Evaluating the impact of operations management on service delivery at a local municipality.

Research report presented to the

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by

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DECLARATION AUTHENTICITY OF MBA RESEARCH REPORT

I, the undersigned, declare that

Evaluating the influence of operations management on service delivery at the municipality:

This minor dissertation is my own original work and has not been submitted before to any institution for assessment purposes. Furthermore, all the sources used have been duly cited in the reference section.

Signed  Date 23/12/2022

Palesa Potlaki (56649053)

This research project has been presented for examination with my approval as the appointed Supervisor.

Singed  Date 9 December 2022

Prof Sugandren Naidoo

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ABSTRACT

In a larger context, local government municipalities might not only have authority and functionality but also the responsibility to carry out their duties in challenging circumstances. The study's main objective is to assess the operational management variables that affect local government service delivery. The goal of this study is to help local municipality in the Northern Cape management gain a clear understanding of the standard of operations management, the degree of service delivery, and the degree to which operations management factors affect delivery within the organisation.

This study aims to assess the operations management factors that affect service delivery at the municipality using a quantitative research method approach and an online survey. Working definitions for both variables for operations management and service delivery were developed based on the literature. In that chapter, it was stated that operations management could be thought of as a process that converts various organisational inputs into outputs of the desired quality and quantity as determined by the organisation and its stakeholders. Additionally, service delivery was defined as a part of organisational performance that is pertinent to the public sector and relates to an organisation's capacity to carry out a process to provide services which the public can derive value from. Overall, the quality of service delivery was poor compared to a marginally higher standard of operations management. Finally, using correlational analysis and regression modeling, the impact of operations management on service delivery at municipality was discussed. The findings showed that the variables had significant positive correlations. Once more, it was discovered that operations management significantly affects the provision of services. The quantitative approach used in this study ensured that the findings were reliable and that they had been evaluated for statistical significance. However, it meant that the study was blind to the rationale behind survey respondents' opinions. Future research should use a qualitative approach or a mixed approach to investigate the qualitative factors that can influence the relationship between operations management and service delivery.

Keywords: operations management, service delivery, quantitative, performance management

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ABBREVIATIONS

Abbriviation	Term
ISO	International Organisation for Standardisation
CLT	Central Limit Theorem
COVID 19	Coronavirus of 2019
CFS	Critical Success Factors
KPI	Key Performance Indicators
OM	Operation Management
P/OM	Project/ Operations Model
RDP	Reconstruction and Development Programme
SBL	School of Business Leadership
SA	South Africa
SD	Standard Deviaion
UNISA	University of South Africa

CHAPTER ONE: Proposal

1.1 Introduction

The focus of this study is to investigate how operations management affects the provision of services at the local municipality The study focus on a local municipality in the Northern Cape province of South Africa, with a population of approximately three hundred thousand (SPM, 2021). According to Michael and Sue (2020), government institutions have been operating in challenging environments, with constrained budgets as a result of the general economic slowdown and increased demand for services as more people have lost their source of income as a result of the Covid-19 pandemic. These factors have increased the pressure on government institutions to provide people with services. Through this study, the researcher hopes to discover whether effective operations management can aid in the improvement of service delivery by government institutions such as municipalities.

This study is divided into seven sections. The study starts by clarifying the problem which prompted this study. Thereafter, presents the purpose, objectives of the study and proposed research questions. A brief review of the literature is also presented to understand what is already known and identify the research gap. Moreover, the proposed research methodology is discussed, covering aspects such as the proposed research approach, methodology and data analysis techniques. Validity and reliability will also be discussed together with ethical issues relevant to the proposed study.

1.2 Background to the study

According to Michael & Sue (2020), in a global context, local government municipalities may not only have power and functionality, but they are also expected to function in adverse conditions. This is where the community it serves is brought in to help achieve a common goal (Michael & Sue, 2020). According to the World Bank (2021), accountability remains the most powerful tool in local government for delivering public services to communities. If municipalities accept responsibility for any delays in providing public services, there will be fewer operational factors affecting service delivery.

1.3 Problem statement

Service delivery has been one of the major problems facing successive post-apartheid governments in South Africa (Dyantyi, 2015). Those governments have been struggling to provide basic services such as housing, education, clean water, and sanitation among other basic services (Horn, 2016; Ndzwayiba, 2012; Krüger, 2014). People have become frustrated, and the lack of service delivery is one of the key factors why the ruling African National Congress party has been losing majority support, particularly in urban areas where service delivery challenges are more evident (Brits, 2014). Failure to deliver service has been a common feature of both the central and local governments in South Africa (Brits, 2014; Habib, 2013). For municipalities, the quality of services delivered has been declining over the years. Table 1 shows some aspects of service delivery at the municipality.

Table 1: The state of service delivery at the local municipality

Service Component	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	% Change p.a.
Service Delivery Protests per Year	4	3	3	4	5	6%
Over-spending (R'000)	241	104	186	257	265	2%
Households without electricity	4 320	3 685	2 625	2644	2 663	-11%
Households without water	349	349	617	636	655	17%
Number employees	1 638	1582	1 964	2 023	2 084	6%
Operational Services Budget (R'000)	1 891	1 937	2 047	2 194	2 304	5%
Municipality Population (000)	248	255	265	293	302	5%
Number of schools in the municipality	63	63	63	63	63	0%
Number of clinics/hospitals in the municipality	6	6	6	6	6	0%

Sources:(Sol Plaatje Municipality, 2017), (Sol Plaatje Municipality, 2018),(Sol Plaatje Municipality, 2020), (Sol Plaatje Municipality, 2019)

Table 1 shows that, despite an annual average 5% increase in population and municipal operational budget, the number of schools and clinics remained constant between 2016 and 2021. While the adequacy of schools would necessitate the number of school-aged children, it is unlikely that the existing health facilities could still provide adequate health

services to such a growing population. While the number of households without electricity decreased over the period under review, those without clean water increased at a 17% annual rate. While failing to provide these basic services, the local municipality has been overspending its operational budget by an average of R197,000 per year. The. As a result of declining service levels, the local municipality has faced an average of four service delivery protests per year. As a result, the research statement for this study is that service delivery may not be possible if operations management factors are not considered, as well as operating processes are not followed by the organisation.

1.4 The purpose of the study

The purpose of this study is to evaluate the influence of operations management on service delivery in the local municipality.

1.5 Research question

1.5.1 Research objectives

The objectives of the proposed study are to:

- To evaluate the quality of operations management in the local municipality;
- To determine the level of service delivery in the local municipality and
- To investigate the extent to which operations management influences the delivery of service in the local municipality.

1.5.2 Research questions

The following questions need to be answered to achieve the objectives above:

- What is the quality of operations management in the local municipality?
- What is the current level of service delivery in the local municipality?
- To what extent does operations management influence the delivery of service in the local municipality?

1.6 Significance of the study

Understanding the relationship between service delivery and operations management is important because it can help the local municipality develop strategies to improve service delivery, which has been lacking in recent years. Furthermore, this study is academically

significant. It aims to bring the debate on how operations management can influence service delivery to the South African public sector, which has been missing in current literature. Section 1.6 provides evidence of this effect. Once again, the study is of professional importance to the researcher. Completing independent research will not only make the researcher a better professional, but it will also lay the groundwork for future research and learning.

1.7 Abbreviated literature review

1.7.1 Introduction

This section presents the review of literature available on both operations management and service delivery. The review is aimed at developing a theoretical framework and identifying existing research gaps.

These challenges encountered are related to ongoing problems in the local government caused by the political-administrative interference and political party issues, which impact the governance badly and basic services. This lack of basic services and fewer funds in municipal possession are due to the shortage of essential skills (Masuku & Jili, 2019). Then the research seeks to determine the relationship between operations management factors and how they affect service delivery through the study.

1.7.2 Operations management

The term operations management consists of two interrelated words, namely operations and management. According to Kumar and Suresh (2019), operations are that part of an organisation that is responsible for the transformation of organisational inputs into outputs (or services) of the requisite level of quality. Thus, there are several aspects of operations. Firstly, operations should be capable of accepting organisational inputs. These inputs can be in the form of financial, human capital and intellectual resources (Slack, et al., 2017). In addition, operations should have the capability of transforming the inputs into outputs. The transformation process can be in the form of construction in the case of roads and schools or impartation in the case of education.

Finally, Kumar and Suresh (2019) make it clear that it is not sufficient to convert inputs into outputs, effective operations covert inputs into outputs of the desired quality. In other

words, operations can only be seen as being effective if the outputs meet the expectations of the organisation and its stakeholders. While quality inputs are important, quantity also matters since that determines the adequacy of the service delivered to those who depend on such service.

The term management, on the other hand, refers to the "process, which combines and transforms various resources used in the operations subsystem of the [organisation] into [value-added] services in a controlled manner as per the policies of the [organisation]" (Kumar & Suresh, 2019:1). In other words, management involves combing of the various operations within the organisation to deliver a service to the organisation's stakeholders. That requires the carrying out of management functions of planning, controlling, organising, staffing and leading (Louw & Venter, 2018). It is critical to note that management is seen as a process rather than a once-off event. This means that the carrying out of management processes is a continuous process.

From the foregoing discussion, operations management can therefore be seen as a process of managing the transformation of the various organisational inputs into outputs of the desired quality and quantity as defined by the organisation and its stakeholders.

1.7.3 Service delivery

The concept of service delivery in the public sector is similar to that of organisational profitability in the private sector (Moore & Moore, 2005). Service delivered by public sector organisations is often referred to as public value (Van den Heever, 2020). The earliest contemporary definition of public value can be traced back to Moor (2005) who defined it as the utility derived by the public from the services delivered by a public sector organisation. Weinberg and Lewis (2009) add that public value is derived from the mission of the public organisation, which is also a reflection of the statutory and other mandates of public organisations. What that means is that public value can only be seen as having been delivered if the public has derived some value from the consumption of the services offered by the public organisation. As a result, service delivery can be seen as a process by which public organisations provide services from which the public can derive some

value. For organisations such as the local municipality, such services include housing, health, safety, water, and sanitation.

1.7.4 Organisational performance

It has been noted above that concept of service delivery in the public sector is similar to that of organisational profitability in the private sector. Collectively, both profitability and service delivery fall under the organisational performance construct (Thompson, et al., 2014). According to Singh, Chetty and Karodia (2016), organisational performance refers to the actual organisational output as measured against the desired output. This means that the first step in measuring organisational output is to outline what the desired output is. Thereafter, actual performance can then be measured against that intended output. Kaplan (2020) talks of organisational performance in the context of the performance hierarchy. Figure 1.1 illustrates the performance hierarchy.

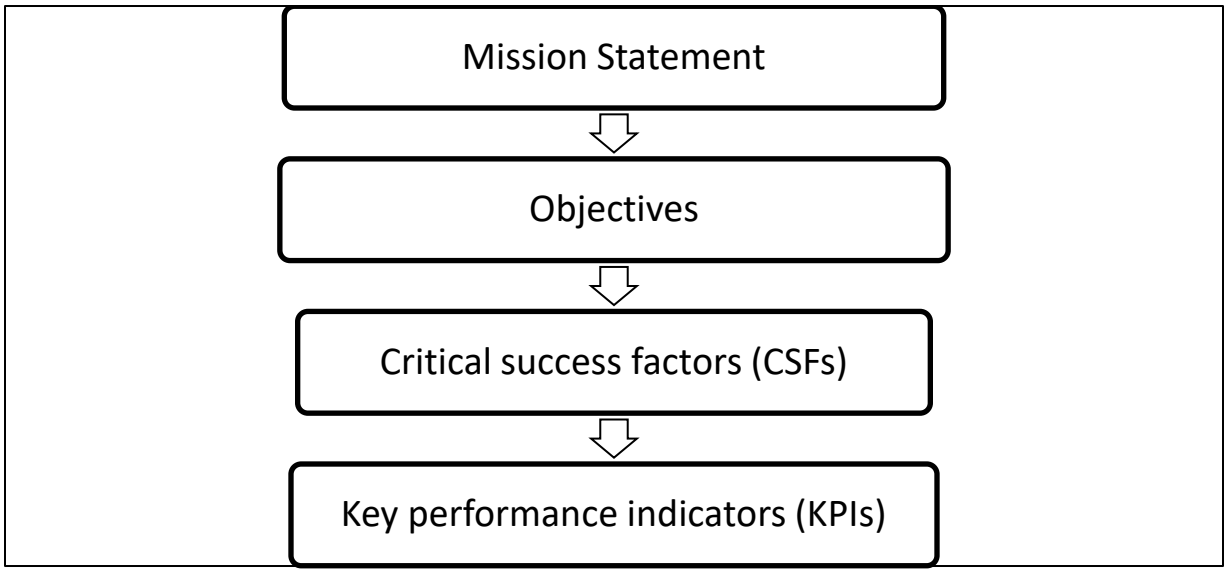

Figure 1.1 : The performance hierarchy

Source: *Kaplan (2020:442)*

Figure 1.1 shows that the first step in managing organisational performance is to set the organisation's mission and express that in a mission statement. Johnson, Scholes and Whittington (2017:164) explain that the mission statement "aims to provide employees and stakeholders with clarity about the overall purpose and *raison d'être* of the organisation." A mission statement clarifies the reason for the organisation's existence.

For local government organisations such as the local municipality, the mission should be derived from both the national aspirations as enshrined in the South African Constitution and the aspirations of those being served by the local government.

Once the mission has been set, the organisation needs to set out objectives. The organisation's objectives are statements of specific outcomes which the organisation seeks to achieve (Louw & Venter, 2018). For instance, one of the objectives of the local municipality is to achieve a crime-free community by 2025. The objective is specific, measurable, attainable, realistic and time-bound.

Achieving strategic objectives requires the organisation to utilise its critical success factors (CSFs). These are those processes, procedures, and service features that the organisation needs to perform well to achieve its stated objectives (Johnson, et al., 2017). For instance, local municipality's CSF may be the availability of budget surpluses to weather the effect of unforeseen events such as Covid-19. CSFs can also be the quality of the organisation's intellectual resources which allows the organisation to deliver quality services.

To monitor the progress in utilising CSFs to achieve the organisation's objectives and mission, Key Performance Indicators (KPIs) will need to be set. KPIs are a set of performance targets that the organisation sets for its various units, the achievement of which leads to overall organisational performance (Kaplan, 2010). For instance, one of the local municipality's KPIs can be the need to build at least three schools every year. Thus, at the end of every year, the number of schools constructed will then be compared to the target of three schools.

The performance hierarchy is an important model for public sector organisations such as the local municipality because it ensures that the organisation's activities are directly linked to the organisation's purpose. In other words, the performance hierarchy ensures that operations management is directed toward achieving the strategic mission of the organisation.

1.7.5 Operations management model

According to Gupta, (2014) the general model of operations management, developed by Johnston, Chambers, Harland, Harrison and Slack (2003), is usually used to structure discussions on operations management. There are various P/OM models used for equipment and personnel selection production planning, quality control, inventory, distribution, factory locations, among other things, the determination of production capacity, maintenance and transportation. A decision model organises the elements of a problem into actionable actions, predictions of events that may affect the outcome, and the relative likelihood of different outcomes occurring. A decision model therefore systematically organises all the important elements (Gupta, 2014).

The model states the operations management process which takes in two sets of resources, namely transformed resources and transforming resources. The transforming resources are used to transform the transformed resources into outputs. Operations management itself, as defined above, will involve the design, planning, control, and improvement of an organisation's resources and processes to produce goods and provide services of the desired quality and quantity (Gupta, 2014).

1.7.6 Strategies for improving service delivery

As there are various perspectives and dimensions of services which can be offered by public sector organisations, the strategies for improving the delivery of such services are also diverse. Generally, leadership has been found to influence organisational performance and hence, service delivery. Research by Hassan, Wright and Yukl (2014) and Kang (2019) indicates that Ethical Leadership can positively influence organisational performance. Therefore, leaders who take a stakeholder approach to manage the organisation improve the performance of the organisation more than those who do not focus on managing stakeholders. In addition, transformational leadership has also been found to improve organisational performance (Bass, 2011; Deichmann & Stam, 2015).

That means that leaders who create a vision about the organisation's future and inspire followers to work towards achieving such visions have the possibility of improving service delivery more than those who focus on ensuring that followers work within set systems and procedures – transactional leaders. Transformational and visionary leadership are

credited with some of the national progress witnessed across the globe such as those in the United Arab Emirates, Singapore and Taiwan (Uppal, 2014).

Accountability also features in some literature as a potential influence on the delivery of public value (Carroll, 2016; Carroll & Buchholtz, 2015). In other words, public organisations systems that enforce accountability reduce the possibilities of resources being lost through maladministration, corruption, and irregular spending as is evident in the local municipality (refer to Section 1.2 for details). Shaoul, Stafford and Stapleton (2012) also argue that accountability should be accompanied by consequences to avoid the loss of resources to maladministration and corruption. That is, the senior managers who are found to have misappropriated resources should face serious consequences to discourage others from engaging in similar activities.

Planning and control of resource usage is also critical in public sector organisations. According to Van den Heever (2020), there are always competing uses of public resources, some of which have equal import. Therefore, without proper planning, such resources may end up being spread thinly in all the competing usages rather than deeply in one area before moving on to the other.

The need for sufficient funding cannot be over-emphasised as one of the key strategies for improving the delivery of services. Moore (2005) indicated that public sector organisations can only be expected to provide adequate and quality service to the public if they are well-funded. However, over the past few years, the government budget has been declining owing to a poorly performing economy in the face of growing social-economic challenges such as the immigration crisis, endemic inequality and austerity measures imposed by international financial institutions as conditions for extending the much-needed international credit (Mohr & Associates, 2020).

1.7.7 The influence of operations management on service delivery

This section reviews empirical studies on the influence of operations management on service delivery. It should be noted that studies on the influence of operations management on service delivery are limited. However, it has been noted that service delivery is a sub-set of organisational performance. Therefore, in this section, both studies on the influence of operations management on service delivery and those on the influence

of operations management on organisational performance are reviewed. The review in this section is not intended to be exhaustive, but to provide a general overview of how operations management can influence organisational performance and, by extension, service performance.

1.7.8 Research gap

The review of prior literature in this study revealed the following gaps. Firstly, none of the reviewed literature was conducted in South Africa, let alone the South African public sector. In addition, the reviewed literature shows that the influence of operations management has only been reviewed within the private sector. Also, while this study aims to investigate the influence of operations management on service delivery, all empirical studies which have been reviewed focus on the impact of operations management on the private sector bottom lines such as profitability and financial performance. Thus, the proposed study will attempt to close these gaps by focusing on the impact of operations management on service delivery in the local municipality, a South African public sector organisation.

1.8 Research methodology

Research methodology is a method of data collection, analysis and interpretation plans and procedures that span broad assumptions to detailed methods for analysing and interpreting data (Creswell, 2012). This section discusses the proposed research methodology which will guide the selection, collection, and analysis of data to achieve the aim of the study.

1.8.1 Philosophical choice

According to Hair, Celsi, Money, Samouel and Page (2016), research philosophy can be defined as the general belief that one holds about the nature of reality and how much reality should be inquired.

In this study, the researcher does not seek to develop any theory since there already exist plausible theories on organisational performance and operations management. On the contrary, the research study seeks to empirically *test* the influence of operations

management on service delivery. As a result, this study adopted a positivist philosophical position.

1.8.2 Quantitative research approach

The research approach can be defined as the overall plan providing an overview of how data will be collected and analysed in a study (Leedy & Ormrod, 2015). Creswell (2012) identified three possible research approaches a researcher can choose from, namely quantitative, qualitative, and mixed methods research approaches.

It has already been noted that the proposed study aimed to test the influence of operations management on service delivery. Such testing will require the collection and analysis of objective data. As a result, the proposed study will adopt a quantitative research approach.

1.8.3 Research design

Research design can be defined as the specific method with a broader approach which is used to collect research data (Creswell, 2012). For instance, a qualitative research approach can involve the use of interviews (structured or in-depth), observations, or content analysis (Hair, et al., 2016). Each of these designs will result in qualitative data being collected and analysed to answer the research questions posed. Thus, because the proposed study will seek to collect and analyse quantitative data, it follows that the design chosen should allow for the collection and analysis of numerical data. As a result, this study adopted a survey design.

1.8.4 Population and sample framework

1.8.4.1 Population

Wani, (2017) defines population as a collection of specific groups of human or non-human entities, such as objects, educational institutions, units of time, geographic areas, wheat prices, and salaries, among others, drawn by an individual. Some statisticians call it the universe (Keller, 2015). This study's population consists of 1,538 employees within the local municipality.

1.8.4.2 Sample

Conducting a study on a sample is called a census (Leedy & Ormrod, 2015). However, except for countries with adequate resources, it is not usually possible to conduct a census, especially for master's level research. In such cases, a sample should be selected. A sample can be defined as a subset of the population that is selected in such a way that the result found based on the sample can be projected to the entire population in a meaningful way (Keller, 2015).

The researcher in this study selected the sample through probability sampling techniques. More specifically, a stratified sampling technique will be used to select the sample. Keller (2015) defines stratified sampling as a random sampling technique under which the sample is first divided into classes (strata) after which random samples are drawn from each stratum. The stratified sampling technique was chosen in this study because it would ensure that employees at all levels of the organisation were included in the sample to enhance the validity of the collected data.

According to Islam (2018), the credibility of a study is enhanced by ensuring that an appropriate size sample is selected. Islam, therefore, recommends the use of the Central Limit Theorem to decide on the sample size. The following formular was used to calculate the sample size (Islam, 2018):

$$n = \frac{N}{1 + N(e^2)}$$

Where n = Sample size; N = Population size and e = significance level, this study assumes a 5% significance level. Table 2 shows the sample framework which resulted from the study.

Table 2: Population and sample framework

Operational Unit	Total Population	Sample size	% Of Population	Sample method
Municipal Manager's Office	21	21	100%	*Census*
Infrastructure and Services	616	243	39%	*Random Sampling*
Community Services	634	245	39%	*Random Sampling*
Financial Services	267	160	60%	*Random Sampling*
Total	**1,538**	**669**	**43%**	***Random Sampling***

Source: (Sol Plaatje Municipality, 2020)

1. According to the table, the target sample size will be 669 people. This was calculated by applying the CLT formula to each stratum. While the sample size is large, it is well above the 317-sample size required for the total sample of 1,538. As a result, if the response rate is around 21% of the target population, the study's pooled results will be valid from a CLT standpoint (that is a sample of 317 out of 1,538 population). The sample will be chosen in the following manner: After receiving ethical clearance from the SBL ethics committee, the link to the questionnaire will be sent to all participants at the local municipality.Emails were sent to all municipal employees inviting them to participate in the study.
2. Following a predetermined cut-off, the number of responses was evaluated to determine whether they met the sample size specified above.
3. The researcher then noticed a slowdown and sent out reminders to non-responders.

4. Steps 2 and 3 were repeated four times until the researcher realised that the target date had long passed and had to work with the sample size that was provided.

1.9 Data collection method

Data for the proposed study was collected through a questionnaire. The questionnaire consisted of three sections as follows:

The questionnaire consisted of three parts:

Section A: Demographic and general information

This section consisted of questions aim at collecting data which assisted in evaluating the quality and representativeness of the sample. Such information includes participants' gender, age, department, and tenure

Section B: Service delivery instrument

This section consisted of statements and questions aimed at measuring the level of service delivery in the local municipality.

Section C: Operations management instrument

This section consisted of statements and questions aimed at measuring the quality-of-service delivery in the local municipality.

The draft questionnaire is included in Appendix 2 of this document. The final instrument was developed after the literature review, Chapter 2. The questionnaire was administered electronically through Google Forms. Data collected was captured in an Excel Spreadsheet, cleaned and ready for analysis.

1.9.1 Data analysis methods, techniques, and instruments

Since the proposed study was quantitative, data was analysed through statistical tools to facilitate the answering of research questions. The analysis was performed in three stages as follows:

Stage 1: *Sample analysis*

At this stage, statistical measures were used to analyse the sample. More specifically descriptive statistics (frequency, mean and standard deviation) were used to understand the sample. According to Keller (2015), descriptive statistics seek to describe the existing state of a given phenomenon. Such statistics do not provide answers on why such states exist.

Stage 2: *Instrument reliability analysis*

The instrument used was tested for inter-rate and construct reliability using Cronbach's Alpha coefficient (α). This is a measure of the closeness of the relationship of a set of items as a group. It measures the reliability of the scale used in an instrument. It is generally accepted, as a rule of thumb, that an instrument is reliable if the alpha coefficient is at least .70 (Wadkar, et al., 2016). However, some authors such as Ursachi, Horodnic and Zait (2015), argue that a range between .60 and .70 shows a reliable instrument, while an alpha coefficient above that range shows a highly reliable instrument.

Stage 3: *Descriptive analysis*

Descriptive analysis was used to achieve the first two objectives (1) To evaluate the quality of operations management in the local municipality and (2) To determine the level of service delivery in the local municipality. The mean and standard deviation of each of the items in the instruments used to measure the variables were calculated. While the mean showed the general level of participants' perceptions, the standard deviation was used to measure the level of agreement of participants' views on any given item (Evans & Basu, 2013).

Stage 4: *Regression and correlation analysis*

The third research objective, *to investigate the extent to which operations management influences the delivery of service in the municipality*, was achieved through correlation and regression analyses. Like in previous studies such as Mkala (2018), Pearson's correlation coefficient was used to assess the extent of collinearity of the variables of the study and their respective factors. This analysis was aimed at evaluating the existence of the potential cause-effect relationship among the factors of the study.

Moreover, regression analysis was used to evaluate the extent to which given levels of operations management can predict the quality and quantity of service delivered to the people of the local municipality.

1.9.2 Validity and reliability

Validity and reliability can be defined as measures of the quality of research (Leedy & Ormrod, 2015). These two attributes of research are discussed in this section.

1.9.2.1 Validity

According to Heale and Twycross (2015:66), validity can be "defined as the extent to which a concept is accurately measured in a quantitative study." It is a measure of whether a construct is accurately defined within a given instrument so that the resultant measure, measures the construct it purports to have measured. Heale and Twycross (2015) identified three types of validity, namely content, construct, and criterion validity.

Content validity measures the extent to which a research instrument accurately measures all aspects of a construct (Heale & Twycross, 2015). For instance, service delivery has both quantitative and qualitative attributes. Therefore, a valid instrument to measure service delivery would be expected to capture all these aspects of service delivery. In this study, content validity will be achieved by developing the instrument from the detailed and critical review of the literature. In other words, literature on the construct to be measured will be reviewed first to unpack the various attributes of such construct so that the instrument which will be developed will capture all such attributes.

In this study, because the instruments were developed from existing literature, the resultant instruments were more or less similar to other instruments used to measure the constructs studied in this study.

1.9.2.2 Reliability

Reliability measures the consistency of a research instrument (Creswell, 2012). It is the measure of the stability of measures of a construct for repeated studies measured under similar circumstances. Reliability can be measured in terms of internal consistency, the extent to which items in a scale measure a single construct (Heale & Twycross, 2015). In this study, internal consistency will be measured through Cronbach's alpha. The extent to which the alpha ecoefficiency shows reliability has already been discussed in the previous section (Section 1.7.4).

Instrument stability is another form of reliability that reflects the consistency of results obtained from using an instrument with repeated testing. Stability is measured through a test-retest under which the same instrument is given to the same participant with the view of comparing results from the original and subsequent tests. In the proposed study,

participants were to complete the instrument once. Therefore, it was not possible to test for instrument stability.

The final form of reliability is equivalence – a measure of the consistency among responses of multiple users of an instrument, or among alternate forms of an instrument (Pandey & Pandey, 2015). It is assessed through inter-rater reliability, which is a measure of the general uniformity of ratings given by participants to rate an item using the same instrument. Like internal consistency, equivalence is assessed by Cronbach's alpha.

1.10 Ethical considerations

(Walter-malcurat, 2021) states that research ethics is a code of conduct that guides researchers regarding the rights of those who are the subject of or are influenced by the research project. The researcher in this study considered all the ethical considerations which were brought up from conducting the proposed research in line with the UNISA SBL Ethics Committee.

1.10.1 Informed consent

It is the right of participants in a study to give their consent, allowing the researcher to include them as part of the study. All the participants were informed of the benefits, risks and implications of taking part in the study, after which they were required to sign a consent form as an acknowledgement of their participation in the study.

1.10.2 Protection from harm

According to Kothari (2014), the researcher has the responsibility to ensure that participants in a study are protected from any physical or emotional harm which may arise from taking part in the study. In this study, the survey was conducted in such a way that it complied with applicable health regulations put in place to deal with the Covid-19 pandemic.

1.10.3 Right to privacy

The names of individuals who were taking part in the study were not collected. To achieve that, no personal identification data was collected in the questionnaire. In addition, no sensitive, discriminatory, or inappropriate data was collected in this study.

1.11 Research organisation

- **Chapter one-** introduced the study and research topic while setting out the aim of the study. Also outlining the research objectives, questions, data collection, and analysis techniques that were used.
- **Chapter two-**contained a critical review of the current literature on the relationship between service delivery and operations management.
- **Chapter three-** contained a discussion of the research methodological choices which will be made to ensure that relevant data is collected and analysed.
- **Chapter four -**includes the presentation and discussion of the research results.
- **Chapter five-** provides the conclusion and recommendations of the study.

1.12 Conclusion

This study began by defining the issue that prompted this research. Following that, the proposal presented the study's purpose, objectives, and proposed research questions. A brief review of the available literature is also provided to understand what is already known about the research variables and to identify research gaps. Following that, the proposed research methodology was discussed, including elements such as the proposed research approach, methodology, and data analysis techniques. The study's validity and reliability have also been discussed, as have ethical issues pertinent to the proposed study. Finally, the timelines for the study and research have been presented.

CHAPTER TWO- Literature Review

2.1. Introduction

This chapter will provide a literature review on both operations management and service delivery. The review's goal was to create a theoretical framework for evaluating the operations management factors that influence service delivery in the local municipality, which is located in the Frances Baard District Municipality in South Africa's Northern Cape Province.

The study by Naidoo and Ramphal (2018) extended that SA has experienced a large amount of backlog, a low skill base, and ongoing service delivery protests, often characterised by violent destruction of public property. The main reason for such protests seems to be the exclusion or inadequate participation of societies where the integrated development planning process is supposed to be useful, but it does not (Naidoo & Ramphal, 2018)

The purpose of this study identified and defined the variable related to the research topic. Section 2.1 elaborates more on operations management definition and a discussion on the operations management model. The focus on organisational performance, service delivery definition and the public value approach as a model to enhance service delivery are contained in section 2.3. Section 2.4 identifies the operations management factors influencing service delivery in the public sector i.e., funding availability, substandard and dilapidated infrastructure, and adherence to governance policies. There are strategies to improve service delivery and this study focused on, firstly improvement of funding, secondly the prioritising of community projects, and thirdly leadership accountability and all these are covered in section 2.5. Section 2.6 discusses the conceptual framework of the study and section 2.7 focus on the empirical literature.

2.2. Operations management

2.2.1 Definition of operations management

Operations management is a fundamental part of any organisation. It plays an important role in the success of the organisation. This is the area of management that deals with the creation of company products and services. This is important, challenging, and

essential for any type of organisation, from manufacturing to retail to service (Manikas et al., 2020). According to Slack, et al. (2017), operations management is the activity of managing resources that create and deliver services and products. The operational function is the part of the organisation that is responsible for the activity. Every organisation has an executive function because every organisation creates type of service and/or product.

Having analysed the definitions above, operations management in this study was therefore defined as the improvement of an ogranisation's resources and processes that provide goods or services to the community.

2.2.2 Operations management model

According to Sushil & Martin, (2014) the general model of operations management, developed by Johnston, Chambers, Harland, Harrison and Slack (2003), is usually used to structure discussions on operations management. Slack, (2019) adds that operations are processes that consider taking in a set of input resources and using them to transform something or themselves into outputs of services and products. And, while all operations try to emulate this general input–transformation–output model, their specific inputs and outputs differ. All operations have transformed and transformed resources as inputs, that they use to produce goods and services (Slack, 2019). The operations management model (Figure 2.1.) illustrates how inputs are transformed into outputs through operations management discussed below using the inputs to outputs processes.

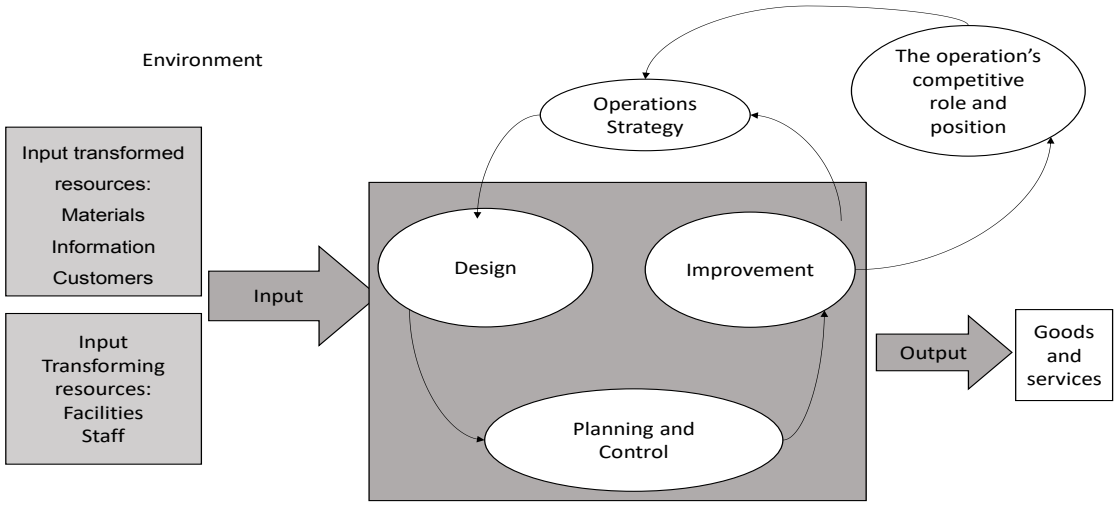

Figure 2.1 : A general model of operations management

Source:(Gelders & van Wassenhove, 2003)

According to Sushil and Martin, (2014), the operations management process uses two types of resources: transformed and transforming resources. The transformed resources are turned into outputs using the transforming resources. The design, planning, control, and improvement of an organisation 's resources and processes to create items and provide services of the desired quality and quantity are all part of operations management, as defined in figure 2.1.

The model has operations strategy from the input resources, design, planning and control as well as improvement.

Designing products and services: The activity of determining the purpose, corporeal form, shape, and composition of products and services, as well as, designing the processes that will be used to produce them, is known as design. Design is a critical activity that always safeguards the organisation 's long-term success (Slack, 2019). In the case of the local municipality, design is evident in being one of the key strategies that is aligned with operations strategy with business strategy. The operations strategy formulation must respond to the supply strategy to carry out the distribution process successfully and reliably.

Planning and controlling the operation: All operations managers face a significant challenge in planning and controlling operations: organising all internal operations to

ensure that resources and customers are in the right place at the right time for the right operation. Following design, the delivery of services and products from manufacturers, as well as the structure of the business to customers, must be planned and controlled (Slack, 2019). In the case of this organisation study, planning and controlling of the operation must be part of the business where it ensures that services are delivered to the public.

Improving the performance of the operation: Slack, (2019) states that it is becoming increasingly clear that operations managers, or any process managers, could indeed merely deliver services and products in the same way they have always done. They are responsible for improving process performance by developing the capabilities of their processes. In addition, from Gelders and van Wassenhove, (2003) studies, failing to improve at least as quickly as rivals (in for-profit organisations) or at the rate of escalating customer expectations (in all organisations) will doom the operations function to continually fall short of what customers want and what the organisation demands. Hence, the local municipality has the mandate to ensure the service delivered is of improved value to the public as to improve the organisation's performance.

Outputs from the process: The transformation process produces goods and/or services as outputs. Because services are typically produced at the same time as they are consumed, customers and service providers are frequently in communication. As a result, customers' perceptions of the service's quality will include not just the 'service' itself, but also the method by which it was created (Gelders & van Wassenhove, 2003). Through the outputs of goods and services, the municipal will have value added to the community.

The operations management model is important because it helps the organisation to manage operations properly and by so doing, they are to deliver required and reliable service. The resources are better managed as well to maximise their potential and labour. It also allows the organisation to promptly deliver good quality service. However, the model has some limitations such as multiple dependency factors where the large number of procedures are required to carry out effective plans. Again, humans tend to be disposed to mistakes and delay processes within the organisation's operations.

2.3. Organisational performance and service delivery

2.3.1. Organisational performance

According to Singh, (2016), organisational performance refers to the actual organisational output as measured against the desired output. It is the ability to achieve an organisation's goals efficiently and effectively. This means that the first step in measuring organisational output is to outline what the desired output is. Akintunde Ajagbe et al., (2016) mention that organisational performance is a chain of events that connects organisational vision, missions, values, and strategic goals to divisional, unit-level, and individual objectives, goals, and activities.

The concept of public sector service delivery is similar to that of private sector organisational profitability. Profitability and service delivery both form part of the organisation performance. Numerous organisations' experiences have taught that one of the best ways to enhance the outstanding performance of an organisation is for management teams to set performance targets that stretch an organisation to perform at its maximum capabilities and delivers the best results (Thompson, 2018).

Thereafter, actual performance can then be measured against that intended output. Kaplan (2020) talks of organisational performance in the context of the performance hierarchy. Figure 2.3 illustrates the performance hierarchy

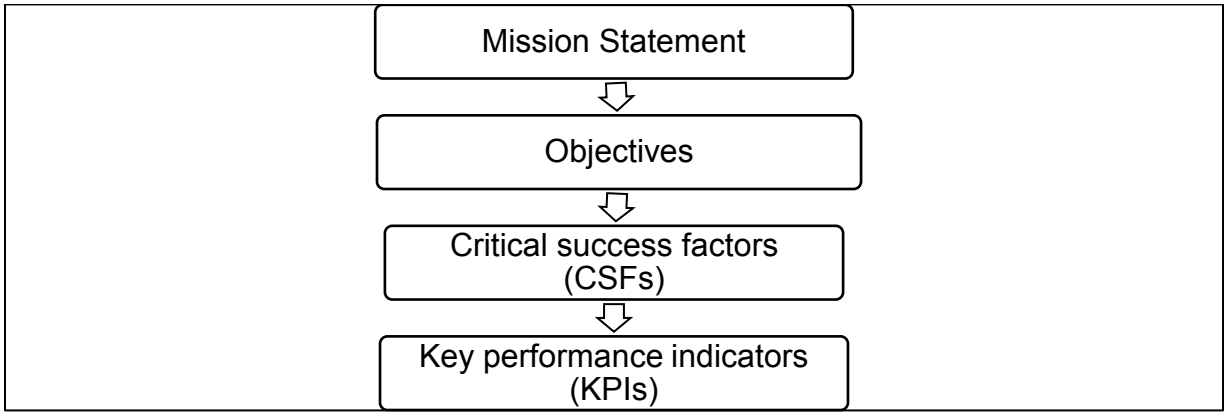

Figure 2.3: The performance hierarchy

Source: (Kaplan & Mcmillan, 2020)

Figure 2.3 shows that the first step in managing organisational performance is to set the organisation's mission and express that in a mission statement. Johnson et al., (2017) explain that the mission statement "aims to provide employees and stakeholders with clarity about the overall purpose and *raison d'être* of the organisation." A mission statement clarifies the reason for the organisation's existence. For local government organisations such as the local municipality, the mission should be derived from both the national aspirations as enshrined in the South African Constitution and the aspirations of those being served by the local government.

Once the mission has been set, the organisation needs to set out objectives. The organisation's objectives are statements of specific outcomes which the organisation seeks to achieve (Louw & Venter, 2018). For instance, one of the objectives of the local municipality is to achieve a crime-free community by 2025. The objective is specific, measurable, attainable, realistic and time-bound.

Achieving strategic objectives require the organisation to utilise its critical success factors (CSFs). These are those processes, procedures, and service features that the organisation needs to perform well to achieve its stated objectives (Johnson, et al., 2017). For instance, the local municipality's CSF may be the availability of budget surpluses to weather the effect of unforeseen events such as Covid-19. CSFs can also be the quality of the organisation's intellectual resources which allows the organisation to deliver quality services.

To monitor the progress in utilising CSFs to achieve the organisation's objectives and mission, Key Performance Indicators (KPIs) will need to be set. KPIs are a set of performance targets that the organisation set for its various units, the achievement of which leads to overall organisational performance Kaplan & Mcmillan, (2020). For instance, one of the local municipality's KPIs can be the need to build at least three schools every year. Thus, at the end of every year, the number of schools constructed will then be compared to the target of three schools.

The performance hierarchy is an important model for public sector organisations such as the local municipality because it ensures that the organisation's activities are directly linked to the organisation's purpose. In other words, the performance hierarchy ensures

that operations management is directed toward achieving the strategic mission of the organisation.

2.3.2. Definition of service delivery

Naidoo, (2017) defines service delivery as the delivery of a product or service by a government to the community with which it was promised or expected. It is a conception that is far from comparatively easy. The Integrated development plan records frequently deal with strategic and operational issues that can be difficult to understand and are not always accessible. Chauke, (2017) adds that service delivery remains critical for municipal endurance and performance, and this can be accomplished by ensuring effective institutional capacity. Therefore, Maboa, (2018) most people's everyday lives revolve around service delivery, although it does not always go as planned.

Looking at service delivery in the local municipality level, according to Masiya, Davids and Mangai, (2019), poor service delivery is a frequent complaint in municipalities. This could justify the protests against service delivery in predominantly black communities across the local communities in the provinces. (Roundtable & Moore, 2017) mention that the service provided by public sector organisations is frequently referred to as public value. As the local municipality work to incorporate the investment approach and build risk-resilience and public into their policy and service delivery, public value is extremely relevant in that regard.

For this study, service delivery was viewed as a process by which local government provides services to the public that have some value. Housing, health, safety, water, and sanitation were examples of such services provided by organisations like the local municipality.

2.4. Operations management factors that are influencing service delivery

The study by Belvedere, (2014) states that the scope of operations management in service organisations, that is the set of operations/processes to which operations management principles and tools can be applied, is not yet clearly defined. This issue is based on the consumer interaction inherent in the service process. In addition, most

operations management policies and tools are designed for large-scale production systems, but most service companies have a broader product range and a greater variety of processes than industrial enterprises. Therefore, it is not easy to understand where activities are located in service organisations, what tools and procedures can be implemented and how they can be used to improve functional activities (Belvedere, 2014).

The operations management factors that influence service delivery at the local municipality included the aging infrastructure of the city, key personnel and instability of top management and funding availability.

2.4.1 Aging infrastructure of the city

Ndzelu, (2016), mentions that many municipalities, especially those in local municipalities, face several challenges such as of expansion of the supply of services in poor and previously disadvantaged rural areas. At the same time, such municipalities collapse while safeguarding the base for Reconstruction and Development Programme (RDP) service communities. In addition to what the researcher Ndzelu, (2016) mentions, the involvement of stakeholder development can bring more to the organisation to manage the aging infrastructure. Therefore, if the local municipality ensures the involment of the communities takes priority in working together to maintain public facilities, clean, and treat them with respect always.

2.4.2 Key personnel and inability of top management

A highly skilled and skilled workforce is an important intellectual asset for any organisation. In many municipalities, this loss of human resources makes infrastructure difficult to maintain (Ndzelu, 2016). These crises of skills shortages usually lead to service interruptions. The crisis has led to the appointment of non-technical staff in senior management positions that require technical expertise (Ndzelu, 2016). However, the resources allocated to the delivery of services are not effectively used. This is largely due to incompetence (Khale & Worku, 2013).

From the study point of view, it was evident that a lack of skilled personnel can lead to poor service delivery. This is also including the inability of top management, meaning if top management kept getting suspended for any reason some operations get disrupted

and cause delays.

2.4.3. Funding availability

Ndzelu, (2016) mentions that most municipalities face financial difficulties or do not have sufficient budgets for delivering service to the community, which makes it difficult to implement infrastructure repair strategies. Other financial consequences include loss of revenue when municipalities provide free basic services, non-payment of services for some citizens and loss of excess power.

Given the importance of service delivery such as water and sanitation, municipalities need to consider prioritising basic services for the benefit of their people. This means that officials need to improve services to ensure the safety of the population, as the lack of such facilities can pose a threat to public health (Ndzelu, 2016).

2.5. The strategies for improving service delivery

According to Khale and Worku, (2013), Service strategies need to be relevant and consistent because companies know what they are doing to improve the services they provide. Get more profit and thus better business efficiency.

According to Sibiya, (2019) ethical leadership focuses on ethical requirements and behaviors that are recommended as acceptable that may affect personal relationships. Follow two-way communication and strengthen the decision-making process. Govender, (2017) mentions that the lack of poor, inadequate, or incomplete services is a major problem in South Africa, and there are many protests against the delivery of services in municipal areas. Therefore, strong leadership responsible for providing the services required by the Constitution of South Africa is a need. Govender (2017) concludes that research on transformational leadership has shown that performance improves across the organisation.

In public sector organisations, resource planning and control are also critical. According to Höglund, Mårtensson & Thomson, (2021), it can be said that public value is created when people's lives are improved as a result of the services provided by public

institutions. In practice, these improvements are often measured in terms of results. In addition, the strategy of a public organisation must meet three main criteria: That is, it must be legally and politically justified, have the purpose of creating material value, and be operational and managerial.

One of the most important strategies for improving service delivery is adequate funding, which cannot be overstated. According to Ndzelu (2016) in addition to budget allocation, many municipalities are unaware of the importance of allocating sufficient budget for infrastructure development. Typically, the focus is on creating and managing new infrastructure, ignoring existing infrastructure that requires regular maintenance. Hence the local municipality is faced with aging infrastructures.

2.6 EMPERICLAL REVIEW

This section covers the literature on the influence of operations management on service delivery and outlines different views from the researchers on this topic.

2.6.1 The influence of operations management on service delivery

It should be noted that studies on the influence of operations management on service delivery are limited. However, it has been noted that service delivery is a sub-set of organisational performance. Battistoni et al., (2013) mention that operations management (OM) activities should primarily involve companies in the manufacturing sector. Operations Management encompasses all the activities required to plan, develop, and improve the business processes involved in the production of a product or the delivery of a service (Battistoni et al., 2013).

According to Francis (2021) operations management transforms revenue into expenses by using physical resources to provide customers with the utilities they need to meet the efficiency, effectiveness, and other organisational goals of the reception.

Wolniak, (2020) emphasis that the design and management of operations have a significant impact on how much material resources are consumed to produce appropriate goods or provide a service to customers. This way, we must ensure that there is enough inventory to produce the quantities that must be delivered to the customer, as well as that

what we produced is what our customers desire. In the case of municipality, the local municipality must deliver sufficient basic service to the community to avoid things like service delivery protests that affect the economy in the area.

2.7 Theoretical framework

This section presents the theoretical framework that the study overviews. The focus was on the stakeholder theory approach, leadership theory and public value triangle theory.

2.7.1. Stakeholder theory approach

A stakeholder is an individual or group that has one or more of the different types of interests within an organisation (Carroll, 2018). The researcher adds that just as stakeholders can be affected by company actions, decisions, policies or practices, these stakeholders can also influence actions, decisions, policies, or communications. organisation's rules (Carroll, 2018).

(Kivits & Sawang, 2021) describes stakeholder theory as the core management insight where the effective management of a company's stakeholder relationships is the primary responsibility of management and the center of value creation. Stakeholder theory promotes the idea that organisations that care specifically for a large group of their stakeholders (i.e., customers, suppliers, employees, communities) will operate more efficiently. and create more value (Kivits & Sawang, 2021).

A study by Fassin et al., (2017) stipulates that stakeholder theory reveals its unique administrative characteristics, which include, and at the same time, transcends the normative, descriptive, and instrumental distinctions between strands. (Fassin et al., 2017) in addition mentions that stakeholder theory is seen as a management approach that allows an organisation to create as much value as possible for its stakeholders, including shareholders. According to Miles (2017), improvements are still possible, allowing the theory to develop optimally to gain a deeper understanding of the organisation from a stakeholder perspective.

Stakeholder theory has had a profound effect on business practices (Kivits & Sawang,

2021) and has politicised it so that stakeholders seek help from local governments and governments. For example, they rely on local governments, mayors, politicians, and even local religious authorities (Carroll, 2018). The studies above prove that if there is a stakeholder approach in an organisation, then there can be improved organisational performance.

In conclusion, Naidoo and Ramphal, (2018) state that the main idea of stakeholder theory is to develop an assertive understanding of an organisations' stakeholders, what they care about, and how they relate to the goal you are urging them to achieve. The organisation should learn about its stakeholders, including their complexity and scope. The enterprise-wide programs in the organisation require a thorough scan to identify stakeholders and their needs and interests. And the next step is to involve the community as soon as possible because no one likes a sudden change in their entity.

2.7.2. Transformational leadership theory

Transformational leaders strive to clarify their vision, share it with their employees, and maintain it over the long term. It is said that this will increase employee involvement in public services, that is a willingness to do good for others and society (Andersen et al., 2018). In addition, (Sibiya, 2019) states that the effectiveness of leadership is crucial to the survival and growth of an organisation and (Katywa & Strydom, 2021) encourages others to exceed their roles and expectations.

Transformational leadership occurs when leaders create an organisational vision, share that vision with their employees, and strive to maintain an awareness of their vision. Transformational leadership seems to motivate public services, weaken employee paternalism, and focus more on contributing to society (Andersen et al., 2018). More studies (Sibiya, 2019) define transformational leadership as a leadership style that excites employees by helping them achieve other normal outcomes, raise awareness of the problem, see the problem in new ways, and reach the group's goals. A leadership style that inspires and transforms. Transformational leadership enables followers to continue to grow, develop, and be self-sufficient while providing safeguards to achieve their organisation's goals, but keeps leaders in the importance of followers. It can be combined with servant leadership (Sibiya, 2019).

According to Kraus et al., (2011), transformational leadership has a significant influence on the organisational performance of city staff and (Taamneh et al., 2021) there are positive effects of transformational leadership on job performance. A discussion made by Govender (2017) confirms that strengthening leadership is related to employee performance and therefore, improved service delivery is a natural consequence of adopting empowering leadership management tools. From the 1980s onwards, transformational management has been a brand-new management technique that has been a chief vicinity of research (Nasuuna, 2019). The study by Moradi & Shahbazi (2016) states that without effective transformational leadership, organisations are less likely to face the challenges of the global economy to achieve good and satisfying performance. As a result, transformational leadership in the local municipality will assist the organisation in delivering services to the community accordingly.

2.7.3. Public value triangle theory

(Moore, 2021) mentions that creating public value requires a public manager with a "restless, value-seeking imagination" to look for opportunities, find ways to seize those opportunities, and execute them. (Roundtable & Moore, 2017) describes public values as technical ideas that can be used to measure and manipulate government performance. Ask what "value" a particular policy, program, institution, etc. will bring beyond simple monetary costs and benefits.

Moore's Strategic Triangle is designed to help public sector leaders develop strong value propositions (what they can do in a particular situation) (Roundtable & Moore, 2017). Its focus is on three issues that need to be resolved and adjusted individually namely, what public value I think can be created, what legitimacy and support can I use, as well as what operational capabilities can be used to achieve the desired results.
The diagram below shows the strategic triangle model by Moore in displaying how the three cycles are aligned in a triangle.

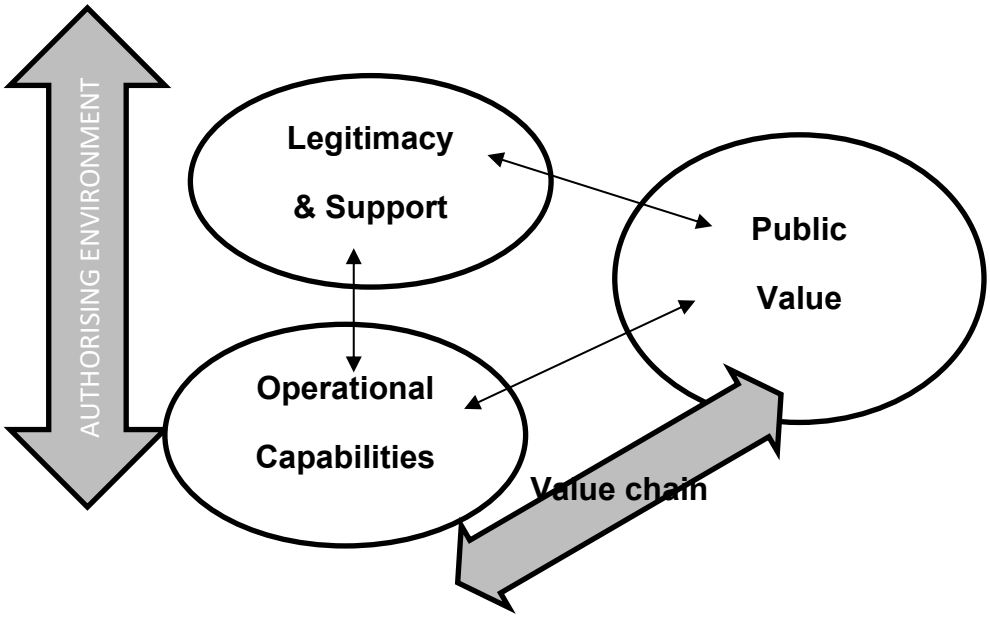

Figure 2.7: A guide to strategic Action- The strategic triangle

Source: (Roundtable & Moore, 2017)

Figure 2.7 above can be used to analyse the use of a strategic triangle to make sure that the three circles of the triangle are aligned and reinforce each other. That is, creating public value while the goals we are looking for may be supported through normative and empirical arguments, while the goals entice financial, criminal and social assistance from the ones in a role to authorise (form a coalition of public sector stakeholders) (Bromell, 2016) and assist the deliberate action, and while we understand the way to set up the to be had assets to acquire the favored results. Meaning there is clarity in what it is trying to be achieved, there is support for it " (legitimacy, authorising environment)" and the resources and capabilities available to make it happen (Roundtable & Moore, 2017).

The study by (Roundtable & Moore, 2017) states that strategic triangle was designed to help those who lead and manage public institutions in a rapidly changing environment. It can also be used for various analysis units. For example, it can be applied to bring together the operational capabilities of different organisations such as local municipality to develop policy responses that address issues across organisations and sectors.

2.8. Conceptual framework

This section discussed the three objective questions of the research and represented in figure 2.3 of the literature review. The conceptual framework for this study will consider the quality operations management, level of service delivery and factors from operations management influencing service delivery. The three theories were discussed in section 2.2 and as a result all promote organisational performance that contributes to well satisfying in delivery of goods and services through public value theory.

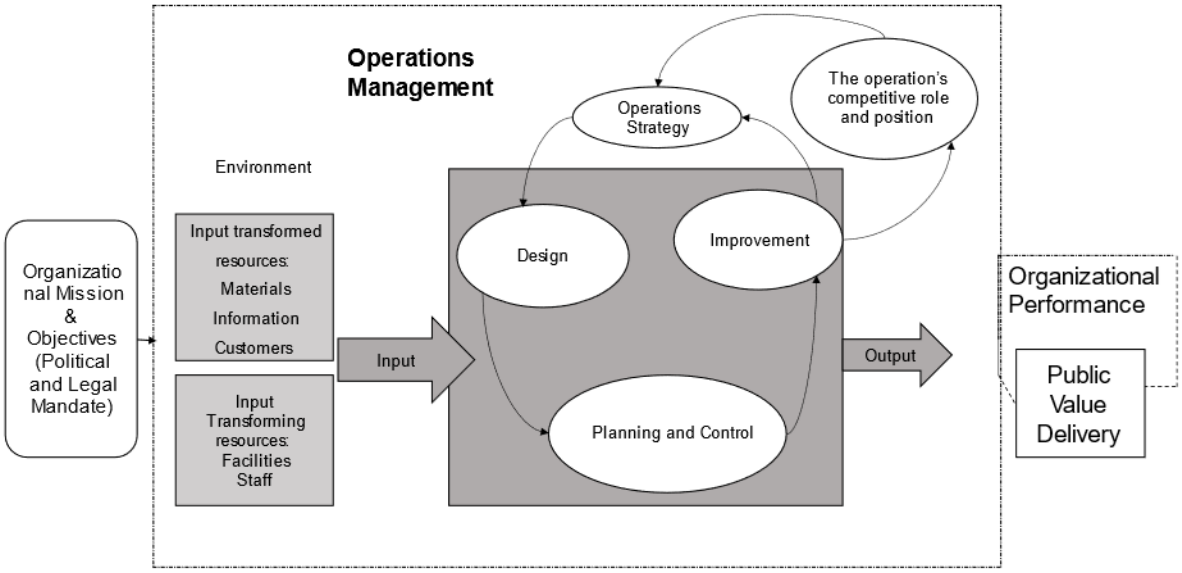

Figure 2.8 Conceptual framework

This theoretical framework illustrates how literature will be organised in chapter 2. Firstly, the literature review will focus on the missions and objectives of public sector organisations. These outline the purpose of the organisation. Once the literature in that regard has been reviewed, the attention is turned to operations management literature. Here, the operations management Model will be used to organise the literature on the operations management construct. The model shows that the operations management process takes in two sets of resources, namely transformed resources and transforming resources. The transforming resources are used to transform the transformed resources into outputs.

Operations management itself, as defined above will involve the design, planning, control and improvement of an organisation's resources and processes to produce goods and provide services of desired quality and quantity. The outputs of the operations

management represent the performance of the organisation. For public sector organisations, that performance is measured in terms of public value delivered. Hence, literature on both organisational performance and public value will also be used.

2.9. Conclusion

This chapter made review concerning operations management and service delivery and the factors influencing the service delivered. The first section was a discussion of the theoretical framework that can be used in the public sector to improve organisational performance and public value delivery.

It was evident that if there is a stakeholder approach in an organisation, then there can be improved organisational performance and effective transformation leadership; organisations are less likely to face the challenges of the global economy to achieve good and satisfying performance. The strategic public value triangle can be applied to bring together the operational capabilities of different organisations to develop policy responses that address issues across organisations and sectors. In the next chapter 3 of the study, a discussion of the research methodology was outlined to answer the research questions.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction

The research methodology chapter addressed the aim of the study which was to evaluate the operations management factors affecting service delivery at the local municipality in Northern Cape Province for this study. Research methodology is a method of data collection, analysis, and interpretation plans and procedures that span broad assumptions to detailed methods for analysing and interpreting data (Creswell, 2012).

Section 3.2 outlined the research design of the study by discussing the relevant design choices, research philosophy, research type, research strategy, time horizon, sampling strategy, data collection methods, and data analysis techniques. Section 3.3 discussed the validity and reliability. Where section 3.4 discussed ethical considerations and section 3.5 concluded with a summary of the chapter.

3.2. Research design

The theoretical idea of the "research onion" shown in figure 3.2 below presents the foundation for one technique of research methodology building. The research onion provides a lengthy description of the main layers or stages that must be completed to develop an effective methodology (Melnikovas, 2018).

Figure 3.2 illustrated the research onion which aided in structuring the research and creating a research design by going layer by layer through the research onion.

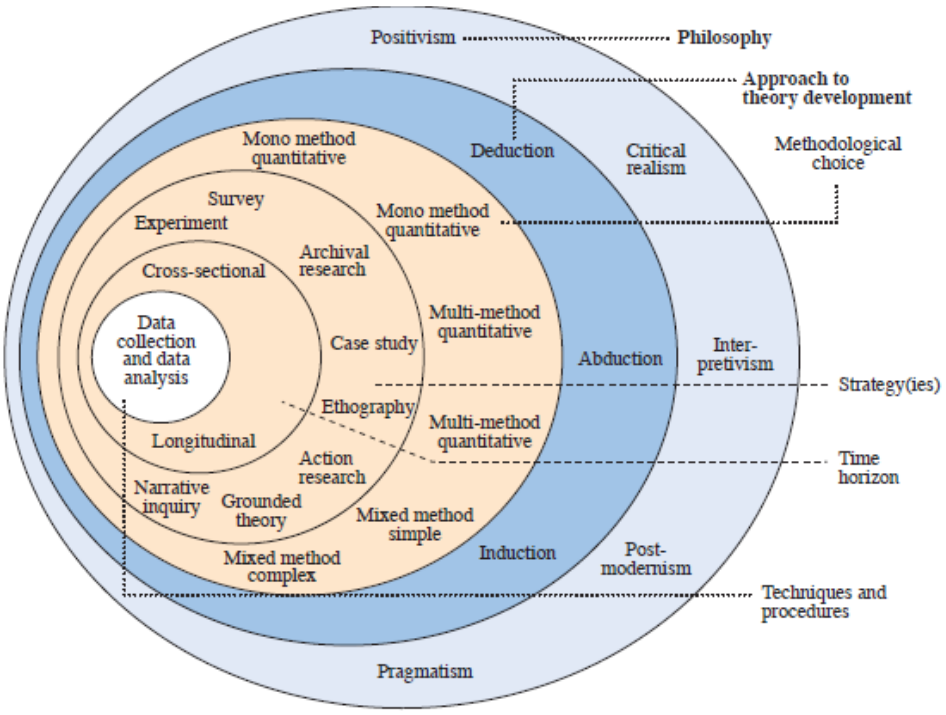

Figure 3.2 Research onion

Source: (Melnikovas, 2018)

3.2.1 Research methodology

According to Melnikovas (2018), a dissertation or thesis research methodology is a crucial component that helps to guarantee the integrity of the approaches, tools, and underlying philosophy used. There are several possible research approaches from which a researcher can choose, the main of which are positivism and constructivism. Positivism is a natural scientist's philosophical perspective that calls for using observed social reality to generate generalisations that resemble laws (Saunders et al., 2019). Positivists argue that it is possible to separate reality from human actors who observe such reality (Creswell, 2015). In other words, reality and the knowledge about that reality exist outside of the confines of the human actors who seek to understand such reality (Creswell, 2015).

On the other hand, constructivism is a research philosophy that holds that reality and knowledge about reality are inseparable from the human actors who seek to understand such reality (Saunders et al., 2019). In other words, the ultimate worldview that people hold about a phenomenon is informed by both human actors' views about the phenomenon and the implicit features of such a phenomenon. That means that to

understand a phenomenon, it is necessary to first understand the perceptions of the human actors seeking to understand the phenomenon as that will influence the ultimate meaning formed about the phenomenon (Creswell, 2015). In simple terms, constructivists seek to generate a theory about a phenomenon by studying how human actors interact with that phenomenon.

What is clear from the discussion above was that while the constructivism philosophy was necessary for developing theories, positivism was essential for testing such theories. This study does not seek to develop any theory since there already exist plausible theories on organisational performance and operations management. Therefore, the researcher did not seek to empirically test the influence of operations management on service delivery. As a result, this study adopted a positivist philosophical position.

3.2.2 Research type

The research type forms part of the research design philosophy where the approach would either be inductive or deductive. Melnikov's, (2018) states that inductive is when research begins with observation and data collection and moves on to description and analysis to form a theory. The inductive approach is often used when developing a theory or in areas where there is little research on the subject. According to Ragab & Arisha, (2018), the inductive research approach is less concerned with generalisation but rather with a deep understanding of the research phenomenon in its context and thus adopting a more flexible structure for investigation.

A deduction is when the research begins with an existing theory, then asks a question or hypothesis, and collects data to confirm or reject the hypothesis (Melnikovas, 2018). In addition, the deductive approach is used for existing theoretical tests. Ragab & Arisha, (2018) mention that deduction follows a highly structured methodology, often examining accidental relationships between variables to explain specific phenomena and produce generalisable results.

Figure 3.2.2 below shows the difference between the inductive and deductive approaches.

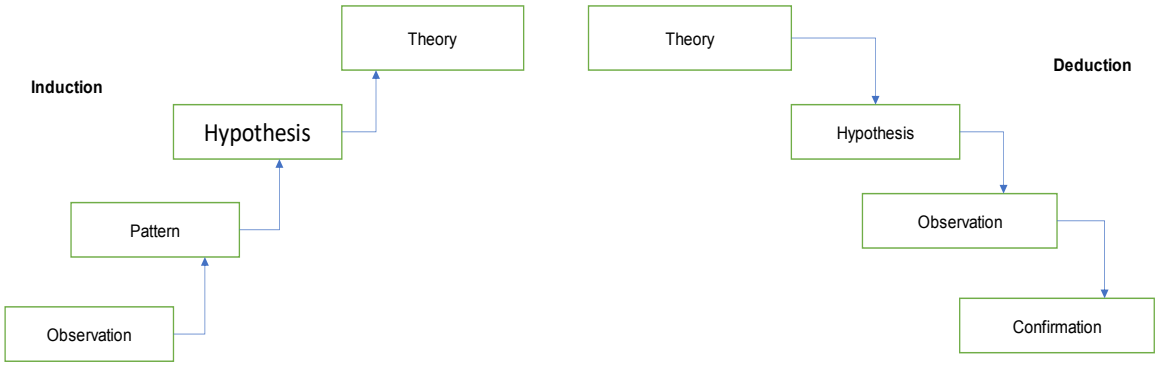

Figure 3.2.2 Induction and Deduction

Source (Ragab & Arisha, 2018)*:*

From figure 3.2.2, deductive reasoning begins with proposing a theory and designing research methods to test it. Therefore, it is also known as the "top-down approach". The construction of an inductive theory begins with concrete observations. Relationships are identified to form a theory about a particular phenomenon and are called a "bottom-up" approach. The study, therefore, will adopt the deduction research approach as a paradigm of positivism and the reasoning starts from the top down.

3.2.2.1 Research methods

Research methods include the techniques used to conduct research including data collection and analysis tools (Ragab & Arisha, 2018). Research methods are often classified as qualitative or quantitative or mixed. Ragab & Arisha, (2018) emphasise that the methods used must support their analytical burden, including the certainty of violations of underlying assumptions, and they must provide clear and unambiguous information about the data.

1. Qualitative method

Qualitative research relies on words rather than numbers and can generally be described as research whose results are not produced by quantitative methods (Ragab & Arisha, 2018). Kothari, (2014) argues that through this research, we can analyse the different factors

that motivate people to behave in a particular way or make people like or dislike a particular thing. According to Ragab & Arisha, (2018), the qualitative method aims to take a holistic view that seeks discovery by incorporating it into the real-world experience and providing a deeper understanding of social phenomena through the investigation and interpretation of collected data.

2. Quantitative method

Quantitative research involves the researcher collecting and analysing numerical data to achieve the aim of the research (Kothari, 2014). Naidoo, (2017) adds that quantitative research has its roots in positivism and is more closely related to scientific methods than qualitative research. The emphasis is on connections and causes. According to Ragab & Arisha, (2018) quantitative research methods include experiments, surveys, structured observations, and structured interviews. In addition, quantitative research is often used to question the relationships between variables that produce predictive, descriptive, or confirmatory results.

3. Mixed method

In a research study, mixed methods entail combining or integrating qualitative and quantitative research and data. Qualitative data is typically open-ended, with no predetermined responses, whereas quantitative data is typically closed-ended, as found on questionnaires or psychological instruments. The field of mixed methods research is still in its early stages and requires significant effort to develop (Creswell, 2015).

The study focused on adopting the quantitative method as the research used surveys with a large number of samples and found accuracy in numbers.

3.2.3 Research strategy

According to Melnikovas, (2018), research strategies can be described as a general path that helps researchers answer research questions and select key data collection methods or sets of methods to achieve their research goals. The research strategy can be subdivided into different design approaches, naming a few which are experiment research or survey research from quantitative design and ethnography or case studies from qualitative design.

3.2.3.1 Experiment and survey strategy

Experiment strategy is part of quantitative research and Creswell, (2015) seeks to determine whether a particular treatment affects the outcome. Researchers evaluate this by providing a particular treatment to one group and withholding it from another and then determining how both groups work for the results. Experiments include real-world experiments with randomly assigned subjects. Treatment conditions and quasi-experiments with non-randomised assignments (Creswell, 2015).

The survey approaches also part of the quantitative design, provides a quantitative or numerical description of the trends, attitudes, or opinions of a population by studying a sample of that population (Creswell, 2015). According to Saunders et al., (2019), the survey strategy is often combined with a deductive research approach. It is a popular and common strategy in business and management research and is often used to answer the questions "what", "who", "where", "how much" and "how much". Surveys using questionnaires are popular because they allow standardised data to be collected from a large population in a very economical way, allowing easy comparisons.

3.2.3.2 Ethnographic and case studies strategy

Ethnographic strategy forms part of qualitative research and Saunders et al., (2019) are used for group learning with its roots in colonial anthropology. This ethnographic approach involves researchers living among the people they have studied, observed, and talked to create detailed cultural narratives about beliefs, behaviors, interactions, and beliefs. writings, languages, rituals, and events that shaped their lives. In addition, Creswell, (2015) data collection usually includes observations and interviews.

Case studies explore research topics or phenomena within that context or one. A set of actual contexts (Saunders et al., 2019). In another context, Creswell, (2015) Case studies are survey designs found in many disciplines, especially evaluations, where researchers develop cases, often programs, events, activities, processes, or detailed analyses of one or more people. According to Saunders et al., (2019), a case study strategy is suitable if one wants to gain a deeper understanding of the context of the research and the processes carried out.

The study used the survey research strategy as it aligned more with the quantitative research adopted for the study. In addition, the survey allowed the study to make use of questionnaires to collect data.

3.2.4 Time horizon

Saunders et al., (2019) mention that, when planning research, it is crucial to consider the following: "Do I want my study to be a "snapshot" taken at a specific time, or do I want it to be more analogous to a diary or a series of snapshots and be a depiction of events over a specified period?" in this case the ‘snapshot’ time horizon is the cross-sectional while the ‘diary’ perspective is longitudinal.

Cross-sectional studies often use a survey strategy. They can search for and describe the effect of a phenomenon. The main strength of longitudinal studies is the ability to study change and development. This type of investigation also gives some control over some of the variables that are investigated (Saunders et al., 2019).

3.2.5 Population and sampling strategy

Chitamba, (2018) states that population is referred to the category of people or objects that researchers plan to produce reports and samples. Some statisticians call it the universe (Keller, 2015). This study’s population consists of 1,538 employees within the local municipality.

According to Ball, (2019) samples are an integral part of the external validity of a survey. The sample should be representative of the larger sample and optimal size to minimise sampling error. Two approaches to sampling, known as random sampling and non-random sampling, encompass a large number of selection techniques in these two categories:

3.2.5.1 Probability or representative sample

Probability sampling knows the probability that each case will be selected from the population and is usually the same for all cases. This allows one to answer survey questions and achieve goals that require statistical estimation of population characteristics from the sample (Saunders et al., 2019).

3.2.5.2 Random sample with no probability

The probability that each case will be selected from the entire population is unknown, and it is not possible to answer research questions or address goals that require statistical inference about the characteristics of the population (Saunders et al., 2019).

In this study, the sample was selected through probability sampling techniques. More specifically, a stratified sampling technique was used to select the sample. Keller, (2015) defines stratified sampling as a random sampling technique under which the sample is first divided into classes (strata) after which random samples are drawn from each stratum. The stratified sampling technique was chosen in this study because it would ensure that employees at all levels of the organisation were included in the sample to enhance the validity of the collected data.

According to Islam, (2018), the credibility of a study is enhanced by ensuring that an appropriate size sample is selected. Islam, therefore, recommends the use of the Central Limit Theorem to decide on the sample size. The following formula was used to calculate the sample size (Islam, 2018):

$$n = \frac{N}{1 + N(e^2)}$$

Where n = Sample size; N = Population size and e = significance level, this study assumes a 5% significance level. Table 2 shows the sample framework which resulted from the study.

Table 2: Population and sample framework

Operational Unit	Total Population	Sample size	% Of Population	Sample method
Municipal Manager's Office	21	21	100%	*Census*
Infrastructure and Services	616	243	39%	*Random Sampling*
Community Services	634	245	39%	*Random Sampling*
Financial Services	267	160	60%	*Random Sampling*
Total	**1,538**	**669**	**43%**	***Random Sampling***

Source: (Sol Plaatje Municipality, 2020), (Sol Plaatje Municipality, 2018),(Sol Plaatje Municipality, 2017)(Sol Plaatje Municipality, 2019)

The table showed that the target sample will be 669 participants. This was derived by applying the CLT formula to each of the strata. It should be noted that, while the sample is ambitious, this is well above the 317-sample size required for the total sample of 1,538. Therefore, the pooled results of the study will be valid, as measured from the CLT perspective, if the response rate will be around 21% of the target population (that is a sample of 317 out of 1,538 population). The sample was selected as follows:

1 Emails were sent to all employees in the local municipality to invite them to participate in the study.

2 After a set cut-off date which was three weeks, the number of responses was assessed to see if they met the sample size stipulated above.

3 Then, the researcher realised that the sample size is still low and reminders were sent to non-responses with a week deadline.

4 Steps 2 and 3 were repeated until the researcher saw that the desired sample size was achieved and made a decision to work with the target presented.

3.2.6 Data collection methods

Most data collection methods can be used in both qualitative and quantitative studies. Ranjit Kumar, (2011) mentions that when doing research, in most situations necessary information should be collected; however, sometimes required information is already available and only has to be unzipped. Based on these general approaches to information gathering, data can be classified as primary data and secondary data.

3.2.6.1 Primary data

According to Chitamba, (2018) primary data is data that is gathered directly by the researcher on variables of interest for the specific purpose of the research study. There are three most used primary sources to collect data include observation, interviews, and questionnaires. Ranjit Kumar, (2011) describes observation as the deliberate, systematic, and selective way of observing and listening to an interaction or phenomenon as it occurs. In summary, observation is the best approach to gathering the information you need if you are more interested in behavior than people's perception, or if people are too involved in the interaction to provide objective information. However, a problem may arise where the observer becomes biased unless the observer is open-minded. It is easy to introduce bias and there is no easy way to validate the observations and conclusions drawn from them.

Another primary source would be interviewing, which is a commonly used method of gathering information from people. As a researcher, you are free to decide when interviewing respondents to select the format and content of the question to ask the respondent, the wording of the question, decide how to ask the question, and choose the order of the questions that have been asked. Interviews can either be structured or unstructured. In a structured interview, the researcher asks a predetermined set of questions using the same wording and question order specified in the interview plan. An advantage here is that Structured interviews require fewer interviewing skills than

unstructured interviews. In unstructured interviews, there is complete freedom in providing structure and content. Unstructured interviews are widely used in both quantitative and qualitative studies. The difference lies in the information they received in answering your question may be used (Ranjit Kumar, 2011).

Then, there is also a questionnaire for collecting primary data. A questionnaire is a written list of questions for which respondents have recorded their answers. In the survey, respondents read the question, interpret what is expected, and then write down the answer. In a questionnaire, there is no one to explain the meaning of the question. Therefore, it is important for respondents that the question is clear and easy to understand. Similarly, the layout of the questionnaire should be easy to read and look good, and the order of the questions should be straightforward (Ranjit Kumar, 2011).

3.2.6.2 Secondary data

Secondary data refers to data that is already available, which means it refers to data that has been collected and analysed by others. When a researcher uses secondary data, he must search various sources from which he can derive it. In this case, it certainly does not face the problems usually associated with original data collection (Kothari, 2014). According to Ranjit Kumar, (2011) both qualitative and quantitative research studies use secondary sources as a method of data collection. Qualitative research usually extracts descriptive (historical and present) and narrative information. In quantitative research, the information extracted is a category or a number. When using data from secondary sources, one needs to take note as there may be specific issues with data availability, format, and quality. The scope of these issues varies from source to source.

The study adopted the primary collection of data through a questionnaire. In quantitative research, information is most often generated by a series of pre-determined questions, with answers recorded in a category format or categories created from the answers. The questionnaire consisted of three sections as follows:

Section A: Demographic and general information

This section consisted of questions aimed at collecting data that assisted in evaluating the quality and representativeness of the sample. Such information included participants' gender, age, department, and tenure

Section B: Service delivery instrument

This section consisted of statements and questions aimed at measuring the level of service delivery in the local municipality.

Section C: Operations management instrument

This section consisted of statements and questions aimed at measuring the quality-of-service delivery in the local municipality.

The questionnaire was administered electronically through Google Forms. Data collected was captured in an Excel Spreadsheet, cleaned and ready for analysis.

3.2.7 Data analysis techniques

Chege, (2020) describes data analysis as the simplification, interpretation, and display of data collected from external sources to match an established framework. Data analysis techniques can be used in alignment with descriptive statistics, and inferential statistics that consist of correlation analysis and regression analysis.

3.2.7.2 Descriptive statistics

According to Chitamba, (2018), descriptive statistics provide a summary of samples and actions. In addition, Saunders et al., (2019) add that descriptive statistics allow a researcher to describe (and compare) variables numerically.

3.2.7.3 Inferential statistics

Inference statistics are used to derive inferences and generalisations about the population based on the response of the sample. Similarly, inference statistics are used to test population assumptions (Chitamba, 2018).

- Correlation analysis

Correlation analysis is used to determine the existence and direction of the relationship between the independent and dependent variables (Chege, 2020). In addition, Chitamba, (2018) states that correlation is useful as it can show predictive relationships.

- Regression analysis

According to Chege, (2020), regression analysis is performed to determine how each independent variable predicted the dependent variable.

Since the proposed study is quantitative, data were analysed through statistical tools to facilitate the answering of research questions. The analysis was performed in three stages as follows:

Stage 1: Sample analysis

At this stage, statistical measures were used to analyse the sample. More specifically descriptive statistics (frequency, mean and standard deviation) will be used to understand the sample. According to Keller, (2015) descriptive statistics seek to describe the existing state of a given phenomenon. Such statistics do not provide answers to why such states exist.

Stage 2: Instrument reliability analysis

The instrument used was tested for inter-rate and construct reliability using Cronbach's Alpha coefficient (α). This is a measure of the closeness of the relationship between a set of items as a group. It measures the reliability of the scale used in an instrument. It is generally accepted, as a rule of thumb, that an instrument is reliable if the alpha coefficient is at least .70 (Wadkar et al., 2016). However, some authors such as Ursachi et al., (2015) argue that a range between .60 and .70 shows a reliable instrument, while an alpha coefficient above that range shows a highly reliable instrument.

Stage 3: *Descriptive analyses*

Descriptive analysis was used to achieve the first two objectives (1) To evaluate the quality of operations management in the local municipality and (2) To determine the level of service delivery in the local municipality. The mean and standard deviation of each of the items in the instruments used to measure the variables were calculated. While the

mean was showing the general level of participants' perceptions, the standard deviation was used to measure the level of agreement of participants' views on any given item (Saunders et al., 2019).

Stage 4: *Regression and correlation analyses*

The third research objective, *to investigate the extent to which operations management influences the delivery of service in the local municipality*, was achieved through correlation and regression analyses. Like in previous studies such as (Mkala et al., 2018), Pearson's correlation coefficient will be used to assess the extent of collinearity of the variables of the study and their respective factors. This analysis was aimed at evaluating the existence of the potential cause-effect relationship among the factors of the study.

Moreover, regression analysis was used to evaluate the extent to which given levels of operations management can predict the quality and quantity of service delivered to the people of the local municipality.

3.3 Validity and reliability

WL Cornelius, (2020) states that validity and reliability are important concepts and are used to determine whether research recommendations are based on accurate, reliable, effective, and reliable data collection and analysis methods.

3.3.1 Validity

Saunders et al., (2019) describe validity as the extent to which one or more data collection methods accurately measure what is being measured. To some extent, the research results are what they say. Validity can be explained using a few main types.

- **Content validity**- This occurs when the equipment used to measure the data represents the survey questions used during the survey (Govender, 2019). For instance, service delivery has both quantitative and qualitative attributes. Therefore, a valid instrument to measure service delivery would be expected to capture all these aspects of service delivery. In this study, content validity will be achieved by developing the instrument from a detailed and critical review of the literature. In other words, literature on the construct to be measured will be

reviewed first to unpack the various attributes of such construct so that the instrument which will be developed will capture all such attributes.

- **Construct validity**- The validity of this form indicates the extent to which the instrument measures certain criteria or characteristics that may or may not be directly observable (Govender, 2019). The validity of the instrument will be achieved by comparing the results of the study to theoretical propositions. An instrument may be seen as lacking instrument validity if the results from the data collected in the instrument are significantly different from the well-established theoretical propositions.
- **Criterion validity**- Used to indicate the success of the measurements used during the analysis or prediction (Govender, 2019). In this study, because the instruments will be developed from existing literature, the resultant instruments will be more or less similar to other instruments used to measure the constructs studied in this study.

3.3.2 Reliability

Saunders et al., (2019) define reliability as the extent to which one or more data collection methods produce consistent results, whether similar observations are made, conclusions drawn by other researchers, or how meaningful the raw data is. Is the transparency of. There are several ways to determine the reliability of a device, which can be categorised as external or internal integrity methods. In this study, the internal integrity method will be measured through Cronbach's alpha. The extent to which the alpha ecoefficiency shows reliability has already been discussed in the previous section (Section 3.2.5).

Naidoo, (2017) mentions that the reliability of the measuring instrument is not directly affected by systematic errors, because these errors systematically affect the measurement. Reliability is mainly affected by instability errors because these errors create low reliability of measuring devices. In the proposed study, participants completed the instrument once. Therefore, it was not possible to test for instrument stability.

Cronbach's alpha has some notable statistical flaws, such as study length, the correlation between items, and variation due to sample characteristics. For this reason, additional techniques need to be combined with the reports for each statistic. Reliability assessments may also include informal assessments of the language, leave-one-out

analysis using Cronbach's alpha, or item response theory using item characteristic curves (Naidoo, 2017).

3.4 Ethical considerations

Walter-malcurat, (2021) states that research ethics is a code of conduct that guides researchers regarding the rights of those who are the subject of or are influenced by the research project. This study considered all the ethical considerations which were brought up from conducting the proposed research in line with the UNISA SBL Ethics Committee.

3.4.1 Informed consent

It is the right of participants in a study to give their consent, allowing the researcher to include them as part of the study. All the participants were informed of the benefits, risks, and implications of taking part in the study, after which they were required to sign a consent form as an acknowledgment of their participation in the study.

3.4.2 Protection from harm

Kothari, (2014) the researcher has the responsibility to ensure that participants in a study are protected from any physical or emotional harm which may arise from taking part in the study. In this study, the survey was conducted in such a way that it complied with applicable health regulations put in place to deal with the Covid-19 pandemic.

3.4.3 Right to privacy

The names of individuals who will take part in this study will not be collected. To achieve that, no personal identification data was collected in the questionnaire. In addition, no sensitive, discriminatory, or inappropriate data was collected in this study.

3.5 Concluding summary

This chapter discussed the research methodology and research design used for the study on evaluating the influence of operations management on service delivery at the local municipality. The research methodology method adopted for this study was quantitative to answer the research problem. A research onion method was used to discuss the research design methods. The research design method included research philosophy where the study adopted the positivism approach. A discussion on research types that

included, inductive or deductive and the study adopted deduction research approach as a paradigm is positivism and the reasoning starts from the top to down.

The research design has some strategies in methodology and as a result of those strategies (experiment and survey strategy, ethnographic and case studies strategy), the study made use of the survey research strategy as it aligned more with quantitative research adopted for the study. In addition, the survey allowed the study to make use of questionnaires to collect data. The two (cross-sectional and longitudinal) time horizons were discussed for the study and population and sample strategies as well. For this study, the sample was selected through probability sampling techniques. More specifically, a stratified sampling technique was used to select the sample.

The study adopted the primary collection of data through a questionnaire. In quantitative research, information was most often generated by a series of pre-determined questions, with answers recorded in a category format or categories created from the answers. For data analysis techniques, regression analysis was used to evaluate the extent to which given levels of operations management can predict the quality and quantity of service delivered to the people of the local municipality. The next chapter 4 will be a discussion of the research results.

CHAPTER 4: RESULTS, PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents and discusses the results of the study. The chapter starts by analysing the sample of the study before moving on to analysing the reliability of the instruments used. Descriptive statistics are then presented and discussed, focusing on mean and standard deviation. The influence of operations management on service delivery at the local municipality is evaluated using correlational analysis and regression modelling. The next section analyses the sample.

4.2 Sample analysis

4.2.1 Response rate

Of the 669 invitations which were made, only 120 valid responses were received. Thus, the response rate was 18%. This was significantly lower than the average response rate of around 55.6% reported by Baruch (2019). However, as indicated in Chapter 3, the sample size was significantly higher than the 60 participants required for a valid quantitative study. Next, the sample of the study is analysed in terms of gender, tenure, and ethnicity among other demographic factors.

4.2.2 Gender

Gender statistics is presented in Figure 4.1.

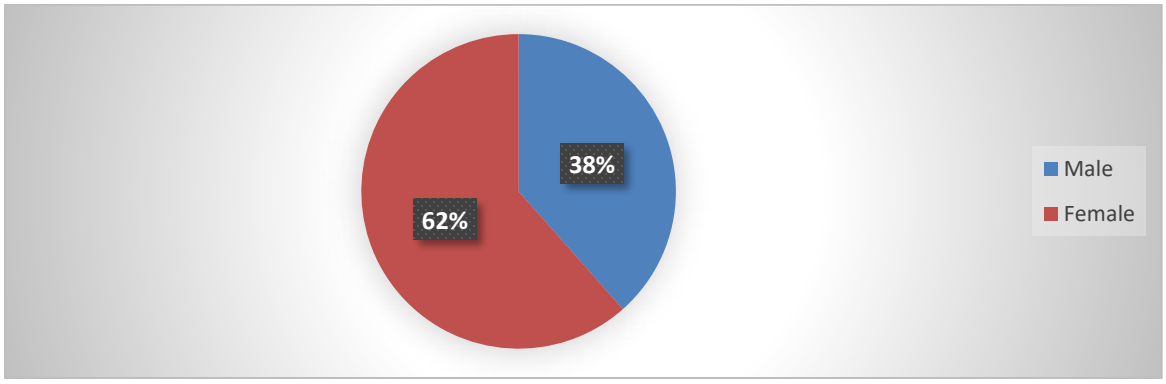

Figure 4.1 Gender Statistics

The sample shows that there were more females (62%) than males (38%) in the sample. These results are in line with the gender distribution at the local municipality, which

consists of 54% females and 46% males, albeit with females being slightly overrepresented.

4.2.3 Age

Age distribution results are presented in Figure 4.2

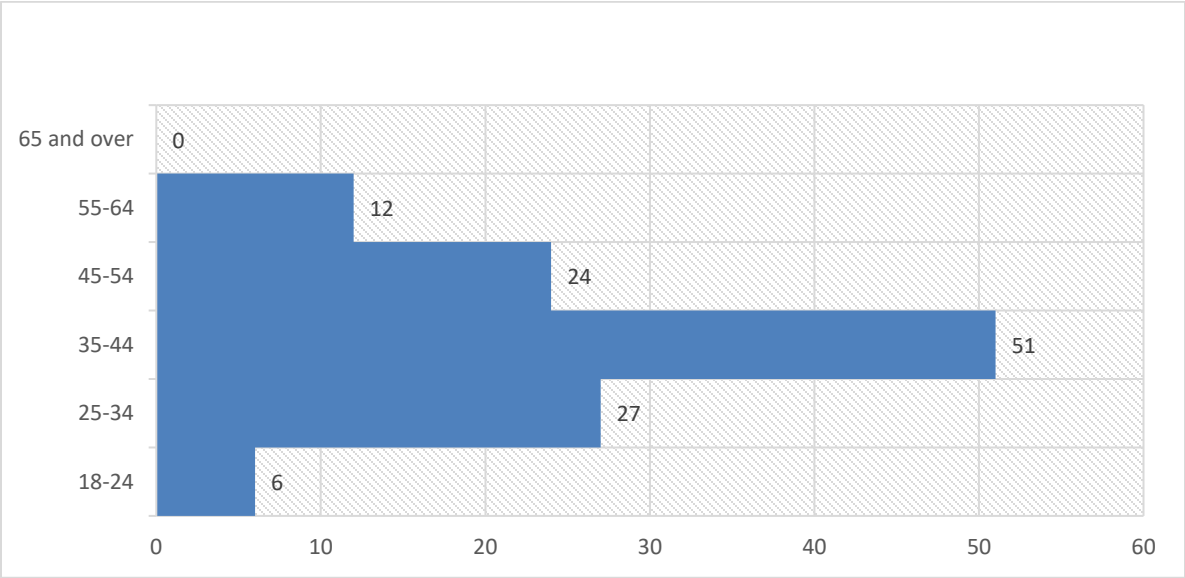

Figure 4.2 : Age distribution

Figure 4.2 shows that more people fell within the 35 to 44 age group. The mean age of sampled participants was 40.75 years (SD = 9.59 years). Thus, the age distribution was widely spread, with a range of 40 years. The sample shows that participants were old enough (older than 18 years) to give informed responses regarding the influence of operations management on service delivery.

4.2.4 Tenure

Tenure statistics are presented in the following table (Table 4.1).

Tenure	Number of People
0-2 years	6
3+ years	114
Mean	13.78
SD	10.25

Table 4.1: Tenure Statistics

Table 4.1 shows that majority of the participants had been at the local municipality for at least 3 years. While there is no standard on the length of time one needs to give informed

responses about their organisation, three years should be more than enough. Thus, it can be generally concluded that the participants had been with SMP for long enough to be able to give informed responses to the questions which were asked.

4.2.5 Ethnicity

Ethnicity information is presented in Figure 4.3 below.

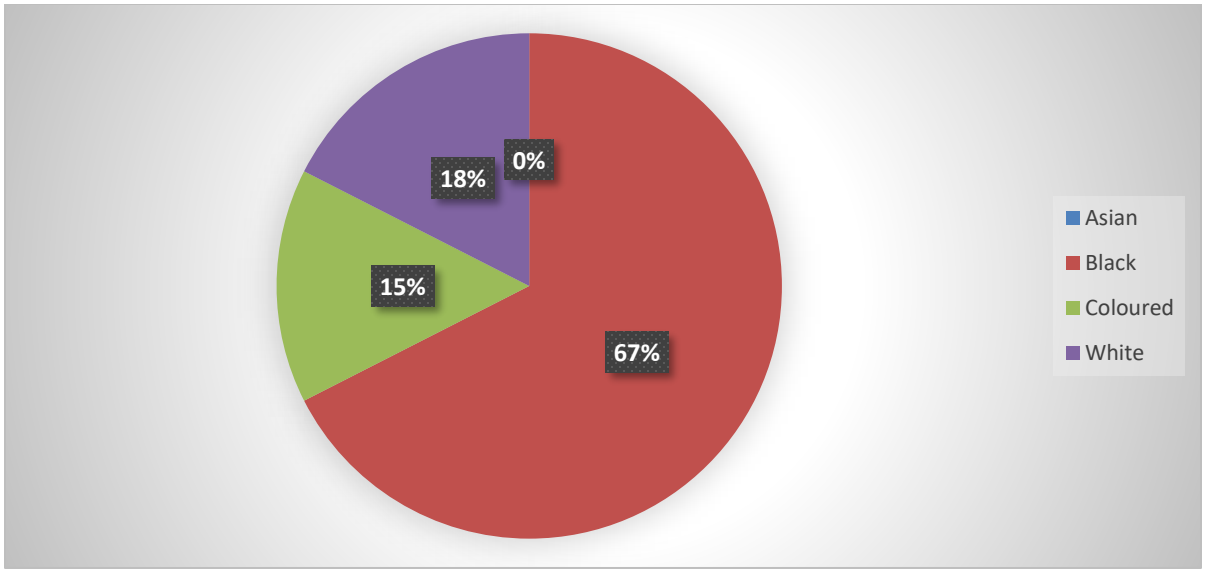

Figure 4.3 : Ethnicity

Figure 4.3 shows that the sample was generally representative of the workforce at the local municipality, with more Blacks and Coloureds than Whites. However, none of the participants came from the Asian group, one of the components of the South African population. Thus, the results of the study may not be reflective of that population group.

4.2.6 Role within the organisation

The role of participants is illustrated in Figure 4.4

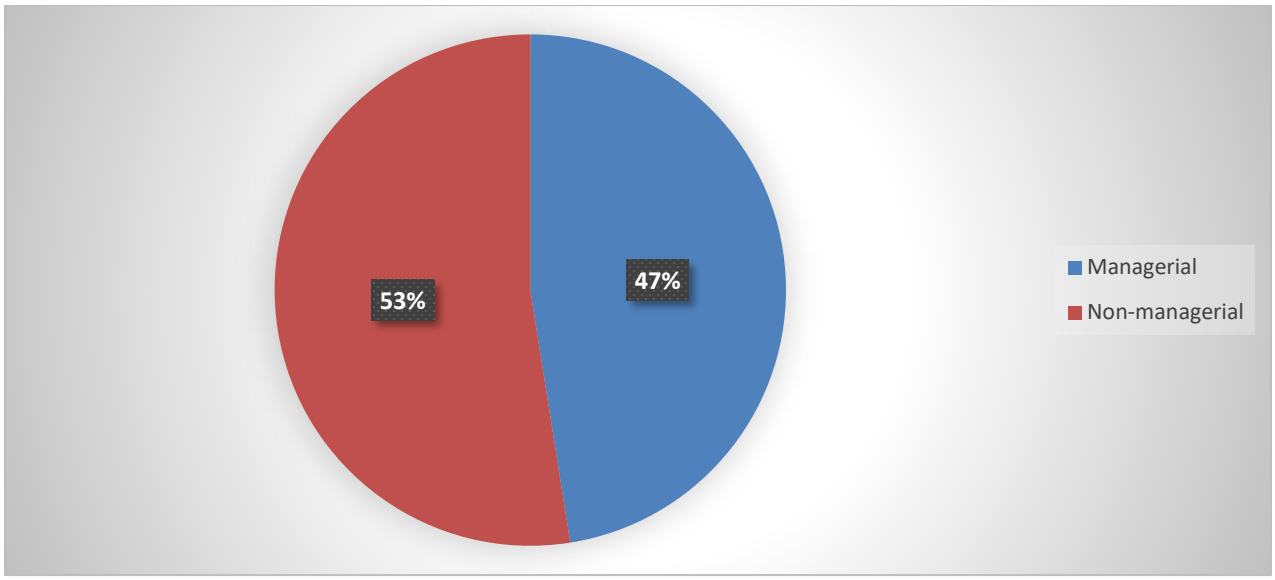

Figure 4.4 : Roles within local municipality

Generally, the proportion of roles is expected to be skewed toward non-managerial employees. That fact is confirmed by data in Table 4.4. however, the manager-non-managerial proportion in the sample was significantly higher than the 1%/80% ratio in the local municipality's workforce (See Table 3.2). Nonetheless, the sample still consisted of more non-managerial employees than managerial ones, hence, can be seen as being generally representative of the local municipality population.

4.2.7 Education and workstation

The participants were analysed in terms of their levels of education and the departments they worked in. the results are shown in Table 4.2.

	Bachelor's degree	High school diploma or equivalent qualification	Honours/PGD/Doctoral	No degree	Total
Community Services	31%	56%	6%	0%	25%
Corporate services	8%	22%	25%	50%	20%
Financial Services	23%	0%	25%	50%	20%
Infrastructure and Services	31%	22%	31%	0%	28%
Municipal Manager's Office	0%	0%	6%	0%	3%
Strategy, Economic Development and Planning	8%	0%	6%	0%	5%

Table 4.2 : Education and Workstation

Table 4.2 shows that Infrastructure and Services and Community Services had more respondents than other departments, at 28% and 25%, respectively. The proportion of the sample drawn from the corporate services and Financial Services was 20% apiece. Generally, in terms of ample distribution per department, the sample was in line with the workforce at the local municipality. In terms of education, only 2% (6 participants) of the whole sample did not have any degree or any other qualification, implying that participants had at least some level of education necessary to understand what operations management and service delivery were about. In line with the local municipality's drive to create employment for semi-skilled residents in the Community Service department, the department had the most people with a high school diploma or equivalent qualification. Overall, the sample distribution in terms of education and workstation was in line with the local municipality's workforce distribution.

4.3 Instrument reliability

This section discusses the reliability of the research instruments used to measure the variables of the study, namely supply chain management and service delivery. The supply chain management instrument was multi-dimensional, consisting of several factors. For

this instrument, reliability was assessed for both the instrument as a whole and each of the factors. The results are presented in Table 4.3.

Instrument	Mean	SD	Cronbach's Alpha
Operations Management Instrument	**Organisational Strategy**		
	3.21	1.01	0.93
	Operations Management Strategy		
	2.98	0.99	0.949
	Operations Management Inputs		
	2.75	1.02	0.831
	Operations Management Design		
			Cronbach's Alpha
	3.30	0.89	0.918
	Operations Management Planning and Control		
	3.75	1.04	0.832
	Operations management improvement		
	2.77	1.03	0.811
	Total Operations Management Instrument		
	3.33	1.27	0.966
Service Delivery Instrument			
	3.99	1.45	0.905

Table 4.2: Reliability Assessment

It was noted in Chapter 3 that an instrument is deemed to be reliable if Cronbach's Alpha is at least 0.70. Table 4.3 shows that all the instruments had reliability coefficients which were greater than 0.70. Thus, all the instruments used to measure the variables and the operations management factors can be deemed to be reliable.

4.4 Descriptive statistics

The first objective was to evaluate the quality of operations management in the local municipality while the second was to determine the level of service delivery in the local municipality. To achieve these two objectives, descriptive statistics for each of the items in the two instruments were calculated. The results are discussed in this section.

4.4.1 The quality of operations management in the local municipality

This section presents descriptive statistics for the Operations Management Instrument to assess the current level of operations management in municipality.

Instrument/Item	Mean	SD
Organisational strategy		
1. Our organisation has a clear mission for its future	3.25	1.28
2. Our organisation has detailed long-term objectives	3.15	1.25
3. Our organisation has strategies to achieve its stated objectives and mission	3.15	1.23
4. Leaders in our organisation clearly communicates the organisation's mission, objectives, and long-term plans	2.63	1.39
Operations management strategy		
5. Our organisation has a clear operations management strategy	2.78	1.19
6. The operations management strategy of our organisation is aligned with the long-term strategies of our organisation	2.95	1.24
7. Operations management objectives in our organisation are aligned with the overall operations management strategy of the organisation	2.75	1.19
8. The operations management strategies our organisation clearly identify service quality as a key priority	3.00	1.26
Operations management inputs		
9. The organisation provides adequate material resources for the efficient running of operations	2.60	1.03
10. Information is made available to operations management employees to ensure the efficient and effective execution of their duties	2.83	1.06
11. Our organisation solicits client input into its operations management	2.50	1.04
12. The organisation has adequate infrastructure to support the execution of operations	2.45	0.99
13. There are adequate operations management staff to ensure efficient and effective execution of operations	2.78	1.19
Operations management design		

14. Processes carried out in our organisation are aimed at satisfying the needs of stakeholders	3.05	1.08
15. The operational activities in our organisation are designed to ensure the efficient use of resources	2.88	1.14
16. The design of operations in our organisation minimises wastages in time and resources	2.50	1.11
17. Operations management in our organisation is designed to minimise error and operational breakdowns	2.58	1.06
Operations management planning and control		
18. There are standard operating procedures for operations management activities in our organisation	3.33	1.21
19. Management constantly measures actual operational performance against planned performance	2.88	1.07
20. Operational employees have targets about their sections	3.13	1.16
Operations management improvement		
21. There is clear plan in our organisation to continuously improve operations	2.85	1.19
22. Our organisation uses results from comparison of actual performance and planned operational performance to identify gaps in operations	2.85	1.12
23. Operational deviations are resolved promptly in our organisation	2.68	1.12
24. Improvement of operational performance is the responsibility of everyone in our organisation	3.43	1.34

Table 4.3: Descriptive Statistics Per Item: Supply Chain Management

4.4.1.1 Organisational strategy

The first section of the four items measured the extent to which the local municipality has a well-defined organisational strategy, measuring participants' perceptions on whether local municipality had a clear mission about its future (Item 1), detailed long-term objectives (Item 2), strategies to achieve its stated objectives and mission (Item 3) and whether local municipality clearly communicated the organisation's mission, objectives,

and long-term plans (Item 4). The results in Table 4.4 shows that all the mean scores were above 2.5, implying that participants believed that local municipality had a defined organisational strategy. As indicated in Chapter 2, the starting point of an effective operations management system is having a clearly defined and communicated organisational strategy. The score for Item 4 (Leaders in our organisation clearly communicates the organisation's mission, objectives, and long-term plans) was the lowest (Mean = 2.63, SD = 1.39). While this was above half of the possible mean score (2.5), the local municipality needs to work on improving this area. It needs to improve its communication of the organisation's mission, objectives, and long-term plans, as part of improving the effectiveness of its operations management.

4.4.1.2 Operations management strategy

Items 5 to 6 required participants to rate the local municipality's current operations management strategy. Generally, the level of operations management strategy was moderate, with mean scores ranging between 2.75 and 3.00. thus, the level of operations management strategy was lower than that of organisational strategy. Item 7 (Operations management objectives in our organisation are aligned with the overall operations management strategy of the organisation) recorded the lowest mean score of 2.75 (SD = 1.19). The local municipality needs to work on aligning operations management objectives to the organisation's operations management strategy. As pointed about by Johnson et al. (2017), to develop an effective operations management system, which supports organisational performance, it is critical that the organisation cascades operations management objectives from the operations management strategy. Again, it should be noted that having a working organisational strategy is one step toward developing an effective operations management system. The next step is to have a clearly defined operations management strategy (Slack, 2019). The local municipality should, however, be applauded that its operations management strategy, notwithstanding its shortcomings, was perceived to identify service quality as a key priority, an important aspect of public management according to Moore (2021).

4.4.1.3 Operations Management Inputs

The third section of the instrument solicited participants' perceptions of the level of operations management inputs in municipality. The results were mixed. Fair results were

found for Items 9, 10 and 13, with mean scores ranging between 2.60 and 2.83. That means participants felt that the local municipality provided fair material resources for the efficient running of operations (Item 9, Mean = 2.60, SD = 1.03); that fair information was provided to operations management employees to ensure the efficient and effective execution of their duties (Item 10, Mean = 2.83, SD = 1.06), and that the local municipality had adequate operations management staff to ensure efficient and effective execution of operations. Again, the level of stakeholder engagement was found to be fair (Item 11, Mean = 2.50, SD = 1.04). In other words, participants felt that the local municipality was not doing enough to solicit client input into its operations management. Stakeholder engagement was identified by Govender (2017) and Moore (2021) is the management of public sector operations and gaining stakeholder buy-in. The lowest mean score in the operations management input section was found in Item 12 (The organisation has adequate infrastructure to support the execution of operations). Without adequate infrastructures such as roads, water reticulation plants and schools, it is difficult to have an effective operations management system. This is an area that the local municipality needs to improve on.

4.4.1.4 Operations Management Design

The design of operations management was also identified as being critical in determining the effectiveness of the operations management system (Moore, 2021). Again, the mean scores for this section were fair, ranging between 2.50 and 3.05. The highest mean score was recorded for Item 14 (Processes carried out in our organisation are aimed at satisfying the needs of stakeholders), with a mean score of 3.05 (SD = 1.08). It has been seen above that quality focus was identified as being an integral part of the local municipality's operations management system. Thus, the local municipality should be commended for ensuring that all its efforts are focused on providing quality service which satisfies stakeholder needs. However, there seems to be a challenge in the design of local municipality's operations management. Quality of service and the value created seem to be defined internally, with little input from external or other stakeholders. This directly contradicts the outside-in approach recommended by authors such as Gupta and Starr (2014), and Kumar and Suresh (2019). Such an approach requires that the organisation understands what value means from the perspective of stakeholders –

internal and external – and uses that as a basis for formulating an operating management strategy and designing the operations management system. Thus, the local municipality needs to improve on that aspect of its operations management practices.

In line with what was highlighted in the problem statement, the design of operations management in municipality is such that minimising wastages in time and resources is not achieved as can be seen from a low mean score of 2.50 (SD = 1.11) for Item 16 (The design of operations in our organisation minimises wastages in time and resources). With irregular spending having been reported as part of the problem for the local municipality, the organisation may need to redesign its operations management system such that it minimises wastage.

4.4.1.5 Operations management planning and control

Once the operations management system has been set up, the next step is its control. Operations management planning and control factor in the study was generally high, with two of the three items measuring this factor recording mean scores above three (3). For a public sector organisation, it would be expected that the organisation has standard operating procedures for operations management activities (Item 18). The mean score for this item was the highest at 3.33 (SD = 1.21). In addition, participants generally agreed that the local municipality had targets for employees about their sections (Mean = 3.13, SD = 1.16). However, the local municipality needs to ensure that constantly measures actual operational performance against planned performance (Item 19) because this item yielded the lowest mean score within the operations management planning and control section of the instrument (Mean = 2.88, SD = 1.07).

4.4.1.6 Operations management improvement

Finally, an effective operations management system is capable of evolving together with changes in the organisation's environment (Johnson, et al., 2017). In this study, the last section of the operations management instrument contained items that measured operations management improvement. The mean scores for the continuous improvement section ranged between 2.68 for Item 23 (Operational deviations are resolved promptly in our organisation) and 3.43 (SD = 1.34) for Item 24 (Improvement of operational performance is the responsibility of everyone in our organisation). Generally, the mean scores show that participants' perceptions were that the local municipality fairly improve

its operations management system. However, there is still room for improvement, particularly in the at which operational deviations are resolved in the organisation. To keep pace with the changing operational environment, it is necessary that operations management deviations are resolved as promptly and possible. Improving long after the changes in the environment may make such changes irrelevant or inadequate to address the operations management challenges facing the organisation. Again, this is an area that the local municipality needs to work on.

4.4.2 The level of service delivery in the local municipality

The level of service delivery in the local municipality was measured through a nine-item instrument. The descriptive statistics for this instrument are presented in Table 4.5 below.

Item code	Item	Mean	SD
	Level of …		
SdL1	Education services	2.95	0.96
SdL2	Water and sanitation	2.33	0.89
SdL3	Health services	2.68	0.97
SdL4	Collection of rates and taxes	2.73	1.18
SdL5	Sports and recreation	2.60	0.98
SdL6	Public safety security, prevention of crime, and secures law, and order.	2.25	0.98
SdL7	Infrastructural and amenities development	2.25	1.03
SdL8	Social cohesion and integration	2.58	0.98
SdL9	Protection of the natural environment	2.30	1.11

Table 4.4: Descriptive Statistics per Item: Service Delivery Instrument

Participants were asked to rate the current level of the named services which ought to be provided by local municipality. The results showed that the mean scores for service delivery components were generally lower than those for operations management. More specifically, none of the services mentioned had a mean score of three (3), as was the case within the operations management instrument. Education Services (Mean = 2.95, SD = 0.96) had the highest mean score, implying that on average, participants felt that operations management has been able to improve Education Services over the past few years before the research. However, several items had mean scores which were less than the 2.5 half mark. These were Item 3 (the quality of water and sanitation), Item 6 (provision of public safety, security, prevention of crime, and secures law, and order),

Item 7 (the quality of Infrastructural and amenities development), and Item 9 (Protection of the natural environment). Participants did not feel operations management has been able to significantly improve these services over the past few years before the study. Thus, to improve the overall service delivery levels, the local municipality may need to devote additional resources to these areas. Overall, the perceived level of service delivery in the local municipality was found to be fair.

4.5 The influence of operations management on service delivery

To investigate the extent to which operations management influences the delivery of service in the local municipality.

4.5.1 Correlation analysis

The first step to evaluate the influence of operations management on service delivery in the local municipality was done through correlation analysis. Pearson's correlation coefficient was used to test correlation and the results are included in Table 4.6.

	1	2	3	4	5	6	7	8
1. OgS	1							
2. OpS	.814**	1						
3. OpI	.693**	.786**	1					
4. OpD	.712**	.765**	.825**	1				
5. OpC	.666**	.766**	.714**	.778**	1			
6. OiP	.654**	.803**	.828**	.828**	.871**	1		
7. OpMan	.608**	.484**	.493**	.532**	.451**	.383*	1	
8. SdL	.518**	.634**	.527**	.631**	.671**	.553*	.564**	1

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed).
Where:

- OgS = Organisational Strategy
- OpS = Operations Management Strategy
- OpI = Operations Management Inputs
- OpD = Operations Management Design
- OpC = Operations Management Planning and Control
- OiP = Operations Management Improvement
- OpMan = Total Operations Management
- SdL = Service Delivery

Table 4.5: Correlation Results

It was noted in Chapter 3 that correlation can be small ($r < 0.10$), medium ($0.11 \leq r \leq 0.49$) or large ($r \geq 0.5$), and that correlation can either be positive, zero, or negative. The results in Table 4.6 show that all the correlations were positive, implying that variables had positive effects on each other. More importantly, a large correlation was reported between Service Delivery and all the factors of operations management, namely, Organisational Strategy ($r = 0.518$, $p < .01$), Operations Management Strategy ($r = 0.634$, $p < .01$), Operations Management Inputs ($r = 0.527$, $p < .01$), Operations Management Design ($r = 0.631$, $p < .01$), Operations Management Planning and Control ($r = 0.671$, $p < .01$), and Operations Management Improvement ($r = 0.553$, $p < .01$).

It was noted in Chapter 2 that the first step in designing an effective operations management system is to clearly define the organisation's strategy. In this study,

organisational strategy was measured, and it was found to be positively correlated to service delivery ($r = 0.518$, $p < .01$). In other words, this study revealed that clearly defining an organisational strategy has a positive effect on organisational performance in general and service delivery, in particular. This confirms the propositions by Belvedere (2014), who asserts that effective operations management can positively influence organisational performance. The reader should be reminded that in Chapter 2, it was noted that service delivery is a component of organisational performance for public sector organisations such as the local municipality.

In Gelders and van Wassenhove's (2003) operations management model, the operations management system depends on operations management inputs such as human capital, customers, and information. The effect of these operations management inputs on service delivery was assessed and the results showed that there was a large, positive, and statistically significant correlation between operations management inputs and service delivery ($r = 0.527$, $p < .01$). This implies that the measured operations management inputs had a positive effect on service delivery, confirming the proposition by Gelders and van Wassenhove (2003).

The design of the operations management system has also been proposed as having a positive effect on organisational performance (Gelders & van Wassenhove, 2003). This assertion was confirmed in this study, as the operations management design factor was found to have a large, positive, and statistically significant correlation to service delivery ($r = 0.631$, $p < .01$). Another assertion from prior literature such as Manikas et al. (2020), Gelders and van Wassenhove (2003), Sushil and Martin, (2014), and Johnston, Chambers, Harland, Harrison, and Slack (2003), which was confirmed in this study was that the effectiveness of an operations management systems lies, in part, to the quality of operations management planning and control procedures. Thus, these studies proposed that operations planning and control had a significant effect on organisational performance. In this study, operations management and control were found to have a positive effect on service ($r = 0.671$, $p < .01$).

Having effective operations management was found to also depend on the extent of operations management improvement processes so that the system evolves with evolving operations management environment (Slack, 2019). This was confirmed in this

study, with operations management improvement found to have a large, statistically significant positive effect ($r = 0.553$, $p < .01$).

Finally, the Operations Management variable was found to have a large effect on Service Delivery ($r = 0.564$, $p < .01$). These findings confirm the findings in earlier studies such as Battistoni et al., (2013), Sir Francis (2021), and Wolniak, (2020), namely, that operations management has an impact on organisational performance. In this study, the performance was measured through the quality-of-service delivery variable.

As discussed in Chapter 3, the correlation coefficient shows the extent to which variables change together or against each other. It does not confirm the cause-effect relationship. It has been found above that operations management has a positive effect on service delivery. That implies a positive relationship and not that operations management determines the level of service delivery. To confirm the extent to which service delivery can influence service delivery, regression modelling was performed (next section).

4.5.2 Regression modelling

Regression modelling was performed to assess the extent to which operations management can influence service delivery. That way, the influence of operations management on the level of service delivery could be assessed. The summary regression model is presented in Table 4.7 below.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig.
1	.383[a]	0.147	0.124	6.43	0.147	6.540	1	38	0.01
2	.451[b]	0.204	0.161	6.30	0.057	2.649	1	37	0.11
3	.565[c]	0.320	0.263	5.90	0.116	6.130	1	36	0.02
4	.594[d]	0.353	0.279	5.84	0.033	1.809	1	35	0.19
5	.605[e]	0.366	0.273	5.86	0.013	0.695	1	34	0.41
6	.661[f]	0.437	0.335	5.61	0.071	4.169	1	33	0.04
a. Predictors: (Constant), OgS									
b. Predictors: (Constant), OgS, OpC									
c. Predictors: (Constant), OgS, OpC, OpD									
d. Predictors: (Constant), OgS, OpC, OpD, OpI									
e. Predictors: (Constant), OgS, OpC, OpD, OpI, OpS									
f. Predictors: (Constant), OgS, OpC, OpD, OpI, OpS, OpM									
Where: OgS = Organisational Strategy OpS = Operations Management Strategy OpI = Operations Management Inputs OpD = Operations Management Design OpC = Operations Management Planning and Control OpP = Operations management improvement OpM= Total Operations Management									

Table 4.6: Regression Model

Hierarchical multiple regression was used, with each of the operations management factors being entered progressively at each stage. Since there is more than one independent variable, adjusted r square is used rather than r square as advised by Keller (2015). In the first model (Model 1), Organisational Strategy was entered. The model shows that Organisational Strategy is a significant predictor of Service Delivery (Adjusted

r square = 0.124, p < 0.05). Since the p-value is less than the threshold of 0.05, it can be concluded that Organisational Strategy is a significant predictor of Service delivery. The adjusted r square value of 0.124 shows that 12.4% of the variations in service delivery can be explained by variations in Organisational Strategy. The findings confirm the assertion by Belvedere (2014), who indicated that defining and clarifying an organisational strategy was critical in having effective operations management system which can positively influence organisational performance.

In the second model (Model 2), Operations Management Planning and Control were entered, and the model's predictive value increased to (Adjusted r square = 0.161, p 0.11). That means Operations Management Planning and Control can account for an additional 3.7% (0.161-0.124) of the variations in service delivery. However, the contribution of Operations Management Planning and Control was found to be statistically insignificant (p > 0.05). The fact that the coefficient of determination was found to be insignificant was contrary to assertions by prior scholars such as Manikas et al. (2020) and Gelders and van Wassenhove (2003) who agreed that operations management and control significantly influenced organisational performance.

Operations Management Design was entered in the third model (Model 3) and the model's predictive value increased to 0.263, implying that an additional 11.6% of the variations in service delivery can be accounted for by variations in Operations Management Design (Adjusted r square = 0.263, p < 0.05). The p-value is less than 0.05, implying that the contribution of Operations Management Design was statistically significant. These findings confirm prior literature such as Sushil and Martin (2014), and Johnston, Chambers, Harland, Harrison, and Slack (2003), which hold that the design of operations management determines the effectiveness of such a system to positively influence organisational performance.

Moreover, when the factor Operations Management Inputs was entered into the model (Model 4), the adjusted r square value improved to 0.279, meaning that Operations Management Inputs contributed an additional 3.3% to the model's predictive value (Adjusted r square = 0.279, p > 0.05). The contribution was, however, not statistically significant, given that the p-value was greater than 0.05. These findings are in line with prior studies such as Battistoni et al. (2013) and Slack (2019), namely, that operations

management inputs such as human capital, materials and process design can have a positive effect on organisational performance.

Operations Management Strategy was entered in the fifth model (Model 5), reducing the model's predictive value to 0.273 (Adjusted r square = 0.273, $p > 0.05$). That means that Operations Management Strategy indeed harmed the model's predictive value. The need to define an operations management strategy that cascade down from the organisation's strategy was found to influence organisational performance by Moore (2021). Thus, the findings in this study confirm Moore's propositions.

Finally, Model 6 included all the operations management factors. That model could predict 33.5% of the variations in service delivery (Adjusted r square = 0.335, $p > 0.04$). Thus, overall, operations management was found to positively influence service delivery. It can, therefore, be concluded that operations management has a positive effect on organisational performance in general and service delivery in particular. Therefore, the overall findings of this study support literature by Manikas et al. (2020), Gelders and van Wassenhove (2003), Sushil and Martin (2014), Slack (2019), and Johnson, et al. (2017), who assert that organisational performance can be improved by improving the effectiveness of operations management systems within the organisation.

4.6 Conclusion

This chapter has presented and discussed the results of the study. It started by analysing the sample of the study which was found to be generally representative of the local municipality's workforce with respect to gender, age and tenure, among other factors. The chapter also analysed the reliability of the instruments used. All instruments were found to be reliable measures of their respective variable or factor, with the reliability coefficients being higher than the 0.7 thresholds. Descriptive statistics were also presented and discussed, focusing on mean and standard deviation. Overall, the level of service delivery was low while the level of operations management was slightly higher. Lastly, the chapter discussed the influence of operations management on service delivery at the local municipality using correlational analysis and regression modelling. The results revealed significant positive correlations among the variables. Again, operations management was found to have a significant influence on service delivery. The next chapter concludes the

findings in this chapter and makes recommendations to the local municipality's management.

CHAPTER 5 RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

This is the last chapter of the study. The main purpose of this chapter is to summarise the findings of the study and provide recommendations to the local municipality management. The first section of this chapter summarises the findings from the critical literature review in Chapter 2. Thereafter, the chapter concludes on the findings of empirical evidence presented, analysed, and interpreted in Chapter 4. The chapter also contains a section on recommendations, which is based on the findings from both literature and empirical evidence in this study. Limitations of the study are also discussed before closing off the chapter.

5.2 Summary of literature review

This section summarises the findings from literature review. The summary focuses on definitions of variables and the results of the empirical review.

5.2.1 Clarification of concepts

In Chapter 2, operations management and service delivery were defined based on literature and working definitions were developed for both variables. It was concluded in that chapter that operations management can be seen as a process (Gupta & Starr, 2014) of managing (Louw & Venter, 2018) the transformation of the various organisational inputs into outputs (Kumar & Suresh, 2019; Gupta & Starr, 2014) of the desired quality and quantity as defined by the organisation and its stakeholders (Slack, et al., 2017; Gupta & Starr, 2014; Kumar & Suresh, 2019).

In addition, service delivery was defined as a subset of organisational performance that has relevance to the public sector and relates to the ability of a public sector organisation service delivery carry out a process to provide services from which the public can derive some value (Moore & Moore, 2005; Van den Heever, 2020; Weinberg & Lewis, 2009).

5.2.2 Theoretical framework

From a theoretical perspective, the review identified some theories which were relevant to the study. The first one was the operations management theory developed by Johnston, Chambers, Harland, Harrison, and Slack (2003). The model shows that the operations management process takes in two sets of resources, namely transformed

resources and transforming resources. The transforming resources are used to transform the transformed resources into outputs. Operations management itself, as defined above, involves the design, planning, control, and improvement of an organisation's resources and processes to produce goods and provide services of the desired quality and quantity (Gupta & Starr, 2014) Johnston et al. (2003).

Another model which was reviewed was the stakeholder theory. The theory holds that the organisation needs to engage all its stakeholders and ensure that it works towards achieving the aspirations of the various stakeholder groups rather than focusing on the needs of one set of stakeholders at the exclusion of others (Carroll, 2018; Kivits & Sawang, 2021; Fassin, de Colle, & Freeman, 2017; Miles, 2017). It was noted that for an organisation such as the local municipality in study, engaging stakeholders is critical since public sector organisations tend to have the significant number of stakeholders and stakeholder groups.

Leadership theory was drawn to understand how operations management can be improved. In that regard, the transformational stood out as one of the leadership approaches which the local municipality can use to deal with some operations management and service delivery challenges the organisation struggled with. Such leadership was found to depend on the leader's ability to develop and share a compelling vision about the future of the organisation and motivate followers to move towards that vision (Andersen et al., 2018; Sibiya, 2019; Katywa and Strydom, 2021). Finally, Moore's (2005) Public value triangle was found as an important theory that can create a foundation for fostering the performance of public sector organisations. The theory focuses on how the organisation can elevate its performance by working towards a defined public value, and utilise its resources and capabilities within an environment where the organisation has earned legitimacy and support from stakeholders (Moore & Moore, 2005).

5.2.3 Empirical review

Literature also focused on searching for empirical literature on the influence of operations management on service delivery. The literature search did not yield any great articles which reviewed the influence of operations management on service delivery. A few articles were found that focused on the influence of operations management on organisational performance rather than public value (Battistoni et al., 2013; Sir Francis,

2021; Wolniak, 2020) . The dearth of literature on the influence of operations management on service delivery was evident. More specifically, none of the reviewed literature was conducted in South Africa, let alone the South African public sector. Some reviewed literature shows that the influence of operations management has only been reviewed within the private sector. Also, while this study aimed to investigate the influence of operations management on service delivery, all empirical studies which were reviewed focused on the impact of operations management on the private sector bottom lines such as profitability and financial performance. This was identified as a research gap that the current study aimed to contribute to.

5.3 Summary of findings from empirical evidence

This study aimed to evaluate the influence of operations management on service delivery in the local municipality. To achieve that, quantitative data was collected and analysed. The sample, from which the data was collected, was found to largely represent the workforce within the local municipality, respect to gender, age and tenure, and level of education, among other factors. The instrument used to measure the quality of operations management and the level of service delivery in the local municipality were both found to be reliable, with the calculated reliability coefficients being above the 0.70 thresholds. This section summarises the findings for each of the research objectives which were stated in Chapter 1 (see Section 1.3).

5.3.1 Research objective one

The first objective was to evaluate the quality of operations management in the local municipality. To achieve this objective, descriptive statistics were used, focusing on mean and standard deviation. The components of operations management focused on where the existence of the organisational strategy, the availability of the operations management strategy and how it was linked to the local municipality's overall strategy. The operations management instrument also measured the quality and adequacy of operations management inputs, the design of the operations management, operations management planning and control and the continual improvement of existing operations management system.

The results showed that, overall, the level of operations management in the local municipality was generally moderate, with the majority of the mean scores lying around

three. Participants felt that the local municipality had an organisational strategy but felt that it was not being communicated well to the local municipality's various stakeholders. Concerning operations management inputs, the results showed that the local municipality fared lowly, especially in terms of the provision of adequate materials, infrastructure, and information for decision-making.

In addition, the design of the local municipality's operations management had some flaws. More specifically, while local municipality ensured that its operations management was aimed at delivering quality services to stakeholders, the definition of quality was determined internally by the organisation, rather than through a process of stakeholder engagement. This was found to be a significant flaw, particularly in a public sector organisation such as the local municipality whose prime aim is to serve the general public as its main stakeholder.

In terms of the planning and control of operations management, the study revealed that the local municipality has set targets and objectives for the various teams within the organisation. However, the control element of the planning and control aspect was found to be weak. The results showed that the comparison of targets to actual performance was rarely done. Thus, there is a danger that the local municipality may suffer strategic drift – where set targets may end up becoming irrelevant as the environment changes. This is an area that the local municipality, again, needs to focus on. Operations management improvement was found to be relatively low in the local municipality. This was identified as an area that required attention since the continuous improvement was found to be necessary for an efficient and effective operations management system.

5.3.2 Research objective two

The second research objective was to determine the level of service delivery in the local municipality. The level of service delivery was found to be ranging from low to moderate. Low levels of service were mainly experienced in services such as the quality of water and sanitation, provision of public safety, security, prevention of crime, and security law, and order, the quality of infrastructural and amenities development, and the protection of the natural environment. Participants did not feel that the local municipality's operations management had been able to significantly improve these services over the past few years before the study.

5.3.3 Research objective three

The third research objective was aimed at investigating the extent to which operations management influenced service delivery in the local municipality. To achieve this, correlation and regression analyses were conducted.

5.3.3.1 Correlation results

The operations management instrument broke down operations management into its components. The results of the study showed that all service delivery was positively correlated to both the operations management variable and the individual operations management components. All the correlations were found to be statistically significant and were all large. That means that, in this study and the context of the local municipality, operations management has a positive effect on service delivery. As indicated above, very limited literature was found that investigated the relationship between operations management and service delivery. The study, however, confirms findings from the private sector which found that a positive correlation exists between the organisational performance (Moore & Moore, 2005; Van den Heever, 2020; Weinberg & Lewis, 2009). With the quality-of-service delivery being the bottom line for the local municipality, it can be concluded that in the public sector, high levels of operations management are generally related to high levels of organisational performance.

As discussed in Chapter 3, the correlation coefficient shows the extent to which variables change together or against each other. It does not confirm the cause-effect relationship. To confirm the extent to which service delivery can influence service delivery, regression modelling was performed (next section).

5.3.3.2 Regression analysis results

In this study, a hierarchical multiple regression model was developed, in which the effect of operations management and its various factors was measured. The results of that analysis showed that operations management has a moderate influence on service delivery (r square = 33.5, $p < 0.01$). This relationship is statistically significant, given that the reported p-value is less than 0.05. While the overall operations management variable was found to have a positive effect on service delivery, the influence of the various factors of operations management was mixed. The Organisational Strategy, Operations Management Inputs, Operations Management Planning and Control, Operations

Management Design, and Operations Management Improvement were all found to have a positive effect on service delivery. However, of these, Operations Management Planning and Control, and Operations Management Inputs were found to have a statistically insignificant influence on service delivery. Nonetheless, the influence of these factors still has some practical significance, especially if they are considered together with correlation results. These results confirm earlier studies such as Battistoni et al. (2013, Belvedere (2014), Gelders and van Wassenhove (2003), Johnston, Chambers, Harland, Harrison, and Slack (2003), Manikas et al. (2020), Slack (2019), and Sushil and Martin (2014), who all proposed that operations management influences organisational performance. In this respect, as already noted, the performance is in the form of service delivery.

By contrast, and in contrary to the existing literature on the operations management-organisational performance relationship, the findings in this study show that Operations Management Strategy has a negative influence on service delivery. That contrast Moore (2021), who asserts that operations management improves the performance of public sector organisations.

Overall, the results of this study confirm that operations management has a positive influence on organisational performance in general and service delivery in particular. This similarity in the findings to those found in the private sector help to strengthen the argument raised in chapter 2, namely, that organisational performance in the public sector can be borrowed from the private sector, albeit with some modifications.

5.4 Recommendations

The overall findings in this study are that some aspects of the local municipality's operations management needed to be improved and that the levels of service delivery were low. Given that operations management has been found to have the ability to influence service delivery, the following are some suggestions on how operations management can be improved in the local municipality, knowing (from the results of this study) that such improvement in operations management will ultimately lead to improvement in service delivery.

Communication of strategies – the results have revealed that the level of communication of municipality's strategies is low within the local municipality. Thus, the organisation needs to work on its communication strategies to ensure that crucial information, such as strategic initiatives is properly disseminated. The local municipality has options to either revamp its internal communication department or it can engage the services of a consultant. The latter option may mean a larger budget commitment even though it will ensure that the communication department is run by professionals. This option can be used as a way of capacitating internal staff so that a sunset clause can be put into the contract with the external consultant to leave after some time. In addition, nowadays, platforms such as social and electronic media can be used with effectiveness. Depending on the availability of financial resources, having a community radio can assist as well to ensure that there is two-way communication between munipality and its stakeholders.

Stakeholder engagement – it was noted that much of the definition of quality in municipality comes from local municipality. There is a need to involve the organisation's stakeholders, particularly resident clients to ensure that they feel that their interests are also given priority, in addition to the other priorities which the local municipality may have. Moore (2005) recommends that stakeholder engagement should be preceded by a programme of stakeholder analysis that assess the levels of stakeholder interest in what local municipality does and stakeholder power to influence municipality's operations. That way, the engagement will address the concerns of stakeholders by prioritising the concerns of key stakeholders, followed by those who will be lower on the stakeholder hierarchy, until all stakeholders have been engaged. Programmes such as service delivery open days can help bring stakeholders together.

Provision of adequate operations management inputs – the local municipality is currently, no doubt, having challenges with its finances. However, for an efficient operations management system, there is a need for some investment. For instance, the study has revealed that inputs such as infrastructure, staff, and information are all low in local municipality. There is need to invest in these. Infrastructure such as roads and schools need to be invested in as these will then improve transport and education services. This may take some time and require substantial resources. Part of such

resources can come from plugging the current irregular expenditures, as discussed in Chapter, through the implementation of strong internal controls and risk management systems.

Regular review of actual performance – performance management in local municipality is incomplete if the organisation does not regularly review actual performance and compare that to targets. This is an area that can be improved by, say, investment in technology such as Enterprise Resource Planning systems. Such systems can improve the efficiency with which budgets are set and how actual performance can be tracked and compared budget. The initial investment can be significant, but in the long term, the benefits of that will likely outweigh the cost.

Design a programme of continuous improvement – the localmunicipality needs to think hard about how it can improve its operations. It is not enough to simply have effective operations management systems. Such systems need to be continuously improved so that they evolve with the changes in municipality's environment. Adoption of international best standards such as ISO, even though it is not for certification, may assist greatly.

The recommendations in this section are not meant to be complete, they just indicate what the local municipality may need to do to improve operations management and, ultimately, service delivery.

5.5 Limitations of the study and suggestions for further research

Efforts were made to ensure that the study was credible and represented as far as possible the views in the local municipality. However, the study was not without some limitations. For instance, the actual sample size was significantly lower than the target population, the employees in municpality. That means the results in this study are conservative. Nonetheless, the sample was large enough to perform statistical analyses on the resultant data, based on advice from research scholars such as Islam (2018). In future, researchers may need to increase the sample size to validate the results of this study.

Also, this study used a cross-sectional design. While the design was cheaper, given the time constraints within which the study was conducted, it meant that time-based changes in perceptions in the local municipality were not captured. In the future, studies can

investigate the relationship between operations management on service delivery in a longitudinal study. That way, the findings in this study can be triangulated.

The quantitative method adopted in this study ensured that results were rigorous, and tested for their statistical significance. However, it meant that the study missed out on the reasons for participants' views expressed in the survey. Future studies can benefit from conducting a qualitative methodology or a mixed one, to inquire about the qualitative factors which can lead to the relationship between operations management and service delivery.

5.6 Management implications

This study has shown that organisational performance can be improved through an effective operations management system. Therefore, management of the local municipality can enhance the organisation's performance through implementing an effective operations management system. This may require investment in human capital, physical assets, and marketing. More specifically, management can improve operations management by streamlining the local municipality's organisational strategy so that it is aligned with the needs of its stakeholders. Also management need to ensure that operations management strategy is aligned to the organisation's strategy. The organisation needs to constantly plan and control operations performance.

5.7 Conclusion

The main goal of this chapter was to summarise the study's findings and make recommendations to municipal management. The findings from the critical literature review in Chapter 2 were summarised in the first section of this chapter. Following that, the chapter concludes on the empirical evidence findings presented, analysed, and interpreted in Chapter 4. The chapter also included a section on recommendations based on the findings of this study's literature and empirical evidence. Before concluding the chapter, the study's limitations were also discussed. Overall, the findings indicate that operations management has an impact on service delivery.

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7. ANNEXURES

Annexure A: Cover letter to Participants

Dear Respondent

You are herewith invited to participate in an academic research study conducted by Palesa Potlaki, a student in the Master of Business Leadership at UNISA's Graduate School of Business Leadership (SBL) under the supervision of DR Sugandren Naidoo.

The purpose of the study is to evaluate the influence of operations management on service delivery in the local municipality.

All your answers will be treated as confidential, and you will not be identified in any of the research reports emanating from this research.

Your participation in this study is very important to us. You may however choose not to participate, and you may also withdraw from the study at any time without any negative consequences.

Your participation in this questionnaire will be highly appreciated as it will assists me in concluding my study research and the participation is totally from own free will. Please answer the questions in the attached questionnaire as completely and honestly as possible. This should not take more than 15-20 minutes of your time

The results of the study will be used for academic purposes only and may be published in an academic journal. We will provide you with a summary of our findings on request.

Please contact my supervisor, Prof Sugandren Naidoo, naidoosu@unisa.ac.za if you have any questions or comments regarding the study.

Yours sincerely

Researcher Name: Palesa Potlaki

Researcher Signature:

Date:

Annexure B: Questionnaire (Quantitative)

The questionnaire was shared using Google Forms.

Evaluating the influence of operations management factors on service delivery at Sol Plaatje Municipality

Section A: Demographic and general information

1.1 Please indicate your age. *

Your answer

1.2 What would best describe your ethnic group? *

- [ ] White
- [ ] Black
- [ ] Coloured
- [ ] Indian/Asian

1.3 Which gender do you identify most with? *

- ◯ Male
- ◯ Female
- ◯ Prefer not to say

1.4 What is your highest qualification? *

- ◯ Less than a high school diploma
- ◯ High school diploma or equivalent degree
- ◯ No degree
- ◯ Bachelor's degree
- ◯ Honours/PGD/Doctoral

1.5 Which operating unit do you belong to? *

- ◯ Municipal Manager's Office
- ◯ Infrastructure and Services
- ◯ Community Services
- ◯ Financial Services
- ◯ Corporate services
- ◯ Strategy Economic Development and Planning

1.6 How many years of experience do you have working for Sol Plaatje Municipality? *

Your answer

1.7 Is your current job a managerial or non-managerial post? Tick the appropriate box.

	Answer
Managerial	◯
Non-managerialanagerial	◯

Section B: Operations Management Instrument

State
your level of agreement or disagreement with each of the following statements by writing your score next to the statement in the box provided. Your scores should range between 1 and 5 based on the following scale:

1
= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

1. Organisational Strategy *

	1	2	3	4	5
Our organisation has clear mission about its future	○	○	○	○	○
Our organisation has detailed long-term objectives	○	○	○	○	○
Our organisation has strategies to achieve its stated objectives and mission	○	○	○	○	○
Leaders in our organisation clearly communicates the organisation's mission, objectives and long-term plans	○	○	○	○	○

2. Operations Management Strategy *

	1	2	3	4	5
Our organisation has clear operations management strategy	○	○	○	○	○
The operations management strategy of our organisation is aligned with the long-term strategies of our organisation	○	○	○	○	○
Operations management objectives in our organisation are aligned with the overall operations management strategy of the	○	○	○	○	○
The operations management strategies our organisation clearly identify service quality as a key priority	○	○	○	○	○

3.Operations Management Inputs *

	1	2	3	4	5
The organisation provides adequate material resources for the efficient running of operations	○	○	○	○	○
Information is made available to operations management employees to ensure the efficient and effective execution of their duties	○	○	○	○	○
Our organisation solicits for client input into its operations management	○	○	○	○	○
The organisation has adequate infrastructure to support execution of operations	○	○	○	○	○
There are adequate operations management staff to ensure an efficient and effective execution of operations	○	○	○	○	○

4. Operations Management Design *

	1	2	3	4	5
Processes carried out in our organisation are aimed at satisfying the needs of stakeholders	○	○	○	○	○
The operational activities in our organisation are designed to ensure efficient use of resources	○	○	○	○	○

The design of operations in our organisation minimises wastages in time and resources	○	○	○	○	○
Operations management in our organisation are designed to minimise error and operational breakdowns	○	○	○	○	○

5. Operations Management Planning and Control *

	1	2	3	4	5
There are standard operating procedures for operations management activities in our organisation	○	○	○	○	○
Management constantly measures actual operational performance against planned performance	○	○	○	○	○
Operational employees have targets about their sections	○	○	○	○	○

6. Operations Management Improvement *

	1	2	3	4	5
There is clear plan in our organisation to continuously improve operations	○	○	○	○	○
Our organisation uses results from comparison of actual performance and planned operational performance to identify gaps in operations	○	○	○	○	○

performance to identify gaps in operations					
Operational deviations are resolved promptly in our organisation.	○	○	○	○	○
Improvement of operational performance is the responsibility of everyone in our organisation	○	○	○	○	○

Section C: Operations Management Instrument

State your level of agreement or disagreement with each of the following statements by writing your score next to the statement in the box provided. Your scores should range between 1 and 5 based on the following scale:

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

To what extent do you agree that the following aspects of service delivery have improved significantly over the past few years due to improved operations management? *

	1	2	3	4	5
Education services	○	○	○	○	○
Water and sanitation	○	○	○	○	○
Health services	○	○	○	○	○
Collection of rates and taxes	○	○	○	○	○
Sports and recreation	○	○	○	○	○
Public safety security, prevention of crime, and secures law, and order.	○	○	○	○	○

Sports and recreation	○	○	○	○	○
Public safety security, prevention of crime, and secures law, and order.	○	○	○	○	○
Infrastructural and amenities development	○	○	○	○	○
Social cohesion and integration	○	○	○	○	○
Protection of the natural environment	○	○	○	○	○

Annexure C: Unisa SBL Ethics Clearance Certificate

Graduate School of Business Leadership, University of South Africa, PO Box 392, Unisa, 0003, South Africa
Cnr Janadel and Alexandra Avenues, Midrand, 1685, Tel: +27 11 652 0000, Fax: +27 11 652 0299
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SCHOOL OF BUSINESS LEADERSHIP

RESEARCH ETHICS REVIEW COMMITTEE (GSBL CRERC)

20 September 2022

Ref #: 2022_SBL_MBA_050_FA
Name of applicant: Ms PP Potlaki
Student #: 56649053

Dear Ms Potlaki

Decision: Ethics Approval

Student: Ms PP Potlaki (56649053@mylife.unisa.ac.za , 078 905 5472)

Supervisor: Dr Naidoo, Sugandren, (naidoosu@unisa.ac.za, 012 429 3304).

Project Title: Evaluating the Influence of Operations Management On Service Delivery at the SOL Plaatje Municipality

Qualification: Master in Business Administration (MBA)

Expiry Date: December 2023

Thank you for applying for research ethics clearance, SBL Research Ethics Review Committee reviewed your application in compliance with the Unisa Policy on Research Ethics.

Outcome of the SBL Research Committee: Approval is granted until December 2023

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the SBL Research Ethics Review Committee on the 19/09/2022

The proposed research may now commence with the proviso that:

1) The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached
2) The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
3) Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the SBL Research Ethics Review Committee.
4) An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.
5) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

45 Building leaders who go beyond

SBL GRADUATE SCHOOL OF BUSINESS LEADERSHIP UNISA

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Kind regards,

Prof N Mitwa
Chairperson: SBL Research Ethics Committee
011 - 652 0381/ wiltonb@unisa.ac.za

pp.
Prof P Mbweli
Executive Dean: Graduate School of Business Leadership
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UNISA

Annexure D: Language Editing Certificate

Kgaabi Academic Enablers (Pty) Ltd Editing and Proofreading Confirmation Letter

Westview Estate
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September 2022

Cell: 072 692 7635
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TO WHOM IT MAY CONCERN

This letter serves as confirmation that I, Kwena Dominic Kgaabi[1], together with Lufuno Ligavha-Mbelengwa[2] have edited the research proposal of **Potlaki P** student number **(56649053)** entitled **"Evaluating the influence of operations management on service delivery at the Sol Plaatje Municipality"** to be submitted for Master of Business Administration at the University of South Africa.

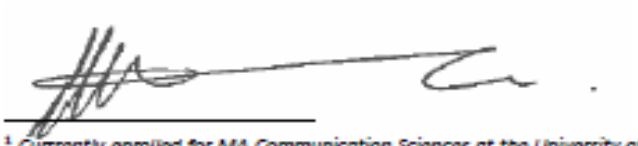
I, therefore, declare that the document is to my knowledge devoid of language errors that may deprive Palesa's work of being accepted for the qualification Master of Business Administration.

Kwena completed his BA Hons Media Studies postgraduate at the University of Limpopo with a distinction in the research mini-dissertation and Lufuno completed her MSc Geohydrology at the University of the Free State.

We can be reached on the above contact details should you require clarity on anything.

Sincerely yours,

Kgaabi KD (Mr)



[1] *Currently enrolled for MA Communication Sciences at the University of South Africa. BA Hons Media Studies (University of Limpopo) with a distinction. BA Media Studies (University of Venda) Major Courses: Advanced English Structure (ENG 3541) Advanced English Usage (ENG 3542) and Media Studies. Microsoft Excel certificate: Basic, Intermediate and Advanced level + Project Management certificate (Africa International Advisors) General Course on Intellectual Property (World Intellectual Property Organization), Introduction to the Patent Cooperation Treaty (World Intellectual Property Organization), Advanced Course on Intellectual Property, Traditional Knowledge and Traditional Cultural Expression (World Intellectual Property Organization).*

[2] *PhD Candidate in Geohydrology and MSc Geohydrology from the University of the Free State. Microsoft Certificate. Published a paper titled: Investigation of factors influencing groundwater quality in a typical Karoo aquifer in Beaufort West town of South Africa. Cite: Ligavha-Mbelengwa, L. and Gomo, M., 2020. Investigation of factors influencing groundwater quality in a typical Karoo aquifer in Beaufort West town of South Africa. Environmental Earth Sciences, 79(9).*

Annexure E: Consent letter for examination approval

MBA5929

CONSENT TO SUBMIT RESEARCH REPORT FOR EXAMINATION 2022

Consent is hereby given to:

Student name: Palesa Potlaki

Student number: 56640953 to submit her research report in its final form.

Supervisor Signature: ..... Date: 9 December 2022

Supervisor Name: Prof S Naidoo

The student acknowledges that sufficient feedback was provided by the supervisor and that s/he took the responsibility to attend to the feedback in a way that satisfies the requirements for a research dissertation on the MBA and MBL level.

Student signature: Potlaki Date: 09 December 2022

Annexure F: Turnitin Report

Final_MBA5929_56649053.pdf

ORIGINALITY REPORT

22%	18%	2%	12%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

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turnitin

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This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	PALESA PAULINA POTLAKI
Assignment title:	Preparation Research Report Submission (Moodle PP)
Submission title:	Final_MBA5929_56649053.pdf
File name:	389_PALESA_PAULINA_POTLAKI_Final_MBA5929_56649053_19...
File size:	1.6M
Page count:	118
Word count:	27,243
Character count:	165,161
Submission date:	13-Dec-2022 09:45PM (UTC+0200)
Submission ID:	1980441663

Annexure G: Proof of registration

1838

POTLAKI P P MISS
69 MEMORIAL ROAD
OSC BUILDING 1ST FLOOR ESKOM
KIMBERLEY
8301

STUDENT NUMBER : 56649053

ENQUIRIES TEL : 0861 670 411
FAX : (012) 429-4150
eMAIL : sbl@unisa.ac.za

2022-03-31

Dear Student

I hereby confirm that you have been registered for the current academic year as follows:

Proposed Qualification: MBA (90870)

CODE	PAPER	S	NAME OF STUDY UNIT	NQF crdts	LANG.	PROVISIONAL EXAM.DATE	EXAMINATION CENTRE(PLACE)
Study units registered without formal exams:							
MBA5929			Integrated Management Project	48	E		
Study units registered for exam period May/June 2022:							
MBA4801		1	Economics for Managers	12	E		ONLINE EXAMINATIONS
Study units registered for exam period October/November 2022:							
MBA5903		2	Strategic Financial Management	12	E		ONLINE EXAMINATIONS

You are referred to the "MyRegistration" brochure regarding fees that are forfeited on cancellation of any study units.

Your attention is drawn to University rules and regulations (www.unisa.ac.za/register).
Please note the new requirements for reregistration and the number of credits per year which state that students registered for the first time from 2013, must complete 36 NQF credits in the first year of study, and thereafter must complete 48 NQF credits per year.
Students registered for the MBA, MBL and DBL degrees must visit the SBL's ESOnLine for study material and other important information.
Readmission rules for Honours: Note that in terms of the Unisa Admission Policy academic activity must be demonstrated to the satisfaction of the University during each year of study. If you fail to meet this requirement in the first year of study, you will be admitted to another year of study. After a second year of not demonstrating academic activity to the satisfaction of the University, you will not be re-admitted, except with the express approval of the Executive Dean of the College in which you are registered. Note too, that this study programme must be completed within three years. Non-compliance will result in your academic exclusion, and you will therefore not be allowed to re-register for a qualification at the same level on the National Qualifications Framework in the same College for a period of five years after such exclusion, after which you will have to re-apply for admission to any such qualification.
Readmission rules for M&D: Note that in terms of the Unisa Admission Policy, a candidate must complete a Master's qualification within three years. Under exceptional circumstances and on recommendation of the Executive Dean, a candidate may be allowed an extra (fourth) year to complete the qualification. For a Doctoral degree, a candidate must complete the study programme within six years. Under exceptional circumstances, and on recommendation by the Executive Dean, a candidate may be allowed an extra (seventh) year to complete the qualification.

BALANCE ON STUDY ACCOUNT: 66694.00

Yours faithfully,

Prof Mpofu
Acting Exec Director (SBL)

1503 0 00 4

UNIVERSITEIT VAN SUID-AFRIKA
PRETORIA
UNIVERSITY OF SOUTH AFRICA

University of South Africa
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PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

Annexure H: Organisation permission letter

05 May 2022

Ms Palesa Potlaki
Graduate School of Business Leadership (SBL)
University of South Africa
PRETORIA

Dear Ms Potlaki **Per email: potlakpp@eskom.co.za**

PERMISSION TO CONDUCT RESEARCH AT SOL PLAATJE MUNICIPALITY

I, Nomonde Kesiamang, as Acting Municipal Manager of Sol Plaatje Municipality grant permission to collect data at this site for your research project titled "The Evaluation of Operations Management Factors Affecting Service Delivery at Sol Plaatje Municipality".

I grant this permission as the authorized person to so in this company and am aware of the following:

1. The study is conducted as a UNISA researcher and remains the property of UNISA.
2. You can use the name of the Municipality in your research project.
3. All data and information collected will be solely in the procession of the researcher.
4. I will require feedback of the research.
5. The research may be published in the public domain under the supervision of the supervisor.

I wish the best and success in this research

.....

N KESIAMANG
ACTING MUNICIPAL MANAGER

The city that sparkles

Annexure I: Statistician letter

GRADUATE SCHOOL OF BUSINESS LEADERSHIP (SBL)

Confidentiality Agreement Template: Statistician

This is to certify that I, Trust Sigauke, the statistician of the research project **investigating the influence of operations management on service delivery at the Sol Plaatje Municipality**, agree to the responsibilities of the statistical analysis of the data obtained from participants (and additional tasks the researcher(s) may require in my capacity as statistician).

I acknowledge that the research project is conducted by Palesa Potlaki of the Graduate School of Business Leadership (SBL), University of South Africa.

I understand that any information (written, verbal or any other form) obtained during the performance of my duties must remain confidential and in line with the UNISA Policy on Research Ethics.

This includes all information about participants, their employees/their employers/their organisation, as well as any other information.

I understand that any unauthorised release or carelessness in the handling of this confidential information is considered a breach of the duty to maintain confidentiality.

I further understand that any breach of the duty to maintain confidentiality could be grounds for immediate dismissal and/or possible liability in any legal action arising from such breach.

Full Name of Statistician: Trust Sigauke

Signature of Statistician: TS Date: 29/07/2022

Address of statistician 3 South Street Centurion, Pretoria

Statistical Company: N/A

Any Job/reference number N/A

Full Name of Primary Researcher: Palesa Potlaki

Signature of Primary Researcher: Potlaki Date: 29/07/2022

SBL REC MARCH 2015