African Community
ECCAS:	Economic Community of Central African States
ECOWAS:	Economic Community of West African States
IGAD:	Intergovernmental Authority on Development
SADC:	Southern African Development Community
APR:	Africa Progress Report
GEMR:	Global Entrepreneurship Monitor Report
FDI:	Foreign Direct Investment

CHAPTER 1: INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Small, micro and medium enterprises (SMMEs) have been considered important by governments because they have an effect on the socio-economic stability of a country (Mbonyane, 2006; Barnard, Kritzinger, and Kruger, 2011; Fatoki, 2014; jili, Masuku, and Selepe, 2016; Lumbwe, Nwobodo-Anyadigwu, and Mbohwa, 2018; Bushe, 2019; Govuzela and Mafini, 2019; Rahman and Kabir, 2019). They contribute significantly to the alleviation of poverty and reduce the unemployment rate. In addition, they stimulate economic growth, and create job opportunities (Makakane, 2014; Rabothata, 2017; Cant and Rabie, 2018). Furthermore, SMMEs generate income within poor and disadvantaged communities in developing countries (Maloka, 2013; Lekhanya, 2015; Lekhanya, Olajumoke, and Nirmala, 2017).

SMMEs contribute significantly to the South African economy (Reynolds, Fourie, and Erasmus, 2019). The South African government has encouraged SMMEs in the sense that, in 2014, they created a Ministry of Small Business Development to recognise the important role SMMEs play in economic growth, innovation, and unemployment rate reduction (BER, 2016). According to the Provincial Investment Portfolios of 2017, SMMEs are essential for South Africa's economic development (Bushe, 2019; Govuzela and Mafini, 2019). Nevertheless, despite the important role played by SMMEs in South Africa, they are still experiencing location decision challenges (Manala, 2018, Lumbwe et al. 2018).

Location decision is a choice to be made at some stage by any business (Kalantari, 2013). It is a major operational decision and is part of an enterprise's planning process strategy (Blair and Premus, 1987). Generally, such decision has long-term consequences, it is cost intensive, and difficult to reverse (Aswathappa and Bhat, 2010; Lumbwe et al. 2018).

Beside the fact that there are similarities among enterprises when making a location decision, each enterprise selects a location for reasons specific to their business (Maier and Tödtling, 1997; Smith and Clinton, 2009). Generally, most SMMEs initially start their businesses from informal locations such as personal family homes, from where they progressively grow and change to bigger formal premises that provide opportunities for supplementary jobs (Donaldson and Smit, 2011; Banard et al., 2011; Lumbwe et al. 2018). Business owners or managers also tend to choose a location mainly based on the availability or the accessibility of information (Bjelkemyr, Wiktorsson, Bruch, Rösiö,

and Bellgran, 2013). Other business owners or managers select a location based on the availability of vacant premises. One of the reasons SMMEs fail is because business owners or managers select a location without firstly completing an absolute analysis of the potential location alternatives (Pickle and Abrahamson, 1990). Therefore, if the location decision is particularly poor, the business might not survive, even with proper financing and high managerial ability (Mbonyane, 2006).

1.2. DEFINITION OF SMMEs

Small, micro, and medium enterprises (SMMEs) have been defined differently according to the area where they are situated and the conditions under which they operate. Therefore, a definition of SMMEs in Europe or America is not exactly the same as in South Africa, particularly when the size of the business is involved. Because this study is conducted in South Africa, the definition of SMMES as defined in Section 1 of the National Small Business Act of 1996 and amended by the National Small Business Amendment Act (2003) is observed:

"…a separate and distinct business entity, including co-operative enterprises and nongovernmental organisations, managed by one owner or more, which, including its branches or subsidiaries, if any, is predominantly carried out in any sector or sub-sector of the economy mentioned in Column I of Schedule 14 …" (Banking Association of South Africa BASA, 2017).

SMMEs are sub-divided into four groups (NTSIKA, 1997, The White Paper, 1995): The first group is survivalist enterprises which involve people who cannot find a job and who are engaged in certain activities which generate the minimum standard income. The owners of such businesses invest small capital and are unskilled in the particular field in which they are operating. The second group, micro-enterprises, also called very small business, are usually managed by the owner alone. These type of businesses lack "formality" such as business licences and value-added tax (VAT) registration. The owner of this type of business has either basic technical or business skills. Nevertheless, unlike survivalist, many micro-enterprise are more likely to become viable small businesses. The third group refers to small enterprises which are well-established and have the ability of employing from 5 to 50 employees. Small enterprises are generally either controlled directly by the owner or a manager. These small businesses are likely to conform to formal registration requirements. Finally, medium enterprises, also controlled by the owner or manager,

have the potential to employ up to 200 employees (The White Paper, 1995; Joubert, and Schoeman, 1999; Malefane, 2013; Le Fleur, Koor, Chetty, Ntshangase, Mackenzie, and Rawoot, 2014).

1.3. RESEARCH GAP ANALYSIS

This section examines relevant researches done in previous studies. The research gap analysis considers the nature of the research, the year published, research area, the sample size, methodology, and the results and recommendations for future study. The critical assessment of existing literature starts with researching relevant publications through web search engine such as Google Scholar, Researchgate, and Ujoogle. The key word used to identify relevant publications in this study were "location decision", "location factors", "business performance", "manufacturing and service location decision", and "SMMEs". The timeframe for the search was from 2011 to 2019. The search only focused on publications that were published in English and were carefully evaluated by means of titles and abstracts. Each publication identified was critically reviewed before deciding whether it could be incorporated in the analysis. Publications that were not relevant to this study were not considered.

It was observed that some studies have researched on the effect of the location decision on businesses. The following section shows all critical assessed studies:

In the study of Chatzoglou, Chatzoudes, Petrakopoulou, and Polychrou (2018) conducted in Greece, factors affecting investors' manufacturing facility location decisions were examined. They aimed to integrate the most significant measures used in the global literature and conceptualise an original research decision model. Structural Equation Modelling was implemented to examine the data collected. They used a mixed method approach. The findings of their research indicated that the main location decision factors impacting decisions of investors are "cost issues", "market characteristics", and "infrastructure". Furthermore, "subsidies" and "tax incentives" provided by the central government significantly influence the decision of entrepreneurs to invest in the precise area. The results of their research could not be generalised because the data was collected during a time of economic crisis, which had specific structural standards and could barely attract and retain new investments. They therefore recommended that future research should gather qualitative data regarding the most important location factors. They further recommended that future studies should conduct similar research by considering and validating location decision factors that are

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used in their research in order to compare future results with developed countries that face similar challenges.

Fusková, Hanáčková, and Gubáňová (2018) conducted their research in the Slovak Republic. The purpose of their research was to determine whether certain location factors are important for enterprises or not. Data was collected from 275 businesses by means of a questionnaire survey. In total, sixty seven location decision factors belonging to six location categories were identified. These were "labour", "market", "land and natural resources", "infrastructure", "environment" and "law and socio-economic conditions". The findings revealed that the most significant location categories are "market" and "labour". Sub-factors that were rated as the most important sub factors are "intensity of competition in the sector", "Knowledge of the local business environment" and "purchasing power of households". From the "labour" factors, the important sub-factors were "qualified workforce supply" followed by "flexibility of the workforce". The results of their study also revealed that "land and natural resources" was rated as the most unrelated sub-factor in location decision. Fusková et al. (2018) suggested that a similar research should be done in a different area, region, and country using the location factors identified in there study. A qualitative method should also be combined in such a study to enrich the location decision literature.

Lumbwe et al. (2018) agreed that various factors influence a location decision, which may result in good or poor business performance. They aimed to evaluate the relationship between location decision factors and South African SMMEs' performance. The findings of this study revealed that "affordability of electricity tariff" had the strongest positive relationship. Lumbwe et al. (2018) collected data from 56 businesses. The reliability of the instrument was verified and various statistical methods (descriptive and inferential methods) were used in the data analysis, notably Chi square(X^2) and logistic regression. A gap identified in their research was the intensive review of location factors. They recommended that future studies should include qualitative data to support the findings of the quantitative method.

Gordon and Sved (2017) examined how two companies used geographic information systems (GIS) technologies, and the advantages of using this type of software. This study aimed to investigate the factors that influenced location decision of the two companies, and discussed the role of customer demographics and GIS software in the selection of business location. Their study only focused on the literature discussing GIS software, as well as its usage by the two companies,

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and the demographics as well as general industry information about the companies involved in the study. Their research used a qualitative approach based on secondary data. The result showed that the two companies' GIS strategies and customer demographics were important in combination with the GIS software.

Mkwanazi and Mbohwa (2016a) used one of the location factors (xenophobia) to establish what influences location decision of migrants in South Africa. The purpose of their study was to stimulate further research in this area. As a result on violent xenophobic attacks on migrants who operate their small enterprises in the main townships of South Africa such as Soweto, Khayelitsha and Umlazi such locations have been unable to attract and retain migrant's small enterprises since the attacks. The results indicated that numerous migrants' businesses had to close down because of these violent attacks directed towards them. In addition, these townships are less attractive locations for conducting business, given many service delivery protests which end up as opportunities for looting and disrupting business operations. The authors of this research suggested that future studies should be conducted on the co-existence of migrant businesses and those of locals.

Cifranič (2016) conducted his research in the Slovak Republic. The author focused on the importance of location factors on manufacturing companies. The purpose of this research was to identify, describe, evaluate and examine location factors for five manufacturing enterprises. The literature identified and described six location factors which are "labour", "market", "land", "infrastructure", "environment" and "legal social and economic conditions". The results of this research revealed that the highest scored locations decision sub-factors were "flexibility of workforce and related costs", "organisation of distribution network", "size of land", "local standards for discharged dangerous substances", and "economic and social stability of the given region". Irrelevant sub-factors factors were "supply of disabled workforce", "climate conditions", and "level of the institutions and services supporting regional development".

Mkwanazi and Mbohwa (2016b) conducted their study on the impact of location decisions on sewing co-operatives based in Gauteng Province, South Africa. They also researched on other valuable location decision approaches that can be used to improve co-operatives performance. A sample of 83 co-operatives was collected in the survey. The result of their study revealed that "operations", "supply chain", and "accessibility of the business location" are very important to the

sewing co-operatives when choosing their location. The multiple regression analysis and factor analysis could not be done because of insufficient data, but were recommended for future study, as well as the use of mixed method which should include interviews in order to extend the knowledge of the impact of location decision on businesses.

John, Ejikeme, and Alfred (2015) assessed the potential relationship between enterprises locations and consumer patronage at the University of Calabar, in Nigeria. At the same time, the study considered the consequences of business policy and decision makings. The objectives of this study was to evaluate the effect of enterprises' locations on continuous purchases of consumers; and assess the impact of proximity of enterprises' locations on the patronage of consumers. The authors categorised the location factors into two groups, namely "push" and "pull" factors. Push factors include "rising competition in an area", "rising costs", "poor communications systems", and "falling demand". On the other hand pull factors refers to "government incentives", "low labour costs", "good communication systems", and "developing markets". Hundred respondents participated in the study. The instrument utilised was content-validated and the test-retest method was conducted to approve the reliability. The findings revealed that location decision impacts on an enterprise's performance, and also significantly influences the continuous purchases of consumers. In addition, location of enterprises near customers and competitors have advantages on business performance within the university.

Thumawongchai and Huang (2011) did their study on models and factors implemented in production location decisions. Their research reviewed the literature of manufacturing location decision models and factors. Their study moreover unpacked preceding researches that analysed the existing status of models and factors used in the manufacturing location decision. This research was based on literature databases, literature reviews and case study reports. This research compiled a framework that classify the current location models and factors. The framework presents the models used and essential factors in manufacturing location decisions. Three manufacturing case study reports were used to inspect the authors' own artificial framework. Therefore, the findings show that dynamic and economics models within the analytic group and multi objective models within the strategic group have been practically used. From a factor view, the major factors in manufacturing location decisions are: "availability and reliability of the supply chain" and "availability of labour". This study recommended that future areas of study could

include areas such as luxury products, public sector, or business area. Furthermore, studies could evaluate the relationship between location decision models and location factors so that informed location decisions can be made.

Rajkumar (2013) attempts to examine factors that influence IT companies' location decisions in India. The results show that seven location decision factors and sub-factors play a major role in location decision. Those factors include "resources", "technology", "cultural", "hedonistic", "industrial site", and "economic governmental factors". The survey constructed a structured questionnaire targeting employees from IT companies, government, and support service companies. The factorised data and constructs were further examined by using a structural equation model. The results revealed new dimensions in the process on location decision. Rajkumar (2013) recommended that future research could be done to explore factors affecting location decision in different area. Future research could also examine the relationship between variables in the context of region and country.

The study of Lakshmikanthan and Tabiri (2012) was based on factors influencing location decision. The research reviewed factors that impact production location decision and determined the impact of supply base and sourcing parameters on the process of location decision. This study used literature review and interviews. The sample size was composed of four companies. Theoretical and empirical analysis reveal that numerous businesses use their own sourcing models based on their core and non-core activities; however, the results based on the four companies also show that the major location factors are considered by production companies that include "costs", "proximity to markets/ customers", "supply chain", "legal issues", "labour", and "capacity". Furthermore, it was discovered that "supply base" and "sourcing" are essential factors in manufacturing location decision and businesses should consider it as "must" and not a "want" so that optimal production is completed.

The study of Minai and Lucky (2011) seeks to determine the significance of location factors in the development of entrepreneurship and small businesses in Nigeria. The aim of their research was to evaluate the effect of location decision as a moderating variable in the relationship between entrepreneurial factors (the individual determinants, external factors and firm characteristics) and business' performance. A pilot study was conducted with 30 owner/managers. Descriptive analysis was then utilised, as well as the factor analysis. Their study focused only on manufacturing and

service industries in Lagos, Nigeria. Consequently, the results could not be generalised to other sectors. Based on these arguments, their study recommends that future research should focus and cover other sectors such as the trading and distributive sectors. In addition, other research methodologies other than the one adopted in their study should also be considered.

Barnard et al. (2011) investigated the macro-environmental factors that influence local decision-making and how these choices can impact SMMEs ' business performance. A positivistic research methodology was adopted and seven hypotheses were developed to achieve the primary objective of their study. A sample of 175 SMMEs in the Nelson Mandela Metropole participated. This study was based on a quantitative approach and used a questionnaire. Cronbach Alpha coefficients were calculated to determine the reliability of the questionnaire items. Data analysis was done by calculating descriptive statistics, Pearson correlation coefficients and conducting a simple linear regression analysis. Cohen's d was used to determine the significance of between-factor differences. The findings of the research indicated that positive relationships existed between all the location decision factors and business performance, excluding the relationship between electricity tariffs and business performance. Employment and business performance attained the strongest positive relationship. On the other hand, the relationship between location and business performance obtained the lowest positive correlation. This study was done on a small geographical area; therefore, future studies should be done in a wider geographical location in order to gain a more general perspective on SMME location decisions and business performance. In addition, more location factors should be included in future studies.

From the previous relevant researches discussed, it can be observed that SMMEs as well as large companies have faced location decision challenges. Most of the relevant papers critically reviewed have used quantitative methods but few used a qualitative method. Therefore, this study is based on a mixed method (quantitative and qualitative method) as recommended by some of the studies. This study also aims at involving a large sample size in order to apply suggested data analysis methods such as multiple regression analysis. The reason behind the use of a qualitative method is to bring value into the understanding of how location decision affects business performance based on a South African perspective.

This research also seeks to determine the research gap between the importance and the satisfaction of location decision. Research studies reviewed seemed to emphasise the importance of location

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decision only; however, no research focused on how the satisfaction of location decision could be identified. Therefore, this study seeks to analyse both the importance and satisfaction of location decision factors.

1.4. PROBLEM STATEMENT

SMMEs have the ability to stimulate the economic growth of a country and create job opportunities (Bhorat, Asmal, Lilenstein, and Van der Zee, 2018; Lumbwe et al., 2018). In South Africa, Their importance has been acknowledged by government (Erasmus Beyers, 2015; Rungani and Potgieter, 2018; Bhorat et al. 2018; Bushe, 2019) hence various studies have identify the challenges that SMMEs encounter, including poor location decision that impact on their performance and productivity (Soni, Cowden, and Karodia, 2015; Mkwanazi and Mbohwa, 2016b, Mtshali, Mtapuri, and Shamase, 2017; Lumbwe et al., 2018). Location decision challenges studied in the literature often refer to plant or facility location challenges (Thumawongchai and Huang, 2011; Chen et al. 2014; Mkwanazi and Mbohwa, 2016b; Lumbwe et al. 2018; Li, 2018). Location decisions determine the success or failure of a business (Suttle, 2019). If the location decisions principles, processes or methods are not well-implemented, they can ultimately lead to the failure of a business (Lucky and Minai, 2011; Thumawongchai and Huang, 2011; Mbugua, 2011; Fiseha and Oyelanna, 2014; Phelps and Wood, 2017; Lumbwe et al. 2018). Even with enough funding, if a location decision is unsuitable, a business may fail (Longenecker et al. 2012). Therefore, a well-made location decision is the "keystone to profitability" (Hernandez and Biasiotto, 2001) and sustainability. Knowing the benefit and consequences of location selection, business owners or managers must consider location factors and sub-factors, understand the implications of location decision (Longenecker et al. 2012), and prevent the consequences of making a poor location decision (MacCarthy and Atthirawong, 2003; Lumbwe et al. 2018).

1.5. AIM OF THE STUDY

The aim of this study is to investigate and explore the impact of location selection factors on SMMEs performance, particularly manufacturing and service SMMEs.

1.6. RESEARCH QUESTIONS

The research questions are presented as follows:

RQ1. What are the factors and sub-factors to be considered in location decision?

RQ2. What is the gap between the importance and satisfaction of location decision factors?

RQ3. What is the relationship between location decision factors (independent variables) and the performance of manufacturing and services SMMEs (dependent variable)?

RQ4. How do location factors affect SMMEs business performance?

1.7. OBJECTIVES OF THE STUDY

The main objective of this study is to examine the nature of the relationship based on the following variables: location decision factors and the performance of manufacturing and service SMMEs.

1.7.1. Secondary objectives

This study was reinforced by the following secondary research objectives:

RO1. To identify the factors and sub-factors SMMEs have to consider when making location decisions.

RO2. To determine the gap between the importance and level satisfaction of location decision factors.

RO3. To determine whether a correlation exists between location factors (independent variables) and the performance of manufacturing and services enterprises (dependent variable).

RO4. To explore the effect of location decision on business performance.

1.8. SCOPE OF THE STUDY

The study area is restricted to the City of Johannesburg and is therefore limited in the generalisation of the sample to the population from which it was drawn. Johannesburg is the largest city and capital of Gauteng province, located in South Africa as shown in Figure 1.1. Located in the North-East of South Africa, It is the smallest province of South Africa but also the richest and most crowded (Saho, 2017; Kalitanyi, 2019). Dlamini (2017) states that Johannesburg is the economic powerhouse in the Southern African region, and is also perceived as a model for the economic development of Africa. It is the wealthiest sub-Saharan city, and Africa's economic hub, without a doubt. The city is an important contributor to the economy of South Africa. The rate of economic growth is higher than both the national and provincial (Karuaihe, 2013).

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The City of Johannesburg in the Gauteng Province

Figure 1.1. Study area of this research (author)

This study also targets only manufacturing and service SMMEs within Johannesburg due to the availability of quality information from this city. This study only focuses on small businesses that have implemented site and region location decisions. International or global location decisions of businesses are not included in the scope of this study.

1.9. VALUE OF THE RESEARCH

Few empirical researches on the impact of location decision on business performance have recently addressed. Therefore, this research study contributes to the theory, knowledge, and practice of operations management research, specifically in the field of location decision strategies. It is also of value to business owners or managers on how single or combined location factors are crucial in making the best location decision. In addition, because of the research objectives and questions, business owners or managers will acquire knowledge of the potential local location decision factors to consider as well as the predominant location factors before selecting locations for their enterprises.

1.10. METHODOLOGY

Methodology is an important section in research that portrays the basis for the action to be taken to investigate a research problem; and the application of specific methods and procedures to identify, collect, process, and analyse data in order to understand the problem (Richard, 2004; Myers, 2013). The research methodology section addresses two general questions: How was the data collected? How was it analysed? (Richard, 2004; Rakabe, Musakewa, and Madonsela, 2017).

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Based on the research gap identified, the methodology used in this study is a mixed method approach which involves both quantitative and qualitative methods. A quantitative method was used to evaluate information collected from SMMEs owners and managers; questionnaires were given and sent to SMMEs owners and managers to complete. On the other hand, a qualitative method was employed to reinforce an understanding and explanation of results from the data collected through human interactions (interviews).

A number of calls have been made for the implementation of mixed methods in research (Proctor et al. 2009; Palinkas, Holloway, Rice, Fuentes, Wu, and Chamberlain, 2011; Aarons, Hurlburt, and Horwitz, 2011; Landsverk, Brown, Chamberlain, Palinkas, and Horwitz, 2012; Palinkas, Horwitz, Green, Wisdom, Duan, and Hoagwood, 2015). This arises from the fact that a single methodological approach is often insufficient (Palinkas et al. 2015).

1.10.1. Research design

Research design refers to the overall strategy and appropriate framework selected to examine diverse elements at the same time, making sure that the problem is being properly addressed by establishing a data collection plan, measurement and analysis. The research design suitable for this study is a survey because it describes the characteristics of the population. In addition, this is reinforced by a critical review of relevant literature. The design also involves key informative interviews, secondary data (relevant sources), and purposive sampling (De Vaus, 2006; Sileyew, 2019). Selecting the appropriate design is perhaps the most important decision a researcher makes (Abutabenjeh and Jaradat, 2018).

1.10.2. Sampling strategy

Sampling is a strategy implemented to ensure that the sample represents the population from which it was taken. There are two types of sampling strategies: probability sampling which refers to random selection and non-probability sampling which refers to not randomly selected sample (de Vos, Strydom, Fouche, and Delport, 2011).

This study used for both quantitative and qualitative approaches a purposive sampling which is a non-probabilistic sampling strategy that selects samples based on the characteristics existing within a precise population group (Crossman, 2019). Manufacturing and service SMMEs owners/ managers were targeted in this research because they are in a better position to participate in the interviews and answer the research questionnaire.

1.10.3. Population and sample size

The population of this research includes all manufacturing and service SMMEs in Johannesburg, particularly, owners and managers because they are in the best place to provide all the information needed for this study. The sample size of this study involves 211 manufacturing and service SMMEs for the quantitative study. Regarding the qualitative study, the author interviewed five owners/managers of the manufacturing and service SMMEs due to the time constraints and because respondents did not show any interest to participate in the interview.

1.10.4. Data collection methods

Data collection refers to the method of collecting and measuring information on variables of interest in order to answer defined research questions, fulfil research objectives, test hypotheses, and evaluate outcomes. Data collection methods include series of approaches such as primary sources (questionnaires, interviews, observation) and secondary sources (Kumar, 2004). The following are key instrument used in this study:

- **Questionnaire:** the author designed a questionnaire validated by STATKON, a department of the University of Johannesburg responsible for providing professional consultation services to postgraduate students and researchers in regard to research design, methodology, questionnaire design, data analysis…etc. The questionnaire was enriched by the literature review and previous questionnaires used to conduct similar research study. The questionnaire was a structured questionnaire based on a five-point Likert scale. This facilitated the author to collect as much data as possible from a large group of respondents. It is also the most cost-effective method of gathering information from respondents (Lombaard, Van der Merwe, Kele, and Mouton, 2011). The data collection was conducted from June 2019 to September 2019.

- **Semi-structured interview:** The researcher first shared the interview questions with the respondents to study them so that a successful interview could be conducted. In order to make the findings of this research as consistent and reliable as possible, only managers and owners of SMMEs were purposely selected and interviewed.

The data collected was obtained using other methods that ensured triangulation of data and trustworthiness of the research's results. These methods were as follows: filed notes, data from transcripts, reflective notes and audio-tapes. The interviews were audio-tape recorded with the

permission of the respondents (Annexure D) to make sure that responses were captured verbatim. The researcher took the opportunity to interview respondents after they filled in the questionnaires. The qualitative and quantitative data were collected during xenophobic attacks against foreign nationals. Therefore, the results could be biased.

1.10.5. Statistical data analysis

The quantitative data were analysed using the Statistical Package for Social Science (SPSS) version 26 through the assistance of STATKON consultancy. The reason of using this software is that it provides opportunities to generate various statistical models and converts data collected into descriptive statistics, reliability and regression analysis (Makhubedu, Nwobodo-Anyadiegwu, and Mbohwa, 2017).

The qualitative data were transcribed from the interviews conducted, followed by a thematic analysis which is a methodical process that breaks down and organises rich data from qualitative research, by classifying individual observations and quotations with appropriate codes in order to simplify the identification of important themes (Rosala, 2019). Field notes were also used to support the thematic analysis.

1.11. RESEARCH ETHICS

Research ethics establishes guidelines and rules that defines the conduct of researchers (Akaranga and Makau, 2016). It is essential in research because it encourages researchers to protect and respect the dignity of the respondents and publish truthfully the information that is researched (Fouka and Mantzorou, 2011; General Assembly of the World Medical Association, 2014; Yip, Han, and Sng, 2016; Žukauskas, Vveinhardt, and Andriukaitienė, 2018). The researcher fulfilled the following ethical concerns:

- The researcher did not harm respondents.
- Participation in the study was voluntary.
- Consent forms were provided.
- There was no dishonesty, no violation of confidentiality, and no denial of treatment.

In addition, the researcher did not reward the respondents for taking part in the study. The researcher considered and implemented the university's ethics policy. The identity of all SMMEs

and respondents was omitted during and after the study. The researcher also encouraged SMMEs owners or managers to request for a copy of the results of the study.

1.12. CHAPTER SUMMARY

The first chapter has discussed the background of the research study, research gap, detailed problem statement, outlined research questions, followed by the aim and the objectives of the study. In addition, this chapter includes the scope of the study, the research's contribution to knowledge and learning, methodology and finally ethical considerations. The next chapter will discuss literature review relevant to the study and main elements such as location factors.

1.13. CHAPTER OUTLINE

This research is divided into the following chapters:

CHAPTER 1. Introduction: This section briefly discuss the research background, research gap, research questions, aim, objectives, scope and contribution to the study. It also presents the workflow for the study.

CHAPTER 2. Literature review on location decision and business performance: this outlines previous studies on location decision based on an international, African, and South African perspectives. It also outlines location factors and sub-factors as well as performance factors.

CHAPTER 3. Research Methodology: it describes the instruments and techniques used to collect. As previously mentioned, the methodology of this study is a mixed method (quantitative and qualitative method).

CHAPTER 4. Data analysis and findings: this chapter discuss the statistical techniques used to analyse and explains and discuss the results of quantitative and qualitative data.

CHAPTER 5. Conclusion: this chapter summarises the findings, highlight the research limitations, and provides recommendations for future studies.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

This chapter reviews existing literatures on location decisions. In order to achieve a better understanding and insight of the study, this chapter provides the framework on which this research is based. The author provides some background knowledge of the research questions and objectives. This chapter starts with presenting previous studies of the effect of location decision on enterprises based on a global and African perspective; then, a brief historical of location decision, followed by the identification of grouped location factors and sub-factors. In addition, a literature on business performance is provided.

Research shows that when business owners or managers search for a location, they commonly pick a location that will satisfy the requirements of their businesses (Martyniuk-Pęczek, martyniuk, gierusz, and pęczek, 2017). Selecting the best location may improve a business's market competitiveness, increase the profit, decrease the cost, and promote employee and customer satisfaction. On the other hand, unsuitable location can have undesirable repercussions on a business (Martyniuk-pęczek et al. 2017). Thus, business owners or managers must understand the type of business they want to locate prior taking location decision because each enterprise has specific location requirements (Cifranič, 2016). The type of enterprises includes manufacturing, service, retail or industrial, etc. After that, location factors and market research must be evaluated to confirm whether a business should be located in a specific area (Cifranič, 2016).

2.2. A GLOBAL VIEW OF LOCATION DECISION PRACTICES

This section aims to provide a summary of common researchers' views in the field of location decision, as well as an overview of location decision issues and practices applied all over the world in different business sizes and sectors.

2.2.1. Location decision in America and Europe

SMMEs are the engines that drive world economies and the stepping stone to industrialisation for both developing and developed countries (Messah and Wangai, 2011; Rhodes, 2012; Mkwanazi and Mbohwa, 2016b; Muriithi, 2017; Lumbwe et al. 2018). Bardwell, Spiller, and Anderson, (2003) conducted a research in the United State of America to explore the differences between home based and office based enterprises. They further indicated that there has been few research in location decision and about female entrepreneur. A practice commonly used in the United State

of America and United Kingdom by small business owners is home based business location which provide an affordable working place compared to office based enterprises (Bardwell et al. 2003). These countries developed due to the studies on location decision practices or models that include locally or internationally location decision and outsourcing (Graf and Mudambi, 2005; Boardman Liu, Paul, Zeng, and Gerstenfeld, 2008; Rajkumar, 2013, Pearce II, 2014, Mostofi, 2017). These studies speak to the idea that location decision is influenced by proximity to resources and suppliers; furthermore, these researches confirm the consideration of common factors notably the quality of labour, financial incentives for choosing a specific location, quality of life, transport infrastructure and costs of occupying a particular area (Mkwanazi and Mbohwa, 2016b).

Many worldwide enterprises of the United Kingdom and the United States of America have spread in diversity of their operations such as fabrication, assembly, warehouse and distribution to different parts of the world; while at the same time, creating a global network of operations which is considered as global supply chain (Khumawala and Kadipasaoglu, 2000). Graf and Mudambi (2005) showed in their study that locating business activities outside its home country can be successful because it provides a clear business location strategy, as well as an understanding of location attractiveness factors. Another location factor considered by worldwide businesses is tax advantages (Devereux and Grifitth, 2003), which affects the location decision of manufacturing businesses. Although tax is used by many countries as an advantage to attract multinational enterprises for increased economic opportunities as well as improving current economic state, a location that is near quality materials for production remain also significant (Mkwanazi and Mbohwa, 2016b).

Krenz, (2016) conducted a study on official firm-level dataset for German manufacturing firms to examine the location decision of new firm activity in the German regional economy, differentiated by firm structure. It was discovered that agglomeration economies is important for small businesses, but not for medium-sized and large businesses. While the market potential have a significant positive effect on all businesses, labor costs do not significantly impact large business' location decisions. Another similar research conducted in Spain by (Martí, Alguacil, and Orts, 2017) used firm-level data to investigate how different host country characteristics impact the decision of Spanish multinational firms to locate in developing and transition countries, and whether these determinants change when looking at manufacturing or services firms. The findings

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recommend that Spanish investments in developing and transition economies are mostly driven by market-seeking factors. They also confirm the relevance of the business and financial climate in the location decision of multinational firms. Lastly, the results reveal differences between manufacturing and services Foreign Direct Investments in several local factors, such as the agglomeration effects, skilled labour and financial risk.

2.2.2. Location decision practices in Asia

It is well known that the economies of China and India have performed remarkably well. Among Asian countries, China and India together contribute more than half of Asia's Gross Domestic Product (GDP) (The World Bank, 2019). In addition, Asia has a background of low cost manufacturing (Lloyd, 2017; Radu, 2019) and a significant population of low labour cost (Jennings, 2017). Both are strategic location factors that motivate enterprises to locate in Asia (Mkwanazi and Mbohwa, 2016b).

An example of Asia's interest in providing industrial location is a campaign called Make in India, which was launched in 2014 by the Prime Minister Narendra Modi in India. The primary aim of this campaign was to attract and facilitate investments from across the world, create employment by motivating enterprises to manufacture their products in India, in doing so, to strengthen India's manufacturing sector (Chaudhari, 2015; Gaur and Padiya, 2017; Bhatia and Agrawal, 2018).

Countries within the Association of Southeast Asian Nations (ASEAN) for example offers lower labour cost than those in the developed economies of the world (Rastogi, 2019). Asia rely more on low operations cost to attract international enterprise. However, overtime may no longer be considered as a strategic location factor. (Mkwanazi and Mbohwa, 2016b). Nevertheless, infrastructure still remain a challenge in some Asian countries (Subhanij, 2019). On the other hand, China has been able to maintain its infrastructures and continuously improve and develop its facilities. Through all the continuous economic improvement Asia is facing, small businesses within Asia are still able to operate their businesses either secured facilities or home based businesses (Mkwanazi and Mbohwa, 2016b).

The following section introduces and discusses an African perspective of location decision practices.

2.3. AN AFRICAN VIEW OF LOCATION DECISION PRACTICES

The continent of Africa is composed of fifty four countries. The Regional Economic Communities of Africa (RECs) comprise eight sub-regional bodies which are the building blocks of the African Economic Community formed in the Abuja Treaty of 1991. Those economic blocs provide a general framework for continental economic integration. The height economic blocs includes Arab Maghreb Union (UMA), Common Market for Eastern and Southern Africa (COMESA), Community of Sahel-Saharan States (CEN-SAD), East African Community (EAC), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Intergovernmental Authority on Development (IGAD), and Southern African Development Community (SADC) (Office of the special adviser on Africa, 2019).

Nigeria is part of Economic Community of West African States and is a developing country (QI2020, 2019). Researches conducted in Nigeria by Agwu and Emeti (2014) as well as Adisa, Abdulraheem, and Mordi (2014) revealed a high rate of unemployment and poor performance of SMEs in job creation due to poor financing, insufficient infrastructures, lack of managerial skills, and multiple taxation. The challenges outlined by the researchers are not only faced in Nigeria but other African countries as well (Agwa-Ejon and Mbohwa, 2015; Bushe, 2019). Studies concerning the importance of SMMEs are becoming more present in Africa, particularly studies of location decision on SMMEs (Banard et al. 2011; Mkwanazi and Mbohwa, 2016b; Lumbwe et al. 2018). Nigeria's MSMEs significantly depend on location decision in order to determine the survival of their businesses given the need to attract qualified labour from specific areas of the country which may be collective situation for ECOWAS member counties (Banwo and Onokala, 2015).

When it comes to the SADC for instance, the SADC regional secretariat emphasis was on the significant need to develop infrastructure in order to ensure that the region has a cohesive infrastructure so that transportation and producton cost is decreased (Southern African Development Community report, 2012; Mkwanazi and Mbohwa, 2016b). South Africa is considered as a developing country with the abundance of natural resources and the impressive industry and manufacturing growth (Bakari, 2017). Despites all the qualities, South Africa faces challenges and issues regarding infrastructure (BusinessTech, 2020), particularly SMMEs that fail because of the lack business infrastructure which consequently affect the location decision of most businesses (Mkwanazi and Mbohwa, 2016b).

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A general idea of African SMMEs presented by the African Progress Report (APR) and the Global Entrepreneurship Monitor Report (GEMR) revealed challenges that affected SMMEs performance in regards to location facility issues. According to the GEMR, the lack of resources is still an obstacle to the success of SMMEs (GEM Report, 2014). To a certain extent, SMMEs in Africa have implemented mobile technology to assist their business and to link location facility gaps (Africa Progress Report, 2014). Therefore, location decision is critical in determining business success for SMMEs. In addition, stable economic activities and available infrastructure for business attract foreign direct investment (FDI) given the performance of local SMMEs.

2.4. LOCATION DECISION THEORY

2.4.1. Evolution of location decision

Location decision or facility location decision has a long and extensive history (Thumawongchai and Huang, 2011). As this area of study has evolved, challenges and the various location factors increased, driven by the continuous changing trends and criteria regarding location decisions. The world economy, technology and environment issues impacted the existing models used in location decision (Thumawongchai and Huang, 2011). Thus, the following theories have been established to support businesses to make a better decision (Kalantri, 2013):

- Thunen was the first researcher to develop a standardised method for evaluating location decisions from an economic perspective. His research was based on the "least-cost approach" to location (Thunen, 1875).

- Then, in 1885, Laundhardt analysed location decision process by examining the difference between the cost and demand factors at alternative locations. In addition, through his research, he was able to identify the importance of transportation costs when making a location decision. (Laundhardt, 1885).

- The study that was published by Weber in 1929 is regarded as a significant milestone in the research of the location decision. He suggested 3 significant facility location decisions factors: "transportation cost", "labour cost" and "agglomeration forces" (Weber, 1929).

- Hotelling's research is also regarded as another milestone in the history of location decision. He examined competition that existed among businesses and tried to build a relationship between this competition and location decisions (Hotelling, 1929). He

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demonstrated that businesses tend to select their facility location proximity the center of the market (Hotelling, 1929). After that his research became the foundation of many future studies. Some studies tried to improve his model by adding more aspects to it. Some others argued his theory and recommended new models for the location decision behaviour of companies. (Ohlin, 1935; Lerner and Singar, 1937; Smithies, 1941; Ohlin, 1952; Kats, 1995; Balvers and Szerb, 1996).

- Another important theory in the literature is Lösch's theory. It was based on location of a facility in a free economy and suggested that the use of cost and demand curves analysis to obtain best location decision (Lösch, 1954).

- Hoover's theory research was based on cost and demand (Hoover, 1937; Hoover, 1948) He demonstrated that freight rates make the transportation cost to act in a nonlinear way.

- (Greenhut, 1959) pursued Hoover's path and tried to develop a theory that combines location theory with practice.

2.4.2. Definition and importance of location decision

Theories of location decision intend to elaborate the reason that a business selects a specific location and not another (Dubé, Brunelle, and Legros 2016). The perfect location decision inevitably selects the best possible place among a given set of alternatives and constraints with the objectives of either maximising profit or minimising cost (Dubé et al. 2016).

Location decision is one of the ten major decision areas of operations management (Heizer, Render, and Munson, 2016; Lumbwe et al. 2018) with the objective of fulfilling at least one objective such as cost, profit, distances, service, or waiting time (Farahani and Hekmatfar, 2009). It is a strategic decision that can be used for many areas including public and private facilities, military environment, national and international scopes. (Farahani and Hekmatfar, 2009; Heizer et al. 2016). Offering services or products at a new location can be a part of organisation's growth strategy (Heizer et al. 2016).

The location decision is of such importance as it can influence the growth, success as well as failure of a business (Mbugua, 2011; Cohan, 2013). In order to achieve an ideal location decision, it is important to identify the critical location factors that are most important to the success of

business (Mbugua, 2011). In addition, Yang and Lee (1997) affirmed that in order to make the right location decision, it is important to select, analyse and evaluate the right location criteria.

2.4.3. Type of location decisions

Most of the time, businesses find themselves in the situation of making location decision in different situations, such as allowing a continuous increased of production volume, venturing a new market, introducing a new product/services or relocating a facility (Bruch, Wiktorsson, and Bellgran, 2014). According to Heizer et al. (2016) location decision options involves (1) increasing the size of an existing facility instead of relocating: Expanding business in an existing facility or moving to a new location to cater for increased demand as a part of an expansion strategy. (2) Preserve the existing location but adding another facility in a different location, or (3) closing the current facility and locating to another site. On the other hand, Vos (1991) and Pongpanich (1999) were also able categorise three types of location decisions; however, they focused on production location decision as illustrated in Figure 2.1:
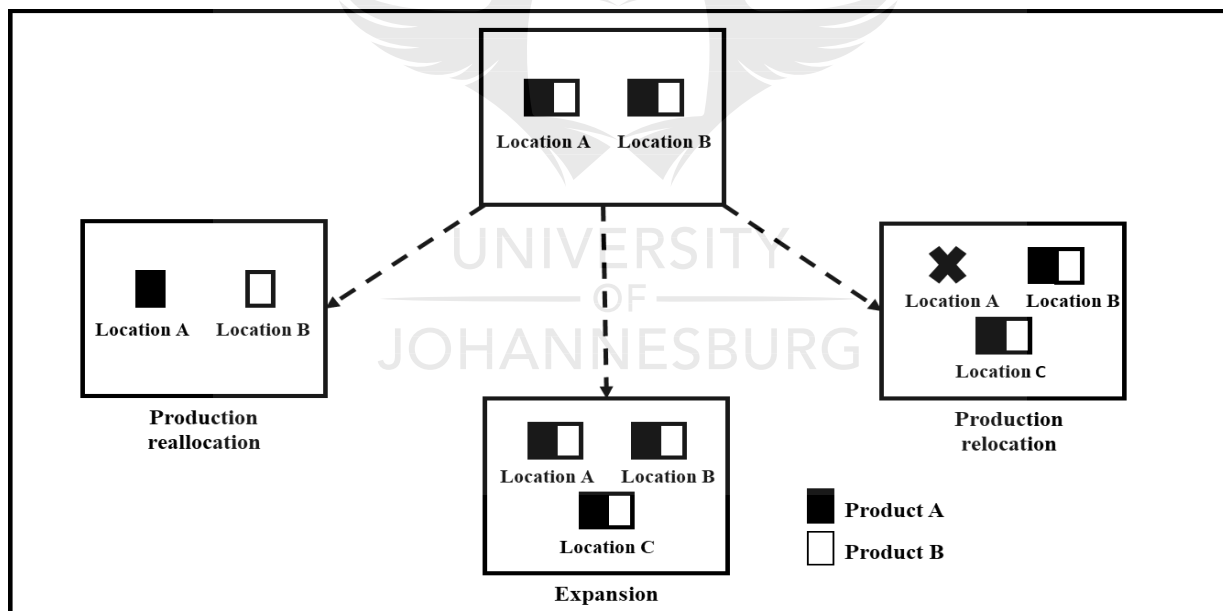
Figure 2.1. Types of production location decisions
Source: (Bruch et al. 2014)

Figure 2.1 is adapted from Pongpanich (1999) and based on Vos (1991). The three categories are discussed as follow: (1) selecting of a new production location: expanding production capacity to satisfy customer's demand. (2) Relocation of the companies from one area to another and implies

that the current location will have to be closed. Finally, (3) reallocation which relates to changes in the allocation of production activities across the network of existing plants (Bruch et al. 2014).

2.4.4. Location decision level

Two levels of location decisions were identified: macro and micro location decision (Rikalović, Cosic, and Lazarevic, 2014). The difference between macro and micro location decisions are displayed in Figure 2.2. Macro location describes the geographically distinct sub-market in which a property is located. It is usually the city or region in which the property is located (Kurzrock, 2011). On the other hand, the specific place in the micro location that meets technical, infrastructural and working process requirements (Rikalović et al. 2014). Figure 2.2 provide a clear example of the two levels of location decisions: The macro location decision is the city of Johannesburg and the micro location decision can be any suburb of the City of Johannesburg.
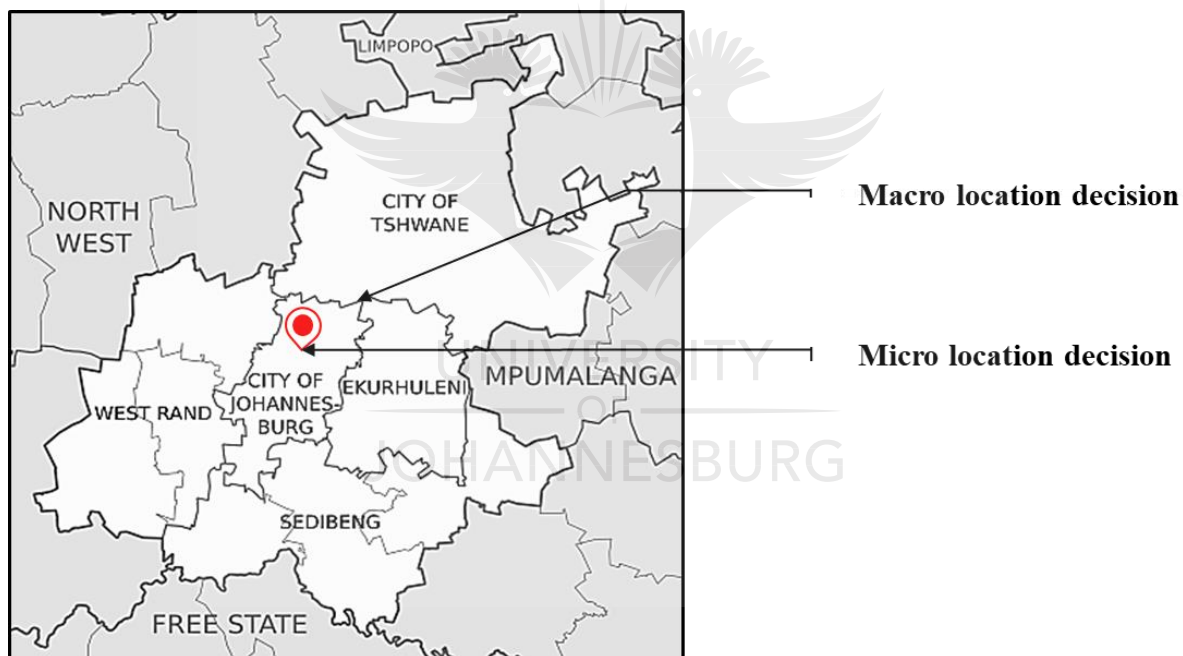
Figure 2.2. Difference between Macro and Micro location in site selection process.
Source: Adapted from (Rikalović et al. 2014).

2.4.5. Location decision process

Before making a location decision, one should ask, "Can I locate anywhere? Or do I have special requirements that demand that I locate to a certain region, or even a certain town?" As soon as this question is answered, a business owner or manager must have a clear demographic idea for selected areas or cities that best suit the enterprise's requirements (Watson, 2014; Gordon and Sved, 2017).

Applebaum (1965) affirmed that a general approach to location decision evaluation is to first establish a checklist to guarantee that all relevant factors are given sufficient attention.

It is important to identify and understand the characteristics of the diverse types of location decisions (Pongpanich, 1999) because sort of location decision has different consequences for the ideal alternatives. Nevertheless, Vos (1991) claimed that although each type of decision has diverse outcomes, the process of location decision does not change. Generally, location decision processes can be divided into numerous distinct steps including all the essential activities (Hoffman and Schniederjans, 1994; MacCormack, Newman, and Rosenfield, 1994; Kodali and Routroy, 2006).

In the research of Pongpanich (1999), four general stages were identified and grouped as shown in figure 2.3. In addition, Ertuğrul and Karakaşoğlu (2008) defined location decision process as Pongpanich (1999) has done.
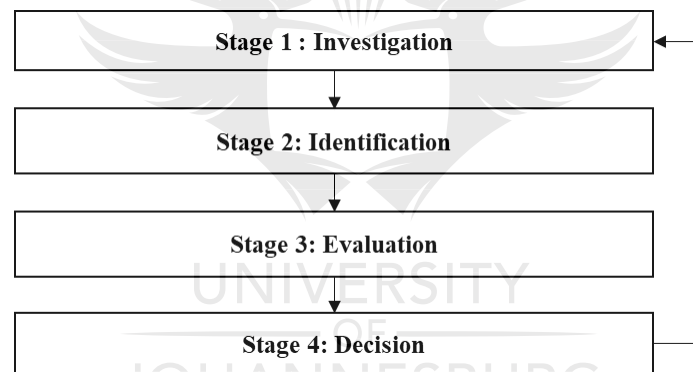
Figure 2.3. Location decision process
Source: (Pongpanich, 1999)

Stage 1 refers to understanding the enterprise's current situation in the industry.

Stage 2 refers to the identification of factors that are important and a list of potential facility location alternatives

Stage 3 examines the potential options identified in stage 2
Lastly **Stage 4** examines the potential alternatives identified in stage 2

These stages in principle follow a rather general problem solving procedure (Bruch et al. 2014).

2.4.6. Predominant business location alternatives for SMMEs

This section introduces the most noticeable business location alternatives. The literature identified the following location decision alternatives (Mkwanazi and Mbohwa, 2016b):

- **Home based businesses:** In this alternative, the business owner uses a portion of his or her private home either owned by self or someone else to conduct a business. This option is the best for sole proprietors and for some industries as well (Donaldson and Smit, 2011; Curran, Lynn, and O'Gorman, 2016). The advantages include lower overhead, reduced tax income, and family time. The disadvantages include issues such as parking, and signage, isolation, and the landlord may not be home-based business-friendly (Ward, 2018).

- **Industrial location:** The nature of activities conducted by a particular business such as manufacturing and production companies requires industrial business location (Curran et al. 2016).

- **Shopping center location:** Well established businesses like franchises chose to locate in malls or shopping centers where customer traffic is high (Mkwanazi and Mbohwa, 2016b). General public have access to shopping centers and malls through public transportation and available parking for individuals (Zondi, 2011). Shopping centres have restrictions for their renters and can be costly for SMMEs and some brands or shops may be prioritised to have facilities within a shopping center; therefore, shopping center location may not be an alternative for SMMEs especially when they are not well established (Mkwanazi and Mbohwa, 2016b).

- **Building or buying a property:** Certain businesses choose to build or buy a property when they believe that they have an important business opportunity. This option help the decision makers to build or select premises that meet the specific business conditions; it also allows a business to examine business location factors (Mkwanazi and Mbohwa, 2016b). Despite the advantage of building or buying a new facility, this decision can be negatively impacted if a municipal authority disapproves building a property in a zone selected (Kimelberg and Williams, 2013). In addition, this alternative might not be affordable for certain SMMEs. On the other hand, the advantages buying or building a property are ownership, operating flexibility quick occupancy, accessibility to traffic, asset appreciation, facility condition and location flexibility. Mason, Mayer, and Ezell (1988) stated that: "long-term commitment, initial capital outlay, adaptability, initial facility condition, maintenance costs, and construction time" are the disadvantages of this alternatives.

- **Website based business:** The business environment is continuously changing, at the same time being shaped by technology and consistent online trade. According to Longenecker,

Petty, Hoy, and Palich, (2012), in developed countries website based businesses are seen to be a trend. This alternative is ideal for start-up business as well as SMMEs as it save costs associate with location decision. Nevertheless, it requires an entrepreneur to be skilled in order to effectively and efficiently operate a business online. Online and set-up cost may not be exempted in this process. This alternative does not protect businesses form cybercrime and crash online platforms. Furthermore, even if an entrepreneur decides to locate virtually, he or she has to have a physical location for inventory (Mkwanazi and Mbohwa, 2016b).

- **Leasing:** Other businesses, especially freshly established businesses may decide to use services of a business incubator for their initial location decision. A business incubator is a facility that offers shared space, services and management assistance (Longenecker et al. 2012). In addition, some enterprises started their function in small leased buildings, garages and other premises. After a few successful years it may happen that an enterprise is able to purchase the leased premises to the own property and even expanded their plants (Park, 2002). The advantages of leasing are quick occupancy, relatively low initial costs, and reduced commitments. The disadvantages include operating inflexibility, changing lease terms, initial facility condition, adaptability, and lease nonrenewal (Mason et al. 1988).

2.5. LOCATION DECISION IN MANUFACTURING AND SERVICE INDUSTRIES

According to Hanink (1997) and Heizer et al. (2016), the characteristics of service and manufacturing sector clearly differ. The major differences are the time of production and consumption considerations. For instance, services are intangible and cannot be stored. They must be delivered where they are consumed. Manufacturing companies however produce tangible products that can be stored (Hanink 1997; Heizer et al. 2016). Service sector originally has been thought to be connected to markets regarding location decision; on the other hand, the manufacturing are limited to supply considerations.

2.5.1. Location decision in the manufacturing sector

When considering a manufacturing location decision, there are various factors to consider to guarantee the best location for the business facility (Robinson, 2018; Heizer et al. 2016). Unlike services such as retail, office, or even residential locations, a manufacturing business must consider factors including environmental regulations, workforce issues, and raw material availability

(Rahman and Kabir, 2019; Robinson, 2018). Location decision for manufacturing enterprises are more critical, in the sense that when the plant is built according to the business requirements, there is no way to move or abandon it for a new location. Therefore, making a location decision is likely the most vital decision manufacturing companies could make (Robinson, 2018).

2.5.2. Location decision in service sector

As previously mentioned, services are constantly located proximally to their market because most services cannot be stored. Similarly, market accessibility and availability is imperative for the service sector characterised by continuous purchases. Furthermore, due to their simultaneous production and consumption, the best location for services is the location where market concentration and flows are high (Hanink, 1997). Nevertheless, other location decision factors including local quality of life are also significant in the location decision of a business (Hanink, 1997).

According to Schmenner (1994), labour characteristics, infrastructure and quality of life tend to be more vital for businesses that are located near the city centre. Scmenner (1994) confirmed that location proximity customers comes with distinct characteristics such as high employment, more open hours per week, high capital/labour ratios, sites in this vicinity, strong local business ties, high value placed on particular sites. Many of these characteristics apply also to the location proximity to competitors influence (Porter, 2000). Low costs or rents appeal most to large service businesses and to those that attract an extensive market for their sales. In addition, they find that hospitals, education institutions and social services, personal and business services (e.g. direct mail, cleaning, graphic arts, and temporary employment agencies) and utilities are relatively immune to many of the general area influences.

2.6. CONCEPTUAL FRAMEWORK OF THE STUDY

Figure 2.4 illustrates the conceptual framework of the study. It shows how location decision factors and sub-factors affect business performance which may lead to potential business success or failure. It also shows the gap between the importance of location decision factors and sub-factors and the satisfaction of selected factors and sub-factors.
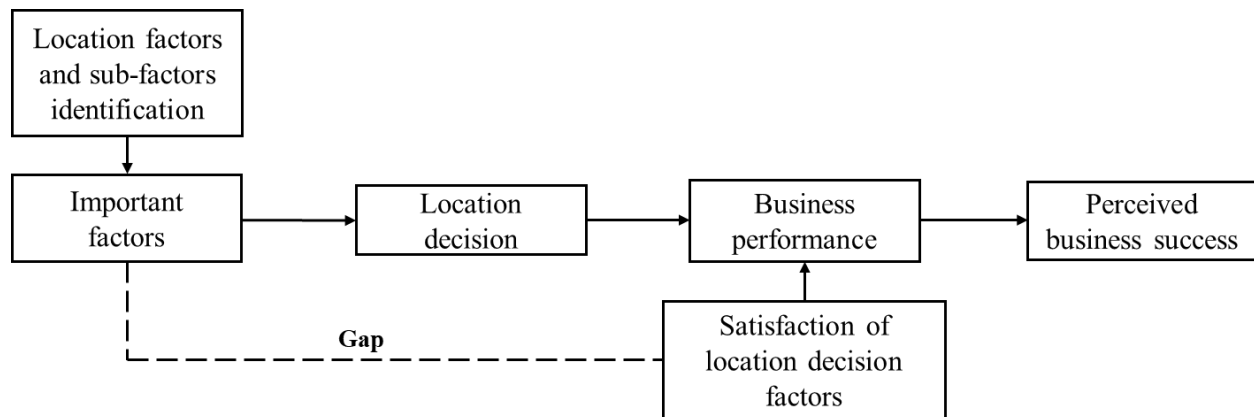
Figure 2.4. Conceptual framework of the study

The gap identified emerged from the fact that even though owners or managers of SMMEs consider some location decision factors important for their business and make an informed location decision, their businesses still fail. This gap has not been previously addressed by the empirical literature.

2.7. LOCATION DECISION FACTORS AND SUB-FACTORS

Each location decision problem is unique and there are standardised procedures that can be applied in every situation (Kalantri, 2013). The factors impacting location decisions, as well as the importance of each of these factors differ according to various parameters. Such parameters include the type, size, nationality, culture and ownership (domestic or foreign) of an enterprise (Chatzoglou et al. 2018). Many researchers have carried out studies on this issue; some of their results will be presented in the next few paragraphs (Chatzoglou et al. 2018).

There are some important and main factors that need to be considered in most of the location decision problems (Kalantri, 2013). Therefore, this section seeks to identify location decision factors that are more critical and are needed to make a good classification to assure the validity of the results. For this purpose, the factors that are cited in the literature were reviewed and those that appeared to be common between different researchers are identified.

Jungthirapanich and Benjamin (1995) conducted research on enterprises in the United State of America, and they considered eight facility location decision factors. These factors are: market, transportation, labour force, site consideration, raw materials and services, utilities, governmental targets and interests and local community environment.

Mazzarol and Choo (2003) carried out their study on 450 businesses located in Australia. The result of this study shows that the location decision factors vary according to enterprises size: small businesses claim that the most important factor for the facility location is the proximity to the market/customers, as well as the proximity to the owner's residence; while, large businesses consider the availability of transportation infrastructure.

Bhatnagar and Sohal (2005) examined the relationship between location decision factors (cost, infrastructure, services, labour, government support, customers, proximity to suppliers and key competitors) and the competitiveness of the supply chain (quality, flexibility, inventory turnover, responsiveness). They conducted their research in various Asian countries such as Singapore, Malaysia, Brunei, Indonesia, Philippines, and Thailand. The statistical results support for their initial hypotheses.

Nikolaidis (2007) conducted his study on 148 enterprises in Greece and he concluded that subsidies, availability and cost of raw materials, infrastructure, availability and cost of labour, and access to markets are among the most significant location decision factors. Yet, there are many who claimed that they have decided to locate their business in a specific location mainly for personal reasons (proximity to their home town, etc.).

Heizer and Render, (2014) shows in their book that there are various factors influencing the location decision processes of the business owners or manager. Those factors include for example government rules, attitudes, political risk, incentives, market location, labour availability, attitudes, productivity, and cost, availability of suppliers, location proximity raw material and customers..etc. However, those factors depends on a country, region, and site location decisions, as well as the nature of the business.

Accordint to Dixit, Clouse, and Turken (2019), location decisions include economic factors such as transportation, labour, real estate, constructions costs, tax incentives, labour and resource availability, proximity to suppliers or markets, and sustainability. Qualitative factors such as proximity to industry clusters, anchor institutions, and the presence of an innovative culture and social networks are gaining importance. Other research also incorporated some factors such as rental rate, electricity rate, employment, green building, and quality of life (Barnard et al. 2011; Mkwanazi and Mbohwa, 2016b; Lumbwe et al. 2018).

Studies presented, along with quite many others (Amar, Abouabdellah, and El Ouazzani, 2017; Coelho and Mateus, 2017; Galli, Letchford, and Miller 2018; Chatzoglou et al. 2018), examined location decision and determine the factors that impact the decision for choosing one area over another. The literature on location decisions is both significant and diverse, including numerous papers with countless different approaches (Ketokivi, Turkulainen, Seppälä, Rouvinen, Ali-Yrkkö, 2017). Therefore, the framework of this study is based on the research of Ertuğrul and and Karakaşoğlu (2008); Barnard et al. (2011); Mkwanazi and Mbohwa, (2016b); and Lumbwe et al. (2018). Their studies considered location factors such as costs, labour, market factors, rental rates, environmental friendly buildings, and quality of life including their sub-factors.

Location factors can be classified into two categories: quantitative and qualitative factors (Lakshmikanthan and Tabiri, 2012; Bjelkemyr et al. 2013). Quantitative factors use numerical values, such as the distance, transportation costs or revenue (Yang and Lee, 1997). On the other hand, qualitative factors refer to quality of life or business climate, which are difficult demonstrate in numerical values and are evaluated by quantitative models. When qualitative factors are considered, the location decision process becomes more complex (Yang and Lee, 1997).

2.7.1. Cost-related factor

Many studies have empirically demonstrated that any type of cost are unquestionably the most significant factor when selecting a facility location (Hoffman and Schniederjans, 1994; Jungthirapanich and Benjamin, 1995; Badri, 1996; Badri, 1999; Atthirawong, and MacCarthy, 2001; Kalantri, 2013, Lumbwe et al. 2018; Dixit et al. 2019). This factor is practically found in all the location decision factors lists that was established by numerous researchers (Park, 2002; MacCarthy & Atthirawong 2003; Verdonk, 2010; Barnard et al. 2011; Capello, 2011; Sambidi, 2003; Lakshmikanthan and Tabiri, 2012; Bjelkemyr et al. 2013; Kalantari, 2013; Rajkumar, 2013; Bruch et al. 2014; Rikalović et al. 2014, John et al. 2015; Cifranič, 2016; Mkwanazi and Mabohwa, 2016b; Phelps and Wood, 2017; Fusková et al. 2018; Lumbwe et al. 2018).

Location cost are classified into two groups, namely tangible and intangible cost (Heizer and Render, 2014). Tangible costs are cost that can already be identified and precisely measured. These cost include labour, material or resources, utilities, transportation and other costs that accountant and managers can identify. Intangible costs however are difficult to quantify. They include quality of education, public transportation facilities, and quality attitude of prospective employees.

Furthermore, they include quality of life variables such as those that may affect personnel recruiting (Heizer and Render, 2014). However in this study tangible and intangible cost will measured separately.

With the introduction of globalisation, numerous factors that were not predominant in the past such as tariffs and exchange rates are now relevant (Dixit et al. 2019). A Delphi study based on a panel of specialists point out that the most important cost related factors effecting on facility location decisions in order of importance are: wage rates, transportation, fixed costs, energy cost/availability, and other manufacturing costs (MacCarthy & Atthirawong, 2003).

Labour costs also referred as wage rates, have been known to be an important factor in firms moving manufacturing to low-wage countries. Many companies located their business in low-wage countries such as China. However, in recent years, a relocation of manufacturing facilities from China to other countries is observed as labour costs have risen rapidly in the country's vast manufacturing sector since 2013 (Yan, 2017).

Each property (building, premises, facility, or office) presents different electrical conditions depending on the type of the enterprise and the nature of property. However, the electrical conditions of the property must comply with the health and safety regulations. This factor is one of the largest business property expenses which can be avoided through various cost-saving methods, for example reducing the use of energy and lighting. These methods assist businesses from sudden increase of electricity cost which might be incurred when producing finished products or services. Thus, business owners or manger must search for premises that have installed energy-efficient system (Banard, 2011).

Finally, another common cost-related sub-factor of location is transportation cost (Bhattacharya, 2019). This factor refers to the cost that involves any type of transportation such as raw material transportation (Kalantari, 2013; Eicker, & Cilliers, 2017). Transportation is considered as a necessary factors, especially in most of the production companies which play a role in lowering the cost of transportation allowing the company to save money (Kalantari, 2013). Transportation is also among the common location factors used in some researches (Sambidi, 2003; Maccarthy and Atthirawong, 2003; Capello, 2011; Lakshmikanthan and Tabiri, 2012; Rajkumar, 2013; Kalantari, 2013; Rikalović et al. 2014; Lumbwe et al. 2018).

2.7.2. Labour characteristics

Manpower is another concept used to describe labour factor. It is a particularly important factor in location decisions and can influence companies in many different ways. This factor is considered as a variable cost and requires more attention when searching for an appropriate location (Jackson, 2010). An empirical research shows that the quality of the labour is a significant location factor because it has an impact on productivity, product quality, etc. (Atthirawong and MacCarthy, 2001). Labour is a business requirement that involves any sort of work force that a business requires to hire (Kalanatri, 2013). Some companies prefer to locate where labour force is more beneficial; for example, some enterprises require a low cost labour force; while others search for skilled labour force and as a result, locate their businesses near an educated labour force with less emphasis on the cost (Kalantari, 2013).

Labour characteristic of location decision involves the following critical sub-factors and is identified in the following paragraphs:

Many researchers have tried to identify the most significant characteristics of labour that companies consider (or should consider) in their location decisions (Kalantari, 2013). The quality of labour force, the availability of labour force, motivation of workers, the attitudes towards work and business, unemployment rate, and the degree of turnover and absenteeism of the area are sub-factors of labour characteristics (Kalantari, 2013; MccCubbrey, 2016).

Labour availability is one the major sub-factor of location decision. It is an important location decision sub-factor that is always taken into consideration when making a location decision (Billington, 1999; Friedman, Gerlowski, and Silberman, 1992). Another sub-factor is labour cost. This factor involves the cost of hiring labour in the selected area. It has been used in some researches such as (Park, 2002; Kalanatri, 2013; Mkwanazi and Mbohwa, 2016b; Lumbwe et al. 2018; Fusková et al. 2018). Kalantari (2013) indicated that some companies need highly trained labour that are trained who are able to execute precise jobs, while others requires unskilled and low cost labour. Therefore, the education and training level of the labour is a sub-factor that plays a significant role in location decision.

Another labour characteristic is the "unemployment rate" in the area, region, or country. This sub-factor can result in either positive or negative impact on the business in the sense that high unemployment rate can be deduced as accessibility to labour force, and thus be regarded as a

favourable sub-factor. On the other hand, it can be considered as bad economic situation of the location and consequently, a negative interpretation for the business (Kalantari, 2013). Besides "unemployment rate", "motivated labour force" assists businesses to strive achieving their objectives. It is also a fundamental requirement for continuous improvement and lean manufacturing (Kalantari, 2013). Therefore, locations that have more motivated labour force are more attractive for businesses (Kalantari, 2013).

2.7.3. Quality of life

Quality of life involves social factors which includes the standard of health, comfort, and happiness expected and experienced by a business (Jenkinson, 2018). The area that a business selects in which to locate its facility, becomes the home of its employees (Kalantari, 2013). Therefore, a business should imperatively consider the quality of life before finalising the location decision (Kalantari, 2013). If this location sub-factors is selected inadequately, it can negatively affect employees' motivation and consequently, the productivity of the business reduces (Kalantari, 2013).

The concept of quality of life is generally found in "place image and urban design" literature, but is not predominant in the location decision literature. Dogan (2012) implemented Bayesian networks and total cost of ownership methodology to integrate qualitative factors such as quality of life to location decision. The findings revealed that field knowledge is importance in location decisions. This feeling is sustained by a site selection company that stated: "Of the 13 site selection criteria we [use to] evaluate sites, quality of life has relatively minor impact in the early stages….in the later stages, it becomes more important and is measured relative to the other short-listed location candidates." (Crawford, 2010).

Research by Clouse and Dixit (2017) acknowledged and highlighted the role of site images in business location decisions. In their research, they firstly considered traditional and modern factors that directly or indirectly influence facility location decisions, then proposed a framework that describes their relationships. Although some qualitative factors are considered in location decisions from an academic perspective, only few researches consider placing an image as a contributing factor to business site selection.

Sub-factors of quality of life include the attitude of the community towards, quality environment, the current crime rate, xenophobic attacks, and the standard living. Every business owner or

manager must confirm that the location of their facilities conform to safety, welfare, and health regulations. Business owners must make sure that employees feel comfortable and safe in their working environment because the workplaces influence employees' attitudes, therefore impact productivity and job satisfaction (Fassoulis and Alexopoulos, 2015). Employees' attitudes can be influenced by controlled or uncontrolled noise levels inside or outside the facility. Therefore, business owners must provide an excellent internal and external workplace atmosphere that includes appropriate natural artificial lighting, temperature, and a proper ventilation system (Fassoulis and Alexopoulos, 2015).

Environment or atmosphere is also a sub-factor under quality of life in the sense that if the atmosphere is favourable it can positively impact the personnel and the business (Kalantari, 2013). An additional sub-factor is the attitude of the population in a particular area near a business. If the overall attitude of the population in a selected location is against the presence of a particular facility or business, the processes of the business can be disrupted. Hence, businesses should imperatively consider these types of problems when making location decisions (Kalantari, 2013).

The standard of living in a selected location should be satisfactory (Kalantari, 2013). In addition, locating proximity to a good quality healthcare system is another requirement for the processes of certain businesses. This is particularly vital for businesses that use dangerous materials and machineries. Nevertheless, it does not imply that this sub-factor should not be considered by other businesses. A healthcare system is needed for any business with any type of activities (Kalantatri, 2013).

According to Kalantari (2013), a well-designed education system in a specific area can improve the quality of life in a location in a significant way. Moreover, this author states that religion differences can create various challenges for a businesses if they are not taken into account in the location decision process.

One of the sub-factors that affect SMMEs, particularly in South Africa is xenophobia. The South African Human Rights commision (SAHR) defines xenophobia as "a deep dislike or fear of guests or strangers, or migrant nationals by the nationals of a recipient state and the fear of migrants" (Bekker, 2010). Xenophobia is not only an attitude towards foreigners; it can also take shape as a practice. (Harris 2002, Hågensen, 2014). Finding a safe, preferred, resourced and accessible businesses location for most migrants has become a challenge because of the xenophobic attacks.

These have also rendered the businesses of migrants less profitable because they end up relocating to areas where business location selection factors are not controllable. These factors include distance from target customers, decreased quality of life, community considerations, distance from suppliers and resources, and favourable labour climate (Faghi et. al, 2014; Mkwanazi and Mbhowa, 2016a).

2.7.4. Market factors

This factor is considered to be a powerful factor for customer-focus businesses. Location proximity to customer may prevent incurred cost such as transportation cost of products as well as preserving the standards of the just in time production (John et al. 2015; Heizer and Render, 2014; Eicker and Cilliers, 2017). The sub-factors of this location factor involve the market's size, responsiveness and delivery time to market, proximity to demand, and accessibility of market (Maccarthy and Atthirawong, 2003).

Locating proximity customers promote customer satisfaction and responsiveness of the company. A business can identify trends and adjust its policies to maximise the current market situation of and make the required adjustments to benefit from future trends (Kalantari, 2013). Before locating, a business need to identify the potential markets that it can serve. Based on the location of the facility, a company may be able to serve different markets. The best location from this factor point of view is where the company can serve the largest market (Kalantari, 2013). In addition, the purchasing power of the market that the firm aims to serve is another factor that firm needs to take into consideration. They need to locate their facility where they can serve the market that has the most purchasing power (Kalantari, 2013).

Although some enterprises prefer to locate near customers, others prefer to locate near their resources or suppliers because of transportation costs, material costs, availability, quality, as well as a products' perishability (Heizer and Render, 2014). Other prefer to locate proximally to their providers when a major resource is necessary and that resource is of high cost to transport in its raw state (Barnard et al. 2016). Some businesses require raw materials that might constitute major inputs in order to manufacture finished goods or provide services. Materials required might also include equipment that facilitate the production process (Fuchs, Field, Roth, and Kirchain, 2011). Beneficial supply chain create competition in the sense that when the demand is high, each supplier

will attract as much contracts as they can. However, if the competition is high, the entire supply chain can be affected (Thumawongchai and Huang, 2011).

The lead time and transportation cost can be decreased by locating a manufacturing facility near suppliers. Such decision can facilitate a smooth flow of resources in the supply chain (Kalantari, 2013). Suppliers play an important role in supply chain. Therefore, businesses should select suppliers that provide high quality services and products; and satisfy the needs of the business in a short time and with high reliability (Kalantari, 2013). Another essential reason that businesses should opt for a reliable supplier is to keep the business close to the "parent company" in order to maintain a good relationship with the parent company and use their support in cases of emergency (Kalantari, 2013).

Some businesses find it strategic to locate near competitors (Lumbwe et al. 2018). When it comes to business performance, competition play two roles, namely attracting a market of a specific product or service and competing with other similar business to improve competitive advantage. In addition, for service businesses, locating near their competitors (competitive clustering), promote the capture of spillover demand (Porter, 2000). The sub-factors of locating near competitors include the following: number of competitors, degree of competition over numerous products or services, competitor's size characteristics and prominence (Simkin, 1990).

2.7.5. Rental rates

Rental rates refer to the cost paid by an enterprise that use a particular space or facility (Holmbom, Segerstedt, and Van Der Sluis, 2013). Property offers different rental rates depending on the demand in the property market. In addition, the potential profit of each business location is different which affect the amount that business owners are prepared to pay for the property. Therefore, being capable to pay will determine whether to purchase or rent a property (Ball, Lizieri & MacGregor, 2001). Rental rate is measured by sub-factors such as the lease period of rental agreement, rental range of a specific area, variety of rental premises within a specific location, inflation rate, intensity of completion in the sector, service of specific estate agency, and service of a particular estate agent regardless of the estate agency (Mkwanazi and Mbohwa, 2016b). Even though rental costs are not important, they should still be considered when locating a property, and more specifically, when deciding whether to purchase or lease a property (Banard et al. 2011).

2.7.6. Green buildings

Green buildings refers to the structure and process that are environmentally friendly. Such premises operate efficiently by effectively using of inputs such as energy, water, and resources (Mungoshi, 2008). To accomplish energy efficiencies in the building sector, the Department of Minerals and Energy published the South African National Standards 204 in order to decrease the consumption of energy and reduce related costs, and to make sure that the energy availability to South Africa is sustained (Naidoo, 2008). The South African National Standards regulations are currently optional but are soon expected to be green by 2018 (Modise, 2018). Therefore, it is recommended that business owners or managers consider the implementation of the green building principles (Banard et al. 2011).

2.8. BUSINESS PERFOMANCE

Performance is subject to profound discussion in the field of operations management. It is a corporate strategy which can be implemented through a firm's operations techniques and strategies (Batista, 2012). SMMEs are usually required to measure their performance to determine their survival, success or failure, furthermore, to indicate whether sustainable improvement of business activities have been accomplished (Kirsten, Vermaak, and Wolmarans, 2015). Business performance is also influenced by both quantitative and qualitative factors and represents both financial aspects such as sales revenue, profitability, sales growth (Barnard et al. 2011), and non-financial aspects such as quality of material, finished goods or services, customer satisfaction (Perera and Baker, 2007; Vos and Roulston, 2008).

2.8.1. Business success and performance measures

Location decision involves quantitative indicators of a decision's success by associating location decisions to improved business success (Indarti, 2004). Even though business success is not influenced exclusively by the location decision, it plays a role in the success of a business (Indarti, 2004). Some researches confirmed that location decision has a relationship with business success (Alli, Ramirez, and Yung, 1991; Chan, Gau, and Wang, 1995; Ghosh, Rodriguez, and Sirmans, 1995). A performance measure is essential for small enterprises because it assists them to determine the success or failure of the enterprise and also plays a role to achieve sustainable improvement in business activities (Lucky and Minai, 2011). Likewise, Murphy, Trailer, and Hill

(1996:15) stated that "accurate performance measurement is critical to understanding new venture and small business success and failure".

In this research, business performance is analysed from the perspective of the facility location decision. Various scales of business performance measurement have been used through the literature, each mixing different measures (items): Qi, Zhao, and Sheu (2011) and Vickery, Jayaram, Droge, Calantone (2003) for example, used the following items: return on investment (ROI), growth in ROI, return on assets (ROA), growth in ROA, market share, and growth in market share. In addition, Hult, Hurley, and Knight, (2004) developed their own measurement scales which are profitability, growth in sales, market share, growth in market share and general performance. Similarly, Kannan and Tan (2005) used market share, ROA, overall product quality, overall competitive position, overall customer service levels. Tracey, Lim, and Vonderembse (2005) used four dimensions in order to measure performance: perceived product value, customer loyalty, market performance, and financial performance.

A scale measuring business performance in the location decision literature does not exist (Chatzoglou et al. 2018). As mentioned before, most relevant research used secondary financial data in order to assess business performance. It is considered that only focusing on measures of financial performance seems to be short-sighted (Chatzoglou et al. 2018). Therefore, this study considered both financial and non-financial performance measurement. The scale of business performance measurement of this study is proposed as followed: (1) net profit after tax, (2) profit, (3) return on total assets (or total capital), (4) annual sales, (5) perating costs, (6) firm's productivity, (7) number of employees, (8) turnover rate of employees, (9) customer satisfaction, (10) market share, and (11) product/ Service quality.

2.8.2. Relationship between location decision and business performance

There are considerable researches that have been conducted to determine the relationship between location and business performance (Orloff, 2002; Kala and Guanghua, 2010; Lucky and Minai, 2011; Barnard, 2011; Lumbwe et al. 2018).

Orloff, (2002) has provided evidence of the impact of location decision on emerging businesses and therefore their performance. Orloff's research revealed that location decision plays a significant role in entrepreneurship development. Accordingly, Kala and Guanghua (2010) have reported that the strategic location decision of the local enterprises has assisted in achieving a

positive performance. They further reported that location decision has provided enterprises with strong force to flourish and succeed in their business, in addition assisted those enterprises in the area of sustainability and also imply performance.

According to Lucky and Minai (2011), it is predictable that location decision would significantly and positively impact the relationship between the individual determinant, external factor and firm characteristics, and business performance. When it comes to location decision, it is assumed that the relationship between the individual determinant, external factor, firm characteristics, and business performance would become stronger and effective. Therefore, location plays an important role in the effectiveness of individual determinant, external factor and business characteristics on business performance. Thus, it is argued that the success of a business does not depend on the three factors previously mentioned, but the effectiveness of these factors on the business performance may depend on the strategic location decision of the business which then strengthens the effectiveness.

Finally, Barnard et al. (2011) conducted a study on the impact of location on SMMEs performance. They discovered that positive relationships indeed existed between all the identified location factors and business performance except for the relationship between electricity tariffs and business performance. Similarly, Lumbwe et al. (2018) agreed that various factors influence a location decision, which can result in either good or poor business performance.

2.9. SUMMARY OF THE CHAPTER

This chapter reviews the literature regarding the location decision, as well as location decision factors for SMMEs with the purpose of determining the relationship of location factors (independent variables) and business performance (dependent variable). The chapter started by providing a historical overview of location decision. These emphasis has been established to provide a comprehensive reference guide of the original works in this field. All the essential theories on this topic have been discussed as well as various location factors that play role in this important decision. The following chapter discusses the methodology used for this study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

This Chapter presents the overall research strategy that the study undertook. It also provides information concerning the system of beliefs and philosophical assumptions which underpinned the understanding of the research questions and the selection of the chosen research methods. The chapter explains the research methodology that was adopted in order to fulfil the objectives. In addition to the research design, the population and sampling strategy, data collection methods, and the data collection instruments used to collect data are presented.

Research methodology is an essential section of a dissertation or thesis. And its role is to ensure that the reliability of selected research instruments, techniques and underlying philosophy are adequate for the study. One common method used to construct the methodology of a study is based on a theoretical concept known as the research onion as shown in Figure 3.1 (Saunders, Lewis, and Thornhill, 2016). The objective of this concept is to provide a full-scale description of the main layers or steps which are to be implemented so as to formulate an effective methodology (Raithatha, 2017).

The research methodology has its starting point with the delineation of the main philosophy, comprise approaches, methods and strategies as well as defining time horizons, which altogether take the research logic of the research design – main techniques and procedures of data collection and analysis (Figure 3.1).
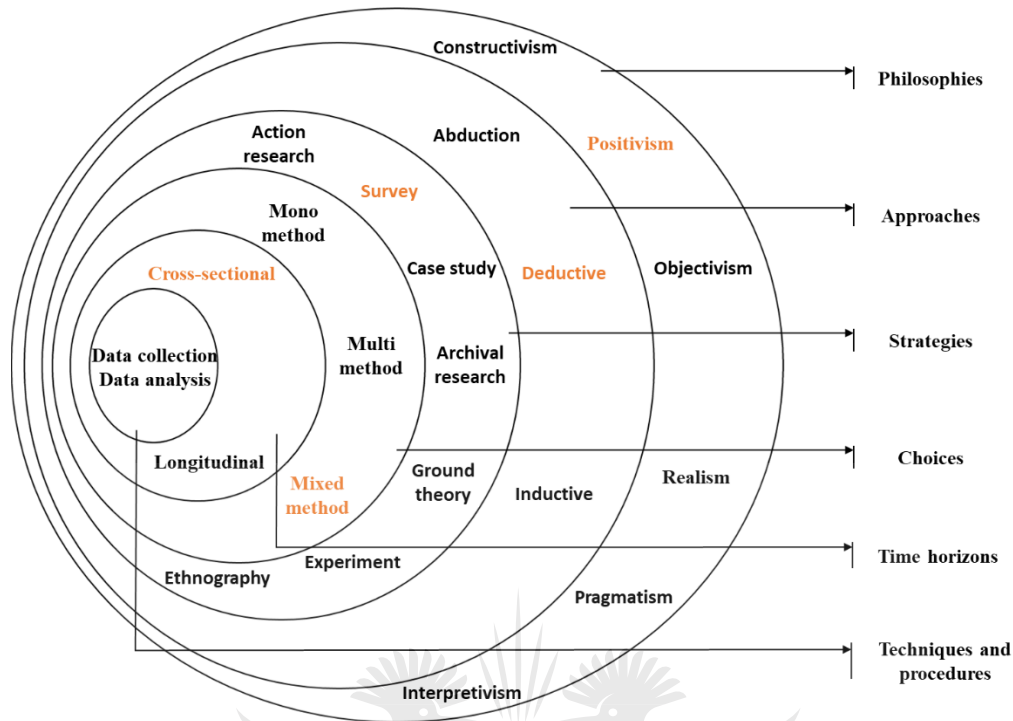
Figure 3.1. Research onion of the study
Source: Adapted from Saunders et al. (2016)

The approach to theory development used in this study was based on a deductive approach which refers to the use of an existing theory (Melnikovas, 2018). This study is based upon existing theories identified in the researches of Barnard et al. (2011), Mkwanazi and Mbohwa, (2016b), and Lumbwe et al, (2018). The theories behind their researches revealed a relationship between two variables: location decision factors (independent variables) and SMMEs performance (dependent variables). As Figure 3.1 shows, the methodological choice of this study is a mixed method design which involves the use of quantitative and qualitative methods. The strategy implemented to gather and analyse data was a survey, which is often linked to the deductive approach. This is because it allows considerable data collection and answers the "who", "what", "where", "when" and "how" of a research. The time horizons of this research is cross-sectional, also known as short term study which is the data collection at a precise point of time. Finally, the last layer of the research onion is the section of techniques and procedures including data collection and analysis, the use of primary or secondary data, selecting sample characteristics and size, developing questionnaire content or preparing interviews (Melnikovas, 2018). The last layer is further explained in the following sub-sections.

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3.2. RESEARCH DESIGN

The research's selection approach depends upon the objective of the research and the use of the findings that will be derived. The research method used in this study is a mixed method approach: quantitative and qualitative method. Quantitative methods are useful to obtain numerical results, while qualitative methods are helpful in investigating questions such as the "how" and "why" of research (Bryman, 2002; Almalki, 2016).

According to Johnson, Onwuegbuzie, and Turner (2007), Creswell and Plano Clark (2017), Salvador-García, Capella Peris, Chiva-Bartoll, and Ruiz Montero (2020), mixed methods research is a type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e. g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of achieving breadth and depth of understanding and corroboration. The use of mix methods expands and reinforce this research's conclusions and, therefore, contributes to the published literature.

In addition, this study used a convergent design, which is one of components of the mixed method design. This design refers to qualitative and quantitative data collected in parallel, analysed independently and then merged as shown in Figure 3.2. This research design also refers to triangulation design (Creswell and Plano Clark, 2007; Plano Clark, Huddleston-Casas, Churchill, O'Neil Green, and Garrett, 2008). The reason for this is to see if quantitative and qualitative data converge in a meaningful way (Rucker, 2018; Schoonenboom and Johnson, 2017).
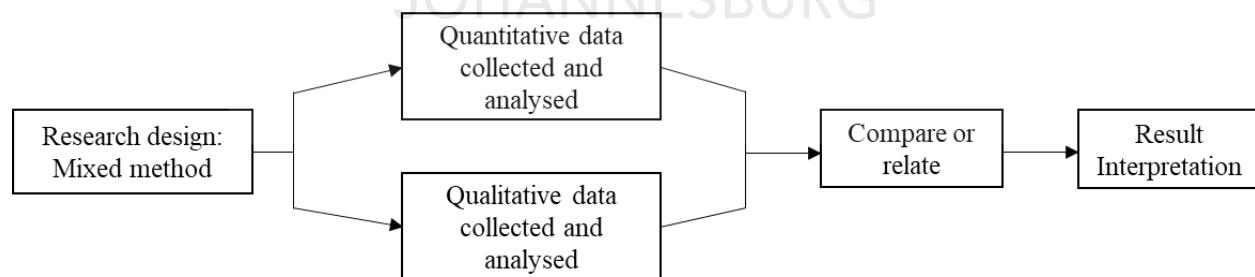
Figure 3.2. Research methodology of the study
Source: (Demir and Pismek, 2018).

3.3. DATA COLLECTION

According to Kumar (2004), there are two types of data collection methods that can be used to examine and answer the research's objective and questions: primary and secondary sources. Figure 3.3 clearly depict data collection of mixed method and both sources:
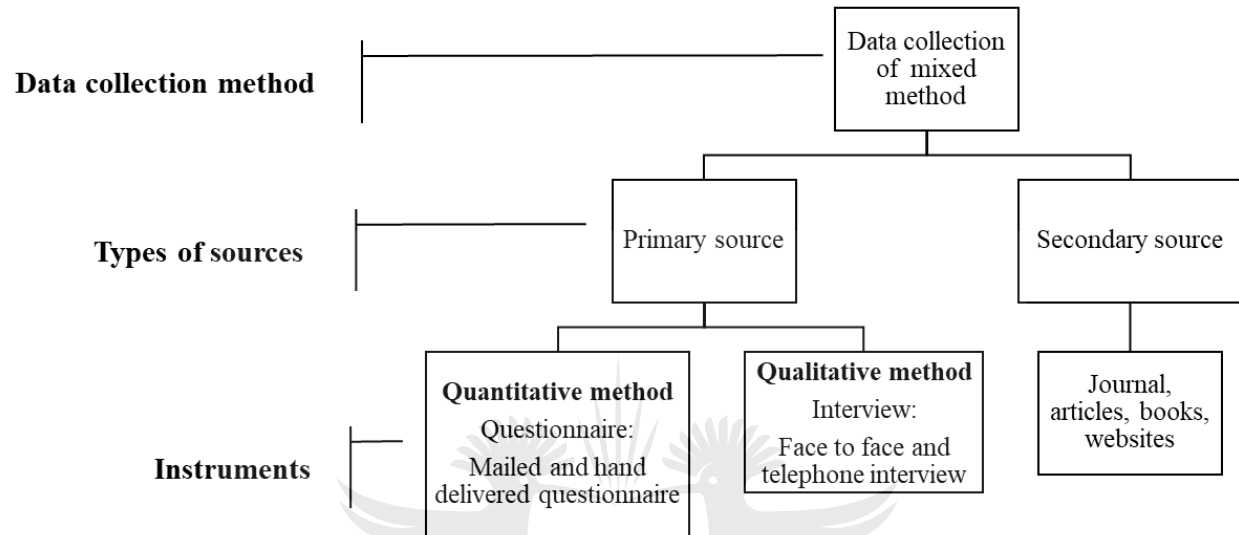
Figure 3.3. Methodology framework (author)

Both primary and secondary sources were used so as to fulfil the research objectives and answer the research question. Primary data was obtained through empirical research while secondary data was obtained through documents of previous relevant research, books and websites. This study used secondary sources that play an important role to identify the research gap as well as identify the location decision factors that affect business performance. The following main section discusses the quantitative and qualitative procedures employed in this research.

3.4. QUANTITATIVE RESEARCH PROCEDURE

The quantitative research plan was based on the quantitative research process proposed by de Vos et al. (2011) as shown in Figure 3.4:

Planning phase
- Undertake an in-dept literature review
- Select a research design
- Select method of data collection and analysis
- Select a sampling plan

Implementation phase
- Conduct pilot study
- Conduct the main research

Data analysis, Interpretation, and presentation phase
- Process and analyse data and interpret results
- Write the report
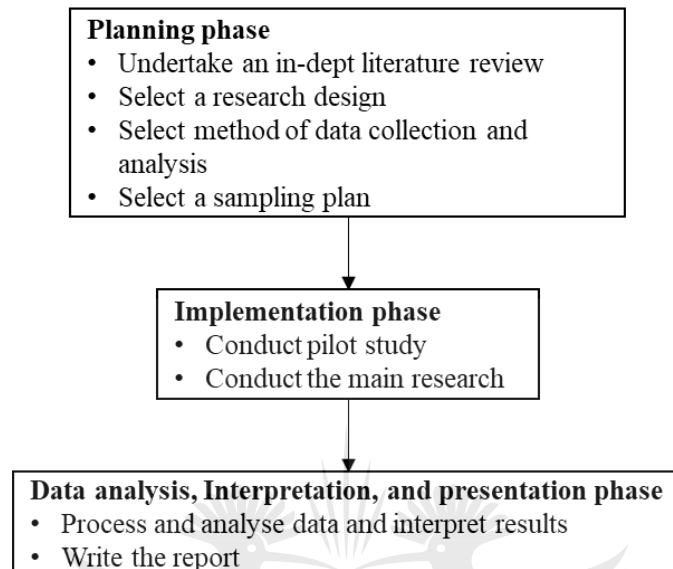
Figure 3.4. Quantitative research process (adapted from de Vos, 2011)

Planning phase: The first phase of this process is a planning phase that consist of a critical literature review on location decision, location decision factors, and business performance. After identifying the research gap through the literature review, the research design is selected, followed by sampling and data collection.

Implementation phase: The second phase is the implementation phase which involves conducting the main research. This phase refers to collecting quantitative and qualitative data.

Data analysis, presentation and interpretation phase: The process is then completed by the data analysis, presentation and interpretation phase. This last phase involves an analysis of the data that was gathered, results interpretation and writing the report.

3.4.1. Population and sampling

In a researchers' mission to contribute to academic debate and knowledge, they collect data from respondents. These respondents belong to the research population, which is a group of people having one or more characteristics of interest (Asiamah, Mensah, and Oteng-Abayie, 2017). McBurney (2001) perceives a population as a sampling frame while Gravetter and Forzano (2003)

refer to it as a universe. The total SMMEs in the City of Johannesburg were the population in this study.

Gangwal (2019) defines sampling as a method that is used to obtain information about the population based on the statistics from a subgroup of the population (sample), without having to investigate every individual. This explanation does not mean the sample selected is representative in fact, but is measured as a representative (de Vos et al. 2011). The theory of representativeness is significant to comprehend its connection to generalisation of the results and can be justified if the drawn sample will also be observed in the other groups from the population (Graziano and Raulin, 2000).

The population of this research was all manufacturing and services SMMEs. This research targeted mostly business owners or managers in the city of Johannesburg because they are in the best position to answer the questionnaire. South Africa has 2 251 821 SMMEs (StatsSA, 2015). The researcher targeted a minimum of 200 SMMEs and was able to collect 211 Questionnaires (200 collected questionnaires and 11 questionnaires received via email). Purposive sampling was used in this study. This techniques is also known as judgmental sampling. This technique involves the selection, deliberately, of respondents due to the qualities that the informant holds. It is a nonrandom technique that does not need underlying theories or a set number of informants. Simply put, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Bernard, 2002; Lewis & Sheppard 2006).

3.4.2. Research instrument: questionnaire

Generally, a questionnaire includes a scale such as the Thurstone scale, Likert scale and semantic differential scale (Dwyer, 1993; de Vos et al. 2011). In order to answer the formulated research questions of this study, a structure questionnaire based on five-point Likert scale was designed. This allowed data collection from a considerable number of respondents. Most questionnaire were printed; while others were sent via email to reduce paper work.

The questionnaire comprised of four sections:

- Section A was about the general demographic information of respondents.
- Section B described demographical data of respondents' businesses.

- Section C was about location factors considered when making a location decision. The locations factors identified were the independent variables of the study and were rated in terms of important then satisfaction level. The locations factors include cost, labour characteristic, quality of life, market, rental rate, and green building.
- Finally, section D was about business performance measurement.

The researcher printed 200 questionnaires and sent 20 questionnaires via email, even though the target was 200 SMMEs. Therefore, a total of 220 self-administered questionnaires were sent to respondents from different suburbs of Johannesburg. 200 questionnaires were collected after they had been filled and 11 questionnaires were sent back via email by SMMEs owners/managers.

3.4.3. Pilot study

There is always a chance that some questions or statement in a research instrument, in this case the questionnaire, could cause problems. Therefore, it is important to test the research instrument used in a study to identify and eliminate these problems (Sudman and Blair, 1998).

The questionnaire was tested by handing out a copy of the questionnaire to five SMMEs owners or managers in the manufacturing and service sector. Semi-structured interviews were also personally conducted with one respondent to determine the weaknesses of the questioning and how to go about correcting them.

The questionnaire and interview questions were adapted as follow:

- Ambiguous questions were improved.
- Some statements, which proved to be unclear were improved,
- Statements that were unnecessary and did not make sense were deleted.
- The authors gave the opportunity to respondents to give their inputs on the questions.

3.4.4. Data collection

The data collection of primary sources was done through a location decision factor-based survey using a five point Likert-type scale questionnaire. The objective of the five point Likert scale questionnaire was to investigate the locations factors based on the importance and satisfaction level that may affect the performance of SMMEs. The author adopted questionnaires in this study in order to create an opportunity to obtain facts and opinions about a phenomenon from a large

cohort who are well-informed about location decision issues (Babbie and Mouton, 2001; Jones, Baxter, and Khanduja, 2013; Rahman, 2017).).

The researcher delivered and collected all questionnaires personally; therefore, was available in all cases to assist respondents who experienced difficulties with filling in the questionnaire. However, the researcher restrained from any personal involvement but motivated respondents to continue completing the questionnaire.

3.4.5. Reliability and Validity

Reliability is about the consistency of the instrument being used (Heale and Twycross, 2015; Mohajan, 2017; Nájera Catalán and Gordon, 2019). Reliability in quantitative research put more attention on measuring consistency on repeated occasions, over measurement instruments (questionnaire), and over respondents (Makhubedu et al. 2017). To determine the reliability of the questionnaire items, the Cronbach Alpha coefficients (α) was calculated. A measuring instrument or item is classified as reliable if the reliability coefficient is equal to or above 0.70. The greater the Cronbach Alpha coefficients, the greater the internal reliability of the items will be (Taber, 2017, Lumbwe et al. 2018). A research is reliable when it can presents similar results over time with the same respondents (Mohajan, 2017).

Before collecting data and determining the reliability of the questionnaire through the analysis of Cronbach Alpha, the researcher made sure that a variety of questions were included in the questionnaire to measure various parameters of the variables; the researcher eliminated ambiguous questions to avoid confusion from the respondents, made sure that the level of measurement was precise, moderated the degree of instrument difficulty for better understanding, used standardised instructions throughout the questionnaire, and maintained a consistent scoring procedure (Neuman and Kreuger, 2003).

Validity refers to the ability of a research instrument to accomplish the mission for which it was intended (Nájera Catalán and Gordon, 2019). There are several types of validity (Streiner, Norman, and Cairney, 2015). According to Kumar (2004), there are three types of validity in quantitative research which are construct validity, predictive validity and content validity. On the other hand, de Vos et al. (2011) adopted four types of validity test the validity of a study, namely, content validity, face validity, criterion validity and construct validity. This study observed the following criteria:

- **Construct validity** is "the determination of the degree to which an instrument successfully measures a theoretical construct" (de Vos et al. 2011). This research study used factor analysis to validate the data.

- **Content validity** ensures that the full content of a conceptual framework is represented in the research instruments (Punch, 2005). In this instance the complete content of the research conceptual framework is represented in the questionnaire.

- **Face validity** refers to the external appearance of a research instrument (de Vos et al. 2011). Without face validity, respondents might decide to not participate to the study which may unfavourably affect the study. In terms of appearance, the questionnaire was neatly and attractively presented to respondents.

3.4.6. Statistical data analysis

Once the questionnaires have been collected, they were subjected to data cleaning, arranging and capturing by using the Statistical Package for Social Sciences (SPSS) Version 26 to examine the possible relationship between the independent variables (location factors) and dependent variables (business performance). The aim of using this software was to produce diverse statistical models to justify the relationship between the identified variables.

Descriptive analysis: Through descriptive analysis, the mean and standard deviations were computed. The data was summarised into frequency distribution tables of the demographics of the respondents, demographics of the respondents' businesses, location decision factors, and lastly business performance.

Internal consistency: exploratory factor analysis: exploratory factor analysis (EFA) was used to regroup research items that belong together. Hence, it is applied as a data reduction or structure detection method (Kline, 2016). It is a multivariate technique that is used to decrease the number of variables and to test relationships between variables. Through EFA, less factors are generated in order to determine whether relationships among variables under study are highly correlated (Koyuncu and Kılıç, 2019).

Comparison technique: T-test: The t-test is an inferential statistic with the objective of testing if there is a significant difference between the means of two groups, which may be related in certain features (Kenton, 2019). This technique was used to examine the gap between the level of

importance when selecting a location and the level of satisfaction after assessing the business performance.

Multiple Regression analysis: Before computing the multiple regression analysis, Pearson correlation was conducted in order to test the relationship between the independent and dependent variables. Then linear regression analysis was further used. Linear regression is a statistical test applied to a data set to define and quantify the relation between the considered variables (Kumari and Yadav, 2018). Through this analysis multiple regression equations were developed to predict business performance.

3.5. QUALITATIVE RESEARCH PROCESS

3.5.1. Population and sampling

There are a variety of sampling methods in a qualitative design when conducting research. Even though researchers in qualitative research usually focus on relatively small samples (Sandelowski, 1996; Vasileiou, Barnett, Thorpe, and Young, 2018). In general, the respondents are selected because they are in the best position to provide rich descriptions of their experiences and are keen to articulate their experiences, thus deliver information that is reliable and which will be able to challenge and enrich the researcher's understanding.

Like the population setting of the quantitative method, the population targeted in the qualitative process was all manufacturing and services SMMEs owners or managers in the city of Johannesburg. The sampling method that was used under the qualitative method was a non-probability judgmental sampling. The researcher precisely chose respondents who were able to contribute to the study and who were willing to share their experiences in their location decision.

On the other hand, the researcher targeted more than ten interviews with SMMEs managers/owners until saturation in order to identify a pattern in the respondents' responses.

3.5.2. Data collection process

The researcher originally approached potential SMMEs owners/managers who responded to the questionnaire. This was done by selecting respondents who met the standards for inclusion in the research. The respondents were consequently selected were those who fulfilled the following criteria:

- SMMEs owners/manager in the city of Johannesburg;

- Respondents who had made location decision before;
- Respondents who had both good and bad experiences regarding location decision that affect business performance.

Those that satisfied the criteria and were willing to participate in the study were subsequently interviewed. Most of the respondents indicated a preference for the interviews to take place at their places of work.

Before interviews could be conducted on SMMEs owners/managers, they firstly read and signed consent forms to participate in the study, as well as another consent form giving the researcher the permission to audiotape the interview. The researcher also provided the questions before conducting the interview so that the respondents could familiarise with them. It took approximately 8 minutes to conduct each interview.

The interviews were conducted by the researcher, and were all conducted in English, even though it happened sometimes that respondents would use their home language (local and international) to express themselves sometimes. Although some of the respondents' home language was not English, their command of the language was good due to their education and professional status. Conducting the interviews in English allowed the researcher to transcribe the interviews as presented by the respondents without translating the interviews. Nevertheless, in instances where the respondents expressed themselves in a language other than English this information was translated during the transcription stage. The researcher deemed it necessary to translate all the interview material into English so that the data would be accessible to people who do not speak those home language.

3.5.3. Interview

According to Mouton and Marais (1991) as well as Barrett and Twycross (2018), there are three types of data collection within the qualitative traditional research: (1) observation, (2) interviews, and (3) personal documents. In order to explore and understand the deeper the views of respondents, the research question "How do the location factors affect SMMEs business performance?" was answered through interviews. The interview questions were composed of open-ended questions when carrying out face to face and telephonic interviews.

Qualitative interviews are determined by the following characteristics: low degree of standardisation and different answers from each interview (Lakshmikanthan and Tabiri, 2012). To avoid prejudice, the researcher interviewed 5 respondent and then assessed the accuracy of the respondents' feedbacks by comparing the responses. The researcher had the opportunity to often ask for explanations to make sure that the interview was on the right track in order to understand every specific situation, which was crucial when analysing and concluding the collected data.

During the data collection of questionnaire, the researcher was at the same time conducting interviews on SMMEs owners/ managers until data saturation would be reached. However, Only 5 interviews were conducted due to the time constraints and because respondents did not show any interest to participate in the interview.

3.5.4. Trustworthiness

Reliability and validity play a very important role in a qualitative study (Patton, 2002; Golafshani, 2003). Although reliability is used for testing and examining quantitative research, the idea is used in various research (Golafshani, 2003). On the other hand, validity is not considered as a single and universal concepts in qualitative studies (Golafshani, 2003). Although some qualitative researchers have argued that the term validity is not applicable to qualitative research, but at the same time, they have realised the need for some kind of qualifying check or measure for their research (Golafshani, 2003). Therefore, reliability and validity are conceptualized as trustworthiness or rigor of the study (Lincoln and Guba, 1985; Seale, 1999; Stenbacka, 2001; Davies and Dodd, 2002).

Trustworthiness is about the extent to which data collection, data interpretation, and the methods used are reliably to ensure the quality of a research (Pilot and Beck, 2014). According to Amankwaa, (2016), researchers should establish essential procedures so that a study can be considered worthy of consideration by readers. Leung (2015) agreed that most experts approve the necessity of trustworthiness in a research; however, debates emerged in the literature as to what comprises trustworthiness.

The criteria identified by Lincoln and Guba (1985) is accepted by many qualitative researchers and will be the focus of this study as well. These criteria includes credibility, dependability, confirmability, and transferability. In 1994, they added another criterion which is authenticity (Guba and Lincoln, 1994).

Each of these criteria and the typically used procedures is outlined; however, not all procedures are used in this study. Table 3.1 present the trustworthiness criteria and the procedures used in this study:

Table 3.1. Trustworthiness criteria and strategy used in this research
Source: Ally (2017)

TRUSTWORTHINESS CRITERION	CRITERIA STRATEGY
Credibility	Triangulation, prolonged engagement with respondents, and member-checking.
Dependability	Audit trial of process logs and peer-debriefings with a colleague
Confirmability	Audit trail of analysis and methodological memos of log.
Transferability	Thick description
Authenticity	Selection of appropriate respondents for the study sample and provision of a rich, detailed description

Credibility: This criterion refers to the confidence in the truth of the research and therefore the findings. It is considered as the most important criterion in establishing trustworthiness (Polit and Beck, 2014). In addition, this criterion is comparable to internal validity in quantitative research (Connelly, 2016). Techniques used to establish credibility in this study include triangulation, prolonged engagement with respondents, and member-checking.

Dependability: Dependability refers to the stability of the data over time and over the conditions of the study (Lincoln and Guba, 1985; Polit & Beck, 2014). This concept is analogous to reliability in quantitative research, but with the understanding stability of conditions depends on the nature of the study (Connelly, 2016). The strategies under this criterion used in this study include maintenance of an audit trail of process logs and peer-debriefings with a colleague. Process logs are researcher notes of all activities that happen during the study and decisions about aspects of the study, such as whom to interview and what to observe.

Confirmability: Conformability is the degree to which the research's results could be confirmed by other researchers (Lincoln and Guba, 1985). In other word findings that are consistent and could be repeated (Polit and Beck, 2014). This criterion seeks to guarantee that data and interpretations

of the findings are not inventions of the interrogator's imagination, but certainly derived from the data that was collected (Korstjens and Moser, 2018). This study used an audit trail of analysis and methodological memos of logs which included the researchers' detailed notes of all decisions and analysis as it progressed. These notes were reviewed by a colleague and also through member-checking with respondents (SMMEs managers/owners) in order to prevent biases from only one person's perspective on the research. Member-checking was done in two ways: (1) during the interview process by giving the opportunity to interviewees to listen to the recoding audio tape. Each respondent approved he interviews. (2) During the data analysis. After the authors transcribed and edited each interview, they were sent back to respondents who approved the edited version.

Transferability: Transferability refers to the extent to which the findings of qualitative research can be transferred to other contexts or settings with other respondents (Lincoln and Guba, 1985; Polit & Beck, 2014). A strategy a researcher can use to facilitate the transferability judgment by a potential user through thick descriptions (Korstjens and Moser, 2018). Even though this concept is comparable to generalisation in quantitative study, it is different from statistical generalisation. Qualitative researchers focus on the informants and their story without saying this is everyone's story. Researchers support the study's transferability with a rich, detailed description of the context, location, and people studied, and by being transparent about analysis and trustworthiness.

Authenticity: Authenticity is the extent to which researchers fairly and completely show a range of different realities and realistically convey respondents' lives (Polit and Beck, 2014). The selection of appropriate people for the study sample and provision of a rich, detailed description are ways the researchers addresses this criterion (Schou et al. 2011). Although there is no similarity to authenticity that exists in quantitative research, this criterion represents the advantage of qualitative research to portray fully the deep meaning of a phenomenon to increase the readers' understanding (Connelly, 2016).

3.5.5. Statistical data analysis

The data analysis method used in this study is thematic analysis. Thematic analysis identifies patterns or themes within qualitative data collected (Maguire and Delahunt, 2017). An additional benefit of this method, mostly from the viewpoint of learning and teaching, is that it is a method rather than a methodology (Braun and Clarke 2006; Clarke and Braun, 2013). This means that,

unlike many qualitative methodologies, it is not tied to a particular theoretical perspective. This makes it a very flexible method (Maguire and Delahunt, 2017).

3.6. ETHICAL CONSIDERATION

Ethical considerations are defined based on the ethics of the study principles that respect and protect human rights to ensure that the researcher constantly supports ethical principles and is engaged at all time in principled pursuit characterised by a sense of professionalism and responsibility (Dhai and McQuoid-Mason, 2011). Although this study posed the minimum risk, the researcher anticipated the consideration of some possible ethical considerations.

The following ethical principles, adapted from the study of (Ally, 2017), were observed in this study:

3.6.1. Permission

This study went through the Faculty of Built Environment's higher degrees committee and was exempted because it did not pose any implications on humans regarding general ethical value. This principle is also about obtaining informed consent from respondents.

To comply with ethical considerations in conducting the research, all respondents were provided invitation letter and written forms before the conducting the interview and filling in the questionnaire, that had to be filled in and signed as a proof of respondents' agreement to participate in the study. Those forms include the following:

a. Invitation to participate in the research (Interview and questionnaire).
b. Request to conduct interview.
c. Consent from the respondents to participate to the research (interview).
d. Consent to the use of tape recorder (interview).

Beside permission outlined, the respondents were encouraged to request the results of this research upon completion.

3.6.2. Autonomy and confidentiality

This principles was observed. It was based on an informed consent (Annexure B) which was voluntary and confidential. Therefore, the respondents were informed that their information and interview would remain confidential and anonymous if they so wished; and that the specific

content of individual interviews would only be discussed with the supervisors. In the final report, the identity of the respondents was removed and codes were used for each respondents. It is important to note that no financial compensations was provided to respondents. The data collected remained confidential throughout the research and is kept on a password-secure computer, which only the researcher has access to. After five years, all information and interviews regarding the respondents will be destroyed.

3.6.3. Non-maleficence

This principle refers the avoidance of doing harm as little as possible (Ally, 2017). The goals of the research was explained to the respondents before filling in the questionnaire, as well as at the beginning of the interview. If at any point of the research the respondents felt uncomfortable, they were highly encouraged and supported to withdraw with no repercussion. In this study, no respondents withdrew from interview.

3.6.4. Beneficence

According to Dhai and McQuoid-Mason (2011), the principle of beneficence refers to doing good for others and promoting interest and welfare for others. This principle was implemented in this study by the telephone number of the researcher and supervisor being availed to respondents so that they could contact them if more information related to the research was required or if there was a need to complain about any discomfort that they experienced. In addition, the researcher had to inform respondents about all risks and advantages of what may happen as a result of the research (Dhai and McQuoid-Mason, 2011). There were no risks associated with this results and the respondents were informed of this.

3.7. SUMMARY OF THE CHAPTER

This chapter has presented a thorough and formal methodology used in the study in order to investigate the research problem, answer the research question, and achieve the research objectives. This chapter discussed the research design, general data collection implemented for the mixed method, as well as data analysis. The quantitative and qualitative population of the study were identified from which the sample were derived. The next Chapter details the analysis process and describes the findings of the research.

CHAPTER 4: DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1. INTRODUCTION

This chapter describes the analysis of data followed by a discussion of the research results. The data that was collected was analysed to answer the research questions and achieve the research objectives. Different methods were used for quantitative and qualitative data collection and data analysis. Tables of frequencies and graphs are used in the chapter to present the findings. Descriptive analysis and inferential analysis were utilised. A total of 211 responses were obtained from the questionnaire survey. The researcher conducted interviews with five SMMEs owners/managers to help strengthen the quantitative questionnaire findings.

This chapter start with a quantitative analysis by describing the demographic characteristics of the study sample followed by a qualitative analysis by using the thematic approach. Surely the data were integrated thereafter to provide a simple view.

4.2. SURVEY RESPONSE RATE

This section describes the descriptive measures in terms of demographics of the respondents extracted from the questionnaire used in this study. 211 SMMEs owners/managers participated in this research. Initially, the researcher targeted 200 responses, therefore, a response rate of 105.5% can be observed, which is high and can be regarded as an opportunity to decrease the risk of bias (Groves and Peytcheva, 2008, Robson, 2011).

According to Mcpeake, Bateson, and O'Neill, (2014) and Livingston and Wilsa (2012), a response rate of at least 60% is considered as satisfactory. Hence, the sample was adequate to examine the research phenomenon.

The subsequent section presents an exhaustive description of the demographics of respondents within the City of Johannesburg.

4.3. Descriptive analysis – Demographic profile

The questionnaire comprised four sections, therefore the data gathered is presented as follows:

- The first section contains demographic information such as age, gender, cultural group, occupational status, and working experience.

- The second section describes aspect of respondents' businesses. This section include business operating time, ownership status, business' sector, and number of employees.
- The third section is about the importance and satisfaction of location factors. The locations factors identified are the independent variables of the study. The locations factors include cost, labour characteristic, quality of life, Market, Rental rate, and Green building.
- Finally, the last section provides the descriptive analysis of business performance.

4.4. SECTION A - DEMOGRAPHIC INFORMATION

4.4.1. Gender of respondents

The data associated with the demographic of respondents in terms of their gender is indicated in Figure 4.1 as follows:
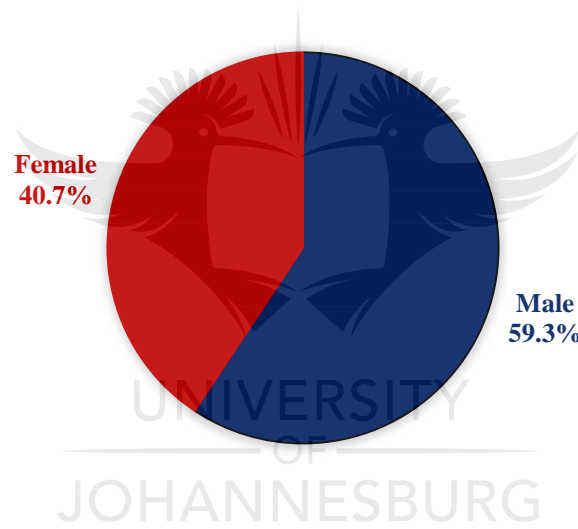
Figure 4.1. Gender of respondents
Source: (Statistical calculation from SPSS analysis: 2019)

An analysis of gender representation of the respondents revealed in Figure 4.1 shows that the majority of the respondents were male. 59.3% of the respondents were male while 40.7% of the respondents were female. It could be adduced from the findings of this study as well as the findings of Barnard et al. (2011) and Lumbwe et al. (2018) that the domain of SMMEs is a slightly male-dominated sector in Johannesburg.

4.4.2. Age of respondents

Table 4.1 presents demographics of SMMEs owners/managers in terms of age.

Table 4.1. Frequency results - Age respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**<20**	2	0.9	1.0	1.0
	21-29	10	4.7	4.8	5.8
	30-39	26	12.3	12.5	18.3
	40-49	80	37.9	38.5	56.7
	50-59	83	39.3	39.9	96.6
	60+	7	3.3	3.4	100.0
	Total	208	98.6	100.0	
Missing	**System**	3	1.4		
Total		211	100.0		

*Source***:** (Statistical calculation from SPSS analysis: 2019)

The data gathered from respondents was consolidated into a frequency distribution table in terms of the age distribution of the respondents. The results that are considered in this study are valid percentages. As presented in Table 4.1, the results show that 1% of SMMEs owners/ managers who participated in this study are less 20 years old. 4.8% of the respondents fall between the age group of 21-29 years old. 12.5% of the respondents fall between the age group of 30-39 years old. 38.5% of the respondents fall between the age group 40-49 years old, while 39.9% of the respondents fall between the age group 50-59 years old. Lastly, 3.4% of the respondents are older than 60 years. From a general perspective, this study gives a satisfactory overview of the respondents' age.

4.4.3. Ethnic background

This section presents the ethnical group of respondents. As presented in the Table 4.2, 7.6% of the sample are Asian. Both black and coloured SMMEs owners/managers within the sample respectively scored the same number of responses, which is 31.4% each. 18.1% of the respondent falls in the white group. 10.5% of the respondents falls in other types of ethnic groups. Lastly 1% were not willing to select the ethnical group they fall in.

Table 4.2. Frequency results - Ethnical group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Asian**	16	7.6	7.6	7.6
	Black	66	31.3	31.4	39.0
	Coloured	66	31.3	31.4	70.5
	White	38	18.0	18.1	88.6
	Other	22	10.4	10.5	99.0
	Not willing to say	2	0.9	1.0	100.0
	Total	210	99.5	100.0	
Missing	**System**	1	0.5		
Total		211	100.0		

*Source***:** (Statistical calculation from SPSS analysis: 2019)

4.4.4. Occupational status

Table 4.3 presents demographics of respondents in terms of their occupational level within the businesses they are running. Respondents' position in business was distributed between owner, manager, and both manager and owner.

Table 4.3. Frequency results – Occupational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Manager**	77	36.5	36.8	36.8
	Owner	63	29.9	30.1	67.0
	Both manager and owner	69	32.7	33.0	100.0
	Total	209	99.1	100.0	
Missing	**System**	2	0.9		
Total		211	100.0		

*Source***:** (Statistical calculation from SPSS analysis: 2019)

The results in terms of occupational status shows that 36.8% of the sample are managers, 30.1% are owners of the enterprise, and 33% are both owner and manager of the enterprise.

4.4.5. Respondents' working experience

Table 4.4 presents demographics of respondents in terms of their working experience within the businesses they are running.

Table 4.4. Respondent's working experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-3 years	8	3.8	3.8	3.8
	4-6 years	31	14.7	14.8	18.6
	7-10 years	117	55.5	55.7	74.3
	11-20 years	45	21.3	21.4	95.7
	21+ years	9	4.3	4.3	100.0
	Total	210	99.5	100.0	
Missing	System	1	0.5		
Total		211	100.0		

Source: (Statistical calculation from SPSS analysis: 2019)

The data presented in Table 4.4 reflect the number of years the respondents have been running their businesses. The outcomes of this section shows that 3.8% have spent less than three years. 14.8% of the respondents have been working for 4 to 6 years. 55.7% of the respondents spent 7 to 10 years running their enterprises. 21.4% have been working for 11 to 20 years. Lastly, 4.3% of the respondents have spent more than 21 years in their enterprises.

4.5. SECTION B - DEMOGRAPHICAL DATA OF RESPONDENTS' BUSINESSES

This section describes the descriptive analysis of the demographical data of respondents' businesses. The section includes business operating time, ownership status, business' sector, and number of employees.

4.5.1. Operating time of the business

Table 4.5 presents demographics of the businesses' operating time.

Table 4.5. Operating time of the business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-3 years	5	2.4	2.4	2.4
	4-6 years	17	8.1	8.1	10.4
	7-10 years	61	28.9	28.9	39.3
	11-20 years	91	43.1	43.1	82.5
	21+ years	37	17.5	17.5	100.0
	Total	211	100.0	100.0	

Source: (Statistical calculation from SPSS analysis: 2019)

As illustrated in Table 4.5, the results show that 2.4% of the businesses falls in the range of 0 to 3 years. 8.1% have been operational for 4 to 6 years. 28.9% of the businesses have been operating from 7 to 10 years. Most of the businesses owners/managers from the sample have been operating their enterprises from 11 to 20 years. Finally, 17.5% of the enterprises have been running for more than 21 years.

4.5.2. Enterprises' ownership status

The demographics of respondents in terms of owner status are presented in Figure 4.2 followed by explanation of the results.
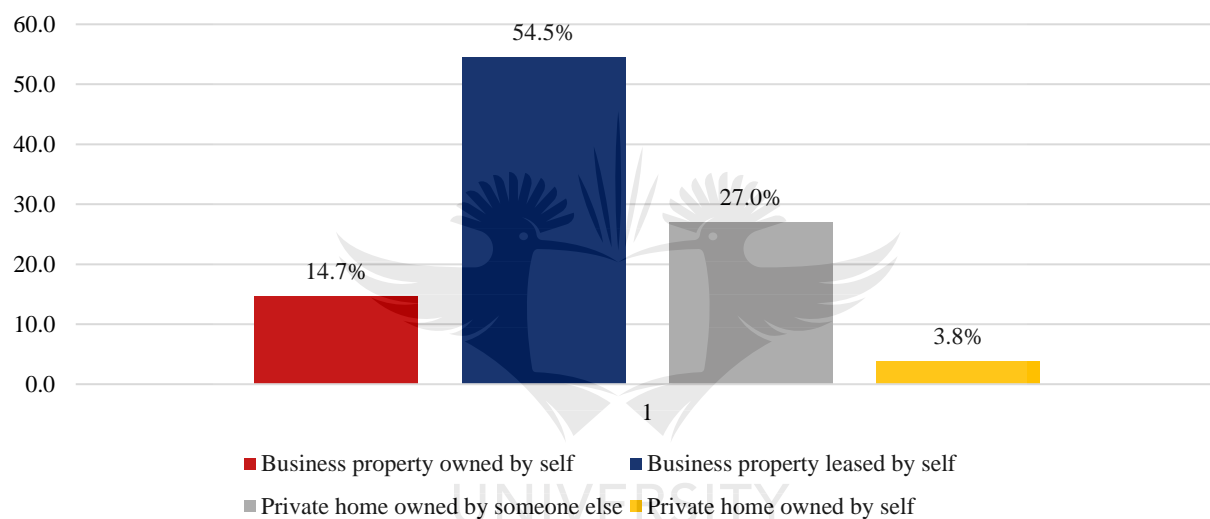
Figure 4.2. Enterprises ownership status
***Source*:** (Statistical calculation from SPSS analysis: 2019)

Through the findings on demographic data in terms of ownership status, it can be adduced that SMMEs prefer to lease a business property for their business. 54.5% of the respondents are leasing a business property, and 27% of the respondents are using a private home owned by someone else, which refer to leasing the property. On the other hand, 14.7% of the respondents are located in business properties owned by themselves, and 3.8% of the respondents' business are private homes owned by themselves.

Donaldson and Smit (2011) stated that the homebased property is a challenge to most businesses because this type of property involves various activities at their family residences, which means

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that it should be a peaceful environment for family members. This explain why most respondents are leasing business properties.

The following section presents the two different type of business sector under which SMMEs operate. These sectors include service and manufacturing as discussed in the literature review.

4.5.3. Respondents' business sector

Table 4.6 presents Respondents' business sector they are operating.

Table 4.6. Respondents' business sector

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Industrial/ manufacturing**	115	54.5	56.1	56.1
	Service	90	42.7	43.9	100.0
	Total	205	97.2	100.0	
Missing	**System**	6	2.8		
Total		211	100.0		

*Source***:** (Statistical calculation from SPSS analysis: 2019)

The results show that 56.1% of SMMEs who participated in this study fall within the industrial/manufacturing sector. On the other hand, 43.9% fall in service sector.

4.5.4. Size of enterprises

The demographics in terms of the size of the enterprises are presented in Figure 4.3. Throughout the literature, it was defined that any enterprise that has 1 to 5 employees in a business is considered as micro business. If an enterprise employs 6 to 50 employees, it is considered as a small business. Lastly, a group of 51 to 200 employees in a business are considered as medium enterprises.
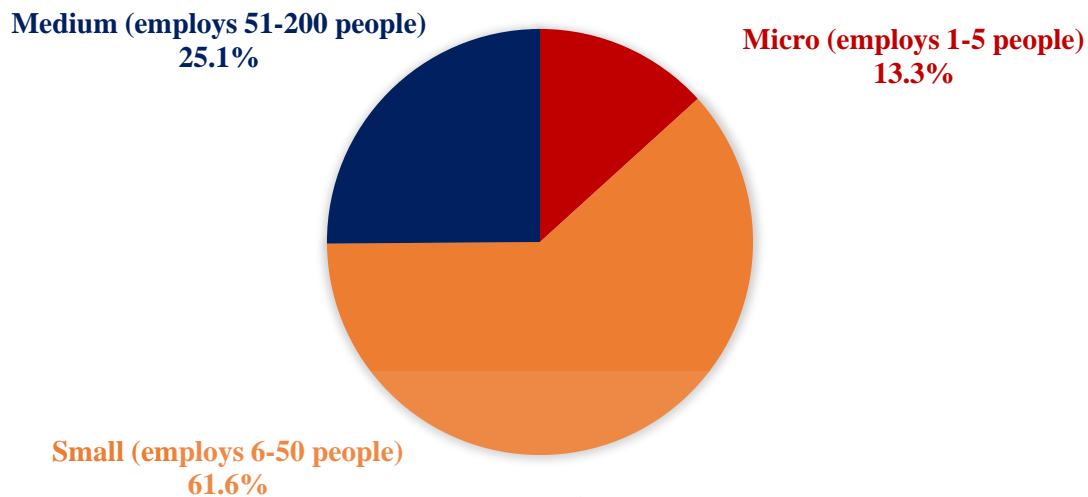
Figure 4.3. Number of employees within enterprises
*Source***:** (Statistical calculation from SPSS analysis: 2019)

Most SMMEs that participated in this study are small businesses, with a percentage of 61.6%. 25.1% of the businesses fall in the group of medium enterprises, and 13.3% in the group micro enterprises.

The next section present the descriptive results of this study on the key items of the research items. As discussed, the research instrument comprised of six sections namely cost, labour characteristics, quality of life, market, rental rate, and green building.

4.6. SECTION C - DISCUSSION OF THE DESCRIPTIVE

In section C of the questionnaire, there are significant parts of consideration and in line with the objectives of this study. The following are the items that present sub-factors which were considered by each SMMEs when making a location decision for their enterprises.

The independent variables are presented in 2 groups: Importance of location decision factors and satisfaction of those factors after making location decision. These are reported based on the mean ranging from 1 to 5. 1 represent the lowest score and 5 the highest.

Each section will firstly provide an explanatory list of the statements that were used in the questionnaire; then the code used for each statement will be used in the descriptive statistics table.

4.6.1. Cost: importance and satisfaction descriptive

C1_Wage rates
C2_Rental price of facility/land
C3_Transportation costs
C4_Fixed cost (e.g. Rent, insurance, taxes. Etc.)
C5_Energy costs (e.g. Electricity)

COST: Level of importance (A)

According to the results in Table 4.7, transportation costs were found to be a very important factor when selecting a location decision, represented by 34.6%. Rental price of facility/land was found to be moderately important when making a location decision (39.8%). 36.0% of the respondents indicated that wage rate moderately affect location decision. 29.0% of the respondents stated that fixed costs such as rent, insurances, taxes and other type of fixed costs are moderately important to SMMEs in terms of location decision. Lastly, 28.1% of the respondents indicated that energy costs such as electricity are very important to SMMEs

Table 4.7. Descriptive of cost in terms of the level of importance

Items	N	Mean	STD. deviation	Not at all important	A little important	Moderately important	Very important	Critically important
C3	211	3.15	1.006	5.7%	20.9%	32.7%	34.6%	6.2%
C2	211	3.13	0.957	4.3%	20.4%	39.8%	28.9%	6.6%
C1	211	2.96	0.925	4.3%	28.9%	36.0%	28.0%	2.8%
C4	210	2.78	1.170	18.1%	21.9%	29.0%	25.7%	5.2%
C5	210	2.68	1.268	26.7%	16.7%	23.8%	28.1%	4.8%

Source: (Statistical calculation from SPSS analysis: 2019)

As Table 4.7 shows, according to the mean arranged from the highest to the lowest, that most SMMEs consider transportation costs as a moderately important location factor, followed by rental price of facility/land, wage rates, fixed cost (e.g. rent, insurance, taxes. Etc.), and energy costs (e.g. electricity).

COST: Level of satisfaction (B)

This section present the descriptive of the level of satisfaction. As Table 4.8 shows, the average of SMME is mostly satisfied with the rental price of the facility/land, followed by transportation cost, and wages rates. On the other hand, it can observed that a considerable number of respondents were neutral about the statement, meaning that they are neither satisfied nor dissatisfied. In the

previous table (Table 4.7), C4_fixed cost and C5_energy costs were considered as less important when making a location decision. With regards to the level of satisfaction, fixed costs and energy costs affect the satisfaction of SMMEs owners/managers the least.

Table 4.8. Descriptive of cost in terms of the level of satisfaction

Items	n	Mean	STD deviation	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
C2	211	3.43	0.804	0.9%	14.7%	27.0%	55.0%	2.4%
C3	211	3.42	0.843	3.8%	9.5%	30.3%	54.0%	2.4%
C1	211	3.33	0.795	1.9%	13.7%	34.6%	48.8%	0.9%
C4	211	3.29	0.903	5.2%	13.7%	28.9%	51.2%	0.9%
C5	211	3.28	0.932	7.1%	10.4%	31.3%	49.8%	1.4%

*Source***:** (Statistical calculation from SPSS analysis: 2019)

4.6.2. Labour: importance and satisfaction descriptive

LC1_ The quality of labour force	LC7_ Attitudes of labour towards work
LC2_ The availability of workers	LC8_ Unemployment rate in area
LC3_ The motivation of workers in the area	LC9_ Turnover and absenteeism rates of employees
LC4_ Qualification level of labour force	
LC5_ Availability of non-qualified labour force	LC10_ No job opportunities for people in the area
LC6_ Availability of temporary labour force	
	LC11_ To create jobs for people in the area

LABOUR: Level of importance (A)

This sub-section presents the description of labour characteristics in terms of the level of importance. The table was re-arranged from the highest to the lowest mean. A higher mean value indicates that respondents perceived the statement as critically important and the lowest as not important at all. From Table 4.9, the highest scored mean is attitudes of labour towards work (LC7) with 3.72, followed by the motivation of workers in the area (LC3), qualification level of labour force (LC4), the availability of workers (LC2), availability of non-qualified labour force (LC5), availability of temporary labour force (LC6), the quality of labour force (LC1), turnover and absenteeism rates of employees (LC9), unemployment rate in area (LC8), no job opportunities for people in the area (LC10).Creating jobs for people in the area (LC11) scored the lowest mean of 2.67.

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Table 4.9. Descriptive of labour characteristics in terms of the level of importance

Items	N	Mean	STD deviation	Not at all important	A little important	Moderately important	Very important	Critically important
LC7	209	3.72	1.057	1.9%	11.0%	29.2%	29.2%	28.7%
LC3	211	3.66	1.099	3.8%	10.0%	30.3%	28.4%	27.5%
LC4	211	3.50	1.007	3.8%	12.8%	27.0%	42.7%	13.7%
LC2	211	3.45	1.010	4.3%	11.4%	33.6%	36.5%	14.2%
LC5	211	3.36	0.958	4.7%	11.8%	34.1%	41.2%	8.1%
LC6	211	3.35	0.905	2.8%	13.7%	36.0%	40.3%	7.1%
LC1	211	3.17	0.985	3.8%	23.2%	31.8%	34.6%	6.6%
LC9	211	2.99	1.062	6.2%	30.8%	28.9%	26.5%	7.6%
LC8	211	2.87	1.099	15.2%	18.0%	35.1%	28.0%	3.8%
LC10	211	2.79	1.072	6.2%	30.8%	28.9%	26.5%	7.6%
LC11	211	2.67	1.110	17.5%	26.5%	31.8%	19.9%	4.3%

*Source***:** (Statistical calculation from SPSS analysis: 2019)

The results of this table indicates that SMMEs owners or managers consider the attitudes of labour towards work as an important sub-factor of labour characteristics in the sense that 29.2% perceived this factor as moderately important, 29.2% as a very important sub-factors, and 28.7% as a critical factor. The least scored mean indicates that SMMEs owners or managers consider location and in order to create jobs for people in the area as little and moderately important.

LABOUR: Level of satisfaction (B)

This sub-section presents the descriptive of labour characteristics in terms of the level of satisfaction. The table was re-arranged from the highest to the lowest mean as well. A higher scored mean indicates that respondents are very satisfied with the statement and the lowest very dissatisfied. From Table 4.10, the highest scored mean is motivation of workers in the area (LC3) with a score of 3.56, followed by the availability of workers (LC2), qualification level of labour force (LC4), availability of non-qualified labour force (LC5), the quality of labour force (LC1), availability of temporary labour force (LC6), attitudes of labour towards work (LC7), no job opportunities for people in the area (LC10), turnover and absenteeism rates of employees (LC9), create jobs for people in the area (LC11). Unemployment rate in area (LC8) scored the lowest mean.

Table 4.10. Descriptive of labour characteristics in terms of the level of satisfaction

Items	n	Mean	STD deviation	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
LC3	204	3.56	0.702	0%	8.3%	30.9%	56.9%	3.9%
LC2	207	3.53	0.736	0%	12.1%	25.1%	60.4%	2.4%
LC4	207	3.48	0.674	0.5%	7.2%	37.2%	53.6%	1.4%
LC5	207	3.45	0.680	0%	8.2%	41.1%	48.3%	2.4%
LC1	207	3.39	0.761	1.0%	13.0%	32.9%	52.2%	1.0%
LC6	207	3.36	0.696	1.0%	8.2%	45.9%	43.5%	1.4%
LC7	207	3.34	0.801	1.9%	12.6%	37.7%	45.4%	2.4%
LC10	211	3.30	0.769	1.4%	14.7%	36.5%	47.4%	0%
LC9	211	3.26	0.770	0%	19.4%	35.5%	44.5%	0.5%
LC11	211	3.16	0.885	5.2%	15.6%	37.9%	40.3%	0.9%
LC8	207	3.14	0.833	3.9%	15.9%	43.5%	35.7%	1.0%

Source: (Statistical calculation from SPSS analysis: 2019)

The results in table 4.9 revealed that the attitude of labour towards work (LC7) is considered as the most important sub-factors compared to other sub-factors in the analysis. When it comes to the level of satisfaction, SMMEs owners or managers are more satisfied with the motivation of workers in the area (LC3) which was among the sub-factors that scored a high mean. In addition, it can be observed that a considerable number of SMMEs were neutral about the statements which means that they are neither dissatisfied nor satisfied the location decision factors.

4.6.3. Quality of life: importance and satisfaction descriptive

The descriptive statistics for quality of life in terms of the level of importance and level of satisfaction are illustrated the following descriptive tables.

SF1_ Quality of environment	SF6_ Behavior of locals to foreign-owned business
SF2_ Community attitude toward business	
SF3_ Standard of living in the area	SF7_ History of xenophobic attacks in area
SF4_ Crime rate	SF8_ Recreational opportunities
SF5_ Attitude of locals to foreign-owned business	SF9_ Access to schools, hospitals, churches

QUALITY OF LIFE: Level of importance (A)

This sub-section presents the descriptive of quality of life in terms of the level of importance. The table was re-arranged from the highest to the lowest mean. From Table 4.11, the highest scored mean is crime rate (SF4), history of xenophobic attacks in area (SF7), attitude of locals to foreign-

owned business (SF5), community attitude toward business (SF2), standard of living in the area (SF3), behavior of locals to foreign-owned business (SF6), quality of environment (SF1), recreational opportunities (SF8), finally access to schools, hospitals, and churches (SF9).

Table 4.11. Descriptive of quality of life in terms of the level of importance

Items	N	Mean	STD deviation	Not at all important	A little important	Moderately important	Very important	Critically important
SF4	211	4.40	0.649	0%	0.5%	7.6%	43.6%	48.3%
SF7	211	4.18	0.694	0%	0.9%	13.7%	51.7%	33.6%
SF5	211	4.15	0.714	0%	2.4%	11.8%	54.0%	31.8%
SF2	211	4.14	0.746	0.9%	2.4%	9.0%	57.3%	30.3%
SF3	210	4.10	0.754	0%	3.8%	12.4%	53.8%	30.0%
SF6	211	4.08	0.689	0%	1.9%	14.2%	57.8%	26.1%
SF1	211	3.84	0.910	1.4%	9.0%	14.7%	53.6%	21.3%
SF8	211	3.18	1.136	11.4%	14.2%	28.0%	37.9%	8.5%
SF9	211	2.90	1.228	18.0%	19.9%	22.7%	32.7%	6.6%

Source: (Statistical calculation from SPSS analysis: 2019)

The results revealed that Most SMMEs owners or managers consider the crime rate (SF4) as very important. 43.6% respondents consider this factor as very important, 48.3% critically important, and 7.6% moderately important. This finding can be explained by the fact that the City of Johannesburg is known not only as the economic capital, but is also as a high crime city (Numbeo, 2019). In Addition, SMMEs are more concerned with the history of xenophobic attacks in areas (SF7). 51.7% agreed that it is very important to verify the history of xenophobia in the area in which they decide to operate their business. 33.6% respondents selected critically important, and 13.7% moderately important. This can be explained by the fact that South Africa has experienced violence against African foreigners since 2008, which has become a chronic problem. These attacks manifest themselves in the form of attacks and looting of foreign-owned shops and offices (Bekker, Eigelaar-Meets, Eva, and Poole, 2008).

QUALITY OF LIFE: Level of satisfaction (B)

This sub-section presents the description of quality of life in terms of the level of satisfaction. When it comes to the level of satisfaction of the quality of life, the highest scored mean was community attitude toward business (SF2), standard of living in the area (SF3), quality of environment (SF1), crime rate (SF4), attitude of locals to foreign-owned business (SF5), behavior

of locals to foreign-owned business (SF6), history of xenophobic attacks in area (SF7), recreational opportunities (SF8), finally access to schools, hospitals, and churches (SF9).

Table 4.12. Descriptive of quality of life in terms of the level of satisfaction

Items	n	Mean	STD deviation	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
SF2	209	3.71	0.691	0.5%	6.7%	19.6%	67.9%	5.3%
SF3	210	3.68	0.705	0%	7.1%	24.8%	61.4%	6.7%
SF1	210	3.61	0.744	1.4%	7.1%	24.3%	62.9%	4.3%
SF4	209	3.52	0.827	2.4%	7.7%	32.1%	51.2%	6.7%
SF5	208	3.51	0.811	2.4%	6.7%	34.6%	50.0%	6.3%
SF6	210	3.51	0.808	2.4%	7.1%	32.9%	51.9%	5.7%
SF7	210	3.39	0.863	3.3%	10.5%	35.2%	46.2%	4.8%
SF8	210	3.25	0.911	5.7%	12.4%	35.2%	44.3%	2.4%
SF9	210	3.16	1.018	9.5%	13.8%	30.0%	44.3%	2.4%

Source: (Statistical calculation from SPSS analysis: 2019)

According to the level of satisfaction statistical results, SMMEs owners or managers are more satisfied with the community attitude toward the business (SF2) rather than other sub-factors under quality of life. As previously shown in table 4.11, SMMEs owners or managers considered the crime rate (SF4) in the area as crucial sub-factor. In table 4.12, respondents are satisfied with all sub-factors, but the community attitude toward business have the highest mean.

4.6.4. Market: importance and satisfaction descriptive

The descriptive statistics for market in terms of the level of importance and level of satisfaction are illustrated the following tables.

M1_ Size of market that can be served	M7_ Quality of suppliers (materials)
M2_ Responsiveness of customers in the area	M8_ Availability of alternative suppliers
M3_ Location near demand/the customer	M9_ Nature of supplier(s) process
M4_ The availability of transport facilities for employees	M10_ Benefit from competition by suppliers
M5_ Location of suppliers	M11_ Government regulations
M6_ Speed and responsiveness of suppliers	M12_ Location near competitors

MARKET: Level of importance (A)

This sub-section provided the descriptive of quality of life in terms of the level of importance. In Table 4.13, the highest scored mean is Availability of alternative suppliers (M8), Quality of

suppliers (M7), Nature of supplier(s) process (M9), Location of suppliers (M5), Speed and responsiveness of suppliers (M6), Location near demand/the customer (M3), Responsiveness of customers in the area (M2), The availability of transport facilities for employees (M4), Size of market that can be served (M1), Government regulations (M11), Benefit from competition by suppliers (M10), Location near competitors (M12).

Table 4.13. Descriptive of Market in terms of the level of importance

Items	N	Mean	STD deviation	Not at all important	A little important	Moderately important	Very important	Critically important
M8	210	4.19	0.679	0.5%	1.0%	9.5%	57.1%	31.9%
M7	211	4.18	0.657	0%	0.5%	12.8%	55.5%	31.3%
M9	211	4.18	0.632	0%	0.5%	10.9%	58.3%	30.3%
M5	211	4.14	0.778	0.5%	2.8%	12.8%	50.2%	33.6%
M6	211	4.12	0.706	0%	1.9%	13.7%	54.5%	29.9%
M3	211	4.10	0.755	0.5%	1.4%	16.6%	50.2%	31.3%
M2	211	4.09	0.772	0.5%	2.8%	14.2%	52.1%	30.3%
M4	211	4.08	0.723	0%	2.4%	15.2%	54.5%	28.0%
M1	211	3.99	0.870	0.9%	6.6%	12.8%	52.1%	27.5%
M11	211	3.87	0.955	2.8%	7.1%	14.2%	51.7%	24.2%
M10	211	3.82	0.878	2.4%	6.2%	16.6%	57.3%	17.5%
M12	211	3.29	1.158	10.4%	14.7%	20.4%	44.1%	10.4%

Source: (Statistical calculation from SPSS analysis: 2019)

It can be observed in Table 4.13 that the group of sub-factors that are considered as very important involves suppliers, followed by customers. Respondents also considered competitors as important. However, the statement that included factors involving competitors scored the lowest mean. Those sub-factors concerning competitors include size of market that can be served benefit from competition by suppliers (M10) and location near competitors (M12). This implies that most SMMEs owners or managers considered suppliers more than other factors.

MARKET: Level of satisfaction (B)

This sub-section presents the description of market factors in terms of the level of satisfaction. When it comes to the level of satisfaction of this factor, the highest scored mean is Speed and responsiveness of suppliers (M6), followed by availability of alternative suppliers (M8), location near demand/the customer (M3), quality of suppliers (M7), responsiveness of customers in the area (M2), location of suppliers (M5), the availability of transport facilities for employees (M4),

nature of supplier(s) process (M9), size of market that can be served (M1), benefit from competition by suppliers (M10), government regulations (M11), location near competitors (M12).

Table 4.14. Descriptive of Market in terms of the level of satisfaction

Items	n	Mean	STD deviation	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
M6	210	3.72	0.686	0%	4.8%	27.1%	59.5%	8.6%
M8	211	3.72	0.751	0.9%	5.2%	24.6%	59.2%	10.0%
M3	210	3.71	0.675	0%	4.8%	27.1%	60.5%	7.6%
M7	210	3.71	0.730	0.5%	5.2%	26.7%	58.1%	9.5%
M2	211	3.70	0.657	0%	5.2%	25.6%	63.5%	5.7%
M5	211	3.70	0.648	0%	3.8%	28.9%	60.7%	6.6%
M4	211	3.69	0.700	0%	5.7%	27.5%	58.8%	8.1%
M9	211	3.66	0.767	1.4%	5.7%	26.5%	58.3%	8.1%
M1	211	3.64	0.684	0.5%	6.6%	24.6%	64.5%	3.8%
M10	211	3.51	0.789	1.4%	9.5%	30.8%	53.6%	4.7%
M11	211	3.49	0.824	1.9%	10.9%	28.0%	54.5%	4.7%
M12	211	3.36	0.864	3.3%	13.7%	28.4%	52.6%	1.9%

Source: (Statistical calculation from SPSS analysis: 2019)

Table 4.14 revealed that respondents are mostly satisfied with the speed and responsiveness of suppliers in the area (M6) and the availability of alternative suppliers (M8) as these two sub-factors scored the same value of 3.72. It can also be observed that sub-factors such as Benefit from competition by suppliers (M10), Government regulations (M11), Location near competitors (M12) scored the lowest mean value in both the level of importance and satisfaction.

4.6.5. Rental rate: importance and satisfaction descriptive

The descriptive statistics for rental rate in terms of the level of importance and level of satisfaction are illustrated the following tables.

RR1_ The lease period of rental agreement
RR2_ Rental rate range of a specific area
RR3_ Variety of rental premises within a specific area
RR4_ Availability of competitors in area
RR5_ Access of service of specific estate agency
RR6_ Access of service of specific estate agent (regardless of the estate agency)
RR7_ The inflation rate

Rental rate - Level of importance (A)

This sub-section provided the description of rental rate in terms of the level of importance. In Table 4.15, the highest scored mean is the rental rate range of a specific area (RR2), variety of rental premises within a specific area (RR3), the lease period of rental agreement (RR1), availability of competitors in area (RR4), access of service of specific estate agency (RR5), access of service of specific estate agent (RR6), and The inflation rate (RR7).

Table 4.15. Descriptive of rental rate in terms of the level of importance

Items	N	Mean	STD deviation	Not at all important	A little important	Moderately important	Very important	Critically important
RR2	211	3.13	1.001	5.7%	21.3%	32.7%	34.6%	5.7%
RR3	211	3.13	1.010	7.6%	18.0%	32.2%	37.9%	4.3%
RR1	211	3.06	0.939	5.2%	20.9%	41.7%	27.5%	4.7%
RR4	211	2.98	1.058	10.9%	20.4%	32.7%	32.2%	3.8%
RR5	211	2.88	1.106	16.1%	15.6%	36.5%	28.0%	3.8%
RR6	210	2.46	0.939	16.2%	36.7%	31.9%	15.2%	0%
RR7	211	2.45	1.087	26.1%	22.7%	31.8%	19.0%	0.5%

Source: (Statistical calculation from SPSS analysis: 2019)

Table 4.15 revealed that respondents find the rental rate range of a specific area (RR2) and variety of rental premises within a specific area (RR3) are more important compared to other sub-factors with a mean of 3.13. On the other hand, access of service of specific estate agent (RR6) and inflation rate (RR7) have the lowest mean. This means that in order to make a location decision, the presence of a service of a particular estate agent and the inflation rate a less crucial than other sub-factors under rental rate.

Rental rate - Level of satisfaction (B)

This sub-section presents the description of the rental rate in terms of the level of satisfaction. In this section, the highest scored mean is the rental rate range of a specific area (RR2), followed by the lease period of rental agreement (RR1), variety of rental premises within a specific area (RR3), access of service of specific estate agency (RR5), availability of competitors in area (RR4), The inflation rate (RR7), and access of service of specific estate agent (RR6).

Table 4.16. Descriptive of rental rate in terms of the level of satisfaction

Items	N	Mean	STD deviation	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
RR2	211	3.39	0.852	3.8%	11.4%	28.0%	55.5%	1.4%
RR1	211	3.31	0.803	2.8%	11.8%	37.4%	46.9%	0.9%
RR3	210	3.30	0.847	3.8%	12.9%	33.8%	48.6%	1.0%
RR5	211	3.26	0.884	4.3%	13.7%	37.0%	42.2%	2.8%
RR4	211	3.22	0.839	4.3%	13.3%	39.3%	42.7%	0.5%
RR7	210	3.06	0.952	7.1%	19.5%	35.2%	36.7%	1.4%
RR6	209	2.93	0.869	5.7%	23.4%	43.1%	27.3%	0.5%

Source: (Statistical calculation from SPSS analysis: 2019)

Table 4.16 reveals that respondents consider the rental rate range of a specific area (RR2) as an important factor. It is shown that respondents are mostly satisfied with this sub-factor. On the other hand, the inflation rate (RR7), and access of service of specific estate agent (RR6) are factors that SMMEs owner or managers are least satisfied with.

4.6.6. Green building importance and satisfaction descriptive

The descriptive statistics for a green building in terms of the level of importance and level of satisfaction are illustrated the following tables.

GB1_Environmental friendly building
GB2_Efficient recycling system in for paper
GB3_Efficient recycling system in place for other waste
GB4_Natural ventilation
GB5_Energy efficient heating system
GB6_Sensors that adjust to light
GB7_Cost saving as a result of green practices
GB8_Use of renewable energy sources (e.g. Solar system)

GREEN BUILDING: Level of importance (A)

This sub-section provided the description of a green building in terms of the level of importance. In Table 4.17, the highest scored mean is natural ventilation (GB4), followed by environmental friendly building (GB1), efficient recycling system in for paper (GB2), efficient recycling system in place for other waste (GB3), Energy efficient heating system (GB5), Use of renewable energy sources (GB8), cost saving as a result of green practices (GB7), and sensors that adjust to light (GB6).

Table 4.17. Descriptive of a green building in terms of the level of importance

Items	N	Mean	STD deviation	Not at all important	A little important	Moderately important	Very important	Critically important
GB4	211	3.36	1.135	10.4%	8.5%	28.4%	39.8%	12.8%
GB1	211	3.17	1.399	19.4%	15.6%	10.4%	37.9%	16.6%
GB2	211	2.86	1.393	27.5%	11.8%	18.5%	31.8%	10.4%
GB3	211	2.78	1.352	28.0%	13.3%	18.5%	33.2%	7.1%
GB5	210	2.75	1.262	24.8%	15.2%	25.2%	29.5%	5.2%
GB8	210	2.67	1.338	29.5%	16.2%	18.1%	30.0%	6.2%
GB7	211	2.65	1.287	28.4%	15.2%	25.1%	25.6%	5.7%
GB6	211	2.63	1.250	28.0%	16.1%	25.1%	26.5%	4.3%

*Source***:** (Statistical calculation from SPSS analysis: 2019)

Table 4.17 revealed that natural ventilation (GB4) and an environmental friendly building (GB1) are moderately important. On the other hand, the remaining sub-factors are considered between a little important and moderately important. Sensors that adjust to light (GB6) is the lowest mean. This mean that among all sub-factors, respondents would consider this sub-factor as a last option.

GREEN BUILDING: Level of satisfaction (B)

This sub-section presents the description of green building in terms of the level of satisfaction. In this section, the highest scored mean is natural ventilation (GB4), followed by environmental friendly building (GB1), efficient recycling system in for paper (GB2), efficient recycling system in place for other waste (GB3), Energy efficient heating system (GB5), Use of renewable energy sources (GB8), cost saving as a result of green practices (GB7), and sensors that adjust to light (GB6).

Table 4.18. Descriptive of green building in terms of the level of satisfaction

Items	n	Mean	STD deviation	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
GB4	211	3.23	0.945	8.1%	9.0%	37.0%	43.6%	2.4%
GB2	211	3.20	0.962	8.1%	11.8%	33.6%	44.5%	1.9%
GB1	211	3.17	1.031	10.4%	13.3%	27.0%	47.9%	1.4%
GB3	211	3.14	0.964	8.5%	12.8%	37.0%	39.8%	1.9%
GB8	211	3.11	1.070	12.8%	10.9%	31.8%	41.7%	2.8%
GB7	210	3.10	1.031	11.0%	11.9%	37.6%	35.7%	3.8%
GB5	210	3.05	0.947	10.5%	9.5%	46.2%	32.4%	1.4%
GB6	211	3.05	1.018	11.8%	11.4%	39.3%	35.1%	2.4%

Source: (Statistical calculation from SPSS analysis: 2019)

Table 4.18 shows that SMMEs are satisfied with the location in which they are currently situated in terms of natural ventilation (GB4) with a mean value of 3.23. This factor is also considered as an important factor. It can also be observed that the same factor that scored the lowest mean in table 4.18 is the same factor that has a low mean (3.05).

4.7. SECTION D – BUSINESS PERFORMANCE DESCRIPTIVE

The descriptive statistics for the business performance are illustrated in the following descriptive table 4.19 and figure 4.4. This section of the questionnaire is significant because it is part of the understanding of one of the research question and research objective.

4.7.1. Business performance measurement

The table in this sub-section includes items that present business performance measures. These items are used to determine whether the performance of the business has increased or decreased. The table was re-arranged from the highest to the lowest mean. According to Table 4.19, the quality of product or service of manufacturing and service SMMEs has considerably increased. This statement scored the highest mean score value of 4.28, followed by customer satisfaction (4.15), firm's productivity (4.11), net profit after tax (4.01), profit has (4.00), return on total assets or total capital (3.91), Market share (3.91), annual sales (3.88), operating costs (3.81), number of employees (3.76), and turnover rate of employees has (3.65).

```
BP1_Net profit after tax has…
BP2_Profit has…
BP3_Return on total assets (or total capital) has…
BP4_Annual sales have…
BP5_Operating costs have…
BP6_Firm's productivity has…
BP7_Number of employees has…
BP8_Turnover rate of employees has…
BP9_Customer satisfaction has...
BP10_Market share has...
BP11_Product/ Service quality has...
```

Table 4.19. Descriptive of Market in terms of the level of satisfaction

Items	N	Mean	STD deviation	Decreased significantly	Decreased a little	Not changed	Increased a little	Increased significantly
BP11	211	4.28	0.666	0%	0%	12.8%	49.8%	37.4%
BP9	210	4.15	0.733	0%	1.4%	16.2%	48.6%	33.8%
BP6	211	4.11	0.770	0%	2.4%	17.5%	46.9%	33.2%
BP1	211	4.01	0.750	0.5%	2.8%	16.1%	56.4%	24.2%
BP2	211	4.00	0.680	0%	1.9%	17.5%	59.7%	20.9%
BP3	211	3.91	0.669	0%	1.9%	21.8%	60.2%	16.1%
BP10	211	3.91	0.591	0%	1.4%	18.0%	68.7%	11.8%
BP4	211	3.88	0.690	0%	2.8%	21.8%	59.7%	15.6%
BP5	211	3.81	0.705	0%	2.8%	27.5%	55.5%	14.2%
BP7	211	3.76	0.684	0.9%	1.9%	26.5%	61.1%	9.5%
BP8	211	3.65	0.781	1.9%	4.3%	29.9%	55.0%	9.0%

Source: (Statistical calculation from SPSS analysis: 2019)

4.7.2. Business success measurement

This sub-section presents the results of the level of success of SMMEs. Figure 4.4 shows that most SMMEs are moderately successful (55.2%). 34.8% are highly successful and 10% are a little successful. In summary, most SMMEs are performing well.
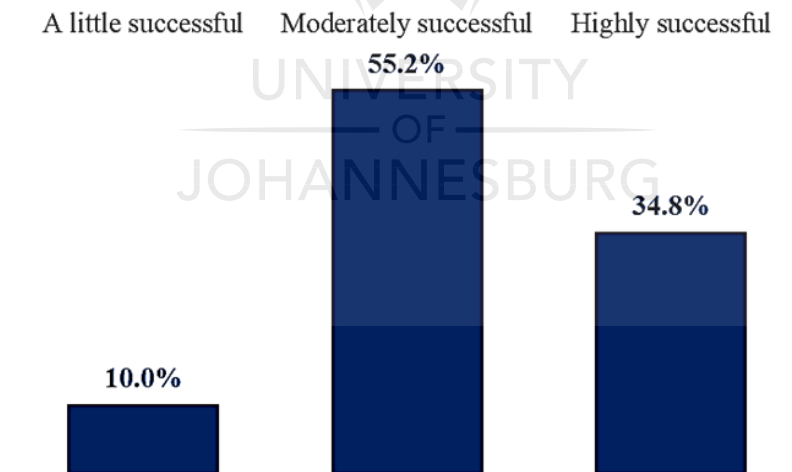
Figure 4.4. Business success level over 2 years
Source: (Statistical calculation from SPSS analysis: 2019)

4.8. RELIABILITY

Reliability is the degree to which a research tool can be reliably repeated and used in other studies. In addition, there should be an extensive level resemblance among the items defined to measure a

particular construct (mohajan, 2017; Blumberg, Cooper, and Schindler, 2005). In this study, the reliability of the instrument is assessed by the Cronbach's Alpha Coefficient. Cronbach's alpha is perhaps the most common estimate of internal consistency of items in a scale (Cronbach, 1951; Cronbach and Shavelson, 2004, Vaske, Beaman, and Sponarski, 2017).

4.8.1. Cronbach's Alpha

Cronbach's alpha (often represented by the lower case Greek letter α) is generally used to assess the internal consistency or reliability of summated rating scales (Cronbach, 1951). The statistic normally ranges from 0.00 to 1.00; however, a negative α value can occur when the items are not positively correlated among themselves. The size of alpha depends on the number of items in the scale (Streiner, 2003).

Although statisticians have questioned what establishes a satisfactory size for Cronbach's alpha (Nunnally and Bernstein, 1994; DeVellis, 2003; Vaske et al. 2017), values closer to one indicate a higher internal consistency; values closer to zero indicate a lower internal consistency (Brcka Lorenz, Chiang, and Nelson Laird, 2013). McMillan and Schumacher (2001) recommend that groups of items with α less than 0.70 should be used with caution.

The following Table 4.20 shows the internal consistency evaluated by the Cronbach's Alpha for independent variables based on the importance (A) and satisfaction (B) of location decision factors, The Cronbach's Alpha of the dependent variables (business performance) is also provided. The reliability of constructs of independent variables, except the importance of quality of life (0.713), and dependent variables are greater than 0.80. This implies that the reliability of the questionnaire is considerably satisfactory and consistent.

Table 4.20. Cronbach's alpha of independent variables

Independent variables		No of items	Cronbach alpha α
Cost	Importance (A)	5	0.849
	Satisfaction (B)	5	0.890
Labour	Importance (A)	11	0.834
	Satisfaction (B)	11	0.823
Quality of life	Importance (A)	9	0.713
	Satisfaction (B)	9	0.834
Market	Importance (A)	12	0.849
	Satisfaction (B)	12	0.894
Rental rate	Importance (A)	7	0.896

	Satisfaction (B)	7	0.894
Green building	Importance (A)	8	0.932
	Satisfaction (B)	8	0.941
Dependent variables		No of items	Cronbach Alpha
Business performance of SMMEs		11	0.912

*Source***:** (Statistical calculation from SPSS analysis: 2019)

4.9. VALIDITY: EXPLORATORY FACTOR ANALYSIS

This analysis was conducted on 7 variables (Independent and dependent variables) that counts 63 items in total. Independent variables included cost, labour, quality of life, market, rental rate, and green building; and the dependent variables was business performance. This statistical technique make the analysis and explanation of the outcomes more simplified, central and consolidated.

Correlation matrix of constructs were also conducted in order to observe the interrelationship between variables. Bock (2019) stated that "A correlation matrix is a table showing correlation coefficients between variables. Each cell in the table shows the correlation between two variables. A correlation matrix is used to summarise data as an input into a more advanced analysis, and as a diagnostic for advanced analyses". All correlation matrix tables of this study are in Appendix F.

Throughout these sections, the exploratory factor analysis (EFA) was conducted on both the level of importance and level of satisfaction subsequently. In each sub-section, the analysis started with the Kaiser-Meyer-Olkin and Bartlett's (KMO) test. Rai (2019) states that "Kaiser-Meyer-Olkin and Bartlett's test is a statistic that indicates the proportion of variance in our variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with our data. If the value is less than 0.50, the results of the factor analysis probably won't be very useful". Rai (2019) further states that "Bartlett's test of sphericity checks whether or not the observed variables inter-correlate at all using the observed correlation matrix against the identity matrix. If the test found to be statistically insignificant, we should not employ a factor analysis".

The extraction method which involves the total variance explained and the principle axis analysis were conducted in order to determine the number of factors that the constructs would regroup. A scree plot is "a line plot of the eigenvalues of factors or principal components in an analysis to

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visualise the dimensionality of the data" (Lewith, Jonas, and Walach, 2010) is also included in the analysis.

All the criteria are applied in the analysis of the EFA and are summarized in Appendix F. The Cronbach's Alpha of the factors computed through the EAF is also provided in Appendix F. The following section discusses the factors that were grouped in terms of importance and satisfaction.

4.9.1. EFA for Cost in terms of importance and satisfaction

The requirements of the EFA was observed. The inspection of the correlation matrix displayed the existence of coefficients greater than 0.3 as shown in table 4.30 and table 4.31 (Appendix F). Table 4.32 and Table 4.33 (Appendix F) attained a KMO value of 0.730 and 0.808 respectively, which is above the recommended value of 0.6. The Bartlett's test was statistically significant with values of less than 0.05.

In this section, the principal axis factoring revealed the existence of two factors in terms of importance and one factor regarding satisfaction with eigen values greater than 1 as shown in Appendix F. Based on the assessment of relationships between the variables under each factor, the following interpretations have been made: because the items under the importance of cost have high correlation between themselves, they can be grouped based on the satisfaction of cost. This implies that that both importance and satisfaction have one factor and keep the same label: **cost**.

The items included in this variable are C1_Wage rates, C2_Rental price of facility/land, C3_Transportation costs, C4_Fixed cost (e.g. Rent, insurance, taxes. Etc.), and C5_Energy costs (e.g. Electricity).

4.9.2. EFA for labour in terms of importance and satisfaction

The correlation matrix tables of this variable in terms of the importance and satisfaction are displayed in table 4.38 and table 4.39 (Appendix F). Table 4.40 and Table 4.41 (Appendix F) attained a KMO value of 0.779 and 0.731 respectively, which is above the recommended value of 0.6. The Bartlett's test was statistically significant with values of less than 0.05.

Under this variable, three factors were identified for both importance and satisfaction through the total variance explained (Table 4.42 and Table 4.43) and scree plots (Figure 4.13 and Figure 4.14). The pattern matrix in Table 4.44 and Table 4.45 show how the factor grouping were made. In terms of importance, factor 1 was **"Workforce in place"**, factor 2 was **"Employment creation"**,

and factor 3 **"Labour qualification"**. All the factors that were identified were named based on their relationship with their variables. Below is the description of the factors:

Workforce in place included items such as LC1_The quality of labour force, LC2_the availability of workers, and LC3_the motivation of workers in the area. **Employment creation** contained items such as LC9_turnover and absenteeism rates of employee, LC10_no job opportunities for people in the area, and LC11_create jobs for people in the area. Lastly, **labour qualification** comprised LC5_Availability of non-qualified labour force and LC6_ Availability of temporary labour force. Three items were rejected: LC4_ Qualification level of labour force, LC7_ Attitudes of labour towards work, and LC8_ Unemployment rate in area.

4.9.3. EFA for quality of life in terms of importance and satisfaction

This section presents the Exploratory Factor Analysis results of the quality of life variables. The requirements of the data for exploratory factor analysis was observed. Table 4. 48 and Table 4. 49 attained a KMO value of 0.697 and 0.746 respectively, which is above the recommended value of 0.6. The Bartlett's test was also statistically significant with a values of less than 0.05.

The Scree plots in appendix F (Figure 4.15 and Figure 4.16) illustrate three factors with eigenvalue value greater that one. Based on the results of the Pattern Matrix, three factors were identified and named. Factor 1 was named as **"Safe environment"**, factor 2 as **"basic needs"**, and factor 3 as **"social climate"**. The three factors were named based on their relationship with their variables. The description the three factors is provided below.

Safe environment includes the following items: SF4_ Crime rate, SF5_ Attitude of locals to foreign-owned business, SF6_ Behavior of locals to foreign-owned business, and SF7_ History of xenophobic attacks in area. **Basic needs** comprises SF8_ Recreational opportunities and SF9_ Access to schools, hospitals, churches. Lastly, **social climate** includes SF1_Quality of environment, SF2_ Community attitude toward business, and SF3_ Standard of living in the area.

4.9.4. EFA for market in terms of importance and satisfaction

This section presents the Exploratory Factor Analysis results of market variables. The correlation matrix tables are presented in Table 4.54 and Table 4.55 (Appendix F). Table 4.56 and Table 4.57 attained a KMO value of 0.838 and 0.865 respectively, which is above the recommended value of 0.6. The Bartlett's test was statistically significant with values is less than 0.05.

Three factors were identified for both importance and satisfaction through the total variance explained (Table 4.58 and Table 4.59) and The Scree plots in Figure 4.17 and Figure 4.18 revealed three factors with eigenvalue value greater that one scree plots. The pattern matrix in Table 4.60 and Table 4.61 present the factor grouping. Factor 1 was referred as **"proximity to suppliers"**. Factor 2 as **"Proximity to competitors"**, and factor 3 **"proximity to customers"**. The three factors were named based on their relationship with their variables. The description the three factors is provided below.

Proximity to suppliers includes items such as M5_ Location of suppliers, M6_ Speed and responsiveness of suppliers, M7_ Quality of suppliers (materials), M8_ Availability of alternative suppliers, and M9_ Nature of supplier(s) process. **Proximity to competitors** contains M10_ Benefit from competition by suppliers, M11_ Government regulations, and M12_ Location near competitors. Lastly, **Proximity to market** includes M1_ Size of market that can be served, M2_ Responsiveness of customers in the area, and M3_ Location near demand/the customer. One item is rejected: M4_the availability of transport facilities for employees.

4.9.5. EFA for rental rate in terms of importance and satisfaction

The inspection of the correlation matrix displayed the existence of the coefficients greater than 0.3 as shown in Table 4.62 and Table 4.63 (Appendix F). Table 4.64 and Table 4.65 reached a KMO value of 0.814 and 0.824 respectively, which is greater than the suggested value of 0.6. The Bartlett's test was also statistically significant with values less than 0.05.

Principal axis factoring in Table 4.66 and Table 4.67 revealed the existence of two factors in both importance and satisfaction with eigenvalues greater than 1 as shown in Figure 4.19 and Figure 4.20 (Appendix F). Although 2 factors have been identified, this study considered only one factor (factor 1). Factor 2 includes items that were scored the least by respondents. Therefore, the rejected items included RR6_ Access of service of specific estate agent (regardless of the estate agency) and RR7_ The inflation rate. This implies that that both importance and satisfaction have one factor and keep the same label: **rental rates**.

The items included in this variables are RR1_ The lease period of rental agreement, RR2_ Rental rate range of a specific area, RR3_ Variety of rental premises within a specific area, RR4_ Availability of competitors in area, and RR5_ Access of service of specific estate agency.

4.9.6. EFA for green building

The inspection of the correlation matrix displayed the existence of the coefficients greater than 0.3 as shown in Table 4.70 and Table 4.71 (Appendix F). Table 4.72 and Table 4.73 attained a KMO value of 0.882 and 0.889 respectively, which is above the recommended value of 0.6. The Bartlett's test was statistically significant with a values less than 0.05.

In this section, the principal axis factoring revealed the existence of one factor in terms of importance and one factor regarding satisfaction with eigenvalues greater than 1 as shown in Table 4.74 and Table 4.75 (Appendix F). This implies that that both importance and satisfaction have one factor and keep the same label: **green building**.

Green building included items such as GB1_Environmental friendly building, GB2_Efficient recycling system in for paper, GB3_Efficient recycling system in place for other waste, GB4_Natural ventilation, GB5_Energy efficient heating system, GB6_Sensors that adjust to light, GB7_Cost saving as a result of green practices, and GB8_Use of renewable energy sources (e.g. Solar system.

4.9.7. EFA for business performance

The requirements of the exploratory factor analysis was observed. The correlation matrix is presented in Table 4.79 (Appendix F). Table 4.80 attained a KMO value of 0.887, which is above the recommended value of 0.6. The Bartlett's test was statistically significant with a value of less than 0.05. The principal axis factoring resulted in two factors with eigenvalues greater than 1 as shown in Table 4.81 and Figure 4.23 (Appendix F). BP7_Number of employees has and BP8_Turnover rate of employees has been rejected from the analysis because these two items scored the lowest mean. This implies that business performance have one factor and kept the same label: **business performance**.

This variable include the following items: BP1_net profit after tax, BP2_profit, BP3_return on total assets (or total capital), BP4_annual sales, BP5_operating costs, BP6_Firm's productivity, BP9_customer satisfaction, BP10_market share, and BP11_product/ Service quality.

The Following section provides the results of the paired sample t-test analysis in order to determine the gap between the importance and satisfaction of location decision factors.

4.10. DEPENDENT SAMPLE T TEST ANALYSIS

Dependent sample t test, also referred as the paired sample t test is used when the observations on two populations of interest are collected in pairs (Douglas and George, 2003). Two samples are dependent (or consist of matched pairs) if the members of one sample can be used to determine the members of the other sample. Dependent Samples t-test is used to compare two groups of scores and their means in which the respondents in one group are somehow meaningfully related to the respondents in the other group (Kim, 2015; Gerald, 2018).

Table 4.84 in Appendix F presents the paired sampled statistics which includes the mean and standard deviation of each location decision factors for both group of comparison. One of the objectives of this study was to draw a comparison between the importance and satisfaction of location decision factors. Therefore, the following Table 4.21 computed a paired samples t test for each factors.

C_Cost	SE_Safe environment	PO_Proximity to competitors
WP_Workforce in place	BN_Basic needs	PC_Proximity to customers
EC_Employment creation	SC_Social climate	RR_Rental rate
LQ_Labour qualification	PS_Proximity to supplier	GB_Green building

Table 4.21. Paired sampled statistics

		Paired Differences					*t*	df	Sig. (2-tailed) *p*< 0.05
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	C (A) – Cost (B)	-0.40924	0.91202	0.06279	-0.53301	-0.28547	**-6.518**	210	**0.000**
Pair 2	WP (A) – WP (B)	-0.06361	0.95325	0.06626	-0.19423	0.06702	-0.960	206	0.338
Pair 3	EC (A) – EC (B)	-0.42654	0.93109	0.06410	-0.55290	-0.30018	**-6.654**	210	**0.000**
Pair 4	LQ (A) – LQ (B)	-0.05556	0.94794	0.06589	-0.18545	0.07434	-0.843	206	0.400
Pair 5	SE (A) – SE (B)	0.72063	0.91181	0.06292	0.59659	0.84468	**11.453**	209	**0.000**
Pair 6	BN (A) – BN (B)	-0.16905	1.07883	0.07445	-0.31581	-0.02229	**-2.271**	209	**0.024**
Pair 7	SC (A) – SC (B)	0.35635	0.70475	0.04863	0.26048	0.45222	**7.327**	209	**0.000**
Pair 8	PS (A) – PS (B)	0.46090	0.63606	0.04379	0.37458	0.54722	**10.526**	210	**0.000**
Pair 9	PO (A) – PO (A)	0.20695	0.82156	0.05656	0.09546	0.31845	**3.659**	210	**0.000**
Pair 10	PC (A) – PC (B)	0.37757	0.69552	0.04788	0.28318	0.47196	**7.885**	210	**0.000**
Pair 11	RR (A) – RR (B)	-0.26114	0.77993	0.05369	-0.36698	-0.15529	**-4.864**	210	**0.000**
Pair 12	GB (A) – GB (B)	-0.27124	0.93821	0.06459	-0.39857	-0.14392	**-4.200**	210	**0.000**

Source: (Statistical calculation from SPSS analysis: 2019)

As shown in table 4.21, a t-test was conducted to evaluate the gap between the importance and satisfaction of location decision factors. The analysis revealed that there is a significant gap between the following location decision factors in terms of importance and satisfaction: C_Cost, EC_Employment creation, SE_Safe environment, BN_Basic needs, SC_Social climate, PS_Proximity to supplier, PO_Proximity to competitors, PC_Proximity to customers, RR_Rental rate, and GB_Green building. Factors such as WP_Workforce in place and LQ_Labour qualification did not present a significant gap between the two groups of comparison because their p-value is greater than 0.05.

4.10.1. Cost

There is a significant gap between the importance of this location factor (M=2.9405, SD= 0.84461) and the satisfaction of this factor (M= 3.3498, SD= 0.71417), t (210) = -6.518, p< 5 E^{-10} (two-tailed). The difference in mean between the two group of comparison is -0.40924 with 95% confidence interval ranging from -0.53301 to -0.28547. This implies that the mean of the level of importance of this factor is lower than the mean of the level of satisfaction.

4.10.2. Workforce in place

Table 4.21 revealed that there is no gap between the importance of this location factor (M=3.4300, SD= 0.92741) and the satisfaction of this factor (M= 3.4936, SD= 0.64672), t (206) = -0.960, p< 0.338 (two-tailed). The difference in mean between the two group of comparison is -0.06361 with 95% confidence interval ranging from -0.19423 to 0.06702. This implies that the level of importance and satisfaction's means have approximately similar mean scores.

4.10.3. Employment creation

There is a significant gap between the importance of this location factor (M=2.8136, SD= 0.90150) and the satisfaction of this factor (M= 3.2401, SD= 0.69560), t (210) = -6.654, p< 2 E^{-10} (two-tailed). The difference in mean between the two groups of comparison is -0.42654 with 95% confidence interval ranging from -0.55290 to -0.30018. This implies that the level of importance's mean of this factor is lower than the level of satisfaction' mean.

4.10.4. Labour qualification

Table 4.21 revealed that there is no gap between the importance of this location factor (M= 3.3502, SD= 0.87122) and the satisfaction of this factor (M= 3.4058, SD= 0.60705), t (206) = -0.843, p< 0.400 (two-tailed). The difference in mean between the two groups of comparison is -0.05556 with

95% confidence interval ranging from -0.18545 to 0.07434. This implies that the level of importance and satisfaction's means have approximately similar mean scores.

4.10.5. Safe environment

There is a significant gap between the importance of this location factor (M= 4.2024, SD= 0.52747) and the satisfaction of this factor (M= 3.4817, SD= 0.68257), t (209) =11.453, p< 6 E^{-24} (two-tailed). The difference in mean between the two groups of comparison is 0.72063 with 95% confidence interval ranging from 0.59659 to 0.84468. This implies that the level of importance of this factor is higher than the level of satisfaction.

4.10.6. Basic needs

There is a significant gap between the importance of this location factor (M= 3.0381, SD= 1.08864) and the satisfaction of this factor (M= 3.2071, SD= 0.87834), t (209) = -2.271, p< 0.024 (two-tailed). The difference in mean between the two group of comparison is -0.16905 with 95% confidence interval ranging from -0.31581 to -0.02229. This means that the level of importance of this factor is lower than the level of satisfaction.

4.10.7. Social climate

There is a significant gap between the importance of this location factor (M= 4.0222, SD= 0.63105) and the satisfaction of this factor (M= 3.6659, SD= 0.62563), t (209) = 7.327, p< 5 E^{-12} (two-tailed). The difference in mean between the two groups of comparison is 0.35635 with 95% confidence interval ranging from 0.26048 to 0.45222. This implies that the level of importance's mean of this factor is higher than the level of satisfaction.

4.10.8. Proximity to supplier

There is a significant gap between the importance of this location factor (M= 4.1623, SD= 0.52817) and the satisfaction of this factor (M= 3.6659, SD= 0.58655), t (210) = 10.526, p< 4 E^{-21} (two-tailed). The difference in mean between the two groups of comparison is 0.46090 with 95% confidence interval ranging from 0.37458 to 0.54722. This implies that the level of importance's mean of this factor is higher than the level of satisfaction.

4.10.9. Proximity to competitors

There is a significant gap between the importance of this location factor (M= 3.6603, SD= 0.82485) and the satisfaction of this factor (M= 3.4534, SD= 0.68877), t (210) = 3.659, p< 0.0003

(two-tailed). The difference of mean between the two groups of comparison is 0.20695 with 95% confidence interval ranging from 0.09546 to 0.31845. This implies that the level of importance's mean of this factor is higher than the level of satisfaction.

4.10.10. Proximity to customers

There is a significant gap between the importance of this location factor (M= 4.0600, SD= 0.71164) and the satisfaction of this factor (M= 3.6825, SD= 0.58893), t (210) = 7.885, p< 1 E^{-13} (two-tailed). The difference of mean between the two groups of comparison is 0.37757 with 95% confidence interval ranging from 0.28318 to 0.47196. This implies that the level of importance's mean of this factor is higher than the level of satisfaction.

4.10.11. Rental rate

There is a significant gap between the importance of this location factor (M= 3.0351, SD= 0.87641) and the satisfaction of this factor (M= 3.2962, SD= 0.72314), t (210) = -4.864, p< 2 E^{-6} (two-tailed). The difference of mean between the two groups of comparison is -0.26114 with 95% confidence interval ranging from -0.36698 to -0.15529. This implies that the level of importance's mean of this factor is lower than the level of satisfaction.

4.10.12. Green building

There is a significant gap between the importance of this location factor (M= 2.8583, SD= 1.07710) and the satisfaction of this factor (M= 3.1296, SD= 0.83501), t (210) = -4.200, p< 3 E^{-5} (two-tailed). The difference of mean between the two groups of comparison is -0.27124 with 95% confidence interval ranging from -0.39857 to -0.14392. This implies that the level of importance's mean of this factor is lower than the level of satisfaction.

In general, out of twelve factors tested for the paired sampled t-test, ten factors which included Cost, employment creation, safe environment, basic needs, social climate, proximity to supplier, proximity to competitors, proximity to customers, rental rate, and green building revealed a gap between the importance and satisfaction of location decision. Therefore one of the research questions (RQ2) and research objective (RO2) has been fulfilled.

The following section present the results of the multiple regression analysis in order to determine the statistical relationship between location decision factors, regarding the level of importance and satisfaction, and business performance.

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4.11. CORRELATION ANALYSIS

In order to test the relationship between the independent variables (location factors) and the dependent variables (business performance), which answer and fulfill the third research question (RQ3) and third research objective (RO3), a correlation analysis was conducted. Correlation analysis is a statistical techniques used to evaluate a potential linear relationship between two continuous variables (Mukaka, 2012).

4.11.1. Regression analysis

Regression analysis is a technique that is used to study the linear relationship between a dependent variable Y and one or more independent variables X (Schneider, Hommel, and Blettner, 2010; Kumari and Yadav, 2018; Bellacicco, Vellucci, Scardi, Barbieux, Marullo, and D'Ortenzio, 2019). Pallant (2007) stated that regression analysis is the only technique appropriate for correlation analysis.

Figure 4.5 and Figure 4.6 illustrate the regression analysis demonstrating the linear relationship between location decision factors and business performance. It can be observed that the data points in Figure 4.5 and Figure 4.6 are gathered along a straight line, which is an assumption of linear relationship. This regression analysis is the starting point of the multiple regression analysis that would make a prediction from the population.
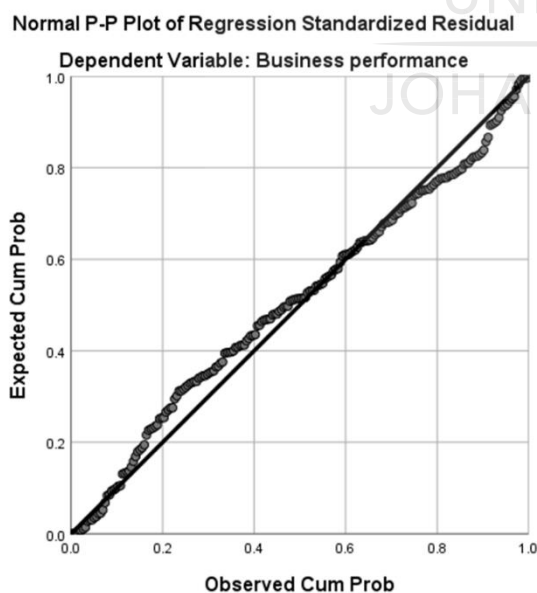
Figure 4.5. P-P Plot (Importance)   Figure 4.6. P-P Plot (satisfaction)
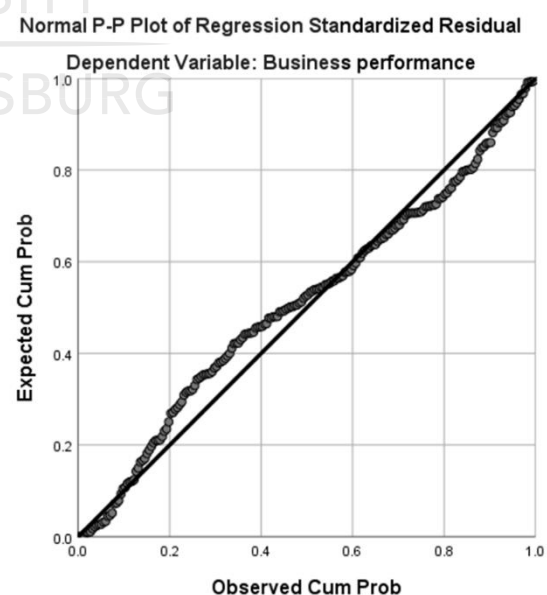
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In addition, the scatter plot in figure 4.7 and figure 4.8 were used to confirm the assumption of linearity (Pallant, 2007) is illustrate as follows:
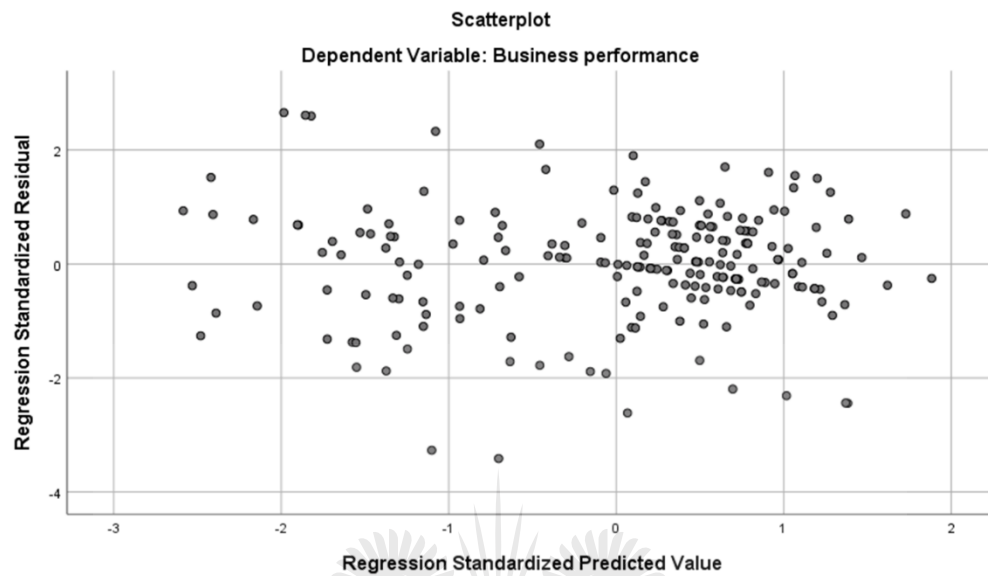
Figure 4.7. Scatter plot (Importance)
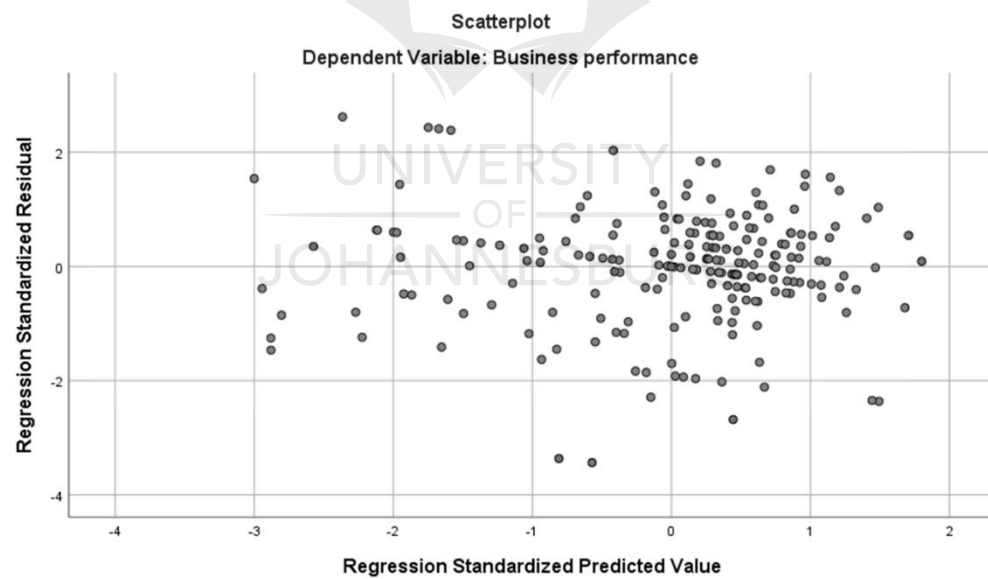
Figure 4.8. Scatter plot (Satisfaction)

4.11.2. Pearson correlation analysis

A pearson correlation analysis was computed to establish the relationship between independent variables (costs, workforce in place, employment creation, labour qualification, safe environment,

basic needs, social climate, proximity to supplier, proximity to competitors, proximity to customers, rental rate, and green building) and the dependent variable (business performance). A Pearson's correlation coefficient of 1 or -1 is a perfect correlation (Pallant, 2007). Table 4.22 reveals the relationship between independent variables and dependent variable in terms of importance and satisfaction.

Therefore, in terms of the importance of factors, the factors that revealed a relationship with business performance are as follows:

- Cost revealed a moderate positive relationship with business performance (r= 0.158, $p=$ 0.022).

- Workforce in place revealed a strong negative relationship with business performance (r= -0.249, $p=$ 0.0003).

- Labour qualification presents a moderate negative relationship (r= -0.151, $p=$ 0.028).

- Basic needs present a strong positive relationship with business performance (r= 0.291, $p=$ 2 E^{-5}).

- Social climate have a positive relationship with business performance (r= 0.207, $p=$ 0.003).

- Proximity to supplier presented a moderate relationship with business performance (r= 0.172, $p=$0.012).

- Proximity to competitors presents a strong positive relationship with business performance (r= 0.252, $p=$ 0.0002).

- Proximity to customers have a negative correlation with business performance (r= 0.186, $p=$ 0.007).

- Rental rate have a strong positive relationship with business performance (r= 0.235, $p=$ 0.001).

- Lastly green building revealed a strong relationship with business performance (r=0.301, p= 9 E^{-6}).

Based on the satisfaction of factors, the following factors present a relationship with business performance:

- Costs presented a moderate relationship with business performance (r= 0.138, $p=$ 0.045).

- Safe environment had moderate relationship with business performance (r= 0.153, *p*= 0.026).

- Basic needs presented a strong positive relationship with business performance (r= 0.297, *p*= 0.00001).

- Social climate had a moderate relationship with business performance (r= 0.176, *p*= 0.011).

- Proximity to competitors revealed a strong relationship with business performance (r= 0.231, *p*= 0.001).

- Lastly, green building presented a moderate relationship with business performance (r= 0.196, *p*= 0.004).

Table 4.22. Pearson correlation analysis

Correlations		Business performance Importance (A)	Business performance Satisfaction (B)
Costs	Pearson Correlation	0.158	0.138
	Sig. (2-tailed)	0.022	0.045
	N	211	211
Workforce in place	Pearson Correlation	-0.249	-0.107
	Sig. (2-tailed)	0.000	0.125
	N	211	207
Employment creation	Pearson Correlation	0.022	0.076
	Sig. (2-tailed)	0.749	0.270
	N	211	211
Labour qualification	Pearson Correlation	-0.151	-0.069
	Sig. (2-tailed)	0.028	0.324
	N	211	207
Safe environment	Pearson Correlation	0.097	0.153
	Sig. (2-tailed)	0.160	0.026
	N	211	210
Basic needs	Pearson Correlation	0.291	0.297
	Sig. (2-tailed)	0.000	0.000
	N	211	210
Social climate	Pearson Correlation	0.207	0.176
	Sig. (2-tailed)	0.003	0.011
	N	211	210
Proximity to supplier	Pearson Correlation	0.172	0.013
	Sig. (2-tailed)	0.012	0.856
	N	211	211
Proximity to competitors	Pearson Correlation	0.252	0.231

	Sig. (2-tailed)	0.000	0.001
	N	211	211
Proximity to customers	Pearson Correlation	0.186	0.084
	Sig. (2-tailed)	0.007	0.224
	N	211	211
Rental rate	Pearson Correlation	0.235	0.129
	Sig. (2-tailed)	0.001	0.062
	N	211	211
Green building	Pearson Correlation	0.301	0.196
	Sig. (2-tailed)	0.000	0.004
	N	211	211

Pearson correlation analysis with correlations over 0.200

4.12. Multiple regression analysis

4.12.1. The relationship between the independent variables (location decision factors) and the dependent variables (business performance) – Importance (A)

Table 4.23. Model summary[b] of location decision factors on business performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.366[a]	0.134	0.117	0.48023
a. Predictors: (Constant), green building, social climate, workforce in place, proximity to competitors.				
b. Dependent Variable: Business performance				

Table 4.24. ANOVA[a] (Importance)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.283	4	1.821	7.895	**0.000[b]**
	Residual	47.047	204	0.231		
	Total	54.329	208			
a. Dependent Variable: Business performance						
b. Predictors: (Constant), green building, social climate, workforce in place, proximity to competitors.						

The coefficient of determination (R^2) is an approximation of the percentage variation in the dependent variable (business performance) which can be predicted from the independent variables (location decision factors). Although the R^2 is not significantly high, the results in Table 4.24 reveals that the model is significant. As presented in Table 4.23, the R^2 value of 0.134 shows that 13.4% of the variation in business performance can be explained by the four variable identified the following Table 4.25.

Table 4.25. Coefficients[a] of dependent variable (business performance)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.532	0.275		12.845	0.000
	Workforce in place	-0.095	0.039	-0.173	-2.435	0.016
	Social climate	0.070	0.059	0.087	1.187	0.237
	Proximity to competitors	0.091	0.046	0.146	1.999	0.047
	Green building	0.068	0.035	0.143	1.948	0.053
a. Dependent Variable: Business performance						

The regression analysis reveals the relationship between the independent variables (location decision factors) and the dependent variable (business performance) in terms of importance. Using Table 4.25, the anticipated regression model is formulated in the following regression equation:

y (business performance)= $-0.095 (X_2) + 0.070 (X_7) + 0.091 (X_9) + 0.068 (X_{12})$

X_i= Independent variable

i= 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

X_1= Costs X_5= Safe environment X_9= Proximity to competitors

X_2= Workforce in place X_6= Basic needs X_{10}= Proximity to customers

X_3= Employment creation X_7= Social climate X_{11}= Rental rate

X_4= Labour qualification X_8= Proximity to supplier X_{12}= Green building

The interpretations are as follow:

a) For every unit increase in the "workforce in place" variable, a (-0.095) unit decrease in the business performance is predicted although the other independent variables remain constant. It also means that the more business owners rely on the sub-factor's importance of "workforce in place" such as "the quality of labour force", "the availability of workers", and "the motivation of workers in the area", the poorer the business performance.

b) For every unit increase in the "social climate" variable, a (0.070) unit increase in the business performance is expected while the other independent variables remain constant.

It also means that the more business owners consider this factor and its sub-factors (Quality of environment, community attitude toward business, and standard of living in the area) as an important factor, the better the business performance.

c) For every unit increase in the "proximity to competitors" variable, a (0.091) unit increase in the business performance is projected while the other independent variables remain constant. The more business perceive competition as an important factor, the better the business performance.

d) Lastly, for every unit increase in the "green building" variable, a (0.068) unit increase in the business performance is predicted although the other independent variables remain constant. It also means that the more business owners consider green building as an important factor, the better the business performance.

4.12.2. The relationship between the independent variables (location decision factors) and the dependent variables (business performance) – Satisfaction (B)

Table 4.26. Model summary[b] of location decision factors on business performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.263[a]	0.069	0.060	0.49551
a. Predictors: (Constant), Proximity to competitors , Safe environment				
b. Dependent Variable: Business performance				

Table 4.27. ANOVA[a] (Satisfaction)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.734	2	1.867	7.604	**0.001[b]**
	Residual	50.334	205	0.246		
	Total	54.068	207			
a. Dependent Variable: Business performance						
b. Predictors: (Constant), Proximity to competitors , Safe environment						

The coefficient of determination (R^2) is an approximation of the percentage variation in the dependent variable (business performance) which can be predicted from the independent variables (location decision factors). Although the R^2 is significantly lower, the results in Table 4.27 reveals that the model is significant. As presented in Table 4.26, the R^2 value of 0.069 shows that 6.9% of the variation in business performance can be explained by the two variable identified the following Table 4.28.

Table 4.28. Coefficients[a] of dependent variable (business performance)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.147	0.227		13.885	0.000
	Safe environment	0.134	0.052	0.177	2.561	0.011
	Proximity to competitors	0.118	0.052	0.158	2.290	0.023
a. Dependent Variable: Business performance						

The regression analysis shows the relationship between the satisfaction of the predictors (location decision factors) and the dependent variable (business performance). Using Table 4.28, the anticipated regression model is formulated in the following regression equation:

y (business performance)= 0.134 (X_5) + 0.118 (X_9)

X_i= Independent variable

i= 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

X_1= Costs X_5= Safe environment X_9= Proximity to competitors

X_2= Workforce in place X_6= Basic needs X_{10}= Proximity to customers

X_3= Employment creation X_7= Social climate X_{11}= Rental rate

X_4= Labour qualification X_8= Proximity to supplier X_{12}= Green building

Therefore, the model is explained as follow:
   a) For every unit increase in the "safe environment" variable, a (0.134) unit increase in the business performance is predicted while the other independent variable remains constant. The model reveals that the more business owners are satisfied with a safe environment where they are running their business, the better the business performance.
   b) For every unit increase in the "proximity to competitors" variable, a (0.118) unit increase in the business performance is expected while the other independent variables remain constant. The model reveals that the more business owners are satisfied with the competition around their businesses, the better the business performance.

4.13. QUALITATIVE ANALYSIS

In order to support the results of the quantitative analysis, a qualitative analysis was conducted. This emphasis refers to triangulation. This section provides the results of the qualitative analysis of this study. A qualitative research method for this research was selected because a qualitative approach is particularly beneficial in determining the meaning that respondents give to situations that they experience (Merriam, 1998). Information of the respondents as well as the thematic analysis is provided in the following paragraphs.

4.13.1. Demographic of respondents and respondent's business

Before conducting the thematic analysis, the demographic of the respondents are provided without mentioning their names, nor the names of their businesses, as confidentiality and anonymity were guaranteed to the respondents. Each respondent was given a code to represent them in the analysis. For example the first respondent is known as R1. The author conducted a pilot with one SMMEs owner. Five SMMEs owners or managers were interviewed excluding the respondent from the pilot study.

Table 4.29. Demographic of interview respondents

code	sex	Ethnic group	Age (years)	Position	Type of business	Industry sector	Business duration
R1	male	black	24	owner	micro	manufacturing	4
R2	male	black	24	owner	small	Service company	2
R3	male	black	29	owner	micro	manufacturing	2
R4	male	white	41	owner	medium	manufacturing	5
R5	woman	black	30	manager	small	Service company	4

4.13.2. Thematic analysis

Prior the data analysis of the qualitative data, the author transcribed the interview manually to facilitate the data analysis. The transcribing process involved the following:

a) The author wrote the name of the interviewer, interviewees, time, dates and locations, where the interviews took place.

b) The author stop and start each interview tapes. Small section at a time were played and type as the author heard them. To make sure that every word were transcribed, the author repeated each tape as and when required.

c) When the first draft was done, the author listened and read the transcribed interviews at the same time, and did corrections where necessary.

d) Finally, the author edited each draft by Spelling out abbreviations and clearing all punctuations, and correcting grammar. The author also edited verbal tics such as "you know", "Eish!", "hum"...etc.

The author used the following six-step framework for conducting a thematic analysis suggested by Braun and Clarke (2006) in Figure 4.9.

```
┌─────────────────────────────────────┐
│ Step 1: Become familiar with the data │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│    Step 2: Generate initial codes     │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│      Step 3: Search for themes        │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│        Step 4: Review themes          │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│        Step 5: Define themes          │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│          Step 6: Write-up             │
└─────────────────────────────────────┘
```
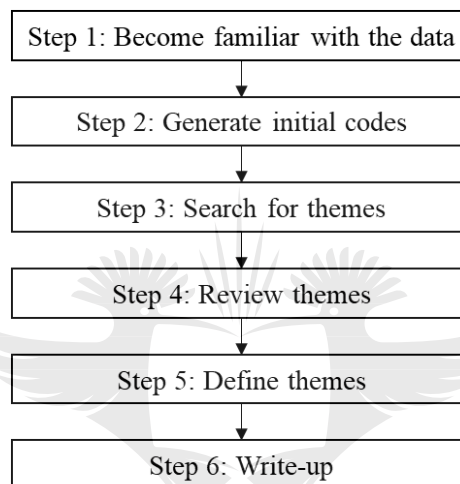
Figure 4.9. Six-step framework for doing a thematic analysis
Source: (Braun and Clarke, 2006).

In general, the first thing a researcher should do in any qualitative analysis is reading, and re-reading the transcripts. At this stage, the author familiarised herself with the complete body of qualitative data collected. In addition, the author was constantly making notes and jotting down early impressions.

The researcher used coding as shown in table 4.29, to reduce the huge amount of data into smaller chunks of meaning. In addition, the author used colours to identify codes that belonged to the same group. The coding process is presented in table in Appendix F. The central theme that emerged from the data analysis in this study was that SMMEs owners experienced the impact of location decision. Fourteen codes were identified and from there, the main themes that emerged from the analysis are:

- **Location decision factors:** Business owners experienced the process of identifying and evaluating location decision factors for their businesses.

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- **Measures for informed location decision:** Through business's owners, measures to make an informed location decision can be defined.

- **Importance of location decision:** Business owners emphasised the importance of such decision for their enterprises.

- **The impact of location decision on business performance:** This theme emerged from the business owners experiencing the effect of location decision on the enterprises.

- **Lastly, satisfaction of location decision:** Business owners express their satisfaction on the location decision they have made.

Figure 4.10 illustrates the themes and some examples of relevant quotations related to location decision that respondents experienced.
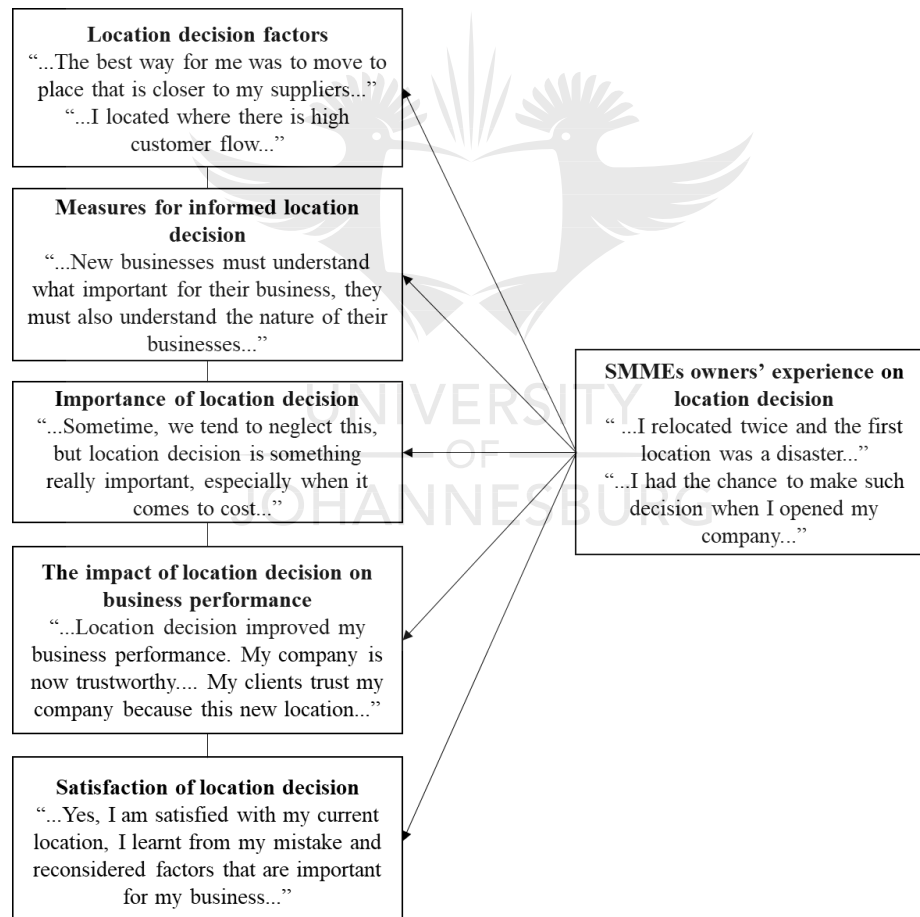
Figure 4.10. Experience of business owners regarding location decision
Source: author

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The reader is informed that the respondent quotations comprise diverse information aligned to experiences which can be associated to the different themes. The researcher extracted fragments of quotes relevant to each theme; therefore the direct quotes appear shortened in order to avoid repetition.

In the following paragraphs, a discussion of each theme that emerged from the interview and filed notes are supported by verbatim quotes and field notes. Verbatim quotes are presented in *italic black* and field notes are captured in orange and are not italicised.

4.13.3. Central theme: SMMEs owners/managers' experience on location decision

The researcher describes the experience of SMMEs owners on location decision as making such decision more than once. Five respondents verbalised during individual interviews that they certainly were experienced in the location decision. Some stated that it was a good experience and others stated it was a bad experience to a point where they had to relocate in order to save their business. This is affirmed by the following quotations from the respondents;

"I relocated twice and the first location was a disaster" Shaking head, looking disappointed.

"I had already made such decision when I opened my company" The respondent did some research on the internet regarding location decision.

"I made a location decision based on my previous experience"

"Yes, I have made a wrong location decision when I first started my company"

"I wouldn't say I am an expert but I think because of my experience, as small as it is, I think I might be able to guide new businesses when it comes to such decision" Looking confident.

4.13.4. Theme 1: Location decision factors

This theme included diverse location decision factors stated by business owners in the interview. Five respondents stated that the consideration of location decision factors. The factors that emerged include "location near suppliers", "location near customers", "easy access to the facility", "electricity and rental rate". The most repeated location factors were location near suppliers. This can be explained by the fact that some businesses prefer to locate near to the source of raw materials (suppliers) in order to reduce transportation cost (Christensen and Drejer, 2005; Heizer and Render, 2014; Mak and Shen, 2016). Furthermore, certain enterprises locate proximity to their

suppliers when a particular material is a component in the production or is costly to ship in its raw state (Barnard et al. 2016). Fuchs et al. (2011) states that "The inputs of some businesses are raw materials, which might be the major input to produce product or provide services. Nevertheless, materials might not necessarily be used for the production of products but for equipment, everything that facilitate the production process". This is affirmed by the following quotations from the respondent;

"The best way for me was to move to place that is closer to my suppliers"

"My business used to be far....far from suppliers and customers...The rental rate used to be very affordable...The fact of living far used to cause a lot on transport, and sometimes, because of the traffic, especially in the morning...the traffic delayed me, and I was late to my meeting with either customers and suppliers"

"I wanted to be closer to my suppliers, and locate where I could be able to deliver my products on time"

"Being far from my suppliers caused a slow production, and I was not able to produce and deliver on time"

"I made the location decision because I saw the need for my business to locate near our suppliers and customers"

"So, staying closer to my supplier is one thing that I wanted"

"It was a wrong decision in the fact that since we were staying far from our suppliers, I find that the money we spent just to get our materials to our company was even more to what we spent, so there was actually no profit"

"Suppliers were far from our business and this, increased the lead time and slowed the production"

"I located near suppliers, in that case the shipping cost of my material is reduced...If my raw materials are delivered on time...I have to deliver my products on time as well"

Another factors that was often mentioned with "location near suppliers" is "location near customers". John et al. (2015) and Lumbwe et al. (2018) affirm that locating near customers is a

key factor for customer-focused businesses. Other reason for locating a business near high concentration of customer flow is to reduce transportation expenses of finished goods as well as maintaining the just in time (JIT) production and delivery strategy. It is affirmed by the following quotations from the respondents:

"I located where there is high customer flow"

"I am currently in a place where there is high concentration of customers"

"I do not struggle anymore because there is less traffic and I easily get to my suppliers and customers..."

"I made the location decision because I saw the need for my business to locate near our suppliers and customers"

Another location factor that emerged in the interview is "easy access to the facility". It affirmed by respondents in the following quotations;

"I needed a place that was very easily accessible...where customers could find the location of my business easily"

"When you are running a business, especially Service Company, your business should be easily accessible"

"My clients were always complaining that the place was too far and it was difficult to access the business facility"

"It is very important to choose a location easily accessible"

Respondents were concerned about the expenses that they would encounter in a particular location. The expenses that emerged from the interview are: "Affordable rental rate" and "Electricity rate and availability". According to Barnard et al. (2011), properties offers diverse rental costs depending on the type of enterprise. Respondents opted for an affordable area in which to run their business.

"The rent was also another factor I considered before taking a decision" The respondent were looking for an affordable place.

"The rent of my previous location was a bit expensive" The respondent had to relocate to a much cheaper place.

"I chose to run my business here because the rent was affordable"

"My first important factors were the rent and..."

Electricity is one of the major business facility expenses which can be tackled by business owners and managers through diverse cost-saving methods, such as well-managed energy and lighting (Banard et al. 2011). These cost-saving methods can benefit businesses from increases in electricity costs and to avoid passing these cost to end users by increasing prices of products or services (Banard et al. 2011; Lumbwe et al. 2018). Respondents stated their concerns as follow:

"Well the other thing is electricity cost because we are constantly manufacturing products" Even though the respondent knew how to save electricity, electricity rate was still a concern.

"I selected an area where load shedding is minimal and does not affect businesses"

Respondents expressed the need to locate in a quiet and safe environment; furthermore, a comfortable area for both business owners and employees was also of interest. According to Fassoulis and Alexopoulos (2015), the workplace environment should be comfortable for employees. Every business owner and mnagers should ensure that the premises comply with safety, welfare and health regulations. Research shows that the working atmosphere is positively correlated with workers ' performance and job satisfaction in the sense that physical workplace influences the attitudes of employees (Raziq and Maulabakhsh, 2014). Such attitudes are affected by regulated noise levels inside or outside the premises, the right natural or artificial lighting, temperature, and adequate ventilation system. This was declared in the following quotations from the respondents during the interview:

"The previous location, the place was a bit noisy in the sense that, my business requires creativity and inspiration and the noise did not help at all"

"When you are choosing a location, you must make sure that the area is secure because security is important, especially in this city"

"My first important factors were rental rate and security. I needed a place that was secure because I store my clients' goods in the office and warehouse"

"There was no taxies available for my workers....I always had to personally drop them off after work"

Lastly, alternatives to location decisions are about (1) expanding an existing facility rather than relocating, (2) maintaining the current location while adding another facility elsewhere, or (3) closing the existing location and locating it at another location (Heizer et al. 2016; Lumbwe et al. 2018). The alternative that emerged from the interview is the third alternative which involves the closing of a facility to relocate to a bigger place. It is affirmed by one respondent as follows:

"The previous place was becoming too small to accommodate other workers and new machines, so I had to relocate" Because they recruiting workers at that times and installing new machinery, the space in the facility was becoming a constraints.

4.13.5. Theme 2: Measures for informed location decision

Due to the personal experience of business owners, they were able to articulate measures that new businesses could look at before making a location decision. Heizer and Render (2014) stated that there are numerous location factors that one needs to consider before selecting a location, but one also needs to understand the nature of the enterprise. Respondents articulated the following measures:

"New businesses must understand what important for them, they must also understand what kind of businesses they running"

"You first need to understand the nature of your business. You also need to identify factors that will match more the requirements of your business...It is really important to do some research on a particular location"

"I will suggest new businesses to locate near their suppliers"

"New businesses must ask themselves how close they are from the suppliers or customers"

"Don't rush...take your time to examine the area you want your business to be...Evaluate options you might have as well"

Although some respondents provided specific factors to considerer, it is still crucial to identify and evaluate factors that fulfill the requirement of a particular business. Pongpanich (1999) further

stated that it is important to identify and understand the characteristics of the different types of location decisions as each type of decision has different implications for the ideal options.

4.13.6. Theme 3: Importance of location decision

Researches such as Khumawala and Kadipasaoglu (2000); Eterovic and Ozgül (2012); Kalantari (2013); Nguyen and Olapiriyakul (2016); Mkwanazi and Mbohwa (2016b); Lumbwe et al. (2018); as well as Fusková et al. (2018) emphasise on the importance of location decision. It can also be observed that some respondents acknowledge the importance of location decision. Respondents said:

"Sometime, we tend to neglect this, but location decision is something really important, especially when it comes to cost"

"So, location decision is very....very important" Respondent insisted on the importance of location decision.

4.13.7. Theme 4: The impact of location decision on business performance

Based on the quantitative results and outcomes of some researches, location decision indeed affects business performance (Mkwanazi and Mbohwa, 2016b; Lumbwe et al. 2018). The interview with respondents revealed that the wrong location decision negatively affects business performance. On the other hand, an informed location decision generally has a positive impact. Respondents expressed their experience with regards to the effect that the location decision has on business performance with the following quotations:

"When we were facing the issue of load shedding, it strongly and negatively affects our performance because we could not produce anything"

"You know, just because of bad location decision, we had difficulties to break even"

"These factors affected my business performance in a positive way"

"Location decision improved my business performance. My company is now trustworthy, my clients trust my company because this new location"

"Location decision is often perceived as a decision that does not influence the productivity and obviously the performance of a business...but such decision can make your business fail"

"I underestimated location decision, it is very important because this decision can determine the success or failure of your company"

"I am currently in a place where there is high concentration of customers, and I am also closed to my suppliers and business is doing really well"

Furthermore, SMMEs that experienced a positive effect of location decision on their performance subsequently enhanced customer satisfaction in the sense that their customers can trust their businesses.

4.13.8. Theme 5: Satisfaction of location decision

Lastly, the final theme was about the level of satisfaction that SMMEs owners experience after selecting a location for their business. Their quotes are verbalized as follows:

"I am satisfied with the place I am currently located. I do not struggle anymore because there is less traffic and I easily get to my suppliers and customers"

"I am satisfied at 100% where I am now located"

"Yes, I am satisfied with my current location, I learnt from my mistake and reconsidered factors that are important for my business"

"I almost gave up on my company, but the day I relocate is the day my company started to perform well"

"Now my business is doing just fine"

It can be observed that some respondents learnt from their past poor location decision experiences. All of the five respondents are satisfied with their current businesses location.

4.14.   CONVERGENT PARALLEL MIXED-METHOD RESULTS

This study applied a convergent design, which refers to qualitative and quantitative data collected in parallel, analysed independently and merged to compare or to relate (Creswell and Plano Clark, 2007; Plano Clark, Huddleston-Casas, Churchill, O'Neil Green, and Garrett, 2008). Data sets for this parallel convergent study are presented in a joint display in figure 4.11. The side-by-side data presentation allows the researcher to merge the data and interpret the results in a single representation.

Quantitative data

Survey (n= 211 owners/ managers of manufacturing and service SMMEs)

Data analysis (SPSS)
Exploratory factor analysis
Dependent sample t-test analysis
Multiple regression analysis

Results
The findings reveals that ten factorised variables presented a significant gap between the importance and satisfaction of location decision factors.
Importance of location decision factors: the Pearson correlation analysis reveals that cost, basic needs, social climate, proximity to supplier, proximity to competitors, proximity to customers, rental rate, and green building have positive relationships with business performance. On the other hand, workforce in place and labour qualification present negative correlations with business performance.
Satisfaction of location decision factors: costs, safe environment, basic needs, social climate, proximity to competitors, and green building revealed positive correlations with business performance.
Lastly, the multiple regression analysis developed regression equations to predict the dependent variables (business performance).

RQ1. What are the factors and sub-factors to be considered in location decision?

RQ2. What is the gap between the importance and satisfaction of location decision factors?

RQ3. What is the relationship between location decision factors (independent variables) and the performance of manufacturing and services SMMEs (dependent variable)?

RQ4. How do location factors affect SMMEs business performance?

Synthesis:
Both method identified gaps between the importance and satisfaction of location decision factors.
Quantitative results reveal factors that have positive and negative relationships on business performance regarding the importance of location decision factors. The results also show factors that have positive relationships with business performance regarding the satisfaction of location decision factors. In regards to the qualitative results, there are factors that respondents perceived as important and impacted their business performance.
Both methods, quantitative and qualitative method revealed that location decision impacts on business performance in the sense that some respondents had to relocated in order to save their businesses.

Qualitative data

Semi-structured interviews (n= 5 owners/ managers of manufacturing and service SMMEs)

Data analysis
Thematic analysis

Results:
Central themes: SMMEs owners and managers experience on location decision.
Sub-theme 1: Location decision factors
Sub-theme 2: Measures for informed location decision.
Sub-theme 3: Importance of location decision
Sub-theme 4: The impact of location decision on business performance
Sub-theme 5: Satisfaction of location decision.

Figure 4.11. Convergent parallel mixed method results.

4.14.1. Interpretation of the merged results

The quantitative findings reveals that ten factorised variables present a significant gap between the importance and satisfaction of location decision factors. The ten factorised variables include the following:

- Cost;
- Employment creation;
- Safe environment;
- Basic needs;
- Social climate;
- Proximity to supplier;
- Proximity to competitors;
- Proximity to customers;
- Rental rate;
- And green building.

The thematic analysis reveals that factors such as proximity to suppliers, proximity to customers, and cost present a gap between the importance and satisfaction of location decision factors in the sense that some respondents considered those factors as important factors but were not satisfied with the performance of their businesses, hence had to relocate where their businesses are currently performing well.

Regarding the importance of location factors, the Pearson correlation analysis reveals that the following have positive relationships with business performance:

- Cost;
- Basic needs;
- Social climate;
- Proximity to supplier;
- Proximity to competitors;
- Proximity to customers;
- Rental rate;
- And green building.

On the other hand the following present negative correlations with business performance:

- Workforce in place;
- Labour qualification.

Regarding the satisfaction of location decision factors, the following present positive correlations with business performance:

- Costs;
- Safe environment;
- Basic needs;
- Social climate;
- Proximity to competitors;
- And green building.

The quantitative method determines the existence and type of relationship that exist between the independent (location decision factors) and dependent (business performance) variables. The thematic analysis also revealed that location decision factors indeed impact on the business performance of SMMEs in the sense that respondents said that when they considered location decision factors in order to locate their business, those factors impacted on their business positively or negatively.

4.15. SUMMARY

In this chapter, the analysis and results of quantitative and qualitative analysis were presented and discussed. 211 respondents participated in the research. The data was captured on computer using SPSS, edited, coded and analysed.

As part of the quantitative analysis, descriptive statistics were conducted on the demographic data of both respondents and their businesses. In addition, the descriptive analysis of the locations decision factors in terms of importance and satisfaction as well as the descriptive of the business performance was conducted. Cronbach's Alpha tests were conducted to assess the reliability of the questionnaire. From there, an exploratory factor analysis for both importance and satisfaction were conducted. Linear correlations were also conducted. Finally, multiple regression was used to

predict the location decision factors that influence business performance in both manufacturing and service small enterprises.

On the other hand, as part of the qualitative analysis, interviews were conducted on only 5 business owners of manufacturing and services SMMEs to provide clarity on the results of the quantitative analysis. A thematic analysis method was used to analyse the interviews.

In the following chapter (Chapter 5), the conclusion and the recommendations are presented.

CHAPTER 5: SUMMARY OF FINDINGS, LIMITATIONS, RECOMMENDATIONS, AND CONCLUSION

This study has been predominantly relying on the primary and secondary objectives defined in Chapter 1. This concluding chapter presents the summary of findings, the limitations of the study, recommendations, future research areas; and lastly, a general conclusion.

5.1. SUMMARY OF FINDINGS

The aim of this study was to investigate the nature of the relationship between location decisions factors and the performance of manufacturing and service SMMEs. The primary objective was achieved with the reinforcement of four secondary objectives. In addition, the research questions were answered through the fulfilment of the research objectives.

5.1.1. Findings based on the questionnaire

The first objective sought to identify the factors and sub-factors that relate to what manufacturing and services SMMEs have to consider when making location decisions. This objective was fulfilled through the literature review of relevant studies. The literature review identified fundamental findings and theoretical contributions to the research topic. Furthermore, six main location decision factors and sub-factors were identified.

The second objective sought to determine the gap between the importance and satisfaction of location decision factors. This objective was achieved by conducting the dependent sample t test. The result of this analysis revealed that twelve factors resulted from the Exploratory Factor Analysis, ten factors which include cost, employment creation, safe environment, basic needs, social climate, proximity to supplier, proximity to competitors, proximity to customers, rental rate, and green building presented a significant gap between the importance and satisfaction of location decision factors.

The third objective aimed to determine whether a correlation exist between location factors (independent variables) and the performance of manufacturing and service enterprises (dependent variable). A Pearson correlation analysis was used to test the relationship between the interdependent and dependent variables and the multiple regression analysis that was used to develop a model that could predict the dependent variables from the independent variables. The findings of the Pearson correlation analysis revealed in order of importance that location factors

(cost, workforce in place, labour qualification, basic needs, social climate, proximity to supplier, proximity to competitors, proximity to customers, rental rate, and green building) have a relationship with business performance. In terms of satisfaction, factors such as costs, safe environment, basic needs, social climate, proximity to competitors, and green building have a relationship with business performance. Through the multiple regression analysis, regression equations were developed to predict the dependent variables (business performance).

5.1.2. Findings based on the interviews

The fourth and last objective aimed to explore the effect of location decision on business performance. The interviews were conducted in order to triangulate this study. A semi-structured interview was conducted on five manufacturing and service SMMEs owners. A central theme, as well as five sub-themes (location decision factors, measures for informed location decision, importance of location decisions, the impact of location decision on business performance, and satisfaction of location decision) emerged from the interviews.

5.2. LIMITATIONS OF THE STUDY

This study was affected by few limitation as follow:

5.2.1. Questionnaire limitations

- The study was conducted exclusively on manufacturing and service SMMEs within Johannesburg in South Africa. Therefore the study cannot be generalised and the findings may not relate to other South African circumstances and should be interpreted as such.
- The researcher collected data during xenophobic attacks which made the data collection challenging, and could introduce bias into the results of this study.
- The questionnaire only assessed local location decision factors. International location decisions factors of businesses were excluded.

5.2.2. Interview limitations

Limitations of this research are based on the sample:

- The number of respondents in the research (5 respondents) was small. A bigger sample size may have generated different or supplementary themes.
- Data for this research was collected from manufacturing and service small, micro, and medium enterprises within Johannesburg.

- Some respondents were unwilling to participate in the interviews due to the fear of being exposed, though they were assured of confidentially and anonymity. They also expressed that it was already time-consuming to fill in the questionnaire.

5.3. RECOMMENDATIONS

This section proposes actions and suggestions to SMMEs about location decisions. The following suggestions are made to achieve the maximum results of location decision:

- **Understanding the type of business**

Location decision is one of the most vital long term and strategic decisions that business owners or managers make, as it influences the survival of SMMEs. It is therefore recommended that business owners or managers should understand the type of business that they are running before conducting proper evaluations of location decision and determining whether location or relocation to a particular area is adequate for their business.

- **Buy rather than rent**

The author proposes that instead of leasing land or facilities, business owners should rather buy. Although this alternative is not always possible, it could be one of the biggest investments that could be made by the business owners (Ehlers, 2007). By purchasing the business premises, the SMMEs save money on rental costs as well as the landlord's inconvenience.

- **Easy access to business facility**

SMMEs should make sure that customers have easy access to their business facilities. (Ehlers, 2007) states in his study that "it should never be a problem or inconvenient for the client to visit the business". Therefore the following suggestions are made: "locating near highways or main roads, bus routes, near schools, universities, etc." facilitate easy access to business premises. In addition, enough parking should be available when customers visit a particular facility.

During the current study interviews, respondents emphasised on the importance of easy access to business facilities. This implies that concentrated, accessible and visible places such as shopping centres or malls present the benefit of easy access for passer-by customers.

- **Safe and secure environment**

Safety and security is important in any location in Johannesburg. The results of the study revealed that SMMEs owners or managers of manufacturing and service enterprises are concerned with the crime rate, safety and security of their businesses. SMMEs are at a high risk of being targets of crime. The researcher therefore suggests that SMMEs owners or managers should take precautions to protect and safeguard the facilities with the essential security mechanisms. Although these security and safety measures might be costly, they protect business owners and managers, customers, and goods stored in the facility.

5.4. FUTURE RESEARCH AREAS

This study presents numerous opportunities for further research:

- A research similar to the current study should be conducted in other areas of Gauteng Province and other provinces across South Africa and internationally for comparative purposes.
- A comparative study on different type of SMMEs should be conducted in order to compare similarities and differences.
- Future research could investigate the cause of the significant gap between the importance and satisfaction of location decision factors.
- Future study could conduct interviews on a larger sample in order to determine whether new themes will emerge.

5.5. CONCLUSION

Many years ago, location decision had been perceived as a strategic decision that determined the survival of businesses. This is still the case at present. It is the most important decision for the success and survival of a business. Not only is this a long-term strategic decision, but also a very expensive one.

The aim of this study was to investigate and explore the statistical relationship of location decision factors which influence the location decision of SMMEs' owners or managers and business performance of small, micro, medium enterprises (manufacturing and service enterprises). Research aim, research questions and research objectives were developed. To answer and fulfil the research questions and research objectives subsequently, this study implemented a mixed method

whereby questionnaires were sent to SMMEs owners or managers. Interviews were at the same time conducted to explore the effect of location decision on manufacturing and services (SMMEs) business performance. In general the results of this study confirmed the importance of location decision. Therefore, the author of this study is contributing to the body knowledge of operations management by providing the recommendations and future research study opportunities.

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APPENDICES

APPENDIX A: research questionnaire

Dear business owner/manager,

I, Alice Kabamba lumbwe, am currently registered for a Master Technology in Operations Management at the University of Johannesburg. The title of the study is: Evaluating the relationship between location decision factors and SMMEs performance within the city of Johannesburg. The research is done under the supervision of Mrs. Eveth Nwobodo Anyadiegwu and Co-supervised by Prof. Mbohwa both from the university of Johannesburg.

I humbly invite you to participate in a research that have the objective of identifying and examining factors that generally affect business location decision of SMMEs (small, micro, and medium enterprises). We would like to get your feedback on your personal experience as an owner/manager who has participated in a business location decision. Your participation is important to help us examine factors that influence a location decision and provide suggestion on how a location decision should be made efficiently.

This questionnaire is designed to collect feedback from Owners/managers of SMMEs who participated in the location decision of their business.

It would take you approximately 5-10 minutes to complete the questionnaire. There are four sections: demographic Information (Section A), demographical data of respondents' businesses (Section B), location factors considered when making a location decision (section C), and Measuring business performance (Section D).

Your participation is voluntary and you can withdraw at any time, however we urge you to complete the questionnaire. All data will be kept confidential. Also note that the survey is developed to be anonymous and there will be no way of connecting the information you provide to you personally. Depending on the nature of the findings, it may be published in a scientific article or in an accredited academic journal. You may include your contact details if you want to receive communication on the findings of the research.

Thank you for your time and participation in this survey.

If you have any concerns, please contact me. My details are provided below:

Researcher:

Ms. Alice Lumbwe Kabamba
lucia.kabamba@yahoo.com
0813033134
Co-supervisor:

Mrs Eveth Nwobodo Anyadiegwu
Evethn@uj.ac.za

This questionnaire comprises close ended questions which requires you, the respondents to select the applicable option with a « X ».   Kindly read the questions carefully. If you do not understand, please feel free to contact the researcher indicated in the contact details.

SECTION A: DEMOGRAPHIC INFORMATION

1.   Which gender do you classify yourself as? *Single response please*

Male	1
Female	2

2.   How old are you?

<20 years	1
21-29 years	2
30-39 years	3
40-49 years	4
50-59 years	5
60+ years	6

3.   What is your ethnic or cultural group? *Single response please*

Asian	1
Black	2
Coloured	3
White	4
Other	5
Not willing to say	6

4.   What is your occupational status in the company? *Single response please*

Manager	1
Owner	2
Both manager and owner	3

5.   What is your total year of working experience with this company? *Single response please*

0-3 years	1
4-6 years	2
7-10 years	3
11-20 years	4

21+ years	5

SECTION B: DEMOGRAPHICAL DATA OF RESPONDENTS' BUSINESSES

1. For how many years has your business been operational?

0-3 years	1
4-6 years	2
7-10 years	3
11-20 years	4
21+ years	5

2. What is the ownership status of the facility you use for business? *Single response please*

Business property owned by self	1
Business property leased by self	2
Private home owned by someone else	3
Private home owned by self	4

3. In which sector is your business? *Single response please*

Industrial/manufacturing	1
Service	2

4. Based on the number of employees, how do you rate the size of your business? *Single response please*

Micro (employs 1-5 people)	1
Small (employs 6-50 people)	2
Medium (employs 51-200 people)	3

SECTION C: FACTORS AFFECTING LOCATION DECISION & BUSINESS PERFORMANCE

The tables below contain listings factors which could have influenced your decision to locate your business in its current place. In column A, indicate how important each factor was in influencing your decision to locate the business in its current place. In column B please indicate your level of satisfaction with each factor at the present time.

1. COSTS

Below are **cost-related** factors which could have influenced your decision to locate your business in its current place. In column A, Please indicate how important each factor was in influencing your decision to locate the business in its current place. In column B, please indicate your level of satisfaction with each factor at the present time.	**A**: Importance of factor in location choice					**B**: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
C1. Wage rates	1	2	3	4	5	1	2	3	4	5
C2. Rental price of facility/land	1	2	3	4	5	1	2	3	4	5
C3. Transportation costs	1	2	3	4	5	1	2	3	4	5
C4. Fixed cost (e.g. Rent, insurance, taxes. Etc.)	1	2	3	4	5	1	2	3	4	5
C5. Energy costs (e.g. electricity)	1	2	3	4	5	1	2	3	4	5

2. LABOUR CHARACTERISTICS

Below are **labour-related** factors which could have influenced your decision to locate your business in its current place. In column A, please indicate how important each factor was in influencing your decision to locate the business in its current place. In column B, please indicate your level of satisfaction with each factor at the present time.	**A**: Importance of factor in location choice					**B**: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
LC1. The quality of labour force	1	2	3	4	5	1	2	3	4	5
LC2. The availability of workers	1	2	3	4	5	1	2	3	4	5
LC3. The motivation of workers in the area	1	2	3	4	5	1	2	3	4	5
LC4. Qualification level of labour force	1	2	3	4	5	1	2	3	4	5
LC5. Availability of non-qualified labour force	1	2	3	4	5	1	2	3	4	5
LC6. Availability of temporary labour force	1	2	3	4	5	1	2	3	4	5
LC7. Attitudes of labour towards work	1	2	3	4	5	1	2	3	4	5
LC8. Unemployment rate in area	1	2	3	4	5	1	2	3	4	5

	A: Importance of factor in location choice					B: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
LC9. Turnover and absenteeism rates of employees	1	2	3	4	5	1	2	3	4	5
LC10. No job opportunities for people in the area	1	2	3	4	5	1	2	3	4	5
LC11. To create jobs for people in the area	1	2	3	4	5	1	2	3	4	5

3. QUALITY OF LIFE

Below are **quality of life-related** factors which could have influenced your decision to locate your business in its current place. In column A, please indicate how important each factor was in influencing your decision to locate the business in its current place. In column B, please indicate your level of satisfaction with each factor at the present time.	A: Importance of factor in location choice					B: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
SF1. Quality of environment	1	2	3	4	5	1	2	3	4	5
SF2. Community attitude toward business	1	2	3	4	5	1	2	3	4	5
SF3. Standard of living in the area	1	2	3	4	5	1	2	3	4	5
SF4. Crime rate	1	2	3	4	5	1	2	3	4	5
SF5. Attitude of locals to foreign-owned business	1	2	3	4	5	1	2	3	4	5
SF6. Behavior of locals to foreign-owned business	1	2	3	4	5	1	2	3	4	5
SF7. History of xenophobic attacks in area	1	2	3	4	5	1	2	3	4	5
SF8. Recreational opportunities	1	2	3	4	5	1	2	3	4	5
SF9. Access to schools, hospitals, churches	1	2	3	4	5	1	2	3	4	5

4. MARKET

Below are **market-related** factors which could have influenced your decision to locate your business in its current place. In column A, please indicate how important each factor was in influencing your decision to locate the business in its current place. In column B, please indicate your level of satisfaction with each factor at the present time.	**A**: Importance of factor in location choice					**B**: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
M1. Size of market that can be served	1	2	3	4	5	1	2	3	4	5
M2. Responsiveness of customers in the area	1	2	3	4	5	1	2	3	4	5
M3. Location near demand/the customer	1	2	3	4	5	1	2	3	4	5
M4. The availability of transport facilities for employees	1	2	3	4	5	1	2	3	4	5
M5. Location of suppliers	1	2	3	4	5	1	2	3	4	5
M6. Speed and responsiveness of suppliers	1	2	3	4	5	1	2	3	4	5
M7. Quality of suppliers (materials)	1	2	3	4	5	1	2	3	4	5
M8. Availability of alternative suppliers	1	2	3	4	5	1	2	3	4	5
M9. Nature of supplier(s) process	1	2	3	4	5	1	2	3	4	5
M10. Benefit from competition by suppliers	1	2	3	4	5	1	2	3	4	5
M11. Government regulations	1	2	3	4	5	1	2	3	4	5
M12. Location near competitors	1	2	3	4	5	1	2	3	4	5

5. RENTAL RATE

Below are **rental rate-related** factors which could have influenced your decision to locate your business in its current place. In column A, please indicate how important each factor was in influencing your decision to locate the business in its current place. In column B, please indicate your level of satisfaction with each factor at the present time.	**A**: Importance of factor in location choice					**B**: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
RR1. The lease period of rental agreement	1	2	3	4	5	1	2	3	4	5
RR2. Rental rate range of a specific area	1	2	3	4	5	1	2	3	4	5
RR3. Variety of rental premises within a specific area	1	2	3	4	5	1	2	3	4	5
RR4. Availability of competitors in area	1	2	3	4	5	1	2	3	4	5
RR5. Access of service of specific estate agency	1	2	3	4	5	1	2	3	4	5

	A: Importance of factor in location choice					B: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
RR6. Access of service of specific estate agent (regardless of the estate agency)	1	2	3	4	5	1	2	3	4	5
RR7. The inflation rate	1	2	3	4	5	1	2	3	4	5

6.   GREEN BUILDING

Below are **building-related** factors which could have influenced your decision to locate your business in its current place. In column A, please indicate how important each factor was in influencing your decision to locate the business in its current place. In column B, please indicate your level of satisfaction with each factor at the present time.	A: Importance of factor in location choice					B: Satisfaction with factor at present time				
	Not at all important	A little important	Moderately important	Very important	Critically important	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
GB1. Environmental friendly building	1	2	3	4	5	1	2	3	4	5
GB2. Efficient recycling system in for paper	1	2	3	4	5	1	2	3	4	5
GB3. Efficient recycling system in place for other waste (e.g. plastic, glass, piece of fabric)	1	2	3	4	5	1	2	3	4	5
GB4. Natural ventilation	1	2	3	4	5	1	2	3	4	5
GB5. Energy efficient heating system	1	2	3	4	5	1	2	3	4	5
GB6. Sensors that adjust to light	1	2	3	4	5	1	2	3	4	5
GB7. Cost saving as a result of green practices	1	2	3	4	5	1	2	3	4	5
GB8. Use of renewable energy sources (e.g. Solar system)	1	2	3	4	5	1	2	3	4	5

SECTION D: MEASURING BUSINESS PERFORMANCE

Below are some indicators companies use to measure performance. Thinking of your business activity over the past two years, please rate performance for each indicator.

Over the past two years	Decreased significantly	Decreased a little	Not changed	Increased a little	Increased significantly
BP1. Net profit after tax has…	1	2	3	4	5
BP2. Profit has…	1	2	3	4	5
BP3. Return on total assets (or total capital) has…	1	2	3	4	5
BP4. Annual sales have…	1	2	3	4	5
BP5. Operating costs have…	1	2	3	4	5
BP6. Firm's productivity has…	1	2	3	4	5
BP7. Number of employees has…	1	2	3	4	5
BP8. Turnover rate of employees has…	1	2	3	4	5
BP9. Customer satisfaction has...	1	2	3	4	5
BP10. Market share has...	1	2	3	4	5
BP11. Product/ Service quality has...	1	2	3	4	5

How would you rate your business's success level over the past two years?

A little successful	1
Moderately successful	2
Highly successful	3

Thank you for time and participation.

Will you be willing to grant me a short interview session about your location decision?

APPENDIX B: Information letter to respondents

Faculty of Engineering and the Built Environment
Department of Quality and Operations Management
University of Johannesburg

Information letter to respondents

Dear business owner/manager,

I, Alice Kabamba lumbwe, am currently registered for a M-Tech in Operations Management at the University of Johannesburg. The title of the study is: Evaluating the relationship between location decision factors and SMMEs performance within the city of Johannesburg. I kindly invite you to take part in this research study. The research is done under the supervision of Mrs. Eveth Nwobodo Anyadiegwu and Co-supervised by Prof. Mbohwa both from the university of Johannesburg.

This Interview seeks to explore the factors that one has to consider in making location decisions in consideration with the performance a business. The objective of this interview is therefore to Analyse of the impact of factors that affects the performance of manufacturing and service SMMEs.

In order to obtain data from you that will assist in understanding how location factors affect business performance, in depth individual interview will be conducted with you upon your consenting to participate in the study.

Your name will not be mentioned during all discussions related to the study and the information from the interview will only be accessible to the researcher and supervisors of this research.

The interviews will take approximately 20-30 minutes and strict ethical principles will be applied. The interviews will be audiotaped with your permission for accuracy and to facilitate the transcription of the data verbatim.

You and The researcher will agree upon the venue, date, and time when the interview should be conducted.

All data extracted from the interview, including the tapes will remain confidential throughout and after the research and will be kept on a password-secure computer, which only the researcher has access to. The data will be destroyed one year after the publication of this research

Your participation is voluntary and you can withdraw at any time of the interview without repercussions.
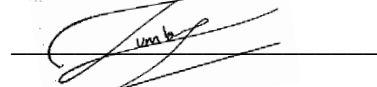
The results of this research will be published in a scientific article or in an accredited academic journal. You may include your contact details if you want to receive communication on the

findings of the research. Should you have any queries about the study please feel free to contact me from Monday to Friday between 8h00 and 17h00.

There is no risk for you in sharing your location decision experience with us during the interview. Should you however feel any discomfort during the interview, please feel free to inform the interviewer.

Should you agree to participate, please complete the attached consent form.

Yours faithfully,

Ms. Alice Kabamba Lumbwe

Masters in Operations Management

lucia.kabamba@yahoo.com

0813033134

APPENDIX C: Consent to participate in research

Faculty of Engineering and the Built Environment
Department of Quality and Operations Management
University of Johannesburg

Consent to participate in research

I_____ hereby agree to take part in the research study

of evaluating the relationship between location decision factors and SMMEs performance within

the Gauteng Province.

_____   _____

Respondent signature   Date

_____   _____

Interviewer signature   Date

_____   _____

Witness Signature   Date

APPENDIX D: Consent to the use of tape recorder

Faculty of Engineering and the Built Environment
Department of Quality and Operations Management
University of Johannesburg

Consent to the use of tape recorder

I_____ hereby agree to the use of tape recorder to record the interview in the research of evaluating the relationship between location decision factors and SMMEs performance within the City of Johannesburg.

_____   _____

Respondent signature   Date

_____   _____

Interviewer signature   Date

_____   _____

Witness Signature   Date

APPENDIX E: Interview questions

1. Tell me about the location decision you had made.
2. How long has the company been operating?

3. Have you made wrong location decision in the past that did not go well? Why? How?

4. What would you have done differently?

5. What would you recommend to new businesses and those who are about to make location decision for their businesses?

6. What other factors did you considered when you made the decision of your business location?

7. How did these factors affect your business performance?

8. Did you ask people in the same business before making your decision?

9. Did you make your location decision having the opportunity to choose? Did you make your choice out of necessity?

THANK YOU

APPENDIX F: Additional statistical analysis

COST: CORRELATION MATRIX (IMPORTANCE AND SATISFACTION)

Table 4.30. Correlation matrix - **Cost (Importance A)**

	Items	C1_ Wage rates	C2_ Rental price of facility/land	C3_ Transportation costs	C4_ Fixed cost	C5_ Energy costs
Correlation	C1_ Wage rates	**1.000**	0.733	0.546	0.448	0.225
	C2_ Rental price of facility/land	0.733	**1.000**	0.714	0.521	0.333
	C3_ Transportation costs	0.546	0.714	**1.000**	0.614	0.494
	C4_ Fixed cost	0.448	0.521	0.614	**1.000**	0.782
	C5_ Energy costs	0.225	0.333	0.494	0.782	**1.000**

Table 4.31. Correlation matrix - **Cost (Satisfaction B)**

	Items	C1_Wage rates	C2_ Rental price of facility/land	C3_ Transportation costs	C4_ Fixed cost	C5_ Energy costs
Correlation	C1_ Wage rates	**1.000**	0.751	0.624	0.476	0.433
	C2_ Rental price of facility/land	0.751	**1.000**	0.766	0.621	0.518
	C3_ Transportation costs	0.624	0.766	**1.000**	0.672	0.614
	C4_ Fixed cost	0.476	0.621	0.672	**1.000**	0.740
	C5_Energy costs	0.433	0.518	0.614	0.740	**1.000**

COST: KMO AND BARTLETT'S TEST (IMPORTANCE AND SATISFACTION)

Table 4.32. KMO and Bartlett's Test – **Cost (Importance A)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.730**
Bartlett's Test of Sphericity	Approx. Chi-Square	618.603
	df	10
	Sig.	**0.000**

Table 4.33. KMO and Bartlett's Test – **Cost (Satisfaction B)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.808**
Bartlett's Test of Sphericity	Approx. Chi-Square	671.461
	df	10
	Sig.	**0.000**

COST : **TOTAL VARIANCE EXPLAINED (IMPORTANCE AND SATISFACTION)**

Table 4.34. Total variance explained - **Cost (Importance A)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**3.182**	63.643	63.643	2.943	58.859	58.859
2	**1.033**	20.662	84.305	0.825	16.505	**75.364**
3	0.393	7.860	92.165			
4	0.211	4.217	96.382			
5	0.181	3.618	100.000			

Table 4.35. Total variance explained - **Cost (Satisfaction B)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**3.495**	69.900	69.900	3.137	62.745	**62.745**
2	0.742	14.847	84.747			
3	0.326	6.517	91.265			
4	0.253	5.056	96.320			
5	0.184	3.680	100.000			

COST: **SCREE PLOT (IMPORTANCE AND SATISFACTION)**
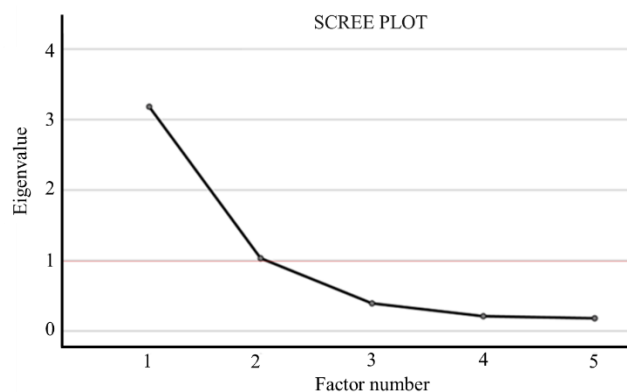
Figure 4.12. cost - Scree plot (importance A)
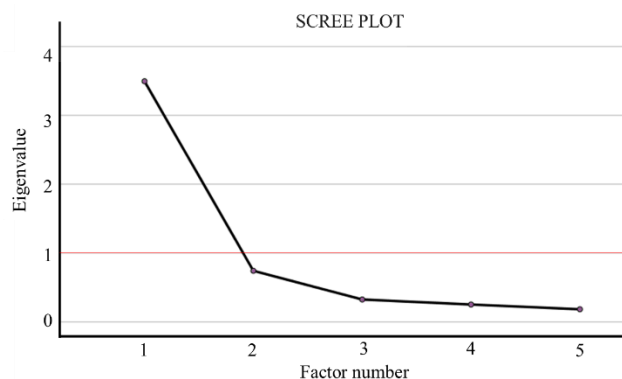
Figure 4.13. cost - Scree plot (satisfaction B)

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COST: PATTERN AND FACTOR MATRIX (IMPORTANCE AND SATISFACTION)

Table 4.36. Pattern Matrix – **Cost (importance A)**

Research items	Factor	
	1	2
C2_Rental price of facility/land	**0.976**	-0.037
C1_Wage rates	**0.787**	-0.047
C3_Transportation costs	**0.598**	0.303
C5_Energy costs (e.g. electricity)	-0.100	**0.958**
C4_Fixed cost (e.g. Rent, insurance, taxes. Etc.)	0.214	**0.774**
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization Rotation converged in 6 iterations.		

Table 4.37. Factor Matrix – **Cost (satisfaction B)**

Research items	Factor
	1
C3_ Transportation costs	**0.870**
C2_ Rental price of facility/land	**0.860**
C4_ Fixed cost (e.g. Rent, insurance, taxes. Etc.)	**0.790**
C5_ Energy costs (e.g. electricity)	**0.713**
C1_ Wage rates	**0.712**
Extraction Method: Principal Axis Factoring. 1 factors extracted. 6 iterations required.	

LABOUR: CORRELATION MATRIX (IMPORTANCE AND SATISFACTION)

LC1_ The quality of labour force
LC2_ The availability of workers
LC3_ The motivation of workers in the area
LC4_ Qualification level of labour force
LC5_ Availability of non-qualified labour force
LC6_ Availability of temporary labour force
LC7_ Attitudes of labour towards work
LC8_ Unemployment rate in area
LC9_ Turnover and absenteeism rates of employees
LC10_ No job opportunities for people in the area
LC11_ To create jobs for people in the area

Table 4.38. Correlation matrix - **Labour (Importance A)**

Items		LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11
Cor	**LC1**	**1.000**	0.809	0.594	0.563	0.468	0.359	0.483	0.071	0.391	0.237	0.046
	LC2	0.809	**1.000**	0.738	0.573	0.533	0.401	0.496	0.037	0.366	0.198	0.026

	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11
LC3	0.594	0.738	**1.000**	0.638	0.552	0.406	0.544	-0.057	0.323	0.159	-0.042
LC4	0.563	0.573	0.638	**1.000**	0.701	0.579	0.374	0.171	0.211	0.140	-0.047
LC5	0.468	0.533	0.552	0.701	**1.000**	0.733	0.355	0.215	0.200	0.124	-0.036
LC6	0.359	0.401	0.406	0.579	0.733	**1.000**	0.378	0.360	0.176	0.194	-0.003
LC7	0.483	0.496	0.544	0.374	0.355	0.378	**1.000**	0.013	0.525	0.301	0.061
LC8	0.071	0.037	-0.057	0.171	0.215	0.360	0.013	**1.000**	0.031	0.179	0.219
LC9	0.391	0.366	0.323	0.211	0.200	0.176	0.525	0.031	**1.000**	0.692	0.337
LC10	0.237	0.198	0.159	0.140	0.124	0.194	0.301	0.179	0.692	**1.000**	0.617
LC11	0.046	0.026	-0.042	-0.047	-0.036	-0.003	0.061	0.219	0.337	0.617	**1.000**

Table 4.39. Correlation matrix - **Labour (satisfaction B)**

Items		LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11
Correlation	**LC1**	**1.000**	0.795	0.561	0.343	0.371	0.270	0.328	0.266	0.272	0.267	0.283
	LC2	0.795	**1.000**	0.665	0.434	0.364	0.224	0.378	0.143	0.231	0.189	0.175
	LC3	0.561	0.665	**1.000**	0.566	0.371	0.230	0.437	0.124	0.217	0.189	0.111
	LC4	0.343	0.434	0.566	**1.000**	0.596	0.328	0.238	0.158	0.195	0.125	0.111
	LC5	0.371	0.364	0.371	0.596	**1.000**	0.565	0.378	0.256	0.128	0.156	0.129
	LC6	0.270	0.224	0.230	0.328	0.565	**1.000**	0.443	0.240	0.176	0.201	0.215
	LC7	0.328	0.378	0.437	0.238	0.378	0.443	**1.000**	0.317	0.297	0.223	0.197
	LC8	0.266	0.143	0.124	0.158	0.256	0.240	0.317	**1.000**	0.134	0.124	0.143
	LC9	0.272	0.231	0.217	0.195	0.128	0.176	0.297	0.134	**1.000**	0.736	0.465
	LC10	0.267	0.189	0.189	0.125	0.156	0.201	0.223	0.124	0.736	**1.000**	0.608
	LC11	0.283	0.175	0.111	0.111	0.129	0.215	0.197	0.143	0.465	0.608	**1.000**

LABOUR: KMO AND BARTLETT'S TEST (IMPORTANCE AND SATISFACTION)

Table 4.40. KMO and Bartlett's Test – **Labour (importance A)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.779**
Bartlett's Test of Sphericity	Approx. Chi-Square	1289.378
	df	55
	Sig.	**0.000**

Table 4.41. KMO and Bartlett's Test – **Labour (satisfaction B)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.731**
Bartlett's Test of Sphericity	Approx. Chi-Square	990.856
	df	55
	Sig.	**0.000**

LABOUR : TOTAL VARIANCE EXPLAINED (IMPORTANCE AND SATISFACTION)

Table 4.42. Total variance explained - **Labour (importance A)**
Extraction method : Principle Axis Analysis

F	Initial Eigenvalues	Extraction Sums of Squared Loadings

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.610**	41.905	41.905	4.288	38.983	38.983
2	**1.978**	17.983	59.888	1.674	15.217	54.199
3	**1.384**	12.586	72.474	0.925	8.413	**62.612**
4	0.713	6.484	78.958			
5	0.621	5.649	84.608			
6	0.447	4.063	88.671			
7	0.377	3.423	92.094			
8	0.303	2.757	94.851			
9	0.248	2.256	97.107			
10	0.177	1.610	98.717			
11	0.141	1.283	100.000			

Table 4. 43. Total variance explained - **Labour (satisfaction B)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.128**	37.524	37.524	3.733	33.941	33.941
2	**1.819**	16.532	54.056	1.492	13.567	47.508
3	**1.241**	11.281	65.337	0.860	7.814	**55.322**
4	0.932	8.476	73.813			
5	0.722	6.559	80.372			
6	0.666	6.057	86.429			
7	0.484	4.402	90.831			
8	0.358	3.252	94.083			
9	0.290	2.632	96.715			
10	0.195	1.769	98.484			
11	0.167	1.516	100.000			

LABOUR: SCREE PLOT (IMPORTANCE AND SATISFACTION)
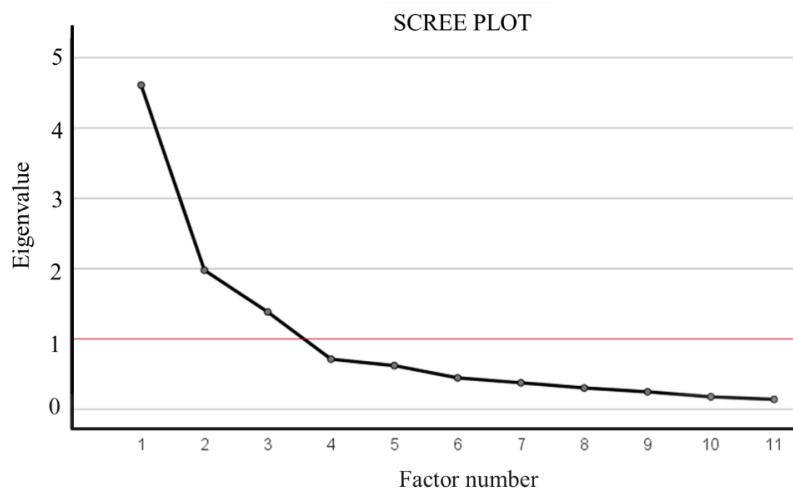
Figue 4.14. Labour scree plot (importance A)
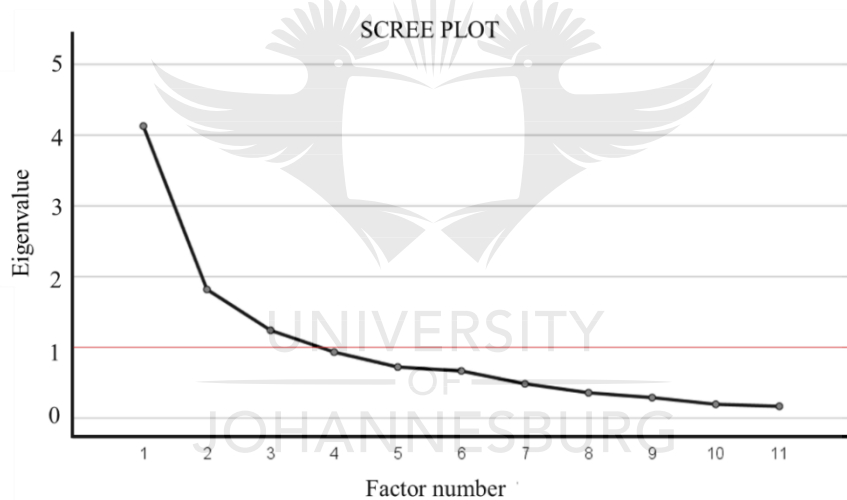
Figue 4.15. Labour scree plot (satisfaction B)

LABOUR: PATTERN MATRIX (IMPORTANCE AND SATISFACTION)

Table 4.44. Pattern Matrix – **labour (importance A)**

Items	Factor		
	1	2	3
LC2_The availability of workers	**0.884**	0.002	-0.027
LC3_The motivation of workers in the area	**0.844**	-0.066	0.001
LC1_The quality of labour force	**0.786**	0.066	-0.009
LC4_Qualification level of labour force	**0.608**	-0.123	0.394

LC7_Attitudes of labour towards work	**0.605**	0.202	-0.012
LC10_No job opportunities for people in the area	0.103	**0.937**	0.096
LC9_Turnover and absenteeism rates of employees	**0.422**	**0.633**	-0.112
LC11_To create jobs for people in the area	-0.118	**0.632**	0.078
LC6_Availability of temporary labour force	0.302	-0.046	**0.736**
LC5_Availability of non-qualified labour force	**0.497**	-0.139	**0.595**
LC8_Unemployment rate in area	-0.145	0.144	**0.490**
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 9 iterations.			

Table 4.45. Pattern Matrix – **labour (satisfaction B)**

Items	Factor		
	1	2	3
LC2_The availability of workers	**1.010**	-0.007	-0.102
LC1_The quality of labour force	**0.744**	0.123	0.018
LC3_The motivation of workers in the area	**0.675**	-0.026	0.150
LC10_No job opportunities for people in the area	-0.036	**0.962**	-0.023
LC9_Turnover and absenteeism rates of employees	0.063	**0.746**	0.000
LC11_ To create jobs for people in the area	0.003	**0.623**	0.043
LC5_Availability of non-qualified labour force	0.029	-0.120	**0.855**
LC6_Availability of temporary labour force	-0.122	0.051	**0.735**
LC4_Qualification level of labour force	**0.301**	-0.082	**0.462**
LC7_Attitudes of labour towards work	**0.171**	0.127	**0.413**
LC8_Unemployment rate in area	0.022	0.075	**0.312**
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 8 iterations.			

SF1_ Quality of environment
SF2_ Community attitude toward business
SF3_ Standard of living in the area
SF4_ Crime rate
SF5_ Attitude of locals to foreign-owned business
SF6_ Behavior of locals to foreign-owned business
SF7_ History of xenophobic attacks in area
SF8_ Recreational opportunities
SF9_ Access to schools, hospitals, churches

Table 4.46. Correlation matrix – **Quality of life (importance A)**

Items		SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9
Correlation	SF1	**1.000**	0.586	0.287	0.016	0.147	0.111	0.075	0.342	0.424
	SF2	0.586	**1.000**	0.416	0.094	0.130	0.117	0.053	0.189	0.217
	SF3	0.287	0.416	**1.000**	0.319	0.344	0.269	0.230	0.157	0.093
	SF4	0.016	0.094	0.319	**1.000**	0.415	0.248	0.339	-0.197	-0.165
	SF5	0.147	0.130	0.344	0.415	**1.000**	0.653	0.521	0.124	0.092
	SF6	0.111	0.117	0.269	0.248	0.653	**1.000**	0.497	0.176	0.162
	SF7	0.075	0.053	0.230	0.339	0.521	0.497	**1.000**	0.090	0.002
	SF8	0.342	0.189	0.157	-0.197	0.124	0.176	0.090	**1.000**	0.686
	SF9	0.424	0.217	0.093	-0.165	0.092	0.162	0.002	0.686	**1.000**

Table 4.47. Correlation matrix – **Quality of life (satisfaction B)**

Items		SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8	SF9
Correlation	SF1	**1.000**	0.758	0.514	0.141	0.223	0.182	0.178	0.245	0.276
	SF2	0.758	**1.000**	0.709	0.300	0.325	0.272	0.300	0.289	0.195
	SF3	0.514	0.709	1.**000**	0.423	0.390	0.305	0.306	0.250	0.204
	SF4	0.141	0.300	0.423	**1.000**	0.607	0.465	0.464	0.230	0.116
	SF5	0.223	0.325	0.390	0.607	**1.000**	0.695	0.530	0.331	0.233
	SF6	0.182	0.272	0.305	0.465	0.695	**1.000**	0.696	0.429	0.232
	SF7	0.178	0.300	0.306	0.464	0.530	0.696	**1.000**	0.514	0.289
	SF8	0.245	0.289	0.250	0.230	0.331	0.429	0.514	**1.000**	0.662
	SF9	0.276	0.195	0.204	0.116	0.233	0.232	0.289	0.662	**1.000**

Table 4.48. KMO and Bartlett's Test – **Quality of life (importance A)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.697
Bartlett's Test of Sphericity	Approx. Chi-Square	605.242
	df	36

	Sig.	**0.000**

Table 4.49. KMO and Bartlett's Test – **Quality of life (satisfaction B)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**0.746**
Bartlett's Test of Sphericity	Approx. Chi-Square	942.299
	df	36
	Sig.	**0.000**

QUALITY OF LIFE: **TOTAL VARIANCE EXPLAINED (IMPORTANCE AND SATISFACTION)**

Table 4.50. Total variance explained – **quality of life (importance A)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**2.906**	32.294	32.294	2.480	27.557	27.557
2	**2.063**	22.919	55.213	1.651	18.346	45.903
3	**1.275**	14.166	69.379	0.890	9.894	**55.797**
4	0.661	7.346	76.725			
5	0.598	6.642	83.367			
6	0.531	5.903	89.270			
7	0.370	4.112	93.382			
8	0.322	3.574	96.956			
9	0.274	3.044	100.000			

Table 4.51. Total variance explained – **quality of life (satisfaction B)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**3.994**	44.381	44.381	3.671	40.786	40.786
2	**1.592**	17.691	62.072	1.316	14.623	55.409
3	**1.287**	14.301	76.373	0.940	10.440	**65.849**
4	0.608	6.754	83.127			
5	0.468	5.195	88.322			
6	0.378	4.199	92.521			
7	0.286	3.175	95.696			
8	0.221	2.452	98.148			
9	0.167	1.852	100.000			

QUALITY OF LIFE: **SCREE PLOT (IMPORTANCE AND SATISFACTION)**
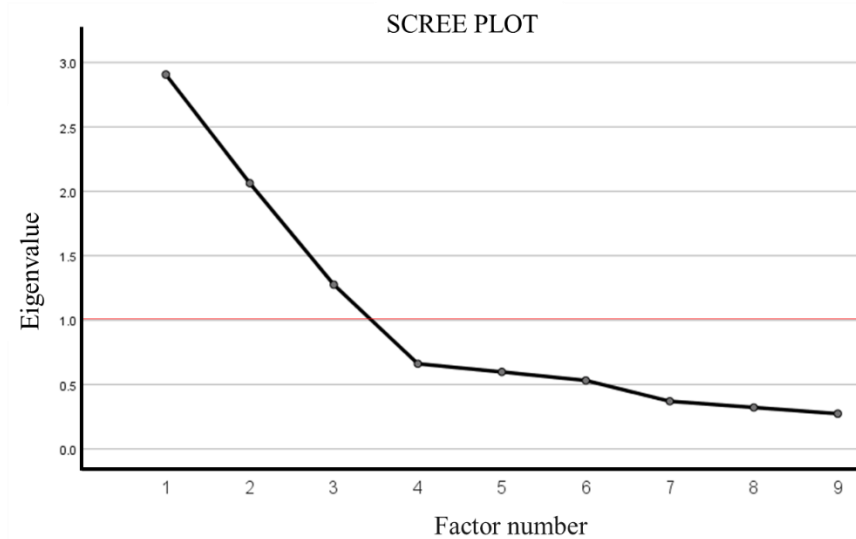
Figue 4.16. Quality of life scree plot (importance A)
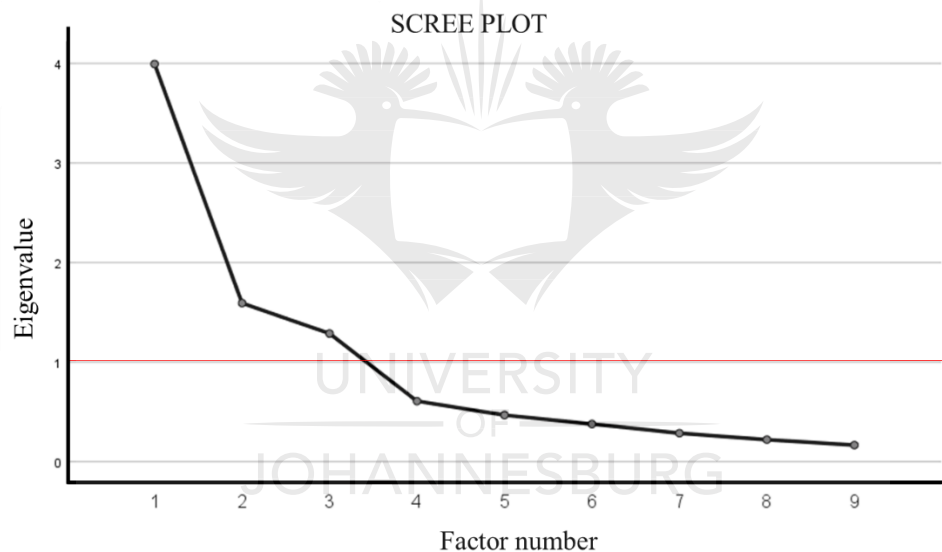
Figue 4.17. Quality of life scree plot (satisfaction B)

QUALITY OF LIFE: PATTERN (IMPORTANCE AND SATISFACTION)

Table 4.52. Pattern Matrix – **qulaity of life (importance A)**

Items	Factor		
	1	2	3
SF5_Attitude of locals to foreign-owned business	**0.847**	0.052	0.010
SF6_Behavior of locals to foreign-owned business	**0.748**	0.167	-0.052
SF7_History of xenophobic attacks in area	**0.659**	0.008	-0.043
SF4_Crime rate	**0.448**	**-0.324**	0.145
SF9_Access to schools, hospitals, churches	0.040	**0.809**	0.110
SF8_Recreational opportunities	0.108	**0.790**	0.057

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	SF2_A Importance: Community attitude toward business	-0.112	-0.018	**0.888**
	SF1_A Importance: Quality of environment	-0.045	0.269	**0.626**
	SF3_A Importance: Standard of living in the area	0.286	-0.050	**0.448**

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 6 iterations.

Table 4.53. Pattern Matrix – **qulaity of life (satisfaction B)**

Items	Factor		
	1	2	3
SF5_Attitude of locals to foreign-owned business	**0.813**	0.047	-0.027
SF6_Behavior of locals to foreign-owned business	**0.813**	-0.072	0.114
SF4_ Crime rate	**0.676**	0.098	-0.117
SF7_ History of xenophobic attacks in area	**0.660**	-0.035	0.238
SF2_Community attitude toward business	0.014	**0.986**	-0.019
SF1_Quality of environment	-0.113	**0.771**	0.115
SF3_Standard of living in the area	0.231	**0.644**	-0.044
SF8_Recreational opportunities	0.128	-0.002	**0.885**
SF9_Access to schools, hospitals, churches	-0.028	0.073	**0.693**

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 5 iterations.

MARKET : CORRELATION MATRIX (IMPORTANCE AND SATISFACTION)

M1_ Size of market that can be served

M2_ Responsiveness of customers in the area

M3_ Location near demand/the customer

M4_ The availability of transport facilities for employees

M5_ Location of suppliers

M6_ Speed and responsiveness of suppliers

M7_ Quality of suppliers (materials)

M8_ Availability of alternative suppliers

M9_ Nature of supplier(s) process

M10_ Benefit from competition by suppliers

M11_ Government regulations

M12_ Location near competitors

Table 4.54. Correlation matrix – **market (importance A)**

		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Corre	M1	**1.000**	0.767	0.570	0.396	0.362	0.290	0.289	0.271	0.291	0.277	0.204	0.184
	M2	0.767	**1.000**	0.738	0.482	0.423	0.311	0.328	0.349	0.327	0.292	0.177	0.152
	M3	0.570	0.738	**1.000**	0.616	0.554	0.398	0.391	0.364	0.362	0.237	0.150	0.114

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M4	0.396	0.482	0.616	**1.000**	0.590	0.428	0.384	0.358	0.384	0.189	0.188	0.109
M5	0.362	0.423	0.554	0.590	**1.000**	0.645	0.468	0.393	0.336	0.114	0.120	0.082
M6	0.290	0.311	0.398	0.428	0.645	**1.000**	0.583	0.508	0.354	0.137	0.158	0.003
M7	0.289	0.328	0.391	0.384	0.468	0.583	**1.000**	0.582	0.465	0.346	0.302	0.217
M8	0.271	0.349	0.364	0.358	0.393	0.508	0.582	**1.000**	0.485	0.356	0.354	0.215
M9	0.291	0.327	0.362	0.384	0.336	0.354	0.465	0.485	**1.000**	0.346	0.284	0.089
M10	0.277	0.292	0.237	0.189	0.114	0.137	0.346	0.356	0.346	**1.000**	0.614	0.461
M11	0.204	0.177	0.150	0.188	0.120	0.158	0.302	0.354	0.284	0.614	**1.000**	0.512
M12	0.184	0.152	0.114	0.109	0.082	0.003	0.217	0.215	0.089	0.461	0.512	**1.000**

Table 4.55. Correlation matrix – **market (satisfaction B)**

		M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M7**	**M8**	**M9**	**M10**	**M11**	**M12**
Correlation	**M1**	**1.000**	0.733	0.501	0.404	0.335	0.331	0.339	0.298	0.325	0.237	0.324	0.266
	M2	0.733	**1.000**	0.677	0.520	0.433	0.401	0.408	0.372	0.356	0.316	0.340	0.274
	M3	0.501	0.677	**1.000**	0.668	0.483	0.469	0.482	0.405	0.419	0.325	0.330	0.234
	M4	0.404	0.520	0.668	**1.000**	0.623	0.470	0.509	0.417	0.436	0.331	0.224	0.172
	M5	0.335	0.433	0.483	0.623	**1.000**	0.570	0.506	0.488	0.459	0.330	0.307	0.232
	M6	0.331	0.401	0.469	0.470	0.570	**1.000**	0.683	0.556	0.531	0.410	0.282	0.257
	M7	0.339	0.408	0.482	0.509	0.506	0.683	**1.000**	0.658	0.639	0.388	0.291	0.255
	M8	0.298	0.372	0.405	0.417	0.488	0.556	0.658	**1.000**	0.680	0.381	0.350	0.333
	M9	0.325	0.356	0.419	0.436	0.459	0.531	0.639	0.680	**1.000**	0.523	0.461	0.353
	M10	0.237	0.316	0.325	0.331	0.330	0.410	0.388	0.381	0.523	**1.000**	0.587	0.415
	M11	0.324	0.340	0.330	0.224	0.307	0.282	0.291	0.350	0.461	0.587	**1.000**	0.613
	M12	0.266	0.274	0.234	0.172	0.232	0.257	0.255	0.333	0.353	0.415	0.613	**1.000**

MARKET: **KMO AND BARTLETT'S TEST (IMPORTANCE AND SATISFACTION)**

Table 4.56. KMO and Bartlett's Test – **market (importance A)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.838**
Bartlett's Test of Sphericity	Approx. Chi-Square	1188.502
	df	66
	Sig.	**0.000**

Table 4.57. KMO and Bartlett's Test – **market (satisfaction B)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.865**
Bartlett's Test of Sphericity	Approx. Chi-Square	1332.750
	df	66
	Sig.	**0.000**

MARKET: **TOTAL VARIANCE EXPLAINED (IMPORTANCE AND SATISFACTION)**

Table 4.58. Total variance explained – **market (importance A)**
Extraction method : Principle Axis Analysis

F	Initial Eigenvalues	Extraction Sums of Squared Loadings

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	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.928**	41.070	41.070	4.530	37.754	37.754
2	**1.841**	15.338	56.407	1.409	11.742	49.496
3	**1.326**	11.054	67.461	0.984	8.203	**57.699**
4	0.781	6.508	73.969			
5	0.641	5.342	79.311			
6	0.501	4.179	83.490			
7	0.445	3.707	87.197			
8	0.418	3.483	90.680			
9	0.359	2.994	93.673			
10	0.320	2.670	96.344			
11	0.267	2.226	98.570			
12	0.172	1.430	100.000			

Table 4.59. Total variance explained – **market (Satisfaction B)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**5.680**	47.334	47.334	5.299	44.156	44.156
2	**1.463**	12.189	59.523	1.094	9.116	53.272
3	**1.248**	10.398	69.921	0.910	7.581	**60.853**
4	0.702	5.847	75.768			
5	0.579	4.827	80.595			
6	0.499	4.162	84.757			
7	0.450	3.752	88.509			
8	0.345	2.873	91.382			
9	0.318	2.653	94.035			
10	0.276	2.296	96.331			
11	0.245	2.041	98.372			
12	0.195	1.628	100.000			

MARKET: SCREE PLOT (IMPORTANCE AND SATISFACTION)
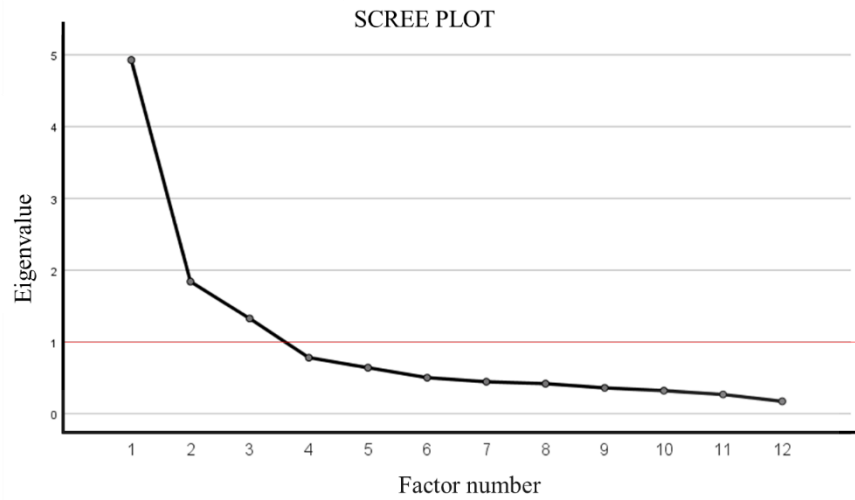
Figue 4.18. Market scree plot (importance A)
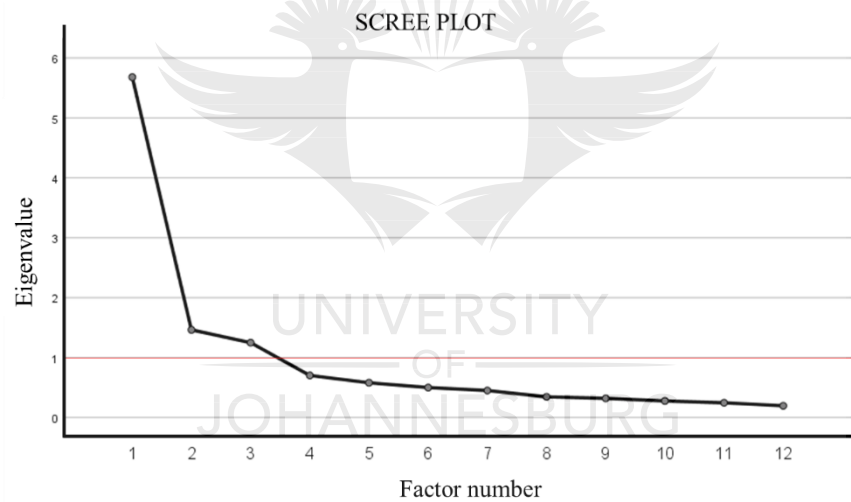
Figue 4.19. market scree plot (satisfaction B)

MARKET: PATTERN (IMPORTANCE AND SATISFACTION)

Table 4.60. Pattern Matrix – **market (importance A)**

Items	Factor		
	1	2	3
M6_Speed and responsiveness of suppliers	**0.849**	-0.142	0.033
M7_Quality of suppliers (materials)	**0.716**	0.185	0.049
M5_Location of suppliers	**0.655**	-0.178	-0.235
M8_Availability of alternative suppliers	**0.621**	0.247	0.022
M9_Nature of supplier(s) process	**0.455**	**0.184**	-0.091

M4_The availability of transport facilities for employees	**0.418**	-0.051	-0.387
M11_Government regulations	0.111	**0.765**	0.043
M10_Benefit from competition by suppliers	0.055	**0.740**	-0.092
M12_Location near competitors	-0.055	**0.605**	-0.052
M2_Responsiveness of customers in the area	-0.076	0.048	**-0.965**
M1_Size of market that can be served	-0.047	0.103	**-0.762**
M3_Location near demand/the customer	0.224	-0.058	**-0.708**
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 8 iterations.			

Table 4.61. Pattern Matrix – **market (satisfaction B)**

Items	Factor		
	1	2	3
M7_Quality of suppliers (materials)	**0.850**	-0.035	-0.001
M8_Availability of alternative suppliers	**0.744**	0.120	-0.062
M6_ Speed and responsiveness of suppliers	**0.739**	-0.015	0.059
M9_ Nature of supplier(s) process	**0.691**	0.264	-0.077
M5_Location of suppliers	**0.562**	-0.027	0.226
M4_The availability of transport facilities for employees	**0.469**	-0.131	**0.438**
M11_Government regulations	-0.052	**0.900**	0.094
M12_Location near competitors	0.024	**0.635**	0.055
M10_Benefit from competition by suppliers	**0.287**	**0.505**	0.003
M2_Responsiveness of customers in the area	-0.050	0.077	**0.919**
M1_Size of market that can be served	-0.050	0.124	**0.709**
M3_Location near demand/the customer	0.267	-0.015	**0.621**
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 7 iterations.			

RENTAL RATE: CORRELATION MATRIX (IMPORTANCE AND SATISFACTION)

RR1_ The lease period of rental agreement

RR2_ Rental rate range of a specific area

RR3_ Variety of rental premises within a specific area

RR4_ Availability of competitors in area

RR5_ Access of service of specific estate agency

RR6_ Access of service of specific estate agent (regardless of the estate agency)

RR7_ The inflation rate

Table 4.62. Correlation matrix – **rental rate (importance A)**

	RR1	RR2	RR3	RR4	RR5	RR6	RR7

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		RR1	RR2	RR3	RR4	RR5	RR6	RR7
Correlation	**RR1**	**1.000**	0.842	0.713	0.559	0.463	0.477	0.301
	RR2	0.842	**1.000**	0.806	0.621	0.577	0.446	0.370
	RR3	0.713	0.806	**1.000**	0.727	0.674	0.462	0.380
	RR4	0.559	0.621	0.727	**1.000**	0.730	0.414	0.445
	RR5	0.463	0.577	0.674	0.730	**1.000**	0.449	0.495
	RR6	0.477	0.446	0.462	0.414	0.449	**1.000**	0.677
	RR7	0.301	0.370	0.380	0.445	0.495	0.677	**1.000**

Table 4.63. Correlation matrix – **rental rate (satisfaction B)**

		RR1	RR2	RR3	RR4	RR5	RR6	RR7
Correlation	**RR1**	**1.000**	0.809	0.656	0.541	0.531	0.467	0.337
	RR2	0.809	**1.000**	0.826	0.689	0.621	0.510	0.433
	RR3	0.656	0.826	**1.000**	0.732	0.577	0.455	0.356
	RR4	0.541	0.689	0.732	**1.000**	0.687	0.417	0.406
	RR5	0.531	0.621	0.577	0.687	**1.000**	0.431	0.417
	RR6	0.467	0.510	0.455	0.417	0.431	**1.000**	0.699
	RR7	0.337	0.433	0.356	0.406	0.417	0.699	**1.000**

RENTAL RATE: KMO AND BARTLETT'S TEST (IMPORTANCE AND SATISFACTION)

Table 4.64. KMO and Bartlett's Test – **rental rate (importance A)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.814**
Bartlett's Test of Sphericity	Approx. Chi-Square	1039.763
	Df	21
	Sig.	**0.000**

Table 4.65. KMO and Bartlett's Test – **rental rate (satisfaction B)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.824**
Bartlett's Test of Sphericity	Approx. Chi-Square	986.752
	df	21
	Sig.	**0.000**

RENTAL RATE: TOTAL VARIANCE EXPLAINED (IMPORTANCE AND SATISFACTION)

Table 4.66. Total variance explained – **rental rate (importance A)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.362**	62.316	62.316	4.071	58.159	58.159

2	**1.053**	15.049	77.366	0.859	12.272	**70.431**
3	0.690	9.850	87.216			
4	0.295	4.217	91.433			
5	0.264	3.769	95.202			
6	0.216	3.079	98.281			
7	0.120	1.719	100.000			

Table 4.67. Total variance explained – **rental rate (satisfaction B)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.355**	62.211	62.211	4.053	57.904	57.904
2	**1.035**	14.782	76.993	0.767	10.962	**68.866**
3	0.594	8.479	85.473			
4	0.391	5.579	91.051			
5	0.285	4.069	95.121			
6	0.222	3.170	98.291			
7	0.120	1.709	100.000			

RENTAL RATE: SCREE PLOT (IMPORTANCE AND SATISFACTION)
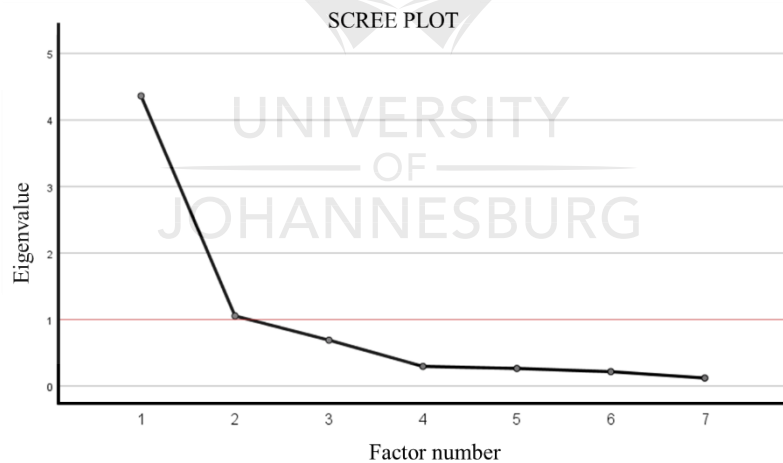
Figue 4.20. Rental rate scree plot (importance A)
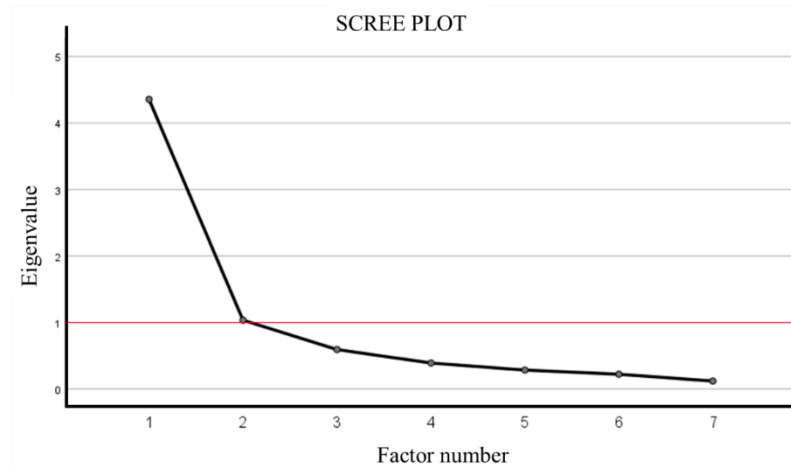
Figue 4.21. Rental rate scree plot (satisfaction B)

RENTAL RATE: PATTERN (IMPORTANCE AND SATISFACTION)

Table 4.68. Pattern Matrix – **rental rate (importance A)**

Items	Factor	
	1	2
RR2_Rental rate range of a specific area	**0.947**	-0.080
RR3_Variety of rental premises within a specific area	**0.917**	-0.015
RR1_The lease period of rental agreement	**0.851**	-0.075
RR4_Availability of competitors in area	**0.680**	0.167
RR5_Access of service of specific estate agency	**0.568**	**0.269**
RR7_The inflation rate	-0.084	**1.011**
RR6_Access of service of specific estate agent (regardless of the estate agency)	0.229	**0.570**
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 5 iterations.		

Table 4.69. Pattern Matrix – **rental rate (satisfaction B)**

Items	Factor	
	1	2
RR2_Rental rate range of a specific area	**0.950**	-0.021
RR3_Variety of rental premises within a specific area	**0.919**	-0.079
RR1_The lease period of rental agreement	**0.774**	0.000
RR4_Availability of competitors in area	**0.774**	0.034
RR5_Access of service of specific estate agency	**0.637**	0.126
RR7_The inflation rate	-0.069	**0.927**
RR6_Access of service of specific estate agent (regardless of the estate agency)	0.141	**0.710**

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Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 4 iterations.

GREEN BUILDIND: CORRELATION MATRIX (IMPORTANCE AND SATISFACTION)

GB1_Environmental friendly building
GB2_Efficient recycling system in for paper
GB3_Efficient recycling system in place for other waste
GB4_Natural ventilation
GB5_Energy efficient heating system
GB6_Sensors that adjust to light
GB7_Cost saving as a result of green practices
GB8_Use of renewable energy sources (e.g. Solar system)

Table 4.70. Correlation matrix – **green building (importance A)**

		GB1	GB2	GB3	GB4	GB5	GB6	GB7	GB8
Correlation	GB1	**1.000**	0.849	0.769	0.250	0.609	0.639	0.597	0.489
	GB2	0.849	**1.000**	0.917	0.338	0.734	0.718	0.693	0.578
	GB3	0.769	0.917	**1.000**	0.393	0.752	0.738	0.704	0.574
	GB4	0.250	0.338	0.393	**1.000**	0.453	0.370	0.341	0.274
	GB5	0.609	0.734	0.752	0.453	**1.000**	0.828	0.790	0.729
	GB6	0.639	0.718	0.738	0.370	0.828	**1.000**	0.849	0.722
	GB7	0.597	0.693	0.704	0.341	0.790	0.849	**1.000**	0.811
	GB8	0.489	0.578	0.574	0.274	0.729	0.722	0.811	**1.000**

Table 4.71. Correlation matrix – **green building (satisfaction B)**

Items		GB1	GB2	GB3	GB4	GB5	GB6	GB7	GB8
Correlation	GB1	**1.000**	0.891	0.726	0.487	0.653	0.616	0.665	0.691
	GB2	0.891	**1.000**	0.804	0.508	0.678	0.648	0.656	0.671
	GB3	0.726	0.804	**1.000**	0.597	0.683	0.659	0.654	0.670
	GB4	0.487	0.508	0.597	**1.000**	0.518	0.478	0.432	0.447
	GB5	0.653	0.678	0.683	0.518	**1.000**	0.811	0.759	0.777
	GB6	0.616	0.648	0.659	0.478	0.811	**1.000**	0.808	0.759
	GB7	0.665	0.656	0.654	0.432	0.759	0.808	**1.000**	0.859
	GB8	0.691	0.671	0.670	0.447	0.777	0.759	0.859	**1.000**

GREEN BUILDING: KMO AND BARTLETT'S TEST (IMPORTANCE AND SATISFACTION)

Table 4.72. KMO and Bartlett's Test – **green building (importance A)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.882**
Bartlett's Test of Sphericity	Approx. Chi-Square	1647.384

	df	28
	Sig.	**0.000**

Table 4.73. KMO and Bartlett's Test – **green building (satisfaction B)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.889**
Bartlett's Test of Sphericity	Approx. Chi-Square	1594.225
	df	28
	Sig.	**0.000**

GREEN BUILDING: TOTAL VARIANCE EXPLAINED (IMPORTANCE AND SATISFACTION)

Table 4.74. Total variance explained – **green building (importance A)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**5.510**	68.878	68.878	5.223	65.291	**65.291**
2	0.853	10.666	79.544			
3	0.780	9.748	89.293			
4	0.265	3.306	92.599			
5	0.221	2.761	95.360			
6	0.184	2.306	97.666			
7	0.120	1.495	99.161			
8	0.067	0.839	100.000			

Table 4.75. Total variance explained – **green building (satisfaction)**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**5.692**	71.145	71.145	5.388	67.344	**67.344**
2	0.759	9.487	80.632			
3	0.601	7.518	88.150			
4	0.284	3.548	91.698			
5	0.250	3.127	94.825			
6	0.201	2.514	97.339			
7	0.122	1.523	98.862			
8	0.091	1.138	100.000			

Figue 4.22. Green building scree plot (importance A)
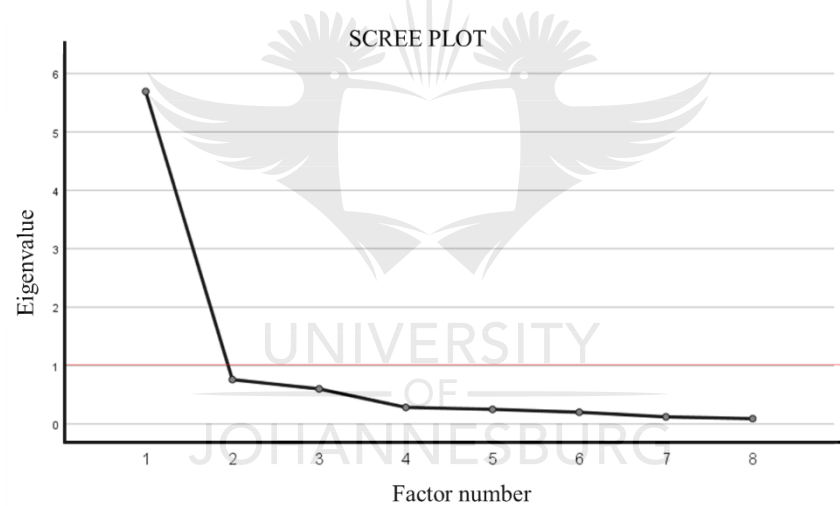
Figue 4.23. Green building scree plot (satisfaction B)

GREEN BUILDING: FACTOR MATRIX (IMPORTANCE AND SATISFACTION)

Table 4.77. Factor Matrix – **green building (importance A)**

Items	Factor
	1
GB6_A Sensors that adjust to light	0.891
GB5_A Importance: Energy efficient heating system	0.889
GB3_A Importance: Efficient recycling system in place for other waste (e.g. plastic, glass, piece of fabric)	0.885

GB2_Efficient recycling system in for paper	0.884
GB7_Cost saving as a result of green practices	0.874
GB1_Environmental friendly building	0.760
GB8_Use of renewable energy sources (e.g. Solar system)	0.752
GB4_Natural ventilation	0.410
Extraction Method: Principal Axis Factoring. 1 factors extracted. 5 iterations required.	

Table 4.78. Factor Matrix – **green building (satisfaction B)**

Items	Factor 1
GB8_Use of renewable energy sources (e.g. Solar system)	0.865
GB5_Energy efficient heating system	0.860
GB7_Cost saving as a result of green practices	0.857
GB2_Efficient recycling system in for paper	0.854
GB6_Sensors that adjust to light	0.842
GB3_Efficient recycling system in place for other waste (e.g. plastic, glass, piece of fabric)	0.836
GB1_Environmental friendly building	0.830
GB4_Natural ventilation	0.583
Extraction Method: Principal Axis Factoring. 1 factors extracted. 5 iterations required.	

BUSINESS PERFORMANCE: CORRELATION MATRIX (IMPORTANCE AND SATISFACTION)

BP1_Net profit after tax has…
BP2_Profit has…
BP3_Return on total assets (or total capital) has…
BP4_Annual sales have…
BP5_Operating costs have…
BP6_Firm's productivity has…
BP7_Number of employees has…
BP8_Turnover rate of employees has…
BP9_Customer satisfaction has...
BP10_Market share has...
BP11_Product/ Service quality has...

Table 4.79. Correlation matrix – **business performance**

		BP1	BP2	BP3	BP4	BP5	BP6	BP7	BP8	BP9	BP10	BP11
Correlati	**BP1**	**1.000**	0.795	0.628	0.564	0.475	0.551	0.421	0.170	0.518	0.489	0.541
	BP2	0.795	**1.000**	0.784	0.679	0.578	0.638	0.499	0.223	0.595	0.524	0.583
	BP3	0.628	0.784	**1.000**	0.738	0.590	0.528	0.461	0.283	0.505	0.476	0.523
	BP4	0.564	0.679	0.738	**1.000**	0.622	0.535	0.509	0.232	0.478	0.409	0.448

BP5	0.475	0.578	0.590	0.622	**1.000**	0.499	0.495	0.345	0.437	0.411	0.389
BP6	0.551	0.638	0.528	0.535	0.499	**1.000**	0.604	0.177	0.681	0.452	0.581
BP7	0.421	0.499	0.461	0.509	0.495	0.604	**1.000**	0.554	0.455	0.432	0.387
BP8	0.170	0.223	0.283	0.232	0.345	0.177	0.554	**1.000**	0.219	0.362	0.141
BP9	0.518	0.595	0.505	0.478	0.437	0.681	0.455	0.219	**1.000**	0.583	0.700
BP10	0.489	0.524	0.476	0.409	0.411	0.452	0.432	0.362	0.583	**1.000**	0.554
BP11	0.541	0.583	0.523	0.448	0.389	0.581	0.387	0.141	0.700	0.554	**1.000**

Table 4.80. KMO and Bartlett's Test – **business performance**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**0.887**
Bartlett's Test of Sphericity	Approx. Chi-Square	1468.599
	df	55
	Sig.	**0.000**

Table 4.81. Total variance explained – **business performance**
Extraction method : Principle Axis Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**6.040**	54.911	54.911	5.634	51.222	51.222
2	**1.184**	10.764	65.675	0.823	7.478	**58.700**
3	0.939	8.541	74.215			
4	0.642	5.836	80.051			
5	0.511	4.644	84.695			
6	0.404	3.670	88.366			
7	0.371	3.372	91.738			
8	0.302	2.750	94.487			
9	0.257	2.334	96.822			
10	0.204	1.858	98.680			
11	0.145	1.320	100.000			

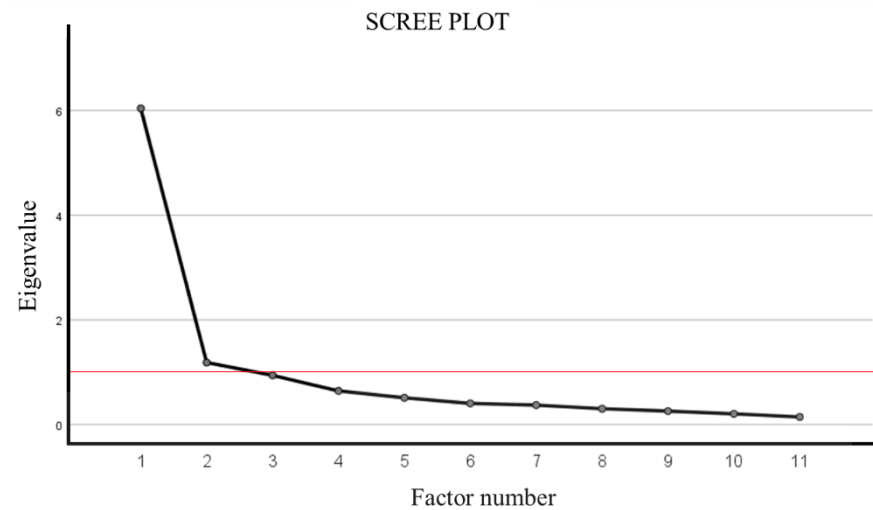**BUSINESS PERFORMANCE: SCREE PLOT (IMPORTANCE AND SATISFACTION)**

Figue 4.24. Business performance scree plot

BUSINESS PERFORMANCE : PATTERN MATRIX (IMPORTANCE AND SATISFACTION)

Table 4.82. Pattern Matrix – **business performance**

Items	Factor	
	1	2
BP2_Profit has…	**0.925**	-0.083
BP1_Net profit after tax has…	**0.819**	-0.110
BP3_Return on total assets (or total capital) has…	**0.784**	0.040
BP11_Product/ Service quality has...	**0.764**	-0.111
BP9_Customer satisfaction has...	**0.753**	-0.016
BP6_Firm's productivity has…	**0.749**	0.023
BP4_Annual sales have…	**0.717**	0.074
BP10_Market share has...	**0.568**	0.165
BP5_Operating costs have…	**0.566**	0.226
BP8_Turnover rate of employees has…	-0.048	**0.833**
BP7_Number of employees has…	**0.400**	**0.531**
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 4 iterations		

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RELIABILITY OF EFA VARIABLES

Table 4.83. Reliability of factorised data (Importance and satisfaction)

Independent Variables	Factors	Importance α	No of items	Satisfaction α	No of items
Cost	Cost	0.849	5	0.890	5
Labour	Workforce in place	0.878	3	0.862	3
	Employement creation	0.780	3	0.822	3
	Labour qualification	0.837	2	0.715	2
Quality of life	Safe environment	0.765	4	0.843	4
	Basic needs	0.814	2	0.790	2
	Social climate	0.689	3	0.851	3
Market	Proximity to supplier	0.822	5	0.873	5
	Proximity to competitors	0.759	3	0.780	3
	Proximity to customers	0.867	3	0.840	3
Rental rate	Rental rate	0.909	5	0.909	5
Green building	Green building	0.932	8	0.941	8
Dependent variable		α		No of items	
Business performance		0.919		9	

PAIRED SAMPLES STATISTICS SATISTICS

Table 4.84. Paired samples statistics

(A) Important (B) Satisfaction		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Costs A	2.9405	211	0.84461	0.05815
	Costs B	3.3498	211	0.71417	0.04917
Pair 2	Workforce in place A	3.4300	207	0.92741	0.06446
	Workforce in place B	3.4936	207	0.64672	0.04495
Pair 3	Employement creation A	2.8136	211	0.90150	0.06206
	Employement creation B	3.2401	211	0.69560	0.04789
Pair 4	Labour qualification A	3.3502	207	0.87122	0.06055
	Labour qualification B	3.4058	207	0.60705	0.04219
Pair 5	Safe environment A	4.2024	210	0.52747	0.03640
	Safe environment B	3.4817	210	0.68257	0.04710
Pair 6	Basic needs A	3.0381	210	1.08864	0.07512
	Basic needs B	3.2071	210	0.87834	0.06061
Pair 7	Social climate A	4.0222	210	0.63105	0.04355
	Social climate B	3.6659	210	0.62563	0.04317
Pair 8	Proximity to supplier A	4.1623	211	0.52817	0.03636

	Proximity to supplier B	3.7014	211	0.58655	0.04038
Pair 9	Proximity to competitors A	3.6603	211	0.82485	0.05679
	Proximity to competitors B	3.4534	211	0.68877	0.04742
Pair 10	Proximity to customers A	4.0600	211	0.71164	0.04899
	Proximity to customers B	3.6825	211	0.58893	0.04054
Pair 11	Rental rate A	3.0351	211	0.87641	0.06033
	Rental rate B	3.2962	211	0.72314	0.04978
Pair 12	Green building A	2.8583	211	1.07710	0.07415
	Green building B	3.1296	211	0.83501	0.05748