

DURBAN UNIVERSITY OF TECHNOLOGY

**SUSTAINABLE MUNICIPAL INFRASTRUCTURE GRANT (MIG)
IMPLEMENTATION STRATEGY FOR MUNICIPAL DEVELOPMENT IN NELSON
MANDELA BAY MUNICIPALITY, EASTERN CAPE**

ZOLANI TAFENI

19 JUNE 2024



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MANDELA BAY MUNICIPALITY, EASTERN CAPE**

**Submitted in fulfillment of the requirements of the
degree of Doctor of Philosophy in Management Sciences**

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at the Durban University of Technology

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DEDICATION

I dedicate this thesis to my late grandfather, Mr Willson Tafeni. May his soul rest in heavenly peace, my Grandmother Nombulelo Tafeni, who supported me at the beginning of my academic journey.

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I would like to take this opportunity to express my deepest gratitude to all institutions/ organisations and all those who contributed to the completion of this study and the completion of this thesis. More especially, my gratitude goes to the following:

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To all those, and many more whom I could not mention here, may the Lord God bless them in all their endeavours.

DECLARATION

I, ZOLANI TAFENI, hereby declare that “**Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for Municipal Development in Nelson Mandela Bay Municipality, Eastern Cape**” is my own work and that all the resources that I have used or quoted have been indicated and acknowledged by means of complete references

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ABSTRACT

The MIG was introduced to promote infrastructure development at the local government level and to improve service delivery, particularly in rural areas, to address unemployment, poverty, and inequality. The MIG policy was then introduced by the Department of Provincial and Local Government as the first infrastructure development policy in response to the country's social and rural economic development challenges. It aimed to prioritise poverty eradication and socio-economic development. The policy gained support and positive responses from the people of the Eastern Cape and other parts of the country. Therefore, the Nelson Mandela Bay Metropolitan Municipality, as a Category A municipality, is one of the municipalities that has implemented the MIG to provide infrastructure development. However, it has been highlighted by the National Treasury's Report on Medium-Term Infrastructure Spending (2019/2021a) that municipalities still find it challenging to spend their allocated MIG funds despite the pressing municipality needs due to effective and efficient prevailing capacity constraints, especially in project planning. This inefficiency stems from the insignificant sustainability of the MIG implementation strategy, which is restricted by several factors. Therefore, the study focused on exploring an alternative MIG implementation strategy for municipal development. Consequently, the study assessed the MIG implementation in Nelson Mandela Bay.

This study utilised a mixed-methods approach, employing quantitative and qualitative research techniques. Data was collected, using structured questionnaires which were distributed to 50 respondents' participants and qualitative data was collected through two focus group discussions. The quantitative data was analysed using descriptive statistics, structural equation modelling, chi-square tests, and factor analyses while the qualitative research data was analysed using Thematic analysis. The Statistical Package for Social Scientists (SPSS) version 29.0 and Smart PLS4 software were used for data analysis.

The study found that implementing the MIG is ineffective, particularly in the initial phases, as it fails to assist the municipality in providing essential services to the community.

The inadequate MIG implementation plan emerged as a significant factor. The study respondents requested an enhanced MIG implementation strategy. This requires developing a customised MIG implementation framework upon which a plan can be developed for institutionalisation.

Therefore, this study proposed a systemic MIG implementation framework that will contribute to the existing literature by providing approaches that can be used to address the challenges faced in sustainable MIG implementation. Moreover, this framework can serve as a point of reference for researchers, municipalities and practitioners to facilitate better application of MIG strategies for various municipalities. Also, the findings of this study may contribute to the public administration theory by demonstrating how a sustainable MIG implementation strategy can influence the allocation and management of grants for infrastructure development in local government.

The study concludes that the existing MIG policy framework is adequate but requires monitoring to ensure the proper implementation of infrastructure projects. Therefore, this study recommends that the MIG guidelines and implementation toolkits should be standardised and used by various MIG agencies.

KEYWORDS: Municipal Infrastructure Grant; Municipal Policy Framework; Nelson Mandela Bay; South Africa.

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LIST OF ABBREVIATIONS

Abbreviation	Full Form
AU	African Union
AUDA-NEPAD	African Union Development Agency-New Partnership for Africa's Development
AVE	Average Variance Extracted
BEE	Black Equity Empowerment
BOOT	Build-Own-Operate-Transfer
BOT	Build-Operate-Transfer
BOTT	Build-Operate-Train-Transfer
CBOs	Community-Based Organisations
CFO	Chief Finance Officer
COGTA	Department of Cooperative Governance and Traditional Affairs
DLG	Developmental Local Government
DPLG	Department of Provincial and Local Government
DUT	Durban University of Technology
EBRD	European Bank for Reconstruction and Development
ECSECC	Eastern Cape Socio-Economic Consultative Council
EFA	Exploratory Factor Analyses
EIB	European Investment Bank
GDS	Growth and Development Strategies
GEAR	Employment and Redistribution
HTMT	Heterotrait-Monotrait Ratio
IGR	Intergovernmental Relations
IDP	Integrated Development Planning
LED	Local Economic Development
LGMIG	Local Government Municipal Infrastructure Grant
MEI	Municipal Environmental Investments

MFF	Multiannual Financial Framework
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
MIGMU	MIG Management Unit
MIS	Management Information System
MITT	Municipal Infrastructure Task Team
MPPMR	Municipal Planning and Performance Management Regulations
MSA	Municipal Structures Act
NA	National Assembly
NDP	National Development Plan
NFI	Normed Fit Index
NGEU	Next Generation EU
NGOs	Non-Governmental Organisations
NMBMM	Nelson Mandela Bay Metropolitan Municipality
NPM	New Public Management
PAM	Public Administration and Management
PFMA	Public Finance Management Act
PIDA	Programme for Infrastructure Development in Africa
PMU	Project Management Unit
PMUs	Project Management Units
PPP	Public-Private Partnership
RDP	Reconstruction and Development Programme
RSA	Republic of South Africa
SALGA	South African Local Government Association
SARS	South Africa Revenue Service
SCM	Supply Chain Management
SEM	Structural Equation Modelling
SIPs	Strategic Integrated Projects

SME	Small and Medium-sized Enterprise
SPSS	Statistical Package for the Social Sciences
SRMR	Standardised Root Mean Square Residual
TA	Technical Assistance
TC	Technical Cooperation
UEI	Urban Environmental Infrastructure
UNDESA	United Nations Department of Economic and Social Affairs
URBIS	Urban Investment Support
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

The primary objective of this research was to investigate the challenges associated with implementing the Municipal Infrastructure Grant (MIG) and to explore alternative MIG implementation strategies for municipal development. Designing and implementing a realistic strategy is a prerequisite for a functional and effective organisation (Madumo, 2017). The same principles apply to municipalities in the post-apartheid era in South Africa. Since its inauguration, the MIG has swiftly become the pioneering policy on infrastructure development introduced by the Department of Provincial and Local Government (2009). This initiative was a strategic response to the socio-economic challenges that the nation faced, mainly in rural areas, and it shifted the focus to the eradication of poverty. The MIG's primary objective is to address the municipal infrastructure backlogs within impoverished communities and ensure the ongoing provision of critical services like water, sanitation, roads, and street lighting (Kopung, 2017). The MIG's oversight and management, ensuring its implementation across all nine provinces and their municipalities, falls under the jurisdiction of the Department of Cooperative Governance and Traditional Affairs (COGTA).

In the 1998 White Paper on Local Government, Minister Valli Moosa wrote: "Local government is the sphere of government that is responsible for the services and infrastructure so essential to our people's well-being." (Republic of South Africa, 1998:04). More than two decades later, it is acknowledged that significant improvement has been made in infrastructure delivery and its positive contribution to the well-being of citizens. However, backlogs persist despite substantial increases in fiscal commitments (Mnguni, 2020:358). Through the National Infrastructure Plan 2050, the South African Government acknowledges the essential purpose of infrastructure in fostering development, job creation, enhancing service, and international competitiveness (Department of Public Works and Infrastructure, 2021:01). The government also believes that the public sector, through its various institutions and instruments, has a pivotal duty to promote local development through

financing infrastructural projects (Department of Public Works and Infrastructure, 2021:02). The national infrastructure plan 2050 aims to strengthen and extend the mandate that was given to the Presidential Infrastructure Coordinating Commission (PICC). The PICC is tasked with implementing 18 strategic integrated projects (SIPs), which have since been further endorsed by the government (PICCN, 2020:01). All these initiatives demonstrate the government's determination and commitment to improving the South African people's living standards.

In the context of the Eastern Cape Province, the then Honourable MEC for the Department of Rural Development and Agrarian Reform, Mbulelo Sogoni, in his policy speech (2010), said that "Rural development was understood to be multi-dimensional encompassing local economic development and social development." This includes improved service delivery, mainly on social and economic infrastructure, and the active involvement of local communities in all aspects of the development process (Moyo et al., 2022). Since then, there have been numerous variations to the grant system in the previous few years and insignificant reviews, leading to the proliferation or rationalisation of infrastructure grants. Several developmental initiatives have been implemented in the province to improve the situation over the years. However, despite these initiatives, people remain in dire conditions due to poor service delivery and sustained poverty (ECSECC Annual Infrastructure Report, 2017). Accessing essential services is a fundamental right for everyone, not just a privilege of the selected few.

This calls for comparative infrastructure development and impact analysis on socio-economic development across the country in the post-apartheid era. The aim should be to establish the extent to which society's welfare is being improved or enjoyed in the present political context. This approach is based on the National Development Plan (NDP), which raises concerns over policy instability. According to this document, the government often underestimates the disruptive effect of significant service delivery policy adjustments. This challenge has notably impacted the local government sector. Consequently, there has been a tendency to introduce additional regulations and legislation specific to local government to address the issues municipalities face (Siddle & Koeble, 2017:04).

Quick observation leads to the conclusion that despite infrastructure development initiatives, Eastern Cape municipalities still struggle with spending all the MIG allocation each year. This has negatively impacted the developmental local government agenda, National Development Plan (NDP), and Provincial Development Plan priorities (Auditor-General Report, 2018). This is the broader context of this study, whose utilitarian role is to improve the current situation in the Eastern Cape and possibly serve as a reference point for other provinces.

Developing a sustainable MIG implementation strategy for municipal development requires a comprehensive approach that considers the municipality's unique challenges and goals. Moreover, it is crucial to tailor the strategy to the specific context and priorities of each municipality by working together with different stakeholders and community members who will provide valuable insights and ensure the success of the sustainable MIG implementation strategy (Frazer, 2020). Against this backdrop, the study was deemed essential and thus worth undertaking.

1.2 CLARIFICATION OF TERMS AND CONCEPTS

Local Government: The Constitution of the Republic of South Africa (Act No.108 of 1996) establishes three important government spheres: national, provincial, and local. Each sphere has distinct functions and responsibilities; they are interdependent but also interconnected, positioning South Africa as a unitary state, not a federal state, as is the case in countries like Nigeria and America.

Local government is a crucial sphere of government because it is closest to the people. It delivers services directly to local communities. The community's needs, desires, and aspirations are most acutely felt and understood at the local level. By being directly linked to the people, local government is better positioned to be responsible for communities' specific needs and address local challenges effectively.

The local government's primary duty is to deliver essential services, including water and sanitation, electricity, waste management, transportation, local planning, and infrastructure. It also promotes local economic development, social welfare, and community involvement in decision-making.

Local governments in South Africa are typically structured as municipalities, which are further divided into metropolitan, district, and local municipalities, depending on the size and characteristics of the area they serve.

By recognising the local government as an essential sphere of governance, the South African Constitution seeks to ensure that power, resources, and responsibilities are decentralised and shared among the various spheres of government to promote effective service delivery and participatory democracy at the local level.

Developmental Local Government (DLG): DLG is pivotal in South Africa's local governance landscape. The White Paper on Local Government (RSA, 1998) states that DLG is a form of local government committed to working collaboratively with the citizenry and diverse community groups. This collaboration aims to discover enduring strategies that address society's social, economic, and material necessities, thereby elevating the overall quality of life.

A key aspect of DLG is its agenda, which addresses the needs of marginalised members and groups within communities. This agenda includes individuals and groups that are usually overlooked or disadvantaged, such as women, disabled people, and those living in extreme poverty. By acknowledging and actively targeting the needs of these disadvantaged groups, DLG aims to ensure that no one is left behind in the process of social and economic enhancement.

To make DLG meaningful and impactful, targeted interventions and policies addressing marginalised groups' challenges are crucial. Doing this may involve implementing programmes to promote gender equality, providing accessible infrastructure and services for disabled individuals, and designing poverty alleviation measures that benefit those living in extreme poverty.

Municipal Infrastructure Grant (MIG): The MIG is a consolidated financial mechanism in South Africa, amalgamating different capital grants dedicated to municipal infrastructure into one unified grant. Its core aim is to centralise and harmonise efforts in infrastructure development, facilitating municipalities' ability to plan economically and deliver services in an integrated manner.

The MIG was established to financially support municipalities in developing infrastructure projects to improve the provision of essential public services, such as water supply, sanitation, electricity, solid waste management, roads, and community facilities.

The MIG operates through a formula-based allocation system, where grants are distributed to municipalities based on factors such as population size, poverty levels, and the municipality's capacity to implement projects. This formula ensures a fair distribution of resources while also considering the specific needs and challenges different municipalities face.

The MIG's primary goal is to promote sustainable and inclusive development by enhancing municipalities' infrastructure and service delivery capacity. By funding infrastructure projects, the MIG plays a crucial role in improving community living standards, particularly in areas where access to essential services is limited.

Integrated Development Planning (IDP): IDP is a holistic and inclusive strategy for long-term municipal planning and actively involves the entire community and municipal stakeholders in addressing immediate service challenges and fostering enduring development. This approach offers a strategic blueprint that guides the municipality's developmental agenda.

The IDP process is essential for all municipalities, as it is legislatively mandated in South Africa by the Municipal Systems Act of 2000. Municipalities must formulate an IDP that spans five years, reflecting a commitment to developmental objectives that resonate with community needs and ambitions. IDP's primary purpose is to ensure that development initiatives closely align with the communal vision and to channel resources and efforts toward sustainable and comprehensive growth.

IDP is intended to be a participatory process that engages various stakeholders, including community members, civil society organisations, businesses, and government departments. Through consultation and collaboration, IDP aims to incorporate the perspectives and priorities of various stakeholders to form a shared vision and plan for a municipality.

IDP addresses various development matters, including social, economic, and environmental considerations. It addresses issues such as service delivery, infrastructure development, land use planning, job creation, poverty alleviation, and environmental sustainability. Taking a holistic and integrated approach, IDP seeks to ensure that all aspects of development are considered and coordinated for the benefit of the municipality and its residents.

Local Economic Development (LED): LED is a dynamic and complex field of government that seeks to unlock the economic potential of local areas, empower local communities, and foster sustainable and inclusive economic growth. It recognises the importance of local contexts and engagement in shaping development strategies and outcomes to resonate with the local needs of the various communities. This policy serves as a vital conduit, linking the strategy and resources of the central government, encompassing both national and provincial levels, with the collective endeavours and coordinated actions of local entities and communities. This collaboration is aimed at addressing their consensus-driven priorities and seizing identified opportunities. Consequently, this underscores municipalities' critical role in meticulously organising, executing, and overseeing projects to ensure local economic initiatives are targeted and sustainable. Such enduring commitment is a crucial driver for fostering job creation and enhancing the socio-economic fabric of communities.

Accountability: The Constitution of the Republic of South Africa, ratified in 1996, underscores the significance of promoting effective governance and prudent management of public resources. As a cornerstone of democratic governance, accountability is crucial for sustaining public trust and confidence. It essentially involves transparent and responsible reporting and justification of all actions undertaken.

In the South African context, accountability is a guiding principle embedded in the Constitution, particularly highlighted in Chapter 10, which is dedicated to public administration. Section 195 of the Constitution articulates the guiding rules for public administration and prominently features the topic of accountability. It mandates that public administration be accountable, transparent, and responsive, ensuring that government actions and decisions are open to scrutiny and responsive to people's needs.

Furthermore, the Constitution establishes mechanisms to ensure accountability for managing public funds and service delivery. The government's judicial, legislative, and executive departments are essential for holding the government accountable. The executive is responsible for implementing policies and managing public resources. At the same time, the legislative branch, particularly Parliament, has the authority and responsibility to oversee the government's actions through various mechanisms such as question time, debates, and committee inquiries. The judiciary has the power to review and adjudicate matters of accountability and the legality of government actions. All state branches are collectively responsible for upholding accountability in their respective spaces.

In addition to the constitutional provisions, South Africa has established institutions and mechanisms to promote accountability, such as the Office of the Public Protector, which investigates maladministration and corruption, and the Office of the Auditor-General, which audits government finances and reports on irregularities and mismanagement.

Fundamentally, the Constitution of the Republic of South Africa acknowledges the importance of accountability in guaranteeing that the prevailing government remains responsible to its citizens, especially regarding public fund management and service provision.

The Public Sector: The public sector represents the economy segment under state jurisdiction, contrasting the privately managed private sector. The public sector's primary function is to devise and execute policies and initiatives to further the government's social and economic advancement goals. This function underscores the public sector's instrumental role in shaping and fostering the nation's developmental trajectory. The objectives include education, healthcare, infrastructure development, public safety, environmental protection, and social welfare. The public sector is responsible for allocating resources, formulating regulations, and delivering public services to meet the population's needs.

At the national level, the public sector includes government departments, ministries, and agencies responsible for formulating national policies and overseeing their implementation. These institutions collaborate with the legislative branch to develop legislation and regulations that support the government's objectives.

The provincial and local governments are responsible for implementing policies and programmes at their respective levels. Provinces have provincial departments and agencies that align with national policies within their jurisdiction, while local governments are responsible for delivering services directly to communities within their jurisdiction. These services include water and sanitation, waste management, housing, and local infrastructure development.

The public sector is integral to stimulating economic expansion, enhancing social well-being, and guaranteeing the fair allocation of resources and services. Its operations are anchored in a legal and regulatory framework, adhering to the tenets of good governance. This legislative framework ensures that public-sector activities are transparent, accountable, and efficient and is essential for the judicious management of public assets and for fulfilling the government's responsibilities to the populace.

Value for money: Value for money in the public sector involves assessing the combined costs, completion time, risks, and quality to achieve the best possible outcomes and meet predetermined public requirements. It requires a comprehensive evaluation of the whole life cycle of projects and services to ensure that public resources are utilised efficiently and effectively (Menze, 2021:22).

1.3 PROBLEM STATEMENT

There is immense deficiency in municipal infrastructure development despite the efforts made by the government to respond to municipal development as provided for in the Constitution of the Republic of South Africa (1996) and the Municipal Systems Act of 2000. According to Moyo et al. (2022:14), most people in the Eastern Cape Province still face high poverty levels, inequality, and unemployment due to poor development. While social inequality is a national challenge, the situation is even worse in the Eastern Cape due to several causal factors, such as the legacy of apartheid, incompetence, and corrupt government and municipal officials. The Premier of the Eastern Cape Province, Honourable Oscar Mabuyane, in his State of the

Province Address or SOPA (2019), stated that the province faced increasing demand for service delivery. He advocated for intensifying infrastructure development to tackle the prevalent issues of unemployment, poverty, and inequality in the province. The scenario is exacerbated by diminishing national and provincial resources, growing demands for infrastructure improvement, limitations in capacity, and escalating maintenance expenses (Maluleke, 2019).

With a substantial population of 7,230,204, the Eastern Cape Province grapples with significant service delivery shortfalls. These challenges are primarily attributed to the lack of an effective monitoring and evaluation framework across public and private sectors (Moyo et al., 2022; Stats SA, 2022). Despite the initial intentions of policies like the reconstruction and development programme (RDP) and growth, employment and redistribution (GEAR) to empower communities and foster local economic growth, the lack of direct project involvement has led to a scenario where only the most resilient survive (ECSECC, 2015). The National Treasury's Medium-Term Infrastructure Spending Report (2019/2021) highlights that municipalities struggle to utilise their allocated municipal infrastructure support grants effectively and efficiently, primarily due to constraints in project planning, suggesting that funds earmarked for infrastructure enhancements are underutilised, leaving the local economies stagnant, which in turn negatively impacts job creation and the community's overall well-being.

1.3.1 Background to the Research Problem

Since its commencement, the MIG has progressively become a cornerstone infrastructure development policy initiative of the Department of Provincial and Local Government, addressing the nation's social and rural economic development challenges by focusing on eradicating poverty. This focus aligns with the South African Government's commitment to the Millennium Targets set at the World Summit on Sustainable Development, which aim to eradicate poverty and enhance service delivery (DPLG, 2004:2). The MIG's goals and objectives resonate well across the country, particularly in the Eastern Cape and other rural areas, eliciting a favourable response from the populace. The MIG was designed to ensure that, by the year 2013, all South Africans would have access to at least a basic level of service through financial grants allocated for the capital costs of essential infrastructure for impoverished communities, as articulated by the then Honorable Minister, Sydney

Mufamadi, However, the objectives of the MIG have not been achieved since its implementation as South Africans still desire for the basic services. Echoing this sentiment, the then Honorable MEC for the Department of Rural Development and Agrarian Reform highlighted in his policy speech that rural development should be seen as a comprehensive concept that includes not only local economic growth but also social advancement, thereby enhancing service delivery and fostering active community involvement in the developmental process (Moyo et al., 2022:11).

The grant system has undergone numerous changes and reviews over the past few years, leading to the expansion and consolidation of infrastructure grants. Several developmental initiatives in the province have been intended to improve the situation. However, despite these initiatives, people remain in dire conditions due to poor service delivery and sustained poverty (ECSECC Annual Infrastructure Report, 2017).

Access to essential services is an important human right and not just a privilege of the few. For this reason, a comparative infrastructure development and impact analysis on socio-economic development across the country in the post-apartheid era is necessary. The aim should be to establish the extent to which society's general welfare is being developed or enjoyed under the present political context. This approach is based on the National Development Plan (NDP), which raises concerns over policy instability. This document highlights that the government frequently underestimates the disruptive impact of significant policy changes on service delivery. It also acknowledges that this issue is particularly prevalent in the local government sector. Consequently, there has been a tendency to implement additional regulations and legislation for local government to address the challenges faced by municipalities (Siddle & Koeble, 2017:04). Quick observation leads to the conclusion that despite the infrastructure development initiatives, Eastern Cape municipalities still struggle to spend all the MIG allocation each year. This underutilisation of the MIG has negatively impacted the DLG agenda, National Development Plan (NDP) and Provincial Development Plan priorities (Auditor-General Report, 2018:4). Therefore, this aspect constituted the broader context of this study aimed to improve the current situation.

1.4 RESEARCH QUESTIONS

This research primarily focused on the Nelson Mandela Bay Municipality (NMBM), as it is a key player within the local government domain and engages with MIG projects designed to foster sustainable socio-economic growth. Considering the infrastructure services offered by the NMBMM, the study addressed the following pertinent questions to thoroughly understand and evaluate the impact and effectiveness of these initiatives:

1. What are the factors that hinder the implementation of the Municipal Infrastructure Grant in the Nelson Mandela Bay Municipality?
2. What are the existing gaps in implementing MIG projects in Nelson Mandela Bay Municipality?
3. What could be adopted and implemented as an alternative MIG implementation strategy for municipal development in the Nelson Mandela Bay Municipality?
4. What are the ways to improve the MIG implementation strategy in the Nelson Mandela Bay Municipality?

1.5 RESEARCH AIM AND OBJECTIVES

The primary goal of this research was to uncover the obstacles hindering the successful execution of the MIG within the NMBM. The study delineated several specific objectives to achieve this overarching aim, each designed to dissect various dimensions of the implementation challenges, thereby providing a comprehensive analysis of the factors impacting the effectiveness and efficiency of the municipality's MIG projects. These specific study objectives were:

1. To examine the factors impeding the MIG's successful implementation in Nelson Mandela Bay Municipality.
2. To explore existing MIG implementation gaps within the Nelson Mandela Bay Municipality.
3. To explore an alternative MIG implementation strategy for municipal development in Nelson Mandela Bay Municipality.

4. To investigate ways to improve the MIG Implementation Strategy in the Nelson Mandela Bay Municipality.

1.6 RESEARCH METHODOLOGY

This section provides a concise overview of the research methodology employed in this study (elaborated further in Chapter 5). It outlines the fundamental aspects of the research methodology, including the research approach, data collection instruments, data analysis techniques, and the sampling procedure. This overview is crafted to orientate the reader on the methodologies adopted to gather, analyse, and interpret data, ensuring the study's findings are robust, valid, and capable of addressing the posed research questions and objectives. As Dunne (2012:162) articulates, research methodology is an exploration or theoretical analysis of the methods applied in scientific inquiries. It entails a thorough description and critique of the chosen research methods, shedding light on their potential and limitations. This sets a philosophical foundation for the research (Creswell & Creswell, 2018:68) and ensures the methodology aligns with the study's overarching goals.

The methodology section is integral as it delineates how the research was conducted, providing transparency and allowing the study to be replicated. It serves as a roadmap, detailing how data was systematically collected, analysed, and interpreted to draw meaningful conclusions that resonate with the research's aims and questions, as underscored by Babbie (2011:85). This meticulous approach makes a substantive contribution to the field as it ensures the integrity and reliability of research outcomes. The methodology section discusses the elements of a research design followed in conducting the study. These elements include research design, population, inclusive and exclusive criteria, sampling and sample size, data collection instruments, data analysis, trustworthiness, and ethical considerations.

1.6.1 Mixed Method Research Approach

Babbie (2015:89) emphasises that every scientific social research project is underpinned by a research design. This design is fundamental in illustrating key components like data collection methods and data analysis strategies and how these elements are interconnected to guarantee that the research outcomes align with the

research questions. The research design is essential for structuring research to ensure its findings are valid, reliable, and relevant to the objectives.

Goodwin and Jasper (2014:245) suggest that researchers might adopt a normative approach, which serves as a guideline in determining the specific data to be considered in the study and informs the appropriate questions to pose. This approach helps set the parameters for what is to be examined, guiding the researcher in collecting data pertinent and significant to the research's aims. It aids in delineating a clear path for the investigation, ensuring that the research remains focused and aligned with its intended objectives. Yin (2013:37) asserts that a research design serves as a plan or blueprint for conducting research. It can also be described as a strategic framework and is crucial to a study's success because research results can only be accepted, rejected, replicated, or comprehended within the context of the methods used to obtain them.

Concerning the research design, this study adopted a descriptive design. The descriptive research design helps answer what, who, where, how, and when questions associated with specific research (Creswell & Creswell, 2018:58). It outlines the characteristics and data pertaining to the unit of analysis. A descriptive research design involves measuring variables through questions and deriving meaningful relationships from those variables. Additionally, a descriptive research design is employed to gather information about the current status of a specific phenomenon, aiming to describe the existing conditions in a given situation (Creswell, 2014:122). This design was appropriate for the study because it enabled the research to describe the reality regarding implementing MIG projects in the NMBM. In general, a descriptive research design will answer research questions as accurately as possible through the collected data.

This study used a mixed-methods approach due to the multifaceted nature of the research objectives. The mixed-methods approach encompasses gathering, analysing, and integrating qualitative and quantitative data, as described by Creswell et al. (2011). The premise is that merging these two methodologies provides a more comprehensive understanding of the phenomenon under study than employing either method in isolation. Thus, the mixed-methods approach was considered appropriate

for this study because of the specific data collection requirements and its potential to reveal novel insights regarding the subject matter.

Qualitative research primarily seeks to understand how individuals and groups perceive, interpret, and understand their social environment, drawing deeply from personal experiences to gain an in-depth comprehension of human behaviour and circumstances (Hennink et al., 2020:79). Conversely, the quantitative approach focuses on measuring and analysing causal relationships between predefined variables, employing statistical methods to generalise findings.

Questionnaires: The elected officials overseeing the departments of Infrastructure Development and Planning, Spatial Planning, Community Services, Land Use Administration and Management, Integrated Development Planning, and Local Economic Development received a structured questionnaire. Throughout the entire process of collecting research data, English served as the sole language of communication, aligning with the standard business language used across all metropolitan municipalities. Fifty questionnaires were disseminated in total.

Additionally, data was collected using focus group discussions. Focus group discussions involve bringing together individuals with similar backgrounds or experiences to discuss a particular topic of interest. These discussions are generally conducted in small groups of five to twelve individuals (Guide, 2016). The focus group discussions in this research study were organised with groups consisting of five to ten participants each. Two distinct focus group sessions were held, one with male participants and the other with female participants, all of whom were actively engaged in the MIG implementation strategy and related projects. The participants for these discussions were selected purposefully, with their involvement predicated on their knowledge and experience with the MIG in the NMBM. A specifically designed focus group discussion guide was employed to facilitate the collection of qualitative data from the participants during these sessions. A focus group discussion guide contains unstructured questions that can be used as a guideline during the discussion (Guest et al., 2017). During the focus group discussions for this study, the researcher acted as a moderator to facilitate and ensure the smooth running of the discussion sessions. The focus group discussions occurred in a comfortable and conducive venue in the Nelson Mandela Bay Metropolitan Municipality (NMBMM). The focus group

discussions took approximately 45 minutes for each group, or 90 minutes in total for both groups.

Recruitment Procedure: The researcher first met with the municipal manager and the councillor to identify the ideal people with the knowledge and experience of the MIG needed to inform this study. The researcher then explained the study's purpose and the eligibility criteria for participation. Meeting with the municipal manager and the councillor first was beneficial because they helped to identify key and relevant people for participation in this study. The researcher then contacted these potential participants via communication channels such as telephone and email.

Pilot Study: A pilot study is a small feasibility study that is designed to test the methods and questionnaire that will be used on a large or full scale and increases the credibility and reliability of the study (Malmqvist et al., 2019:8). The sample size for the pilot test in this study was five respondents because the literature suggests that the appropriate sample size for a pilot study is 10% of the intended sample size for the main study (Neill, 2022).

The five respondents used for the pilot study included one councillor, one municipal infrastructure specialist, and three municipal officials involved in administering the MIG in NMBM. These five respondents did not participate in the main study.

1.6.2 Data Analysis

Data analysis involves organising the collected data to address the research question (Ingham-Broomfield, 2014:23). Data alone does not provide answers; hence, it must be systematically arranged, processed, and analysed to achieve the research objectives. Data analysis is crucial in a research study, encompassing data editing, coding, and processing. The data for this study was collected via a questionnaire and was analysed using version 29.0 version 26 of the Statistical Package for Social Scientists (SPSS) software. SPSS provides a wide range of robust and reliable statistical analysis functions (Arkkelin, 2014). SPSS was suitable for this study because it has statistical features such as descriptive statistics that the researcher used to analyse data. Data collected from the focus group discussions underwent thematic analysis, a method where data is organised according to overarching themes. These themes, often considered 'umbrella' constructs, are typically pinpointed by

researchers at various stages: before, during, and after the data collection phase (Welman, Kruger & Mitchel, 2005:211). This approach allows for a structured examination and interpretation of the collected data, ensuring that insights are grounded in the perspectives and experiences shared by the study participants during the discussions.

Statistical analysis is a method of analysing raw and unstructured data to draw meaningful conclusions. The statistical tools used in this study included descriptive statistics and structural equation modelling (SEM). Descriptive analysis (means, standard deviations, frequencies, and percentages) was used to describe some variables. SEM evaluates relationships among variables by assessing the underlying patterns of covariances. The measurement model component of structural equation modelling ascertains the validity of manifest indicators and the extent to which they represent the underlying latent variable. In contrast, the structural component helps determine relationships among latent variables in the model (Hussain et al., 2018). Refining scale items and ascertaining reliability was achieved with exploratory factor analyses (EFA).

1.6.3 Document Review

This study engaged in a comprehensive literature review, sourcing material from various texts relevant to public administration, management, and economic sciences to inform the development of a MIG framework. This review encompassed an examination of books, academic journals, integrated development plans (IDPs), service delivery improvement budget plans (SDIBPs), business plans specific to each MIG project within the metropolitan areas, growth and development strategies (GDS), annual municipal reports, conference proceedings, legislative documents, dictionaries, and other pertinent publications, including print media. This extensive literature survey gathered essential insights and foundational knowledge for crafting an effective MIG framework.

1.6.4 Validity and Reliability

Research is deemed valuable and credible when it satisfies the criteria of validity and reliability. The researcher's objectivity influences these criteria, the accuracy of measurements, and the comprehensiveness of the research (Tull & Hawkins,

1987:78). The most compelling research builds on previous findings, enhancing the understanding of the problem (Burns & Bush, 2013:56). Triangulation was employed to ensure the reliability and validity of both quantitative and qualitative data in this study. Triangulation is a research strategy that improves the reliability and validity of research findings using multiple sources of information and can be used in both quantitative and qualitative studies (Noble & Heale, 2019:91). Therefore, the researcher employed this strategy by using questionnaires to collect from selected study participants, such as elected councillors, municipal managers, executive directors, specialists, and labour union representatives, to ensure the trustworthiness of the data. Moreover, the researcher used different data collection instruments, such as questionnaires and focus group discussions, to ensure the quality of the data. Lastly, the researcher used a pilot study to check the quality of the data collection instruments. The pilot study was done to make any necessary changes to the data collection instruments before embarking on the main study.

1.7 ETHICAL CONSIDERATION

Ethics are defined as the expected norms or principles guiding a researcher's moral choices regarding their behaviour during the research process (Cooper & Schindler, 2006:108). The researcher adhered to standard research ethical considerations for this study, including obtaining informed consent from respondents and providing sufficient information for them to make informed decisions about their participation. Additionally, respondents' confidentiality and anonymity were ensured, as they were not required to disclose their identities or any traceable information.

Cooper and Schindler (2006:108) state that respondents' data should be kept confidential. Therefore, all data collected from respondents in this study were handled confidentially. The researcher also sought ethical clearance from the DUT's Research Ethics Committee before data collection. Moreover, the researcher assured informants that the findings, as well as the validity and reliability of the collected data, would be made public in accordance with standard practices (Wiid & Diggins, 2013:60)

1.8 ORGANISATION OF CHAPTERS

This thesis is organised into eight chapters. Below is a summary of each chapter:

Chapter One provides a comprehensive introduction to the study, detailing its background, articulating its problem statement, delineating its aims and objectives, and framing its research questions.

Chapter Two provides a theoretical foundation for deploying municipal infrastructure development grants within public administration and management. This chapter also explores the role of public-private partnerships (PPPs) as a strategic model for fostering social and rural economic development, drawing connections across a spectrum from classical scientific management theories to modern paradigms within new public management philosophies.

Chapter Three regards an extensive literature review, sourcing information from a diverse array of materials, including textbooks, academic journals, theses, conference proceedings, legislative documents, reports, and contemporary analyses. This chapter specifically focuses on the socio-economic development initiatives in the Nelson Mandela Bay Metropolitan Municipality (NMBMM), particularly emphasising the projects underpinned by the Municipal Infrastructure Grant (MIG).

Chapter Four presents selected cases of international municipal infrastructure grants and development endeavours to learn from these countries' experiences.

Chapter Five presents the study's research methodology, discussing the methods and procedures employed.

Chapter Six outlines, interprets, and discusses the research findings of each study objective.

Chapter Seven presents the proposed sustainable MIG implementation strategy for municipal development.

Chapter Eight concludes the study.

CHAPTER TWO

THEORETICAL FRAMEWORK: THE PLACE, NATURE, AND THEORY OF THE LOCAL GOVERNMENT MUNICIPAL INFRASTRUCTURE GRANT IN PUBLIC ADMINISTRATION

2.1 INTRODUCTION

The previous chapter provided the background to the study and outlined the aim, objectives, and research questions. It was essential to set the scene for this thesis and provide the general context within which the present study should be understood.

With that goal achieved, this chapter locates the places, nature, and theories that support the Local Government Municipal Infrastructure Grant (LGMIG) within public administration as part of a search for a sustainable MIG implementation framework. This chapter further elaborates on the study's focus within a broader historical context of the relevant literature. Subsequently, the chapter discusses relevant approaches, concepts, and theories shaping the MIG phenomenon in the context of public administration and its application in the public sector. It searches for a relevant theoretical approach, suggested as the sustainable MIG implementation framework for municipal development as the study's contribution to knowledge.

In social scholarship, investigations primarily rely on theory for proper organisation, as any academic study would assume a theoretical concept by which it would be shaped; this study could not be insulated from this reality. Therefore, the study considered the theories behind the LGMIG and the understanding of its implementation framework concerning NMBMM Nelson Mandela Metropolitan Municipality (Andoh, 2012:24).

As cited in Mditshwa (2020:78), Kaplan elucidates that a theory comprises foundational terms, definitions, and axioms, forming the basis from which propositions are drawn and posited. The essence of a theory is its ability to systematically organise these elements within a coherent framework, allowing for interpretative and disciplinary significance. The propositions derived from a theory are expected to be logically coherent and interpretable. Kaplan delineates four specific interpretations of theory, of which three are pertinent to this study:

- A theory comprises a collection of derived theorems tested to predict events based on observed conditions.
- A theory is an endeavour that seeks subjective understanding and entails an intuitive organisation of perception.
- A theory is intrinsic to intuitively grasping social behaviour, institutions, political systems, and cultures. In this context, it is essential to effectively marshal factual material so that the reader, when viewing the evidence through the metaphors, concepts, and definitions that construct the theory, gains an experience of understanding (Kaplan, 1957:78).

According to Welman and Kruger (2001:11), theory is integral to the scientific framework. In any scholarly domain, authentic research is rooted in a coherent set of statements that delineate a phenomenon, typically encompassing one or more hypotheses. In social science research, theory is the cornerstone of inquiry, providing a structured approach to exploration and discovery. It is about unearthing new phenomena and applying a logical methodology to the investigation process.

The MIG concept is deeply embedded in public administration and management (PAM) and its associated theories. The core principles guiding public administration include societal and economic aspects, effectiveness, efficiency, and integration. This study focused on the process theory and systematic theory, which were selected for their relevance in providing a structured analysis of the effective implementation of the local government MIG programme, specifically in the Nelson Mandela metropolitan area. These theories, originating from classical and contemporary management philosophies (Smit, Cronje, Brevis & Vrba, 2007:31), are crucial as public administration and management is an evolving field where performance and impact assessment is continuously expanding into various institutional functions, necessitating refined and focused evaluative measures.

The significance of these theories to the study is underscored by the shared objectives between the public and private sectors in infrastructure development partnerships, aiming to deliver mutual benefits to the targeted communities. Effective MIG management is, therefore, intrinsically linked to performance management within the public sector, with the overarching goal of generating socio-economic advantages.

This study sought to search for and investigate a sustainable MIG implementation strategy to propose new knowledge of the phenomenon that can influence the programme's sustainability aspect. Andoh (2012:25) notes that management theories are separated into classical and contemporary approaches. This study searched for a sustainable MIG implementation framework using the Nelson Mandela metropolitan municipalities in the Eastern Cape as a case study.

This chapter is structured into three distinct sections. Initially, it offers a concise overview of key concepts such as the MIG, public administration and management, and sustainable development. This section aims to elucidate various ideas and subjects that amalgamate knowledge relevant to this study. Subsequently, the methodologies employed in social sciences for data acquisition are outlined (Andoh, 2012:27), providing insight into the research tools utilised in this investigation. Finally, the chapter delves into the theoretical frameworks pertinent to MIG and its role in the public administration developmental paradigm. It explores fundamental theories within public administration and management, which served as the foundational basis for this study, while also examining specific developmental approaches within this context.

2.2 MUNICIPAL INFRASTRUCTURE GRANT AND PUBLIC ADMINISTRATION AND MANAGEMENT CONCEPTS

The MIG concept is deeply entrenched in the field of public administration. It is applicable across both conventional and contemporary public administration and management paradigms (Andoh, 2012:36). The ideal goal of the latter is to improve infrastructure and promote sustainable development in the public domain of resource management (Andoh, 2012:38). The consensus within the academic community, both broadly and in detail, is that the public administration discipline is as ancient as the concept of government itself. However, infrastructure development emerged as a scientific, academic subject following an official publication in 1887 by the American President, Woodrow Wilson, who called for public administration to be recognised as an academic discipline and professional speciality. Therefore, this thesis defines and discusses relevant ideas in public administration, management, and MIG for contextual application.

2.2.1 Public Administration: The Practice

De Waldt and Helmbold (1996:17) differentiate between public administration as an academic discipline and public administration as a practical activity. Public administration as a theory is the field of study that delves into administrative processes and governmental activities, analysing their underlying principles and theoretical frameworks. It is an academic pursuit that seeks to understand the complexities of governing structures and their functions. Conversely, public administration in practice represents the practical application of these studies, and it is about the actual delivery of government services to the public, the execution of policies, and the day-to-day management of governmental affairs to benefit society. Ijeoma (2013) offers a nuanced perspective, emphasising that the practice of public administration, at its core, is about managing government affairs to serve the public interest. It encompasses a structured approach to enacting and enforcing policies.

Shafrits and Hyde (2010:58) contribute to this discourse by highlighting that administration is the most conspicuous component of government, essentially government in action. The operational side of governance is where policies come to life and public services are rendered, underscoring its longstanding existence alongside the government. These insights call for a balanced understanding of public administration that appreciates both its theoretical underpinnings and its practical implications, fostering a comprehensive approach to studying this vital aspect of governance.

The term 'administration' in social sciences is predominantly associated with the public sector. Baxter (1991:99) defines public administration as the operational mechanisms of executive government or, more specifically, the executive branch itself. In this context, administration is understood as the senior management echelons tasked with the development and execution of governmental policies. Goodnow, as cited in Shafrits and Hyde (2010:16), posits that administration and politics, despite their distinct roles, are inextricably linked, suggesting that administrative actions are inherently political to some extent. This perspective broadens the application of administration beyond the public sector to include the private sector, acknowledging the universal principles of administration across different domains. Nevertheless, this

study preferred a broader, more inclusive perspective on administration that encapsulates its essential principles and functions irrespective of the sector.

Stroh and Van der Westhuizen (2008:58) assert that, from this perspective, it is acknowledged that administration involves specific generic functions and activities, such as policy determination and execution, organising, financing, personnel provision and utilisation, work procedures and methods, and control, with all members of the institution being responsible for these tasks. Administration is fundamentally about managing and executing the various functions within an organisation's operational ambit, aiming to achieve the institution's goals and objectives. It acts as a dynamic force driving a series of coordinated activities and tasks towards achieving intended outcomes. Botes, Brynard, Fourie and Roux (1998:257) elucidate from a scholarly perspective that public administration is principally focused on the enactment of government policies across all tiers of governance, national, provincial, and local. This enactment serves as a mirror, reflecting societal issues that require attention and resolution.

In contemporary South Africa, local government is encouraged to employ diverse developmental strategies and methodologies to elevate service delivery, as prescribed by legislative and policy directives like the White Paper on Transforming the Public Service (RSA, 1997). Such initiatives align with the post-apartheid government's commitment to rectify the expenditure disparities of the past government. The genesis of the MIG and its strategic management stems from addressing the uneven infrastructure development of the old South Africa, which was predominantly skewed towards specific regions, sidelining numerous rural and urban informal settlements from significant fiscal investment, thereby exacerbating economic and social disparities. These disparities, albeit diminished, still resonate in the post-1994 political landscape.

To amend and revolutionise this legacy, the African National Congress (ANC) (RSA, 1994) implemented this policy framework to rectify historical inequities, placing a pronounced emphasis on infrastructure enhancement to:

- Create an enabling environment for investment;
- Be a catalyst for economic growth;

- Promote industrial development; and
- Promote local rural economic development.

The White Paper on Transforming the Public Sector (RSA, 1997) led to the development and introduction of the Reconstruction and Development Programme (RDP), whose details are provided in Chapter 3. All these achievements by the ANC government as part of rebuilding South Africa towards a more democratic and developmental country were made possible by sticking to basic public administration and management principles, which govern how resources are administered and managed. Cox, Buck and Morgan (2011:12) assert that the evolution of public administration practices and academic theories is crucial for enhancing government performance.

Drawing from the insights provided by various authors and scholars, it becomes apparent that public administration and management are essential elements for an advancing public sector. The public sector's effectiveness and responsiveness to the nation's requirements hinge on the robustness and adaptability of its public administration and management frameworks. These disciplines are instrumental in equipping the public sector with the necessary tools and methodologies to address and fulfil the country's diverse needs efficiently. The government alone cannot respond to the country's socio-economic challenges speedily. Achieving this goal requires combined and concerted efforts from all stakeholders from the private sector, third sector (non-governmental organisations, community-based organisations, and similar), and civil society to rally behind the country's developmental agenda.

2.3 PUBLIC ADMINISTRATION THEORIES

The main objective of incorporating public administration and management theories into this study was to establish a theoretical foundation for the research project. Grounding studies or research projects in one or more theories is common practice, as it provides a framework for understanding and analysing the subject matter. The MIG phenomenon needs to be fully addressed to effectively manage the factors involved in implementing MIG in metropolitan administration. According to Willing (2001:9), conducting research is impossible without a theory. In this context, Kotze and Van Wyk (1986) highlight that theoretical relationships within research provide

justification due to their empirical and scientific nature. Kaplan and Norton (1992:90) and Binza (2012:51) support this perspective, although from different angles. They argue that a theory consists of a set of primitive terms, definitions, and axioms from which systematic propositions are derived. These propositions must be logically consistent and interpretable. Essentially, theory forms the foundation of all scientific inquiry and contributes continuously to expanding knowledge. This study established essential guidelines to ensure the research maintained scientific rigour by including relevant public administration and management theories. This inclusion was based on the understanding that the study may have suffered from significant academic deficiencies without a clear comprehension of the role and significance of the MIG within public administration and management.

Furthermore, public administration theory is closely associated with organisational theory. As briefly outlined below, Smit and Cronje (2007:30–51) categorise various administrative theories into classical and contemporary groups. While these theories are not directly tied to the study, they provide foundational insights into the principles of effectiveness and efficiency crucial for modern public administration and management. This theoretical framework was instrumental in analysing and evaluating the management of the MIG, ensuring that the study addressed key aspects of administrative performance and operational efficiency. Bailey (1968:129) states that public administration theory aims to integrate the insights of the humanities with validated propositions of social and behavioural sciences and apply these to enhance governmental processes aimed at achieving politically legitimised goals through constitutionally mandated means. With this in mind, administrative theories are discussed below to understand the MIG's role in practising public administration.

2.3.1 Classical Organisation Theory

Classical organisation theory emerged in the late eighteenth and early nineteenth centuries during the height of the Industrial Revolution in the Western world. This theory aims to enhance efficiency and productivity in industrial settings by establishing universal principles and structures that can be applied regardless of the specific circumstances or context. One of the underlying assumptions of classical organisation theory is that administration and organisational structures are universal as the principles and practices of organising and managing people can be applied similarly

across different industries, organisations, and cultures. The theory suggests that fundamental principles of administration apply to all organisations. The inherent biases of classical organisation theory emerged to enhance productivity and capitalise on the unequal power dynamics among individuals (Chakrabarty & Chand, 2012:49). This theory is underpinned by four fundamental pillars: division of labour, scalar and functional processes, organisational structure, and span of control (Chakrabarty & Chand, 2012:51).

Pioneers of this theory, such as Henry Fayol, Luther Gullick, Lyndall Urwick, and J.D. Mooney, made substantial contributions in the early 1920s by framing administration from a managerial perspective. They emphasised five central elements of administration: planning, organising, commanding, coordinating, and controlling. These elements are particularly relevant to municipal infrastructure development projects, where planning is a critical activity conducted by top management that influences all other management functions by guiding resource allocation and institutional outputs (Smit & Cronje, 1992:91).

However, classical organisation theory has faced significant criticism due to its weaknesses such as a heavy focus on establishing rigid institutional structures while neglecting the essential human elements within an organisation. As a result, some scholars critique classicists for being overly fixated on the formal aspects of organisational structure at the expense of human factors (Chakrabarty & Chand, 2012:53). Despite these critiques, classical organisation theory continues to be influential, serving as a foundational framework for contemporary organisational theories (Denhardt & Denhardt, 2007:77) and a vital basis for effective performance management. Therefore, to address these weaknesses the human element needs to be integrated by combining the human resource practices that focus on employee engagement, motivation, and well-being, organizations can create a more balanced approach that values structure and human contributions to achieve the organisational goals. Moreover, while classical theories advocate for rigid structures, integrating HR practices can promote flexibility. This can be achieved by adopting active methodologies that allow for cross-functional teams and decentralized decision-making. Such practices enable organizations to respond more effectively to changes

in the environment, aligning with the modern approaches that recognize the need for adaptability.

2.3.2 The Scientific Management Theory

Chakrabarty and Chand (2012:53) highlight that the development of the scientific management theory marked a significant evolution from traditional industrial management practices. During the European Industrial Revolution, management faced increasing challenges triggered by the growth and consolidation of large-scale industries, which the First World War further intensified. The era was characterised by resource shortages, heightened competition, and greater complexity in business operations, driving the demand for more effective management science. Consequently, scientific management theory emerged as a response to these pressing needs and has since played a crucial role in shaping the understanding of management within the academic realm.

Frederick Taylor, as referenced by Nigro and Nigro (1990:61), was a proponent of the idea that there exists a single optimal method for performing any task, with efficiency relying on a methodical and organised approach to management. This responsibility falls on the manager's shoulders. Taylor and his contemporaries at the forefront of the scientific management movement outline the primary goals of this theory, which include:

- Assessing industry and market trends involves analysing industrial and market dynamics to streamline operations effectively. The goal is to protect investments, maintain the viability of the enterprise as an employment provider, and ensure ongoing operational continuity and job stability.
- Securing continuous employment and earnings by accurately assessing market conditions and strategically planning operations guarantees continual employment and steady income opportunities.
- Fostering worker development—this aspect of scientific management emphasises providing workers with opportunities better to understand their roles and the overall operational processes. The intent is to cultivate self-confidence and self-respect among employees.

- Creating a harmonious work environment—the theory stresses the importance of eliminating environmental irritants and sources of friction that hinder workplace harmony. Promoting mutual understanding, tolerance, and teamwork among workers is essential for enhancing productivity and worker satisfaction (Chakrabarty & Chand, 2012:56).

Taylor developed his theory in response to the disarray he observed in various organisations of his era. Committed to enhancing operational methodologies, he crafted a theory to foster systematic improvement. Taylor establishes several foundational management principles:

- **Time study:** Productivity should be quantified based on the time required to complete tasks, with standard times established for each activity.
- **Performance:** Compensation should be directly linked to the quality and quantity of work performed, correlating directly with the worker's capabilities.
- **Planning methods of work:** Managers should be well-versed in scientific management principles, advocating for their application in managing and controlling work processes.
- **Functional management:** Organisations should be structured strategically to coordinate various industrial activities efficiently (Taylor, 1947:37; George, 1968:91; Villiers in Andoh, 2012:33).

Taylor's principles aim to optimise productivity and effectiveness within an assembly line context, where inputs and processes are meticulously managed to ensure the desired outputs. However, Smit and Cronje (2007) argue that an overemphasis on individual performance without considering broader environmental factors can limit the applicability of these principles in public administration and management. Furthermore, the emphasis is on short-term gains in productivity rather than long-term employee development and engagement. These weaknesses highlight the need for a more holistic approach to management that considers both efficiency and the human aspects of work.

The strengths of scientific management lie in its focus on efficiency, economical operation, and developing skills relevant to the production systems and value chain. It acknowledges that productivity improvements require appropriately skilled workers (Shafritz & Hyde, 2008:36). Taylor's theory advocates dividing work into manageable segments to help employees better understand their tasks and assist managers in effectively executing performance management duties. The theory emphasises a process-oriented approach, ensuring tasks are completed promptly and systematically, aligning with the broader administrative processes where specific outcomes are targeted (Cloete, 1986:4). This systematic method underscores the scientific management's commitment to precision and order in achieving set organisational objectives.

Public administration and management theories provide crucial insights into implementing MIG projects, underscoring their potential for effective and efficient execution based on established management principles. These theories, which emphasise performance management, institutional structuring, and optimal resource allocation, align closely with the socio-economic development objectives inherent to MIG projects. Furthermore, these management theories are integral for applying project management methodologies that emphasise crucial aspects such as time management and strategic planning for successful outcomes. A thorough understanding of the project's framework is essential for its smooth implementation, as well-planned strategies do not automatically guarantee successful execution.

Productivity and functionality, core elements of Taylor's management principles, are particularly relevant to the MIG, which mirrors private sector principles of structured value chain strategies in its implementation. Given the current fiscal pressures the government faces, influenced by various socio-economic factors, there is an increasing imperative for the public sector to forge partnerships with the private and third sectors. For instance, Minister Dr. Blade Nzimande highlighted during a Parliament briefing in October 2015 that the demand for providing free essential services to university students necessitates collaboration with the private sector.

Applying scientific management theories within modern public administration can significantly contribute to developing a capable state that effectively fulfils its constitutional responsibilities. These theories provide a framework for public

administration in practice, ensuring that public sector projects like the MIG are grounded in systematic, theory-informed practices.

Moreover, public administration and management are inherently influenced by the environment in which they operate, as noted by Fox, Schwella and Wissink (1991:10). This environment includes structured processes and a body of activities that extend beyond organisational boundaries (Robbins, 1980:19–20). Thus, effective public administration and management should involve public participation, reflecting community needs in service levels, budget allocations, and project planning. This approach ensures that planning is community-based and evidence-driven, yielding more impactful outcomes than isolated efforts. This integrative perspective underscores the vital role of environmental considerations in managing complex organisations within the public sector.

2.3.3 Bureaucratic Theory

Throughout history, no organisation has operated without some form of bureaucracy, as every collective effort requires a bureaucratic structure. This structure stems from a universally recognised need within modern organisations for attributes like precision, speed, unambiguity, continuity, efficiency, regularity, consistency, cost reduction, unity, and strict subordination (Chakrabarty & Chand, 2012:60). While bureaucracy is intended to enhance efficiency, it can paradoxically impede it, often constraining the agility of an organisation (Albrow, in Chakrabarty & Chand, 2012:60). Despite facing significant criticism, Weber defended his theory of bureaucracy by detailing specific characteristics that define a bureaucratic system:

- There is a clear hierarchy and well-defined authority structure for officials, where each official knows their rank and duties within the organisation.
- Officials' specified functions, roles, and responsibilities are explicitly detailed, preventing ambiguities in job functions.
- Appointments are based on contracts, whereby officials are hired through formal contracts that clarify the terms and conditions of their employment.

- Impersonal duties: Staff members are bound to perform their duties without personal involvement, focusing solely on their official responsibilities.
- Officials are chosen based on relevant professional qualifications, typically verified by diplomas from formal examinations.
- Officials receive a salary and often pension rights, providing financial stability and incentives.
- The position held by an official is considered their primary or sole professional activity.
- A standardised system oversees and disciplines officials, ensuring consistency and fairness in administrative actions (Henderson & Parsons, 1999:18)

Bureaucracy persists in modern public administration and management, manifesting in ways that suggest it remains an integral part of most organisations, particularly within government and state bodies. The present environment necessitates structured methods, systems, and controls to steer organisations toward achieving their goals and objectives. Weber's model of bureaucracy continues to influence this framework, facilitating performance management and compliance with statutory policies, which are crucial for evaluating the efficacy of service delivery programmes intended for community beneficiaries (Henry, 2010:153). Furthermore, bureaucracy is intertwined with the public choice theory, which applies economic principles to political processes and institutions. This approach is rooted in methodological individualism and rational choice and supported by the New Right philosophy. It underscores the persistent relevance of bureaucracy in public administration and management (Niskanen, 1971:73). This enduring relevance suggests that bureaucratic structures, despite their drawbacks, will continue to be a fundamental aspect of organisational governance, particularly in the public sector.

2.3.4 Decision-Making Theory

Decision-making theory is integral to administration because decisions must be made at every stage within an organisation (Kochenderfer, 2015:5). It is a critical component in policy formulation. The decision-making approach encompasses three distinct strategies: the bargaining approach, the participative approach, and the public-choice approach (Kochenderfer, 2015:7). Decision-making is typically not a one-time action

or the sole responsibility of an individual; instead, it involves a series of steps that include gathering feedback, implementing follow-up actions, and involving other significant stakeholders. The sequence of steps in the decision-making process typically includes:

1. Identify the problem
2. Gather related information and data and figure out tentative options. Gather related information and necessary data and formulate potential solutions.
3. Weigh options and assess the tentative solutions by consulting with subordinates and gathering their opinions.
4. Decide, evaluate its efficacy, and choose the most appropriate option after careful consideration.
5. Evaluate the decision and review its effectiveness once implemented to determine if it has successfully resolved the issue.
6. Collect feedback on the outcomes and adjust the decision if necessary (Slocum, 1996:41; Chakrabarty & Chand, 2012:82).

Given this outline of the decision-making process, it is evident that it is not a straightforward task within an organisation but involves multiple complex steps. This complexity arises because every decision impacts the organisation's resources, including human and financial resources. Consequently, as previously discussed, this necessitates well-informed leadership on internal and external environmental factors. The decisions taken can directly or indirectly impact the organisation's operational efficiency, potentially compromising performance.

2.3.5 Contemporary Management Theories

Despite categorising modern management theories into new public management (NPM) and public choice theory, diverse opinions and criticisms continue to surface. NPM is distinguished by its adaptability to the specific environmental conditions of individual countries, aiming to enhance effective and efficient performance management. Similarly, contemporary management strategies, including public choice theory, governance theory, and NPM, are widely recognised by scholars in public administration, management, and economics for their characteristics that draw

on private sector management practices, which are market-driven and focused on improving service delivery through policy development and implementation (Eriksson, 2016:322–339; Boyne, 1998:85).

Public choice theory offers insights into the public sector's decision-making areas, examining the constitutional rules that govern collective decision-making processes often influenced by political activities. Buchanan and Tullock (1962:82) note that public choice theory is pivotal in analysing the mechanisms of government, suggesting that economic and political scholars commonly view individuals as being driven by self-interest in their actions and relationships.

The public choice theory emerged in the early 1950s as a branch of public administration and economics focused initially on taxation and public expenditure, addressing challenges in service provision and (rural) economic development. It points to the bureaucratic tendencies that prevail in today's public sector that often delay internal performance and service delivery processes and are not effectively guided by market-driven income generation (Eskridge Jr, 1988). Historically, public organisations have enjoyed a non-competitive and monopolistic presence in economic markets and service delivery. Improving social and rural economic conditions necessitates cooperative efforts between the public and private sectors (Niskanen, 1971:77). An example of this is the practice where government-financed bureaus outsource the actual delivery of goods and services to the private sector, highlighting a gap in the public sector's capacity to utilise government resources efficiently. The White Paper on Improving the Public Sector (RSA, 1997) underscores the necessity of transforming the public sector into a capable state that can effectively meet its constitutional obligations, setting clear, measurable performance indicators and targets for major developmental projects that align with the perspectives regarding public choice held by scholars in public administration and economics.

The theory is especially valuable for policymakers and decision-makers responsible for making well-informed decisions on behalf of their constituencies while carefully considering the substance of policy documents. Although this theory was initially adopted by the United States Government, stemming from capitalist ideologies, its application remains pertinent today as a guideline for government service delivery

planning and execution and in fostering an environment conducive to partnerships (Howlet & Ramesh, 2003:16; Williams, 2003:114).

In the context of this study, the public choice theory is instrumental in shaping the framework for implementing municipal infrastructure development. It serves a crucial role, highlighted by two main aspects of this research: it enables a comprehensive evaluation and determination of policymakers' actions (Eskridge Jr, 1988:68). This means that policymakers, such as legislators and councillors, are expected to align their policy developments with the needs, aspirations, and interests of the public, connecting these directly to realistically available resources to facilitate the prioritisation of essential areas.

Furthermore, the Constitution of the Republic of South Africa (RSA, 1996:7) demands accountability in managing state resources. Political leaders and appointed officials must comply with constitutional provisions when addressing public interests and needs. However, this accountability is not always evident in practice. Rampant corruption and fraud in South Africa impede social and economic development, especially at the grassroots level, where it is most crucial. Arrow (1951:95) also notes that public choice theory integrates well with other theories, such as game theory, aiding public choice theorists in understanding political conflict resolution and applying mathematical models for voting strategies, also known as social choice. Thus, it can be argued that effective governance and well-implemented MIG frameworks can yield positive outcomes for metropolitan governments and their constituents.

Proponents of new public management (NPM) have consistently advocated adopting private-sector management styles and performance management systems within the public sector to enhance its management practices. The NPM approach emphasises measuring performance and outcomes in strategic planning rather than focusing on inputs as metrics of efficiency and effectiveness (Vigoda, 2003:815). However, classical and contemporary NPM theories do not necessarily prioritise efficiency and effectiveness over performance improvement (Chachter, 2007:734). Although contemporary management theories share some values, they do not possess a uniform perspective (Cox et al., 2011).

The movement to reform and reinvent government underscores the importance of economic growth, performance management, efficiency, and the reduction of wasteful spending, promoting the integration of private-sector management practices within public institutions. According to Cox et al. (2010:57), NPM integrates elements of programme evaluation from previous theories to enhance programme and managerial effectiveness in the public sector. These contemporary management theories differentiate between the NPM and public choice theories.

This thesis discusses the ongoing dialogues about professionalising the public sector, suggesting that the sector should employ NPM to evolve from traditional management practices and incorporate effective strategies from the private sector to fulfil its mandate better. A significant gap in government management has been caused by effective leadership. NPM theory is closely linked with public choice theory because public choice emphasises decision-making based on public needs and the principle of allocating resources where they are most needed. This focus has led the government to pursue partnerships as part of a broader initiative to wholly reinvent the public sector, which would necessitate significant transformation, restructuring, and redefinition. The following section introduces and explores the key complementary developmental phases in public management.

2.3.6 The synthesis of theories and major themes

The formulation of public administration theories such as classical organization theory, scientific management theory, bureaucratic theory, decision making theory, and contemporary management theories are essential starting point for making the most appropriate decisions on the implementation of sustainable municipal infrastructure grant funding (Lamdi,2015). Infrastructure projects are expected to be executed based on strict procedures and accountability as dictated by the Classical organization and bureaucratic theories (Ferduson,2016). Whereas the scientific management theory aids in providing strong support for efficiency and optimisation, which is essential in utilising scarce public resources for maximum impact. With decision making theory, municipalities can undertake infrastructure initiatives that best serve the community and promote sustainability through informed decision making, stakeholder participation and consensus (Wall,2007). In conclusion, contemporary management theories ensure infrastructure projects are responsive to changing environmental and

needs of the society. This means that these theories can be used as a guideline to formulate a strategy for the municipal infrastructure grants implementation that prioritises sustainability in the long term.

2.4 DEVELOPMENT MANAGEMENT PHASES

The evolution of management as a discipline and practice is characterised by distinct developmental phases: the scientific management, the behavioural or people-oriented, and the contingency theory phases. While an in-depth analysis of each phase is beyond the scope of this thesis, it is crucial to highlight each phase's key elements briefly. These phases are significant as they influence the application of the theories mentioned above, particularly from the development and management perspective (Van De Waldt & Du Toit, 2011:58).

2.4.1 The Scientific Management Phase

As previously discussed, Taylor (1978/79) proposed a framework for scientific management in his 1911 work titled "The Principles of Scientific Management." During this period, the Industrial Revolution had ushered in mass production, leading to increased demand for goods and resulting in significant bottlenecks due to factors such as:

- The urgent need for greater efficiency;
- The unsatisfactory administration of affairs; and
- Uncertainty regarding the continued availability of sufficient national resources and labour to meet the demand for manufactured goods.

Consistent with these factors, the framework introduced by Taylor in 1911 as a result of the Industrial Revolution incorporated the following principles:

- Identifying the single best way to perform each task to achieve optimal results
- Scientifically selecting personnel
- Remunerating each worker in direct proportion to their productivity rather than providing a basic wage, and
- Distinguishing between the roles and tasks of managers and workers.

Regarding the principles outlined above, the scientific management phase primarily aimed to enhance productivity within industrial settings rather than public administration (Taylor, 1947; George, 1968:90). This approach prioritised performance management, emphasising measurable outputs upon completion. However, Smit et al. (2007:1128) critique this focus, arguing that isolating individual work performance and concentrating solely on internal processes while neglecting external environmental factors can restrict the relevance of industrial performance management methods in public administration and management.

Fundamentally, MIG projects require extensive management of resources along with the scanning of environmental factors. In the same context, the management of MIG projects should be measured in terms of the pre-determined founding objectives within the parameters of the project management approach to ensure it meets scientific management processes. Equally, performance management of MIG projects is linked directly to effective planning, budgeting, and the implementation of all socio-economic developmental pillars that respond to a citizen's needs. The scientific management phase focuses on rewarding well-performing workers while improving productivity. In modern terms, the following developmental management phase has a different angle to performance management within the organisation or department.

2.4.2 People-oriented Phase

The people-oriented phase was the second phase of the evolution of management as a discipline and practice. This phase brought refinements and advancements in production processes and service provisioning. This phase also saw improvements in the diversity, complexity, and specialisation of jobs. It gave rise to the development of the contingency theory phase during the late 1950s due to the realisation that the nature of a particular environment and circumstances determine a manager's management and productivity.

2.4.3 Contingency Theory Phase

This contingency theory phase emphasised the environment and situational factors and how they impact management styles.

With these three outlined developmental processes of management theories, it becomes evident that logical, systematic, and focused planning and implementation are essential for enhancing organisational performance. MIG projects are also subject to these principles due to the nature of partnerships aimed at accelerating efficient and effective service delivery. This approach necessitates that MIG objectives be achieved as economically as possible (Benington & Moore, 2011:647).

2.5 MANAGEMENT APPROACHES

Fox, Schwella and Wissink (1991) note that the scope and nature of public administration within government organisations encompass a broader range than management alone. Management is considered a subset of public administration, indicating that effective management cannot occur without public administrators' enabling outputs or outcomes. Additionally, it is essential that public managers have a clear policy statement that defines the specific objectives of their department or institution before they can effectively carry out their managerial roles. Managers must employ public administration processes to carry out managerial functions, such as developing structured strategies and frameworks to ensure the entire organisation runs appropriately, whatever the case may be.

Multidisciplinary Approach: Du Toit and Van Der Waldt (1999:91) state that public administration must be studied within its context, making any analysis inherently interdisciplinary and multidisciplinary. This perspective suggests that the field of public administration is continuously shaped by insights from related disciplines, theories, and concepts, which enhance its substance and facilitate the development of effective public service delivery strategies. Private and public administration's dynamic and ever-changing environments necessitate collaborative inquiries and targeted theoretical frameworks.

From these discussions, it is clear that public administration as a theory should be approached as an interconnected discipline and integrated with other fields of study to ensure its ongoing development and relevance. The ongoing discovery and integration of new theories within public administration is crucial for maintaining its practical significance and impact. Furthermore, continuously discovering theories within public administration enables feedback loops between theory and practice.

Theories provide a framework to comprehend and evaluate what is happening, whereas practice influences and contributes to the formation of theories.

This chapter has thoroughly examined both administrative and development theories. A shared vocabulary that addresses key factors such as efficiency, effectiveness, leadership, systems approach, and administrative order, among others, emerges from this discussion concerning the research study. However, what is particularly noteworthy is the widespread adoption of NPM and public choice within contemporary management theories, emphasising an evidence-based approach. This common orientation highlights the importance of data-driven decision-making in enhancing the efficiency and effectiveness of public administration practices. In addition, with the above contentions, MIG implementation has a vast space within the development of public administration and management theories. In the modern South African metropolitan governments, MIG projects cannot be successful outside the theories mentioned above because of issues such as decision-making, public interests, and metropolitan responsibility to deliver and provide sustainable services to communities whilst considering the needs and aspirations of all stakeholders. Using public administration development theories in implementing MIG projects ensures efficiency and effectiveness, provided all other conditions remain constant. The public sector must define precisely what needs to be accomplished and the anticipated outcomes for any MIG procurement.

It is essential to situate the MIG within the discipline of public administration and management as it establishes a solid foundation for the context in which MIG strategies are applied. This grounding is crucial because these initiatives do not occur in a vacuum but within a defined environment, in this instance, the metropolitan government setting.

2.6 CONCLUSION

Conceptualising the management of the Municipal Infrastructure Grant (MIG) within metropolitan government institutions enables the effective pursuit of MIG development objectives. It deepens the understanding of strategies to achieve these foundational goals. Evaluating municipal MIG performance concerning socio-economic development needs has become vital for public administration and management

policymaking. As discussed in the administrative and development theories, managing the performance of MIG projects, whether to enhance efficiency or guide policy interventions, depends on access to detailed information about the quality and quantity of services delivered and their associated costs. Additionally, aligning MIG performance management with core public management principles within the new public management (NPM) framework is essential.

The NPM approach underscores managerial efficiency in the public sector, fueled by the notion that private-sector management practices are generally more effective than those in the public sector. This perception has prompted the government to explore partnerships with the private sector. According to this perspective, decision-making in the public sector tends to be slower and less decisive compared to the private sector. Furthermore, numerous public administration and management scholars have advocated for municipal infrastructure development as a viable strategy for local economic development (LED). This approach promises significant societal benefits, particularly in combating poverty, unemployment, and inequality, thereby contributing to broader social welfare.

The contemporary structure of public institutions can be associated with the classical method of organisational management, which extended from the late nineteenth century to the early 1920s. The great popular contributors to this approach include the likes of Frederick Taylor, whose focus was based on the productiveness of individual workers, whilst Henri Fayol focused on how large organisations manage processes, and Max Weber preoccupied himself with the idea of organisational structuring. In this context, the primary objective of the public sector is to enhance the general welfare of the population it serves.

This chapter introduced several key philosophies pertinent to public service provision. Among these, the theory of public interest stands out alongside the competitive theory that compares the operational dynamics of private sector entities and public institutions. These theories provide a framework for understanding how services are delivered and how they can be optimised to serve the public good, better.

Although the private sector is monumental, as it comprises organisations/institutions of different dimensions, complications, and interests, this study considered the private sector as the entirety of organisations that are external from the public sector domain and involved in activities related to profits.

This distinction is crucial because some organisations, even those outside the public sector, have limited relevance to the context of public-private partnerships (PPPs) discussed in this study. The public sector's primary focus is to serve its citizens and to create an environment conducive for the private sector to operate effectively through informed decision-making. Public institutions utilise resources safeguarded by the Constitution of the Republic of South Africa, with their expenditures scrutinised for value in terms of cost and actual output, among other metrics. Therefore, conceptualising these two sectors' roles and operational frameworks is vital for establishing a solid foundation for their partnership. Such clarity ensures that both sectors can effectively engage while adhering to their foundational principles. This understanding typically benefits consumers or constituents, and thus, initiatives like the MIG should be supported to foster a responsive public sector that meets communities' needs. The following chapter, Chapter 3, delves into the legal foundations of MIG, further exploring its structural and regulatory contexts.

CHAPTER THREE

LEGAL FOUNDATIONS OF MUNICIPAL INFRASTRUCTURE GRANT IN SOUTH AFRICA

3.1 INTRODUCTION

The previous chapter explored literature related to the places, nature, and theories that support the Local Government Municipal Infrastructure Grant (LGMIG) within the public administration discipline as part of a search for a sustainable MIG implementation framework. The current chapter explores and discusses the legislation that forms the basis for municipal infrastructure grants in South Africa. As is the norm in other democratic countries, the Constitution is South Africa's supreme law. Any decisions taken and any established institution should not contravene the Constitution. The same goes for the constitutions of political parties, as well as those of private companies. They are all guided by the national Constitution. Within this broader context, the Constitution of the Republic of South Africa (RSA, 1996:19) states that municipalities (local government) are part of the three government spheres, the other being the provincial and national governments.

Chapter 3, Section 40(1) of the Constitution establishes that government in the Republic is constituted at national, provincial, and local levels, which are distinctive, interdependent, and interrelated. Furthermore, Section 40(2) stipulates that all spheres of government must observe and adhere to the principles outlined in this chapter of the Constitution and conduct their activities within its parameters.

The South African Government is also mandated to formulate inclusive regulatory and statutory frameworks to guide various aspects of society, including development, which relates to this study. The frameworks, comprising several deliberate policies and legislation, are typically tailored toward achieving specific goals that enhance the general welfare of the society of interest (Manyaka, 2014:127). Through various legislation to be discussed later in this chapter, South African municipalities are expected to manage and structure their budgetary and administration process so that essential needs are given high priority. In addition, the process should also be tailored to foster local communities' social and economic development. Local governments are also explicitly mandated to provide adequate and sustainable services to communities

within their jurisdiction. These essential services include water, education, healthcare, and food security. However, adequate and suitable infrastructure must be in place to deliver these services effectively and satisfactorily. Regarding the essential services highlighted above, infrastructure such as schools, hospitals, water distribution networks, and roads facilitating access to some of these services are essential.

Therefore, it is paramount to implement a regulatory and policy framework that promotes infrastructure development to ensure equitable service delivery. This implementation aligns with the Constitution of the Republic of South Africa (1996), which requires all three spheres of government to promote adequate provision of essential municipal services and equal welfare to South African citizens regardless of their race, creed, or geographical location. Although there is co-dependence and interconnectedness among the three spheres of government, each has specific responsibilities and mandates related to socio-economic development and equitable provision of quality services to all community members. According to Mogkethi (2021:72), all South Africans should share and benefit equally from the country's wealth. One way of achieving this goal is using grants to assist disadvantaged communities in catching up to developed communities (Coetzee, 2018:10). South African municipalities are mandated to provide essential services to citizens living within their jurisdiction. These municipalities are provided financial assistance, which sometimes comes in the form of grants from the national government. The MIG is one such grant.

The constitution of the Republic of South Africa (1996:24) states that municipalities can be classified into three classes: local municipalities, district municipalities, and metropolitan municipalities. Of all the three types of municipalities, the local municipality is at the centre of service delivery and basic community needs and wants. A district municipality comprises several local municipalities encompassing administrative and district council unities in the broader scope of geographical demarcations. The metropolitan municipality refers to municipalities that enjoy exclusive jurisdictional power and decision-making within a specific geographic location (Republic of South Africa, 1996:18).

This study investigated the MIG's implementation in South African municipalities, focusing on the Nelson Mandela Bay Metropolitan Municipality (NMBMM). The NMBMM is in the Eastern Cape Province. The Eastern Cape is regarded as one of the poorest and most underdeveloped provinces in South Africa, and it requires financial injections from the national government to foster development. This underdevelopment is despite the province being known as the 'Home of the Legends'. Such a label is because several senior politicians who serve in the National Assembly (NA)—both past and present—come from this province.

Municipalities, including the NMBMM, are responsible for fast-tracking social-economic transformation to ensure that the disparities perpetrated by the pre-democracy regime are addressed. This transformation is the overarching goal of the South African Government at all levels (Republic of South Africa, 1996:22). Although municipalities are at the forefront of providing essential services to the people, they cannot do so without national government assistance (Mnguni, 2020:358). Hence, through the National Treasury, the government provides grants, such as the MIG, for municipalities to perform their mandates effectively.

Following the participatory approach to development, municipalities are empowered to implement programmes and projects that are aimed at improving the provision of essential services such as waste management, water supply, electricity distribution, sanitation, health, education, and water drainage systems (Majali, 2019:03). The national government has sought to ensure that the plight of South Africans is improved through dedicated legal instruments. This chapter examines these legislative instruments and regulatory and statutory frameworks that inform and guide the implementation of projects, specifically MIG projects. Exploring frameworks and legislation related to financing projects and their implementation is crucial because it provides insights into the strengths and weaknesses that might emanate from the legal side of project implementation and can potentially enhance the management of specific MIG projects.

The chapter is structured as follows: The first section discusses the transformation of local government over the years so that its role and responsibility in present-day South Africa can be put into perspective. The second section discusses specific guidelines within which the MIG should be implemented. Finally, the third section discusses

various legislative and regulatory frameworks that guide the implementation of grants, such as the MIG. The conclusion follows this.

3.2 BACKGROUND AND OVERVIEW OF LOCAL GOVERNANCE IN SOUTH AFRICA

The pre-democracy segregator regime left a profound legacy of inequality in South Africa's human settlement and local governance system, necessitating serious and deliberate transformative policies to rectify this anomaly. According to the Department of Provincial and Local Government (DPLG, 2008), transformation requires deep insights into the historical role of local government in perpetuating and creating local inequality and segregation, particularly to the detriment of black-dominated communities. Over the years, the South African governance system has evolved through three distinct stages: commercial public administration (1652), local public administration (1975–1999), and market-local public administration (2000 to present) (Mogkethi, 2021:58).

The market-local public administration phase has shaped the current local governance system. Legally, the Municipal Systems Act (No. 32 of 2000) operationalises the concept of local market-based public administration. This Act provides platforms and opportunities for municipalities to collaborate with civil society, the private sector, and the public to develop vibrant rural and urban economies responsive to the essential needs of local communities. Local communities are defined as decentralised representative institutions with general and specific powers devolved to them by a higher tier of government within a geographic area (Kravchenko, 2021:125). Hlongwane and Nzimakwe (2018:30) suggest that local government refers to the geographical organisation of villages, towns, and cities for efficient management, administration, and governance. Vinci and Russell (2022:33) define local government as a public institution with the authority to govern and manage all affairs within a municipality's jurisdiction.

In South Africa and beyond, it is established that local governments cannot meet their statutory obligations without partnerships and support from the national government (Horn, 2020:08). This context has led to the concept of intergovernmental relations (IGR), which refers to the collaborative relationships and processes between different levels of government. In South Africa, the national government implemented the MIG

to assist municipalities with grants for infrastructural development, demonstrating the practical application of IGR in the context of local governance and infrastructure development.

Infrastructure development is crucial as it forms the foundation for education, healthcare, sanitation, water distribution, power supply, and other services (Makhathini, 2020:26). Without adequate infrastructure, satisfactory service delivery remains a formidable challenge. Local governments rely on their interdependence with provincial and national governments to ensure the effective implementation of development initiatives (Tafeni & Mngomezulu, 2022:02). According to the Republic of South Africa's Constitution of 1996, provincial and national governments are required to support financially and guide municipalities regarding their development and performance. Moreover, all three spheres of government must maintain a shared national policy stance, especially concerning providing essential services to local communities and expanding rural and economic development.

In examining the legal framework governing municipal grant provision and implementation in South Africa, it is essential to consider the role and responsibilities of the national government from a constitutional perspective. Hofstetter, Bolding and van Koppen (2020:853) assert that the national government has a duty to consistently develop institutional policy frameworks for local and provincial governments across the country's nine provinces. According to Section 155(6) and (7) of the Constitution of the Republic of South Africa (1996), both national and provincial governments are obligated to monitor and guide municipal service delivery. Essentially, provincial and national governments are empowered to support local governments and address serious issues related to service provision or critical developmental matters (Ruiters, 2013:23).

Based on the discussion above, it is evident that there is a strong interrelatedness between local, provincial, and national governments. This interrelatedness implies that for local communities to achieve development, all three spheres of government must cooperate towards this goal as prescribed by Section 41 of the Constitution of the Republic of South Africa, 1996. Ijeoma (2013:29) notes that the primary objective of South African local governments, supported by provincial and national governments, is to promote socio-economic development throughout the country. South Africa has

283 municipal councils classified into three categories: A, B, and C, as outlined by the Local Government Municipal Structures Act (No. 117 of 1998). Although all municipalities are part of local government, they have diverse historical backgrounds and unique environments justifying their different classifications (Horn, 2020:11). Recognising these unique historical backgrounds that have influenced current levels of economic development requires understanding each municipality's needs to address their specific communities' needs adequately.

3.3 CHARACTERISTICS OF MUNICIPALITIES

Several distinct features or characteristics separate local government (municipalities) from the other two spheres of government. However, it should be noted that regardless of these distinct features of the provincial and national government, municipalities as local government institutions remain dependent on the other two spheres of government (provincial and national government) (Ramasimong, 2019:19). Elcock (2013:13) avers that a municipality is a well-defined area of jurisdiction. A municipality is exclusively obligated to manage and govern the affairs of a particular geographical location. Municipalities are also characterised by the direct participation of citizens living in specific jurisdictions through platforms such as public engagement and the election of municipal leadership.

The core objective of municipalities is to provide essential services to people living within their jurisdiction (Orr & Vince, 2019:660). These services include but are not limited to the provision of water, roads, housing, sanitation, refuse collection, and health and education services (Maake, 2017:14). To finance infrastructure and support all these services, South African municipalities (predominantly urban and peri-urban-based ones) generate finances through taxes and rates which they are constitutionally obligated to charge and collect (Mulenga & Bekker, 2015:335). However, some municipalities cannot generate enough revenue through taxes and rates. Thus, they end up relying on grants from the national government (Coetzee, 2018:11). The MIG is one such grant given by the national government through the Treasury to deserving municipalities so that they can improve infrastructure.

Additionally, municipalities may pass legally binding by-laws. These by-laws are enacted within the parameters set by other legislation, such as the Municipal Systems Act, the Municipal Structures Act, and the Municipal Finance Management Act. Additionally, municipalities employ qualified and skilled individuals to manage and conduct their daily operations alongside elected municipal officials.

The features discussed above highlight municipalities' role as the primary face of service delivery for residents within their jurisdictions. Despite their distinct characteristics, municipalities operate within the provincial and national government framework outlined in the Constitution of South Africa (Act No. 108 of 1996). Given that this research aims to gain insights into the issues surrounding MIG implementation in the NMBMM, it is essential to discuss briefly metropolitan municipalities in the South African context.

3.4 METROPOLITAN MUNICIPALITIES

Metropolitan municipalities are large urban settlements or areas characterised by high population densities, diversified economies, and a high degree of functional integration across a larger geographic area. Economic and social activities often transcend municipal boundaries, with metropolitan residents living in one locality, working in another, and using recreational facilities across the metropolitan area (White Paper on Local Government, 1998:3). As the economic hub of the Eastern Cape Province, the NMBMM attracts and houses a larger population compared to other municipalities in the province.

Metropolitan municipalities are established to promote the equitable distribution of resources to ensure that all who live under their jurisdiction have equal access to essential services (Van der Waldt, 2014:858). The crucial and significant role of metropolitan municipalities is to promote participation and engagement with all concerned stakeholders on development issues. These issues include infrastructure development, coordination and mobilisation of private or public investments, land use management, and spatial planning. Infrastructure development is, therefore, linked to land use management and spatial planning, as they are the two precursors to infrastructure development (Niyimbanira et al., 2020:57).

Metropolitan municipalities wield executive authority over the jurisdictions of the municipalities they lead (Marais & Cloete, 2017:185). They are a complex form of local government, mainly due to the divergence of their respective municipalities' cultural, economic, political, and environmental manifestations. Fundamentally, metropolitan municipalities provide the foundation for equitable and socially impartial municipal governance, thus preventing situations where residents face inadequate economic, recreational, or social amenities services (Niyimbanira et al., 2020:57).

Metropolitan municipalities are not entirely able to independently deliver on their mandate in the absence of provincial and national government interventions (Marais & Cloete, 2017:185). This inability is because they cannot generate sufficient financial resources from the taxes and rates collected from residents within their jurisdiction. Without government intervention through grants, municipalities cannot provide essential services fairly and equitably to improve socio-economic conditions through infrastructure development (Bikam, Rapodile & Chakwizira, 2015:101). Grants such as the MIG are meant to close the gap resulting from the inadequacies of metropolitan municipalities. In line with the view that metropolitan municipalities oversee socio-economic situations, they should apply for grants such as the MIG to enhance their communities' economic vibrancy and well-being (Kopung et al., 2016:117). Of the available grants, this study focused on the MIG, as this grant is formulated to fund infrastructure development projects within specific municipalities.

3.5 MIG PROGRAMME GUIDELINES

The MIG is a consolidated grant mechanism introduced in March 2003 and managed by the Department of Cooperative Governance and Traditional Affairs (COGTA). The MIG fund is allocated based on a formula to all municipalities that meet three conditions: (a) compliance with the Division of Revenue Act, (b) adherence to cross-cutting conditions such as alignment with the IDP, infrastructure development with economic benefits for poverty alleviation and job creation, and essential service coverage, and (c) fulfilment of sector-specific conditions. The purpose of the MIG is to provide funding for essential infrastructure such as roads, water, sanitation, and electricity (DPLG, 2004:09). As a guiding principle, all projects funded through the MIG must be included in municipalities' IDPs and approved by the council.

The MIG was approved and operationalised on the 5th of March 2003 by the South African Cabinet as a framework for basic infrastructure development. In simple terms, the MIG can be described as a funding arrangement that is advanced to municipalities so that they can implement infrastructure development projects. It was established as a replacement for all the other capital grants for municipal infrastructure development projects. The MIG targets seven infrastructure projects for development: water services, community-centred public works, integrated national electrification programme to local government, the integrated national electrification programme implemented by Eskom, the LED fund, the urban transport fund, and the consolidated municipal infrastructure programme (DPLG, 2004:11).

In the context of the MIG, the role of the national government is to formulate adequate and effective policies, monitor policy outcomes, institute macroplanning, provide support, and regulate municipal infrastructure investments. The MIG is conditionally given to municipalities, as municipalities receiving the grant must meet certain conditions or requirements, which is why the MIG is sometimes called a conditional grant to municipalities and complements the equitable share grant for local government. Moreover, the MIG is allocated based on a prescribed formula (DPLG, 2004:18).

The MIG is primarily concerned with planning and delivering essential municipal infrastructure services. To that end, the MIG has become an integral component of the municipality's infrastructure development mechanism. Given that the MIG is formulated to be a conditional grant, beneficiary municipalities must adhere to a set of conditions. These conditions are provided by the Municipal Infrastructure Task Team (MITT), which is presided over by COGTA through the MIG unit (DPLG, 2004:26). The MITT forms an integral part of the MIG implementation because it carries several responsibilities, which include reviewing municipalities' infrastructure policies to foster consistency, efficiency, and effectiveness in the provision of adequate and quality infrastructure. The MITT also monitors progress regarding the implementation of infrastructure projects and addresses challenges that may hinder the process of infrastructure service delivery. Furthermore, the MITT also crafts policies and makes decisions that relate to improving service delivery through infrastructure development.

The MITT is supported by a technical team called the Municipal Infrastructure Technical Task Team (DPLG, 2004:32).

Considering the discussion above, it can be inferred that the primary objective of the MIG is to subsidise the capital costs of essential services to poverty-stricken households. As stated by the DPLG (2004:16), those households experiencing poverty should be given the highest priority regarding their essential infrastructure needs. These poverty-stricken communities should be assisted by providing appropriate internal infrastructure services through efficient, equitable, and transparent funding distribution to support a coordinated approach to localised development and maximise developmental outcomes. The MIG prioritises the essential needs of households experiencing poverty by supporting multi-year planning and budgeting systems to enhance municipalities' capacity to execute and implement developmental projects. Furthermore, the MIG facilitates the coordinated pursuit of national policy priorities regarding basic municipal infrastructure programmes, thereby avoiding the duplication and inefficiency associated with sectorally fragmented grants (DPLG, 2004:16).

There are several cases worldwide where national governments play a pivotal role in supporting municipalities in delivering essential services to communities within their respective jurisdiction. National governments tend to use municipalities to channel resources to meet the essential services that citizens require because municipalities are generally considered an instrument for wealth redistribution in countries where there are economic inequalities (Tafeni & Mngomezulu, 2022:01). As such, Singo (2012:205) recommends that national governments inject funds and resources into municipalities to ensure fair and equitable access to, efficient, reliable and quality essential services. This view is supported by Van der Waldt (2014:845), who underscores the importance of government interventions to assist specific municipalities in enhancing their capacity to execute capital projects for essential infrastructure services.

To improve project management efficiency, the MIG provides for establishing project management units (PMUs) within beneficiary municipalities. It also includes provisions for the MIG Management Unit (MIGMU) to play a supportive and capacity-building role by assisting municipalities in establishing PMUs and developing effective project management competencies. Besides the PMU located within the municipality, the MIG

also provides for the MIGMU, housed under COGTA, which has several responsibilities, including implementing policies related to infrastructure delivery. The MIGMU is also tasked with setting up the MIG national fund administration system, ensuring the establishment of project management and monitoring capacity within municipalities, monitoring the use of MIG funds, operating the national MIG information system, auditing local programmes to ensure compliance, evaluating local programmes, and preparing reports for the MITT and provincial and national government departments (DPLG, 2004:16).

3.5.1 Statutory Framework for Service Delivery Projects by Local Government

This section discusses the statutory framework that guides and informs the implementation of the MIG in beneficiary municipalities. This statutory framework is important because it helps locate the implementation of the MIG grants in the current legal framework for local governance. In addition, it assists in identifying gaps and strengths in the existing legal framework for implementing and applying grants such as the MIG. This process is vital because it allows for comprehensive and informed recommendations on how the current legal framework can be enhanced to improve the MIG's effectiveness and implementation in municipalities.

Considering the above argument, exploring the framework for basic service infrastructure projects in local governments is essential. According to Kopung (2017:48), the provincial and national governments should strengthen and support municipal capacity to exercise their constitutional powers, manage their affairs and perform their functions through the existing legislative framework. In the South African context, the Constitution of the Republic of South Africa (Act No. 108 of 1996), Municipal Structures Act (Act number and year?), Municipal Systems Act (Act number and year?) and Municipal Finance Management Act (Act number and year?) constitute the key legislation implemented by the post-apartheid South African Government to empower and guide municipalities in discharging and performing their constitutional duties, which include implementing essential services infrastructure funded through the MIG. This is primarily meant to clear backlogs for electricity, sanitation, water, and road infrastructure (Tjebana & Rachidi, 2018:7). This legislative framework is discussed in detail below.

3.5.2 Constitution of the Republic of South Africa, 1996

The Constitution of the Republic of South Africa, 1996, stands as the supreme law of the land, guiding the creation of all other laws. Regarding public management and administration, Section 195(1) of the Constitution dictates how the three spheres of government should utilise resources. According to Section 195(1), these government spheres must ensure that resources are used economically, with high accountability and transparency. Public management and administration should also be effective and efficient. Additionally, Section 152 outlines the objectives that local governments aim to achieve, which include:

- Providing a democratic and accountable government for local communities;
- Ensuring the provision of services to communities in a sustainable manner;
- Promoting social and economic development;
- Promoting a safe and healthy environment; and
- Encouraging the involvement of communities and community organisations in local government matters.

These objectives form the theoretical foundation for all municipal operations, guiding the design and implementation of service delivery projects such as basic service infrastructure.

Furthermore, Section 153 of the Constitution requires municipalities to structure and manage their administration, budgeting, and planning processes to prioritise communities' essential needs and promote social and economic development. Part B of Sections 4 and 5 mandate that municipalities provide their communities with water, waste management, electricity, emergency services, town and city planning, economic planning, and road and storm drainage, among other services.

To effectively provide these services, municipalities must have well-designed projects aligned with the Constitution's provisions. Each municipality or municipal entity must structure and manage its administration and budget planning to prioritise the community's basic needs and promote social and economic development while also participating in national and provincial development programmes (SA Constitution, 1996). Furthermore, Section 217 of the Constitution stipulates that when any organ of

state at the national, provincial, or local level, or any institution identified in national legislation, contracts for goods and services, they must do so fairly, equitably, transparently, competitively, and cost-effectively (Maleka, 2016:37).

The constitution of South Africa also mandates municipalities to use resources at their disposal efficiently, effectively, and transparently. However, Coetzee (2018:12) argues that municipalities alone cannot deliver on their mandate and underscores the importance of provincial and national government as pillars of support to municipalities. The same view is echoed by Maleka (2016:37), who draws on the Constitution of South Africa and states that the provincial and national governments must support and strengthen the capacity of municipalities to manage their affairs, exercise powers and perform functions. Municipalities must achieve unqualified audits consistently. Audits are essential because their results show the extent to which specific projects have been efficiently and effectively implemented. The need for project audits is enshrined in Section 216(1) of Chapter 13 of the Constitution, which outlines that the National Treasury should prescribe measures to ensure that expenditure is within budgeted limits and that transparency is upheld throughout project implementation. This practice is achieved through introducing generally accepted accounting practices, treasury standards, and expenditure classification (Maleka, 2016:38). Such a practice aligns with the dictates of Section 217 of the Constitution of South Africa, which states that municipal supply chain management must be transparent, fair, cost-effective equitable and in compliance with the prescribed regulatory framework for the supply chain management.

According to the Constitution of the Republic of South Africa, 1996, the supply chain management regulatory framework for municipalities and municipal entities must encompass various processes, including tenders, quotations, auctions, and other types of competitive bidding. It should specify procedures for when a particular type of process may or must be used, outline mechanisms for each process, provide for more flexible processes for contracts below a prescribed value, and ensure open and transparent pre-qualification processes for tenders or other bids. Additionally, it should facilitate competitive bidding processes limited to pre-qualified participants, provide guidelines for bid documentation, and detail the advertising and invitation procedures for contracts. It should also include protocols for opening, registering, and recording

bids in the presence of interested parties, evaluating bids to ensure the best value for money, negotiating final contract terms, and approving bids.

Furthermore, the regulatory framework should incorporate screening processes and security clearances for prospective contractors on high-value tenders or bids, promote the compulsory disclosure of any conflicts of interest by prospective contractors, and exclude those with conflicts from participating. It should encourage participation by non-officials in the supply chain management system, barring those convicted of fraud or corruption in the past five years. The framework must address procedures for dealing with individuals who have willfully neglected, reneged on, or failed to comply with government contracts in the past five years or whose tax matters are not cleared by the South African Revenue Service. Measures to combat fraud, corruption, favouritism, and unfair practices in municipal supply chain management and promote the ethics of officials and other role players should be included.

The regulatory framework should also outline procedures for invalidating recommendations or decisions unlawfully or improperly made or influenced, including those contravening the Code of Conduct for Councillors or the Code of Conduct for Municipal Staff Members as set out in the Municipal Systems Act. Additionally, it should detail procedures for procuring goods and services through contracts with other state organs, contract management, dispute resolution procedures, and delegate supply chain management powers and duties to officials (Republic of South Africa, 1996:41).

The Constitution of South Africa serves as the foundation for all laws and regulations in the country. Consequently, laws and regulations guiding project implementation in local governments are crafted in accordance with the Constitution of the Republic of South Africa, 1996 (Mogkethi, 2021:58). In essence, the Constitution sets the agenda and objectives for municipalities, ensuring that all guiding laws and regulations align with the supreme law of the country. The Local Government: Municipal Finance Management Act, the Local Government: Municipal Structures Act, and the Local Government: Municipal Systems Act will be discussed below, along with the White Paper on Local Government (1998) and the White Paper on Transforming the Public Service (1997).

3.5.3 Local Government: Municipal Finance Management Act (2003)

The Local Government: Municipal Finance Management Act (No. 56 of 2003) was formulated to ensure the sound and sustainable management of the financial affairs of municipalities and other local government institutions. Essentially, the Act was enacted to monitor and regulate South African municipalities' budgeting and expenditure processes, as mandated by the Constitution of the Republic of South Africa (1996), which emphasises and enforces the principles of transparency and accountability. To secure sound and sustainable financial and fiscal management in municipalities, the Act establishes standards and norms for:

- Ensuring transparency, accountability, and clear lines of responsibility in the fiscal and financial affairs of municipalities and municipal entities;
- Managing their revenues, expenditures, assets, and liabilities and handling their financial dealings;
- Budgetary and financial planning processes and coordinating those processes with state organs in other government spheres;
- Borrowing;
- Handling financial problems in municipalities;
- Supply chain management; and
- Other financial matters (MFMA 2003:22).

Moreover, the Municipal Finance Management Act (2003:38) stipulates that a municipality may only spend money on a capital project if it has been appropriated in the capital budget, as referred to in Section 17(2) of the Act, excluding the cost of feasibility studies conducted by or on behalf of the municipality. Section 19(1) further specifies that projects can only be funded if the council approve the cost and the project itself. In addition, Section 33 has to be complied with, and also if the sources of financial resources are available, considered and not meant for other projects or programmes (MFMA, 2003:28). The MFMA (2003:22) also underscores the need to consider all the costs for the duration of project implementation as well as anticipated operations revenue and costs associated with projects including tariff implications and taxes, before approving the projects.

In line with the developmental local government (DLG) concept, the MFMA stresses the importance of the participatory approach to the municipal budgeting process by creating conditions for open engagement concerning the budget and budget allocation. This is important because it increases the chances of prioritising the immediate infrastructure service needs within specific municipalities.

The MFMA also deals with the question of how capital projects are approved. According to the MFMA, a municipal council may approve capital projects below a prescribed value, either individually or as part of a consolidated capital programme under Subsection (1)(b). Furthermore, Section 21 of the MFMA mandates that a municipality align its annual budget with its IDP. The section also requires the municipal mayor to take all reasonable steps to ensure that the municipality revises its integrated development plan in accordance with Section 34 of the Municipal Systems Act. This revision should consider realistic revenue and expenditure projections for future years, the national budget, the relevant provincial budget, the national government's fiscal and macroeconomic policy, the annual Division of Revenue Act, and any agreements reached in the Budget Forum.

As an extension of the Public Finance Management Act (1999), the MFMA aims to enhance municipalities' capacity to provide mandated services. Upholding the principles of transparency and accountability is crucial to improving service delivery. The MFMA explicitly outlines measures to prevent fraud, favouritism, corruption, and other irregular or unfair practices while promoting ethical behaviour among office bearers and other participants in supply chain management (SCM). Consequently, municipalities must adhere to legal requirements incorporated into SCM policies (Maleka, 2016:37).

All municipalities must have supply chain policies governed by regulations such as the Public-Private Partnership Finance Act (No.5 of 2000) and the Constitution of the Republic of South Africa. Each municipal entity and municipality should have an SCM unit responsible for implementing SCM policies. It is permissible for a municipal entity and its parent municipality to establish a joint SCM unit. Ideally, the SCM unit should operate under the direct supervision of the chief financial officer. Properly established SCM policies facilitate the effective handling of non-compliance cases.

Even though municipalities strive to adhere to the dictates of the MFMA as a basis for the MIG implementation, there are instances where municipalities can have a good plan and bad implementation or a bad plan and good implementation or be bad or good at both (Mditshwa, 2020:78). The ideal and perfect situation would be to have a good plan and a good implementation strategy. According to Mditshwa (2020:79), project implementation is likely to be successful when a municipality has a good plan and implementation strategy. However, the literature indicates shortcomings in implementing infrastructure projects (Mulenga & Bekker, 2015; Maake, 2017; Tjebana & Rachidi, 2018). There are widespread cases where municipalities have had to return unused grants to the Treasury.

The gaps in the transparent and efficient implementation of projects are exhibited in the Auditor General of South Africa's reports, which indicate the financial state of South Africa's municipalities through the lens of audit opinions. According to the Auditor-General (2016), of the 283 municipalities, only 50 (20%) proved to be implementing sound financial management principles, although they still required improvement (Auditor-General South Africa, 2016). This finding is a concerning development in light of the expectation that financial resources allocated to municipalities must be utilised to improve economic growth (Matabane, 2017:67). Likewise, the MIG should be implemented within the confines of the MFMA to improve chances of success, enhancement of service delivery, and economic growth and development.

3.5.4 Local Government: Municipal Structures Act

The Local Government: Municipal Structures Act is important legislation that has a bearing on the implementation of grants in South African municipalities. More specifically, the Local Government: Municipal Structures Act (No. 117 of 1998) was enacted to provide guidance and regulate how municipalities are internally structured. The Act also addresses the issue of office bearers, municipality classifications, and the electoral system that should be followed within the confines of the Constitution of the Republic of South Africa. In line with the Constitution, the present-day local governance systems stress the importance of public participation and engagement. As such, the Municipal Structures Act underscores the importance of public participation in local government matters through the ward-participatory system of municipal government and permits the formation of functional ward-based committees.

In addition, the roles of ward-based communities are also outlined as a platform to promote public participation in the affairs of municipalities. Public participation is crucial because it enables municipalities to gather information about residents' needs, informing the projects and services that should be prioritised.

Consistent with the principles of democracy, the RSA Constitution (1996) provides for the implementation of the principle of 'shared authority within a district area', as embodied in the Municipal Structures Act, 1998 (Andoh, 2012:38). Emerging from a history marked by inequality, discrimination, and autocratic rule under the apartheid regime, South Africa has needed to adopt new governance and service delivery approaches. These reforms were articulated in the White Paper on Local Government, 1998, and the Local Government: Municipal Structures Act (No. 117 of 1998).

The primary objective of the Municipal Structures Act is to ensure that municipalities are organised in a manner that promotes effective and efficient service delivery. Sections 19.2(d) and (e) of the Act mandate that municipal councils periodically review their organisational delivery mechanisms to meet community needs and enhance overall performance in alignment with the goals of local government defined in Section 152 of the Constitution.

Furthermore, Section 44.2 of the Local Government: Municipal Structures Act (No. 117 of 1998) defines the responsibilities of the executive committee. These responsibilities include identifying the needs of the municipality, reviewing and prioritising these needs, and subsequently recommending various strategies, programmes, and services to the municipal council. These recommendations are to be addressed through the integrated development plan, alongside revenue and expenditure projections, to ensure that prioritised needs are met effectively. The committee should also consider any relevant national and provincial development plans and recommend or determine the best methods, including partnerships and other approaches, to deliver strategies, programmes, and services for the maximum benefit of the community (MSA, Section 44.2). This demonstrates that the Municipal Structures Act significantly influences the implementation of the MIG in municipalities.

3.5.5 Local Government: Municipal Systems Act

The Local Government: Municipal Systems Act (No. 32 of 2000) was designed to provide a comprehensive framework for planning, performance management systems, effective utilisation of resources, and organisational change and to establish the core principles, mechanisms, and processes necessary for partnering with the community (Van der Waldt, 2007:41). Chapter 4, Section 16(1a) of the Act mandates that municipalities cultivate a culture of governance that supports formal representative government with a system of participatory governance. Accordingly, councils are required to encourage and facilitate local community participation in the municipality's affairs. This participatory role extends to preparing, implementing, and reviewing the municipality's integrated development plan, as outlined in Chapter 5 of the Act, evaluating its performance management system as per Chapter 6, and participating in the budgeting process. This approach is intended to ensure that the governance of municipalities remains transparent, inclusive, and responsive to the needs of the communities they serve.

The Municipal Systems Act concerns the performance of municipalities against their set goals. A specific section that deals with the issue of performance is Section 41(c), Chapter 6 of the Municipal Systems Act, which stipulates that all municipalities are required to measure, monitor, and review their performance annually. Where municipalities fail to achieve or attain their goals, and their critical service delivery is unmet, Section 41(d) of the Act stipulates that municipalities should implement measures and mechanisms to improve their performance and capacity to deliver on their constitutional mandates. Furthermore, Section 41(e) of the Act underscores the need for regular reports to the council, relevant political structure municipal staff, and political office bearers. According to the Municipal Systems Act, these reports should also be given to relevant state organs and the public at large. Section 46.1(a) of the Local Government: Municipal Systems Act also mandates that each municipality prepare an annual report for every financial year. This report should include a performance report that details the following:

- The performance of the municipality and any service providers during that financial year, along with comparisons to the targets and performance of the previous financial year;

- The development and service delivery priorities the municipality sets for the upcoming financial year; and
- The measures that have been or will be implemented to enhance performance.

Although several factors influence the performance of municipalities as far as development is concerned, financial injection remains a crucial ingredient for economic development. Such financial assistance is vital because grants such as the MIG are essential for economic development in poor provinces like the Eastern Cape, where NMBMM is located. Although the Municipal Systems Act (No. 32 of 2000) is regarded as essential legislation which forms the basis for development and improved service delivery, evidence on the ground, as shown by consecutive Auditor General reports, shows that compliance with provisions remains a significant challenge.

Municipalities' performance in all their endeavours heavily relies on the extent to which they have effective and efficient operational systems. Optimal municipal systems are characterised by strong leadership, robust internal controls, clear implementation plans, and a well-structured budget responsive to infrastructure development needs. These elements are crucial for ensuring effective governance and successful delivery of municipal services. Municipalities cannot independently meet communities' service delivery demands, hence the need for the MIG and its implementation.

3.6 REGULATORY FRAMEWORK GUIDING PROJECT APPLICATIONS IN LOCAL GOVERNMENT

The South African Government introduced a comprehensive framework to improve project implementation and application in government settings. This framework is not limited to the national government sphere alone and extends to local government projects. Consequently, this means that the same regulatory framework also impacts the MIG. As such, it is important to review and explore the regulatory framework guiding the implementation and application of projects in municipalities, with particular attention to MIG projects. This framework encompasses the creation of mechanisms for monitoring, oversight, capacity building, and control of municipal infrastructure projects.

3.6.1 Municipal Planning and Performance Management Regulations (2001)

The objective of the Municipal Planning and Performance Management Regulations (MPPMR) (RSA, 2001) is to improve the socio-economic conditions of communities within municipal jurisdictions. These regulations focus on addressing and eliminating existing backlogs and disparities that are a legacy of the apartheid era's segregation policies. To achieve this, the MPPMR (RSA, 2001) requires municipalities to develop integrated development plans (IDPs) that transcend departmental boundaries. These IDPs should integrate social, institutional, and economic aspects with the necessary management and implementation frameworks to ensure comprehensive and effective execution.

Performance management is an essential aspect of governance because it helps to determine the extent to which progress is being made in implementing a project. The MPPMR (RSA, 2001:6), thus, outlines what municipalities are supposed to do considering performance management and performance management systems. According to the MPPMR (RSA, 2001:11), municipalities should demonstrate how available performance management systems will be managed and operated, from the planning phase to performance reviews and reports. Additionally, clearly defining all stakeholders' roles and responsibilities is crucial. Moreover, the performance management system should offer detailed clarification on the implementation processes within the integrated development planning (IDP) context. This clarification ensures that all stakeholders understand their duties and how they contribute to the overall goals, promoting transparency and accountability in managing municipal projects.

Furthermore, the frequency with which reports are made, and the lines of performance accountability should be determined, and organisational performance should also be linked to employee performance. The performance management systems should also detail how they are integrated with the municipality's IDP processes and must include demonstrating how the key performance indicators, as outlined in Section 43 of the Regulations, will be incorporated into the municipality's planning and monitoring processes (RSA, 2001:29). Performance management, reporting, and monitoring become impossible in the absence of planning. Hence, the provisions provided by the

MPPMR (RSA, 2001:22) are critical in implementing projects such as the MIG and realising local development.

3.6.2 National Treasury Regulations

The National Treasury Regulations have a far-reaching influence on implementing MIG in South Africa because the National Treasury provides for the MIG; hence, its regulations should be followed when implementing MIG projects within municipalities. The National Treasury Regulations, enacted on April 9, 2001, fall under the jurisdiction of the Public Finance Management Act of 1999. These regulations apply to all public entities, constitutional institutions, government departments, and the South African Revenue Service (SARS).

Municipalities must appoint chief finance officers (CFOs) to report directly to the municipal manager, which aligns with the requirements for all government institutions. This reporting structure does not restrict the municipal manager from delegating specific responsibilities to the CFO. The primary role of the CFO is to assist the municipal manager in fulfilling the responsibilities outlined in Part 2 of Chapter 5 of the Public Finance Management Act of 1999 and in accordance with the provisions of the Annual Division of Revenue Act. These duties and responsibilities include effecting prudent financial management, sound budgeting, application of internal controls, and timely production of financial reports (Republic of South Africa, 2001:7).

Based on the above, there is a need to explore the regulatory obligations that should be considered for office bearers and other mechanisms that should be applied to monitor, provide oversight, and control municipal projects. These roles and mechanisms, detailed in the subsequent subsections, are pivotal in executing projects and ensuring sound local governance and development.

3.6.3 Executive Mayor

The role of the executive mayor is crucial in implementing municipal programmes and projects, as stipulated in the Local Government: Municipal Structures Act (No. 117 of 1998). Section 56 of the Local Government: Municipal Structures Act delineates the responsibilities and powers of the executive mayor. According to this section, the executive mayor's duties include identifying community needs and assessing these

needs to determine which are of the highest priority. This process ensures that municipal governance is responsive to the community's most urgent and significant needs. The executive mayor also recommends programmes, projects, and services that should be implemented to address those needs in line with the relevant provincial and national development plans. The executive mayors also recommend the best approaches to deliver services and programmes that benefit local communities.

The Municipal Structures Act (No. 117 of 1998), Section 56, also assigns further responsibilities to the executive mayor. These responsibilities include identifying and developing criteria to evaluate progress in implementing strategies, programmes, and services mentioned in Subsection (2)(c), including key performance indicators specific to the municipality and common to local government in general. The executive mayor must evaluate progress against these indicators, review the municipality's performance to enhance its economy, efficiency, and effectiveness, improve the efficiency of credit control, revenue, and debt collection services, and implement the municipality's by-laws. Furthermore, the executive mayor is responsible for monitoring the municipality's administration in line with the municipal council's directives, overseeing sustainable service provision to communities, performing ceremonial roles as determined by the municipal council, and reporting to the municipal council on all decisions made by the executive mayor.

The roles and responsibilities of the executive mayor are also outlined in the Municipal Finance Management Act (No. 56 of 2003). This Act describes an executive mayor as a political head who is supposed to give political support and guidance regarding the municipality's financial and fiscal affairs. This support and guidance involve approving and financing essential services and infrastructure projects. Moreover, the executive mayor supervises senior managers to ensure they perform their responsibilities and duties competently. According to Section 54 of the Finance Management Act (No. 56 of 2003), the executive mayors' responsibilities include controlling the budget and early detection of financial problems.

The executive mayor is responsible for issuing necessary instructions to the accounting officer to ensure the budget is executed correctly and according to the service delivery and budget implementation plan. This responsibility includes overseeing that both the expenditure of funds and the collection of revenue are carried

out in accordance with the approved budget. The executive mayor is also tasked with identifying the municipality's financial issues, including potential or emerging financial problems. Under Section 72 of the Finance Management Act (No. 56 of 2003), the executive mayor must also submit a report detailing these financial statuses and any concerns that need addressing to the municipal council by January 31st of each year. The executive mayor's role includes ensuring that service delivery and budget implementation plan revisions are grounded in a municipal project's progress and financial expenditure.

3.6.4 Municipal Manager

The role of the municipal manager is critical in implementing the MIG due to the various functions and responsibilities attached to this position. Under Section 60 of the Local Government: Municipal Finance Management Act (No. 56 of 2003), the municipal manager serves as a municipality's accounting officer. As an accounting officer, the municipal manager must execute assigned functions and powers and provide guidance and advice in compliance with the Municipal Finance Management Act (RSA, 2003). The municipal manager must report to political office bearers, municipal officials, and municipal entities.

In municipal project implementation, municipal managers ensure due diligence to prevent irregular, fruitless, wasteful, and unauthorised expenditures. They must establish robust financial controls over municipal project spending through effective monitoring, oversight, and reporting systems (RSA, 1999). Moreover, as stipulated in Section 62(1) of the Local Government: Municipal Finance Management Act (No. 56 of 2003), municipal managers must take reasonable steps to ensure that municipal resources are utilised economically, efficiently, and effectively.

Additionally, the municipal manager is responsible for maintaining accurate financial records in accordance with prescribed standards. They must also prevent and address any fruitless, irregular, wasteful, and unauthorised expenditure and initiate criminal proceedings against any municipal official who allegedly commits financial misconduct or an offence under Chapter 15 of the Municipal Finance Management Act. The municipal manager also ensures the implementation of tariff and rate policies as

outlined in Section 74 of the Municipal Systems Act and other applicable national legislation.

From this overview, it is clear that the municipal manager, as an accounting officer, plays a pivotal role in ensuring that municipal resources are managed effectively and efficiently. This responsibility is particularly crucial in administering MIG funds, as effective management is critical to ensuring that these grants achieve their intended purposes.

3.6.5 Director of Infrastructure and the Project Management Unit

The director of the Infrastructure and Project Management Unit (PMU) plays a crucial role in implementing MIG projects. This director is responsible for formulating infrastructure plans and overseeing the implementation of infrastructure projects. Municipalities that benefit from the MIG programme should have a project management unit led by the director of the PMU within the infrastructure department. This director not only oversees infrastructure projects but also provides managerial oversight. Additionally, the director is tasked with fostering robust relationships with consultants and constructors in the infrastructure development sector, despite the staffing of the PMU being subject to the National MIG Unit (DPLG, 2004:9). Responsibilities of the recruited staff are defined by the specifications and guidelines set by the PMU director.

Typical functions of the PMU concerning MIG projects include managing the funds allocated for municipal infrastructure projects. The unit also develops plans, assesses the feasibility of proposed projects, and coordinates with other municipal departments as necessary. Moreover, the PMU manages contracts with contractors and consultants for each project, including feasibility studies, and is responsible for project management, capacity building, monitoring, evaluation, and reporting (DPLG, 2004:9).

3.6.6 Internal Audit

An internal audit is another vital component in implementing projects within the public sector, including municipalities, and specifically in executing MIG projects. Section 165 of the Municipal Finance Management Act (MFMA) mandates every municipality to

establish an internal audit department or unit. This unit is typically located within the office of the municipal manager, who acts as the accounting officer (SALGA, 2012:9).

An internal audit's functions include preparing annual risk-based audit plans and programmes and monitoring their implementation during project execution. The unit also advises the municipal manager and reports to the audit committee on matters concerning internal controls, auditing, accounting practices and procedures, loss controls, risk management, compliance with the MFMA, the Division of Revenue Act, and other applicable legislation. Additionally, the internal audit unit may perform other functions delegated by the municipal managers.

Annual audit plans and programmes are submitted to the council for approval, and the internal audit manager must report to the audit committee about implementing these plans and programmes. An internal audit is intended to ensure that the King III and IV principles on good corporate governance are adequately implemented in the municipality. SALGA (2012:9) emphasises that implementing good governance principles is an integral process that spans planning, monitoring, and administration. Thus, an internal audit ensures that internal controls, risk management, and performance management processes and practices are established and adequate.

3.6.7 Audit and Risk Committees

Audit and risk committees are also essential to project implementation within municipalities. Provisions for audit and risk committees are outlined in Section 77 (a)(i) of the Public Finance Management Act (PFMA), which stipulates that municipalities should appoint people to constitute risk and audit committees. Members appointed to an audit and risk committee should be outside experts with the requisite experience and skills. According to the PFMA (RSA, 2001:8), the audit and risk committee should perform duties and functions, including establishing an audit charter that guides how the auditing is carried out and developing operating procedures and rules governing the audit relationship. The audit and risk committee should also communicate any issues it considers fit for the attention of the Auditor General, relevant treasurer and executive authority (Kopung et al., 2016:117).

3.7 CONCLUSION

The nation's supreme law, the Constitution of the Republic of South Africa (1996), governs South African municipalities. The regulations and statutory frameworks developed in alignment with the Constitution are crucial as they dictate how municipalities should operate to fulfil their constitutional responsibilities. Therefore, implementing the Municipal Infrastructure Grant (MIG) must be understood within the context of the relevant laws and regulations that influence the execution of municipal projects.

Municipalities serve as the primary service delivery interface, as the governmental structure closest to the citizens, and they are tasked with providing services supported by sufficient and appropriate infrastructure. The MIG is specifically designed to meet the infrastructure needs of underserved communities, with the broader goals of enhancing local government capacity, efficiency, effectiveness, sustainability, and accountability. While the national and provincial governments are responsible for creating a supportive policy and financial and institutional environment for the MIG, municipalities are directly responsible for planning their infrastructure projects and using the MIG funds to actualise them. Key local government officials such as executive mayors, municipal managers, councillors, and senior officials play a crucial role in allocating and managing municipal resources, including practising sound financial management. Their actions, however, must adhere to the specific statutory and regulatory frameworks outlined in this chapter.

CHAPTER FOUR

SELECTED INTERNATIONAL CASES ON MUNICIPAL INFRASTRUCTURE DEVELOPMENT SUPPORT PROGRAMMES

4.1 INTRODUCTION

This chapter explores selected international cases regarding municipal infrastructure grants and development projects, drawing lessons from the experiences of both developed and developing countries. By examining various municipal infrastructure development financing models, this chapter provides insights to enhance the understanding and implementation of similar programmes worldwide.

Africa faces a monumental task in prioritising, accelerating, and scaling up quality infrastructure development. Infrastructure projects can take several decades to move from concept to operation. With 28 African countries having doubled their populations between 1990 and 2015, the United Nations (UN) foresees another 26 countries will do so between 2017 and 2050 (UNDESA, 2019:1).

The current situation is inadequate to meet Africa's demographic challenges and development objectives, as outlined in the African Union's (AU) Agenda 2063. This chapter identifies impediments to progress, emerging practices, and strategic recommendations for the future. Drawing on recent analyses, entrepreneurial initiatives, case studies, and high-level expert meetings, the 2021 AUDA-NEPAD report supports innovative infrastructure business models developed by the AUC and AUDA-NEPAD within the Programme for Infrastructure Development in Africa (PIDA), aiming to build integrated regional economic corridors.

Investment in African infrastructure is a global public good due to the worldwide significance of Africa's demographic evolution and its necessary productive transformation. Africa's infrastructure lags due to financial or technical constraints, and new infrastructure business models are needed to build integrated regional corridors, functional urban-rural agglomerations, and dynamically evolving value chains. These models must support human development, reduce poverty, and provide stability for fragile states.

Current upstream processes fail to generate pipelines of ‘ready-to-go’ quality infrastructure investment projects at a scale commensurate with demographic dynamics. Adequate commitments between and within countries and financing mechanisms are lacking for creating essential cross-border infrastructure. Slow project development processes cannot match the dynamics required for integrated regional corridor development or the generation of numerous small projects essential for national-level infrastructure services. New upstream processes and commitment and financing mechanisms to make implementation feasible and sustainable are necessary for cross-border and national coordination on sectoral and multisectoral plans, a key finding from policy dialogue meetings held in February and June 2020.

Without new business models, essential infrastructure services will not keep pace with the extraordinary demographic dynamics and shifting global and local challenges, including climate change, pandemics, and armed conflict. A new and improved infrastructure business model is necessary.

4.2 SERBIA MUNICIPAL INFRASTRUCTURE RECONSTRUCTION PROGRAMME

Following the 1999 war in Kosovo and the fall of the Milošević government, Serbia and Montenegro were left with damaged infrastructure and a weak economy. The international community responded through the Stability Pact for Southeastern Europe, prioritising core public utilities such as water supply, wastewater treatment, solid waste management, urban transport, and district heating. Technical cooperation (TC) was critical for project success, although coordination with other donors was essential.

The European Bank for Reconstruction and Development (EBRD) contributed loan funding for municipal projects, complementing grant funding from the Stability Pact, and provided specialised technical support for investment projects. The EBRD’s quick action in this politically fragile post-Milošević situation earned it goodwill and created a platform for policy dialogue.

Serbia became an EBRD member on 18 January 2001, following Milošević’s downfall in October 2000. The EBRD developed a Yugoslav action plan, approved on 13 March 2001, identifying three “quick start” initiatives: a microfinance bank, a small and

medium-sized enterprise (SME) facility, and a working capital facility. Additionally, the plan identified several priority projects, including the Municipal Infrastructure Reconstruction Programme (MIRP).

On 24 July 2001, the EBRD board approved the Belgrade Municipal Infrastructure Reconstruction Programme, consisting of a €60 million loan to the city of Belgrade for urgent improvements to public transport, water supply, and district heating services. Significant TC funds for pre-feasibility studies, legal advisory services, and project implementation support supported the loan.

The public transport investment was well-defined, including purchasing 100 articulated buses and 50 solo buses, renewing tram tracks, and improving maintenance equipment and workshops. The district heating component included network improvements, replacing substations and other equipment, heat generation measures, a new management information system (MIS), and training. The MIS and training component complemented a similar programme by another financial institution. The water component was less detailed, focusing on constructing additional capacity at the Makis water treatment plant and completing a partially built water pipeline.

International cooperation: International cooperation played a crucial role, with the EBRD's investment and TC assistance forming part of the Stability Pact for Southeastern Europe. Endorsed by 40 countries and organisations, this pact aimed to foster long-term conflict prevention in southeastern Europe by promoting secure environments, sustainable democratic systems, and enhanced economic and social well-being. Serbia and Montenegro were admitted to the pact in October 2000, with donors pledging just over €1.5 billion. The EBRD pledged €241 million for seven sectors: growth promotion, private sector development, financial sector development, energy, transport, environment, water, and waste. The EBRD's investment and TC assistance for the Belgrade MIRP were part of this broader international effort.

4.2.1 Nigeria

Infrastructure is commonly comprehended as the physical framework of facilities through which goods and services are delivered to the public. The infrastructure sector encompasses a wide range of services, including telecommunications, sewage disposal, roads, energy, water supply, agriculture, medical, educational, and other

facilities. These services significantly impact human life, affecting health, safety, well-being, and societal development. Infrastructure also plays a crucial role in economic development by boosting productivity and providing amenities that improve the quality of life.

Infrastructure financing is a subset of project finance. It refers to limited resources or non-recourse finance that consists of financing specific assets for projects, with repayment coming only from the cash flow generated by the project asset, without claims on the investors that own the company (World Bank, 1994). Kingsley (2010) noted that infrastructure financing typically involves a combination of equity and debt. The proportion between these two financing forms generally depends on each project's specific characteristics and, most importantly, its unique risk profile.

Apart from financing basic infrastructure in Africa, one of the significant challenges associated with infrastructure is investment for maintaining existing infrastructure. Research by UN-HABITAT (2011) shows that a poor maintenance culture exists in most African countries, which leaves these countries with degraded and inefficient infrastructure services. The case of Nigeria particularly poses a severe concern to stakeholders in the investment sector, the Nigerian government, and its people. The bleak picture of infrastructure deficiencies in the country, especially in major cities such as Lagos, Port-Harcourt, Jos, and others, is compounded by unprecedented urban growth whose consequences are reflected in the explosion of informal settlements (slums) across the country (Dabara, Okunola, Odewande & Okorie, 2012).

Due to inadequate investment in basic infrastructure, the unprecedented urban growth in Nigeria is putting considerable strain on the region's limited infrastructure (Arimah, 2010). There is a need for extensive and continuing investment in almost all areas of Nigeria's infrastructure, including agriculture (provision of loans to farmers, mechanisation of agriculture, processing industries, and more), transportation (airports, railways, seaports and roads), electricity (generation, transmission and distribution), communications (mobile and satellite), water (dams, purification, distribution) and other infrastructure. Given their significant need, the key issue is how to finance these infrastructure projects. Historically, the government has been the sole financier responsible for these projects' implementation, operations, and maintenance. However, there is growing recognition that this approach may be ineffective.

Consequently, it is crucial to explore and utilise other viable financing options considering the fundamental characteristics of basic infrastructure projects, such as large capital outlay, extended maturity periods, rate of returns, and level of risk.

4.2.2 Basic Infrastructure

Adequate infrastructure is essential for a country's economic development. It plays a pivotal role in diversifying production, expanding trade, accommodating population growth, alleviating poverty, and enhancing environmental sustainability (Dabara et al., 2012).

Major infrastructure projects may include:

- Airports, including new runways, runway extensions, and terminals;
- Power stations, including thermal, nuclear, renewable energy sources, and overhead electricity lines;
- Nuclear facilities for fuel fabrication, spent fuel reprocessing, waste storage, or disposal;
- Ports and piers;
- Dams and reservoirs;
- Major roads;
- Railway lines;
- Oil and gas facilities, including extraction facilities, pipelines, terminals, storage facilities, and refineries;
- Chemical works;
- Quarries and mines; and
- Government developments, such as large military projects (Kingley, 2011).

The need for infrastructure is especially critical in developing countries. Lee (2010) notes that infrastructure investments providing essential services such as access to energy, clean water, and essential transport could be a matter of life and death in these regions. Conversely, the available infrastructure capital is significantly higher in developed nations, and there are established measures for maintaining its sustainability.

The state of infrastructure in Nigeria is particularly dire. A World Bank survey from 2002 highlights that Nigeria's infrastructure, both in quality and quantity, was substantially inferior compared to other regions globally, severely impacting the cost of doing business in the country. In the 2004 Global Competitiveness Report, Nigeria's infrastructure quality ranked last among the 102 countries assessed. This finding aligns with earlier findings from the World Bank, where manufacturing firms cited inadequate infrastructure as their most significant business constraint (World Bank, 2002). Critical infrastructure deficiencies include a lack of sufficient or any provision of piped or potable drinking water, with 50% of urban residents lacking access. Consequently, 44% of households have installed private boreholes, and many depend on water vendors who charge prices, consuming more than 30% of household income for the poorest families. As a result, many households resort to using water from unhygienic sources (Hall, 2006).

Nigeria's road network is also lamentable. For instance, roads in cities like Lagos, Gombe, and Ibadan are among the least dense in Africa, with only 31% being paved, compared to a much higher percentage in middle-income countries. Furthermore, only 40% of existing roads are in good condition (World Bank, 2022).

These pervasive issues in infrastructure provision reflect several underlying factors, such as insufficient private sector involvement in infrastructure development, neglect by maintenance units, flawed policies, poor selection in administrative project planning, and political challenges. These challenges underline the need to systematically overhaul how infrastructure projects are planned, funded, executed, and maintained.

4.3 SADC: INFRASTRUCTURE DEVELOPMENT IN SUPPORT OF REGIONAL INTEGRATION

The Southern African Development Community (SADC) comprises a diverse group of member states, including large countries with substantial economies, smaller isolated and island states, and a mix of low- and middle-income countries. Regional infrastructure development within SADC is crucial for creating larger markets and increasing economic opportunities. Developing robust infrastructure is essential for fostering regional economic growth, enhancing trade and investment, and contributing to poverty eradication and improved social conditions.

SADC has made notable progress in enhancing regional infrastructure across crucial sectors such as transport and communications, facilitating regional cooperation. Other vital components of regional infrastructure include energy, water and sanitation, and meteorology. Despite these advancements, the SADC region faces several significant challenges:

- Insufficient energy supply to meet increased production demands and expand access to new areas.
- Expensive and unreliable transport and logistics services (particularly affecting landlocked states).
- Lack of affordable access to modern information and communication technologies.
- Inadequate meteorological services hinder effective and efficient planning and management of water resources, energy production, transport services, and other climate-sensitive sectors.
- A significant portion of the population lacks access to safe drinking water, adequate sanitation, and water for irrigation, which is crucial for agricultural production and ensuring food security.
- Slow response to new trends and opportunities in the tourism sector, as this sector could drive significant economic growth.

Investment in infrastructure is vital. The World Bank estimates that infrastructure improvements boosted growth in SADC by 1.2% per capita per year from 1995 to 2005, mainly due to access to mobile telephony. Road network improvements made small growth contributions, while power sector inadequacies had a negative impact. Infrastructure improvements matching those of Mauritius, the regional leader, could boost regional growth performance by three percentage points. Regional infrastructure requirements across all sectors represent 1% of regional gross domestic product (GDP).

Efforts are ongoing to encourage private sector involvement in environmentally sustainable infrastructure development. The Infrastructure and Services Directorate, along with its affiliated bodies, plays a crucial role in these efforts through several key functions:

- Promoting and monitoring the implementation of regional protocols, policies, and strategies related to energy, transport, communication, tourism, and water aimed at poverty alleviation.
- Developing, promoting, and harmonising policies, strategies, programmes, and projects across sectors, such as energy, transport, communications, tourism, and water.
- Promoting an enabling environment for infrastructure investment.
- Advocating for physical and social infrastructure development that contributes to poverty alleviation.
- Coordinating and promoting the integrated management of transboundary resources like water, tourism, transport, communication, and energy for regional integration and development.
- Promoting capacity-building and training programmes to enhance regional integration.
- Encouraging stakeholder participation, including gender mainstreaming, increasing private sector investment and input, and facilitating easier implementation.

4.3.1 Regional Infrastructure Development Master Plan

Signed at the SADC Summit in August 2012, the master plan provides a comprehensive framework for infrastructure development, covering crucial areas such as roads, rails, and ports. It serves as a basis for planning and cooperation with development partners and the private sector. Infrastructure is a critical element of the Regional Indicative Strategic Development Plan.

The master plan unfolds in three five-year phases:

- Short Term: 2012–2017
- Medium Term: 2017–2022
- Long Term: 2022–2027

These phases align with SADC Infrastructure Vision 2027, which sets a 15-year horizon for forecasting regional infrastructure needs. The plan coordinates with the African Union's Programme for Infrastructure Development in Africa (PIDA) and also significantly contributes to the Inter-Regional Infrastructure Master Plan and the proposed tripartite Free Trade Area comprising SADC, the Common Market for Eastern and Southern Africa (COMESA), and the East African Community (EAC).

The ambitious goals of the Regional Infrastructure Development Master Plan underscore SADC's commitment to creating an enabling environment that meets infrastructure needs by 2027. This plan is crucial for achieving sustainable regional socio-economic development and integration, as envisioned in the SADC Infrastructure Vision 2027.

4.4 WESTERN BALKANS AND EASTERN NEIGHBORHOOD

Sustainable municipal infrastructure encompasses the physical and organisational structures and facilities required for delivering services in municipal and urban areas in an environmentally and socially sustainable manner that guarantees basic human rights to individuals and communities. Terms like urban environmental infrastructure (UEI), green infrastructure, sustainable urban development, urban ecosystem services, climate-proofing cities, and smart or green cities describe this concept. Achieving sustainable urban transformation involves broad, multidimensional structural processes that enable cities to offer a high quality of life without massive energy and resource consumption. Integrated urban development implements multi-purpose solutions for various stakeholders and urban systems simultaneously, using fewer resources and generating more significant returns.

The Western Balkans and Eastern Neighborhood regions face significant urban challenges and climate-related risks. Municipalities in these regions have inherited a legacy of environmental degradation, inefficient energy use, reliance on fossil fuels,

and outdated infrastructure. These issues contribute to high emissions levels and energy use, making the infrastructure vulnerable to climate change effects.

Transitioning to new economic and governance systems poses serious challenges for urban development, including climate change. While urban centres are growing, secondary cities are shrinking, and overall population growth is slow or negative in urban and rural areas. Issues such as urban sprawl, suburbanisation, poor planning, centralised decision-making, legal framework discrepancies, lack of municipal cooperation, inadequate spatial planning, affordable housing, and poor service provision hinder progress.

To address these issues, the 2018 Global Commission on the Economy and Climate report recommended accelerating investment in sustainable infrastructure, supporting strategic national and sub-national programmes, and ensuring equitable, people-centred approaches. Financing for sustainable municipal infrastructure has become increasingly prominent, overcoming traditional challenges in funding projects in municipalities with limited budgets and capacities.

4.5 THE STATE OF LOCAL INFRASTRUCTURE INVESTMENT IN EUROPE

The confluence of COVID-19 and the climate and digital transition has put public investment back on the policy agenda, with enhanced local investment deemed necessary. Public investment that enhances growth is central to policymakers' response to the asymmetric effects of the pandemic, new needs generated by the digital and green transitions, and related social and distributional challenges. Local infrastructure investment is critical for implementing these policies and is on the G20 agenda.

Local authority investment suffered significantly due to the global financial crisis. Fiscal stabilisers were used to support current demands, such as heightened unemployment, while fiscal balances deteriorated and indebtedness increased. Public capital expenditure, particularly at the subnational level, came under sustained pressure. Addressing this legacy of investment gaps at the local level is essential, especially as the transition to a smarter and greener economy opens new gaps.

Municipalities are crucial nodes for implementing policies tackling these transitions, as they concentrate on socio-economic activity and organisational capital. Around 45% of government investment in the EU is conducted by local authorities, covering basic infrastructures like public transport networks, wastewater infrastructure, public buildings, and social housing. Energy efficiency in these projects is relevant for climate change mitigation, while land zoning impacts climate change adaptation and biodiversity.

Municipalities provide various public services, and their administrative capacities impact their engagement with green and digital transitions. Procurement policies incorporating climate considerations and digitally provided public services set standards that drive public-private synergies. However, there is a significant variation in planning and implementation capacities among municipalities, with geographic location being a key determinant of development and needs.

The EU's multiannual financial framework (MFF) for 2021–2027 and the NextGenerationEU (NGEU) funds promise a significant leap forward in tackling these transitions. Despite increasing infrastructure investment efforts, most municipalities signal investment gaps, particularly in climate change, digitalisation, and urban transport. COVID-19 has led many municipalities to emphasise social infrastructure. Smaller municipalities and those in poorer regions more frequently identify gaps and exhibit lower levels of green and digital capacity.

Lack of funds, regulatory red tape, and limited technical capacity impede municipalities' investments. Active engagement by municipalities is necessary to tackle the green and digital transitions. By 2020, nearly 70% of EU municipalities had limited capacity to deal with the green transition, while 43% did not provide standard digital services. Plans to develop these capacities in subsequent years were common.

Municipalities represent an important channel for the European Investment Bank (EIB) to pursue public policy goals. Key policy objectives include sustainable infrastructure, support for economic restructuring to create new jobs and growth, and investment in social infrastructure to ensure a just transition. In the wake of COVID-19, the EIB's commitment to cohesion remains central, addressing economic growth and inequality issues. This commitment includes measures to strengthen the rural-urban nexus,

address inequalities within cities, and foster development in rural regions. The EIB also supports the EU's Urban Agenda and complementary initiatives and is prepared to develop an urban investment support (URBIS) facility (EIB Municipalities Survey, 2020).

4.6 CONCLUSION

Due to its diverse nature, the private sector comprises organisations of various sizes with differing interests and challenges. This research considered the private sector as all institutions operating outside the public sector, primarily those engaged in profit-making activities. This definition is crucial as it recognises that while some organisations may operate outside the public domain, they may have—if any—limited relevance to the concept of public-private partnerships (PPPs) addressed in this study.

The public sector focuses on serving citizens and fostering an environment conducive to the private sector's effective operation through sound decision-making. Public institutions utilise resources protected by the South African Constitution, with the value of these resources assessed in terms of cost and actual output, among other metrics.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 INTRODUCTION

This chapter outlines the research methodology employed to explore the challenges associated with implementing the Municipal Infrastructure Grant (MIG) and to investigate alternative MIG implementation strategies within the Nelson Mandela Bay Municipality (NMBM) in the Eastern Cape. Discussions include the sampling method, sample size, research design, and techniques utilised in the study. The chapter also details the data collection tools and data analysis methods used.

According to Dunne (2012:162), research methodology encompasses the study or theory of how research methods are applied in scientific studies. It involves a descriptive analysis of research methods, emphasising their capabilities and limitations, and establishes the philosophical basis for the research (Creswell & Creswell, 2018:68). Therefore, the methodology is aimed at describing and analysing the research methods, highlighting the scope of resources and the inherent assumptions and potential consequences.

5.2 RESEARCH METHOD

This study adopted a mixed method approach due to the nature of the study's objectives, which involved the collection, analysis, and integration of both qualitative and quantitative data (Creswell et al., 2011:41). The mixed-method approach can be unstructured, structured, or semi-structured, and is particularly beneficial for social science research and practice (Kumar, 2014:18). In this case, a semi-structured approach was utilised as it best met the study's goals. This method is advantageous as it combines different research approaches to provide a more comprehensive understanding of the phenomena under study than would be possible using either approach in isolation. In the mixed method approach, qualitative data was used to explain or build upon quantitative results (Creswell et al., 2011). A qualitative approach was used to provide depth and context, whereas quantitative methods provided breadth and generalizability. Together, they enhanced the overall validity of the research findings.

5.3 RESEARCH DESIGN

Babbie (2015:89) observes that every scientific social research inquiry necessitates a research design that outlines critical factors such as data collection techniques and data analysis methods, illustrating their interrelation to ensure research findings effectively address the predetermined research questions. Goodwin and Jasper (2014:245) propose that researchers adopt a normative approach to determine the selection criteria for which data to consider in a study and, therefore, which questions to ask. This strategic approach ensures that research is conducted thoroughly and systematically, yielding valid and actionable results.

Yin (2013:37) asserts that a research design serves as a plan or blueprint for conducting research. It can also be referred to as a strategic framework essential for the study's success, as research results can only be accepted, rejected, replicated, or understood in the context of how they were obtained.

A descriptive research design was adopted for this study. A descriptive research design answers research questions as accurately as possible by collecting data. This research design helps answer questions of what, who, where, how, and when associated with a specific research question (Creswell & Creswell, 2018:58). It describes characteristics and data about the unit of analysis by measuring variables through questions and deriving meaningful relationships from those variables. Moreover, a descriptive research design is used to gain information about the current status of a specific phenomenon, describing the existing conditions (Creswell, 2014:122). A descriptive research design was appropriate for this study as it enabled the researcher to describe the reality of implementing MIG projects in the NMBM.

5.4 SAMPLING

A sample is a set of data drawn from the investigated population and used to gain insight into the features of a larger group (Jonker & Pennink, 2010; Keller, 2009).

5.4.1 SAMPLING TECHNIQUE

In this study, non-probability purposive sampling was employed. Non-probability sampling is a method where the samples are chosen based on the researcher's subjective judgment rather than random selection (Kyu-Seong, 2022). Specifically,

purposive sampling is used when the researcher selects individuals or groups based on their specific characteristics or knowledge that align with the study's objectives. This method is advantageous when the focus is on phenomena where specific insights or experiences are required (Creswell & Plano Clark, 2011:87). For this research, the purposive sampling technique was chosen to select respondents with relevant knowledge and experience related to the MIG. This approach ensures that the data collected is directly relevant to the study's objectives. The sample for this study was drawn from the following fields of expertise:

1. Infrastructure development and planning
2. Spatial planning
3. Community services
4. Land use administration and management
5. Integrated development planning
6. Local economic development

5.4.2 POPULATION AND SAMPLE SIZE

Data for this study was collected from the Nelson Mandela Bay Metropolitan (NMBM). Bless and Higson-Smith (1995), as cited by Mditshwa (2012:45), define the target population as the set of elements that the researcher focuses on and to which the results obtained from the sample should be generalised. In this study, the target population included elected representatives overseeing the portfolios of local economic development (LED)/infrastructure development, social community services, chief operations officer (COO)/city manager, and community representatives. Additionally, members from the South African Municipal Workers Union (SAMWU), South African Local Government Association (SALGA), and Independent Municipal and Allied Trade Union (IMATU) were included in the sample. Including these groups ensured a comprehensive understanding and enabled the collection of reliable data to make sound recommendations regarding the impact of the MIG project on the entire NMBM.

5.4.2.1 Inclusion and exclusion criteria

Respondents were included in this research on the basis that they meet the following criteria:

1. They had been involved in development issues within the Nelson Mandela Municipality
2. They had stayed in Nelson Mandela Bay Municipality for the past 12 months
3. They held a municipal position as provided for by the Municipal Structures Act
4. They had reached the age of consent

Respondents were excluded from this research if they did not meet the following criteria:

1. They had stayed in the Nelson Mandela Bay Municipality for less than 12 months.
2. They did not hold a position that allowed them to participate in development issues within the municipality.
3. They had reached the age of consent.

The Yamane (1967) formula was used to determine a well-representative sample size in this study, as follows:

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

Where n = sample size, N = population size, and e = margin of error, which was set at 5% (0.05) for this study:

$$n = \frac{50}{1 + 50(0.05)^2}$$
$$N = 44$$

Therefore, 44 participants were selected for this study based on the metropolitan's institutional arrangement, municipal infrastructure framework, and involvement in planning and implementing municipal infrastructure projects through the MIG. The sampling frame of the study is depicted in Table 1 below.

Table 5.1: The sample breakdown

Category/unit	Number of members each selected organisation comprises	Number of participants
Elected Representative/Councillor	5	<u>4</u>
Municipal/City Manager/COO/SALGA	5	<u>5</u>
Executive Directors/Directors: Infrastructure Planning and Development, Spatial Planning, Community Services, IDP, and LED	10	<u>10</u>
<u>Managers</u>	10	<u>8</u>
Specialist/Practitioner	15	12
Labour Union Representative (SAMWU & IMATU)	5	5
TOTAL	50	44

5.5 DATA COLLECTION INSTRUMENTS

The data collection instruments used depend on the type of research and the data to be collected. Instruments may include document reviews, observations, questionnaires, measurements, focus group discussions, interviews, or a combination of these (Ados, 2020:15). A questionnaire and focus group discussion guide were used to collect data in this study. However, before the actual data collection, a pilot test was done to test the methods and questionnaire to be used on a large or full scale to increase the credibility and reliability of the study.

A questionnaire is a tool comprising questions designed to generate data necessary to achieve the research project's aims and objectives (Cant et al., 2007:77). Each respondent receives the same questionnaire with identical questions, ensuring that the data collected is comparable (Burns & Bush, 2013:89). For this study, a semi-

structured questionnaire with both closed and open-ended questions was used to gather data from 44 respondents. The questionnaire was divided into two sections, each with pre-coded questions developed to achieve the study's objectives. Respondents took approximately 20 to 25 minutes to complete the questionnaire.

Additionally, a focus group discussion guide was employed to collect data. Focus group discussions involve gathering individuals with similar backgrounds or experiences to discuss a specific topic of interest. These discussions are typically conducted in small groups of five to twelve individuals (Guide, 2016:207). In this research, focus group discussions were organised with groups consisting of five to ten participants. Specifically, two separate focus group discussions were conducted: one for males and another for females. All participants had been actively involved in the MIG implementation strategy and projects. The participants were selected through purposive sampling based on their knowledge and experience related to MIG projects within the Nelson Mandela Bay Metropolitan Municipality (NMBM).

A focus group discussion guide was employed to facilitate qualitative data collection. As Guest et al. (2017:32) suggest, this guide included unstructured questions designed to steer the discussion. The researcher took on the moderator role during the discussions to guide the conversation and ensure that discussions progressed effectively and efficiently.

The focus group discussions were held in a setting that was both comfortable and conducive to open dialogue within the NMBMM. This environment was chosen to encourage participants to freely express their thoughts and insights, which were critical for the research outcomes. The focus group discussions took 45 minutes for each group, or 90 minutes in total for both groups.

5.6 DATA ANALYSIS

Ingham-Broomfield (2014) asserts that data analysis involves organising the collected data to address the research question. This assertion suggests that data alone does not provide answers; therefore, they must be arranged systematically, processed, and analysed to achieve the predetermined research objectives. Data analysis is crucial in any research study, encompassing editing, coding, and data processing. Moreover, its purpose is to enhance the quality by fixing mistakes through a laborious process of

carefully and critically examining the completed questionnaire, discarding the incomplete questionnaires, and referring to conventionality with relevant data-gathering criteria (Cooper & Schindler, 2003:52). Making data consistent, uniform, accurate, and comprehensive for ease of analysis is the ultimate purpose of data cleansing. The practice of numbering replies and classifying them into specific categories or classes is known as data coding. The primary benefit of doing this is for effective data analysis.

Statistical Package for Social Scientists (SPSS) version 29.0 and Smart PLS4 were used to capture and process the data collected using the questionnaire. SPSS is software that provides a wide range of robust and reliable statistical analysis functions (Arkkelin, 2014). SmartPLS is software with a graphical user interface for variance-based structural equation modelling (SEM) using the partial least squares (PLS) path modelling method. SPSS and SmartPLS were suitable for this study because they have statistical features, such as descriptive statistics, that the researcher used to analyse the data.

Furthermore, descriptive statistics, structural equation modelling, chi-square test, and factor analyses were used to analyse the study data collected through questionnaires. A descriptive analysis (means, standard deviations, frequencies, and percentages) was used to describe some variables. SEM evaluates relationships among variables by assessing the underlying patterns of covariances. The measurement model component of structural equation modelling ascertains the validity of manifest indicators and the extent to which they represent the underlying latent variable. In contrast, the structural model helps determine relationships among latent variables in the model (Hussain et al., 2018). Refining scale items and ascertaining reliability was achieved with exploratory factor analyses (EFA).

Data from the focus group discussions was analysed using thematic analysis, which involves organising data according to key themes. These themes act as 'umbrella' constructs, typically identified by researchers at various stages of the research process, before, during, and after data collection (Welman, Kruger & Mitchel, 2005:211). Thematic analysis helps extract meaningful patterns and insights from qualitative data, facilitating a deeper understanding of the common threads that emerge.

5.7 VALIDITY AND RELIABILITY

Research is considered valuable and credible when it meets the standards of validity and reliability. A researcher's objectivity can influence validity and reliability, accurate measuring, and the research's comprehensiveness (Tull & Hawkins, 1987:78). The best research builds on previous findings, enhancing the understanding of the problem (Burns & Bush, 2013:56); therefore, triangulation was employed to ensure the reliability and validity of this study's quantitative and qualitative data.

Triangulation is a research strategy that can be used to improve the reliability and validity of research findings using different and multiple sources of information and can be used in both quantitative and qualitative studies (Noble & Heale, 2019:44). Therefore, the researcher used this strategy by collecting data using questionnaires and selecting varied study participants such as elected councillors, municipal managers, executive directors, specialists, and labour union representatives, to ensure the trustworthiness of the data. Moreover, the researcher used different data collection instruments, such as questionnaires and focus group discussions, to ensure the quality of the data. Lastly, the researcher used a pilot study to confirm the accuracy of the data collection instruments and to make changes if necessary.

5.8 ETHICAL CONSIDERATION

Ethics regard the expected norms or principles that guide moral choices regarding a researcher's behaviour during the research process (Cooper & Schindler, 2006:108). The researcher observed relevant ethical guidelines to ensure the research aligned with expected ethical standards. Ethical considerations for this study included ensuring respondents provided informed consent by giving them sufficient information to make knowledgeable decisions about their participation.

Furthermore, respondents' confidentiality and anonymity were guaranteed, as they were not required to share their identities, names, or any information that could be traced back to them. Cooper and Schindler (2006:108) state that respondents' data should be kept confidential. Accordingly, data collected from respondents in this study was kept confidential. The researcher also applied for ethical clearance from the DUT's research ethics committee. Additionally, the study's findings, validity, and reliability are to be publicised (Wiid & Diggins, 2013:60).

5.9 CONCLUSION

In conclusion, this chapter meticulously outlined the research methodology, and the specific methods utilised in conducting this investigation, forming the foundation of the study's thematic exploration. It is crucial to reiterate the precise methods employed for data collection within this research project. The chapter has clarified issues related to research methodology and distinguished between methodology and methods, aiming to enhance readers' understanding.

This research used quantitative and qualitative approaches, as discussed and analysed comprehensively in this chapter. Although the study predominantly followed a qualitative approach, it incorporated statistical data collection. Thus, qualitative and quantitative methods were employed, albeit with a stronger emphasis on the qualitative paradigm.

This chapter specifically analysed the survey research method and thoroughly discussed the data collection instruments, questionnaires, and focus group discussions. This chapter also stressed the importance of adhering to ethical standards to protect respondents and ensure the validity and reliability of the research findings. Such adherence not only safeguards participants and adheres to good research practices but also complies with DUT's research regulations and is consistent with its research policy.

The data collected through these instruments are presented and analysed in the subsequent chapter, continuing the exploration of the study's themes and findings.

CHAPTER SIX

STATEMENT OF FINDINGS, INTERPRETATION AND DISCUSSION OF THE DATA

6.1 INTRODUCTION

This chapter analyses the results and interprets the findings from the questionnaire, the primary data collection tool used in this study. The questionnaire was distributed to 44 participants, and the responses were analysed using SPSS version 29.0 and Smart PLS4 software. This chapter presents descriptive statistics through graphs, cross-tabulations, and other figures illustrating the quantitative data gathered. Inferential statistical techniques were also employed, such as correlations and chi-square tests. The results from these tests are interpreted based on their p-values, with results considered statistically significant with a p-value less than 0.05 ($p < 0.05$).

6.2 THE SAMPLE

Out of the 44 questionnaires dispatched, 40 were returned, resulting in a high response rate of 91%. This robust participation helps to ensure the data analysis's reliability and the study findings' generalisability.

6.3 THE RESEARCH INSTRUMENT

The questionnaire comprised 60 items, scaled at nominal or ordinal levels, to measure various constructs relevant to the study. It was structured into six sections, each designed to probe different thematic areas pertinent to the research questions. The distribution of these questions is tabulated below:

Table 6.1: Themes used in the questionnaire

A	General
B	Information on Municipal Infrastructure Grant (MIG)
C	Implementation Plan/Strategy
D	Project Management
E	Monitoring of PPP Projects
F	Policy/PPP Legal Framework
G	Socio-Economic Impact of MIG Projects

6.4 RELIABILITY STATISTICS

Precision in research hinges on two key aspects: reliability and validity. Reliability involves taking multiple measurements on the same subjects to ensure consistency in the results. A reliability coefficient of 0.60 or above is generally acceptable for newly developed constructs. Given the specialised yet limited size of the respondent pool in this study, reliability assessments were conducted using both SPSS and Smart PLS4 to ensure the robustness of the data. The reliability assessment results are first tabulated and then discussed below.

Table 6.2: Results from SPSS and Smart PLS4

	Section	Smart PLS4				SPSS	
		Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)	Cronbach's Alpha	Number of Items
C	Implementation Plan/Strategy	0.8118	0.8132	0.9140	0.8416	0.8016	2
D	Project Management	0.9042	0.9096	0.9332	0.7776	0.9299	5
E	Monitoring of PPP Projects	0.1525	0.1798	0.6867	0.5362	0.1334	2
F	Policy/PPP Legal Framework	0.6433	0.7938	0.8384	0.7239	0.5964	2
G	Socio-Economic Impact of MIG Projects	0.7805	0.8031	0.8437	0.4760	0.8355	7

1. **IMPLEMENTATION PLAN/STRATEGY (C):** The Cronbach's alpha values are relatively close in both Smart PLS4 (0.8118) and SPSS (0.8016), indicating a good level of internal consistency. The composite reliability values are 0.8132 (rho_a) and 0.9140 (rho_c), both above the generally accepted threshold of 0.7, suggesting good reliability. The average variance extracted (AVE) is 0.8416, also above the threshold of 0.5, indicating good convergent validity.
2. **PROJECT MANAGEMENT (D):** The Cronbach's alpha values are very high in both Smart PLS4 (0.9042) and SPSS (0.9299), indicating excellent internal consistency. The composite reliability values are 0.9096 (rho_a) and 0.9332 (rho_c), both well above the threshold of 0.7, indicating excellent reliability. The AVE is 0.7776, also above the threshold of 0.5, indicating good convergent validity.
3. **MONITORING OF PPP PROJECTS (E):** The Cronbach's alpha values are very low in both Smart PLS4 (0.1525) and SPSS (0.1334), indicating poor internal consistency. The composite reliability values are 0.1798 (rho_a) and 0.6867 (rho_c); the former is below the threshold of 0.7, and the latter is close to the threshold, indicating questionable reliability. The AVE is 0.5362, above the threshold of 0.5, indicating acceptable convergent validity.
4. **POLICY/PPP LEGAL FRAMEWORK (F):** The Cronbach's alpha values are acceptable in both Smart PLS4 (0.6433) and SPSS (0.5964), indicating acceptable internal consistency. The composite reliability values are 0.7938 (rho_a) and 0.8384 (rho_c), both above the threshold of 0.7, indicating good reliability. The AVE is 0.7239, also above the threshold of 0.5, indicating good convergent validity.
5. **SOCIO-ECONOMIC IMPACT OF MIG PROJECTS (G):** The Cronbach's alpha values in both Smart PLS4 (0.7805) and SPSS (0.8355) are high, indicating good internal consistency. The composite reliability values are 0.8031 (rho_a) and 0.8437 (rho_c), both above the threshold of 0.7, indicating good reliability. However, the AVE is 0.4760, below the threshold of 0.5, indicating questionable convergent validity.

Sections C, D, F, and G show good reliability and validity. In contrast, Section E shows questionable reliability and validity, possibly due to the low number of items in Section E or other factors needing further investigation.

6.5 FACTOR ANALYSIS

Factor analysis is a statistical method primarily used for data reduction. It is often applied in survey research when a researcher aims to summarise many questions with a smaller set of hypothetical factors.

The extraction method employed in this study was principal component analysis, and the rotation method used was Varimax with Kaiser normalization. Varimax, an orthogonal rotation method, aims to minimise the number of variables with high loadings on each factor, facilitating the easier interpretation of the factors.

Factor analysis or loading identifies inter-correlations among variables. Items that show similar loadings suggest they measure the same underlying factor. Examining the content of items with loadings of 0.5 or higher and prioritising the higher or highest loading in cases where items cross-load above this threshold makes it possible to gauge measurement along various components. Before presenting and discussing the matrix table (Table 6.4), a summary of the KMO (Kaiser-Meyer-Olkin) and Bartlett's test results (Table 6.3) is tabulated; these tests assess the suitability of data for structure detection.

The KMO measure of sampling adequacy evaluates the proportion of variance in the variables that could be attributed to underlying factors. Higher values, approaching 1.0, suggest that factor analysis may be appropriate for the data. However, a KMO value below 0.50 suggests the factor analysis results might be less reliable.

Bartlett's test of sphericity checks if the correlation matrix resembles an identity matrix, implying that the variables are unrelated and unsuitable for detecting any structure (Silva et al., 2014). Significance levels below 0.05 from this test indicate that factor analysis could be effectively applied to the data (<https://www.ibm.com/docs/de/spss-statistics/24.0.0?topic=detection-kmo-bartletts-test>).

Factor analysis in this study was restricted to items measured on a Likert scale. The analysis led to certain components being divided into more specific subcomponents, as detailed in the rotated component matrix section. This breakdown aids in a more nuanced understanding of the data's structure.

Table 6.3: KMO and Bartlett's Test

	Section	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
			Approx. Chi-Square	DF	Sig.
C	Implementation Plan/Strategy	0.45	36.77	6	< 0.001
D	Project Management	0.78	211.17	21	< 0.001
E	Monitoring of PPP Projects	0.50	0.26	1	<0.613
F	Policy/PPP Legal Framework	0.43	70.67	21	< 0.001
G	Socio-Economic Impact of MIG Projects	0.68	255.58	36	< 0.001

All the prerequisites for conducting factor analysis are met, except for Section E. Specifically, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy must exceed 0.500, and the significance (sig.) value for Bartlett's test of sphericity should be below 0.05. These conditions ensure that the data is suitable for structure detection through factor analysis.

Table 6.4: Rotated Component Matrix

C	Component	
	1	2
The metropolitan municipality has established a sustainable MIG strategy and implementation framework.	0.005	0.835
The MIG plan/strategy aligns with the developmental goals of the municipality	-0.171	0.706
The MIG has effectively narrowed the gap between the required infrastructure costs and the available resources.	0.950	0.078
In South Africa, a comprehensive guide for MIG implementation is available that seamlessly integrates with the municipality's integrated development planning.	0.854	-0.375

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in three iterations

D	Component	
	1	2
The metropolitan MIG strategy has preserved and enhanced the quality of socio-economic projects.	0.907	0.137
Government utilisation of the MIG programme has improved project management by adopting advanced construction techniques.	0.929	-0.020
The MIG introduced specialised resources to infrastructure development, significantly bolstering the resources and capabilities of the metropolitan government.	0.836	0.316
The government's sustainable approach to municipal infrastructure development has enhanced the project capacities of our municipality.	0.904	0.224
The MIG has provided the private sector opportunities to contribute expertise and introduce technical innovations to complex projects.	0.723	0.426
Lack of sufficient, sustainable MIG awareness and training impedes the desired development and growth.	0.122	0.915
The presence of MIG in the metropolitan municipality has facilitated skill development opportunities within the metro.	0.202	0.889

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in three iterations

E	Component
	1
Effective monitoring of PPP projects leads to successful implementation of MIG projects.	0.736
The metropolitan MIG systems are equipped with operational monitoring and evaluation mechanisms.	0.736

Extraction Method: Principal Component Analysis

a. One component extracted

F	Component			
	1	2	3	4
South Africa boasts a robust legal framework for municipal infrastructure that facilitates the execution of MIG projects.	0.738	-0.041	0.221	0.523
The current investment environment in the country supports a sustainable and viable system for MIG projects.	0.756	0.299	-0.179	-0.151
The framework for MIG permits the private sector to be involved in developing and delivering infrastructure services.	0.153	0.708	0.585	0.150
Government policies regarding MIG align well with broader socio-economic development strategies.	0.059	-0.036	0.958	-0.110
The legislative landscape in South Africa provides ample authority for the government to engage in PPPs aimed at municipal infrastructure development.	0.792	0.073	0.161	-0.054
Existing regulations, frameworks, and guidelines for MIG in South Africa are adequate to support MIG-related activities effectively.	0.143	0.919	-0.111	0.068
The policy context in South Africa is conducive to the sustainable implementation of MIG projects.	-0.074	0.128	-0.113	0.949

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in six iterations

G	Component		
	1	2	3
The management and operations of MIG are intrinsically linked to the socio-economic service delivery model of the metropolitan areas.	-0.080	0.919	-0.012
The implementation of MIG has undoubtedly and significantly sped up service provision in a highly effective and efficient manner, showcasing its impact on enhancing public services.	0.20 2	0.69 1	0.3 94
Public capital injections have been substantial enough to bolster infrastructure investments, fostering economic growth within metropolitan governments.	0.38 4	0.28 4	0.7 56
MIG projects have supported the metropolitan municipality in achieving immediate and medium-term service delivery goals, demonstrating the programme's flexibility and responsiveness to municipal needs.	0.816	0.511	-0.107
Implementing MIG has accelerated the delivery of infrastructure and industrial facilities, effectively reducing capital and operational costs.	0.594	0.685	-0.187
MIG procurement processes have profoundly impacted local communities within the metropolitan areas, contributing significantly to social welfare.	0.669	-0.278	-0.385
MIG initiatives have contributed significantly to metropolitan areas' gross domestic product (GDP), indicating their economic significance.	0.870	0.081	0.028
MIG project implementations have been crucial in reducing unemployment and poverty in metropolitan areas, highlighting their role in social improvement.	0.830	0.142	0.194
Proposing an alternative MIG implementation plan could provide substantial benefits to both metropolitan governments and society at large, suggesting the potential for further enhancements to the current model.	-0.422	-0.208	0.823

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in five iterations.

As shown in the table above, each section relates to a different aspect of MIG projects. Based on the factor loadings given for each statement using SPSS, within the components, the following subtheme names can be proposed for each section that encapsulates the essence of the data.

For Section C, "IMPLEMENTATION PLAN/STRATEGY," the subthemes are Component 1: "Resource Mobilisation and Infrastructure Implementation" and Component 2: "Strategic Development and Responsiveness."

For Section D, "PROJECT MANAGEMENT," the subthemes are Component 1: "Enhancement of Socio-Economic Infrastructure Quality" and Component 2: "Capacity Development and Specialised Resource Integration."

Since only one component is extracted for Section E, "MONITORING OF PPP PROJECTS," the subtheme is Component 1: "Effective Monitoring and Evaluation Systems for PPP Projects."

For Section F, "POLICY/PPP LEGAL FRAMEWORK," the subthemes are Component 1: "Legal and Regulatory Framework for MIG Implementation" Component 2: "Private Sector Participation and Investment Climate" Component 3: "Policy Consistency with Socio-Economic Development" Component 4: "Sustainable Policy Environment for MIG Projects."

For Section G, "SOCIO-ECONOMIC IMPACT OF MIG PROJECTS," the subthemes are Component 1: "MIG's Contribution to Socio-Economic Services and GDP;" Component 2: "Acceleration of Service Provision and Economic Growth;" and Component 3: "Social Impact and Poverty Reduction through MIG Projects."

These subtheme names reflect the dominant loadings of statements within each component, which indicate the underlying constructs that the principle component analysis (PCA) has revealed regarding the MIG projects' implementation, management, monitoring, policy framework, and socio-economic impact.

Excluding the poor loading factors, Smart PLS4 generated the following loading model. Redundants and variables with little or no variances were omitted from the model. These loadings are used later when discussing the structural equation model.

Table 6.5: Loading model

	C	D	E	F	G
C10	0.9131				
C9	0.9216				
D11		0.8895			
D12		0.9107			
D13		0.9048			
D15		0.8193			
E18			0.5455		
E19			0.8803		
F20				0.7609	
F25				0.9321	
G28					0.5736
G29					0.7534
G30					0.7268
G32					0.7560
G34					0.6203
G35					0.6891

Section A: Biographical Data

This section summarises the respondents' biographical characteristics.

Table 6.6: Positions Held by the Respondents

	Frequency	Percentage
LED Specialist/Practitioner	21	52.5
Manager	6	15.0
Civil Engineer	4	10.0
Business Unit Manager	3	7.5
Infrastructure Assessor and Analyst	3	7.5
Labour Union Representative	2	5.0
Municipal/City Manager	1	2.5
Total	40	100.0

The table above shows that most respondents were LED specialists/practitioners, with 21 (52.5%) respondents. Six respondents occupied managerial roles, representing 15.0% of the aggregate. Four respondents were civil engineers (10.0%), three were business unit managers, and three were infrastructure assessors and analysts, each accounting for 7.5% of the total roles. Labour union representatives and municipal/city managers were comparatively less prevalent, with two (5.0%) and one (2.5%), respectively ($p < 0.001$).

Table 6.7: Overall, Gender Distribution by Age

Age (years)		Gender		Total
		Male	Female	
18 – 34	Count	2	5	7
	% within Age (years)	28.6%	71.4%	100.0%
	% within Gender	8.7%	29.4%	17.5%
	% of Total	5.0%	12.5%	17.5%
35 – 44	Count	5	6	11
	% within Age (years)	45.5%	54.5%	100.0%
	% within Gender	21.7%	35.3%	27.5%
	% of Total	12.5%	15.0%	27.5%
45 – 54	Count	12	6	18
	% within Age (years)	66.7%	33.3%	100.0%
	% within Gender	52.2%	35.3%	45.0%
	% of Total	30.0%	15.0%	45.0%
55 – 64	Count	4	0	4
	% within Age (years)	100.0%	0.0%	100.0%
	% within Gender	17.4%	0.0%	10.0%
	% of Total	10.0%	0.0%	10.0%
Total	Count	23	17	40
	% within Age (years)	57.5%	42.5%	100.0%
	% within Gender	100.0%	100.0%	100.0%
	% of Total	57.5%	42.5%	100.0%

There were more female than male respondents in the youngest age bracket (18–34), comprising 71.4% of this age group. This percentage is considerably higher than their overall representation in the gender category, which is 29.4%. Although fewer, males in this age group represented 8.7% of the total male population, disproportionately lower than the females in the same age group.

In the 35–44 age bracket, the gender distribution was more balanced, with female respondents slightly surpassing males, accounting for 54.5% of the age group. When considering the representation within their respective gender categories, 21.7% of males and 35.3% of females fell within this age bracket, indicating a greater distribution of females than males within this mid-range age group.

The 45–54 age bracket shows a higher concentration of male respondents, who comprised 66.7% of this age segment and more than half (52.2%) of the total male population. In contrast, females represented 33.3% of this age group and 35.3% of the total female population, indicating a dominant male presence in this particular age category.

Interestingly, the 55–64 age category comprised only male participants, representing 100% of this age group, creating a significant skew within this age bracket due to the absence of participating females.

Overall, males accounted for 57.5% of the total study population across the age groups, while females accounted for 42.5%. This overall distribution reflects a gender imbalance within the sample. Based on these findings, most municipal officials in the study were male, which several factors may have influenced. Moreover, the factors that influence the gender distribution of municipal officials may vary across municipalities.

The table exhibits a demographic breakdown by age and gender, revealing variances in representation across the participants' age brackets. The gender disparity was most pronounced in the youngest and oldest age groups, with the former exhibiting a female majority and the latter consisting exclusively of males. There was a more even gender distribution of the participants across the intermediate age brackets, albeit with a slight female predominance in the 35–44 age group and a marked male majority in the 45–54 age group. This demographic landscape suggests potential gender-based differences in participation or presence within the sampled population. The distribution by age is significantly different ($p = 0.012$) but not that different for gender ($p = 0.343$).

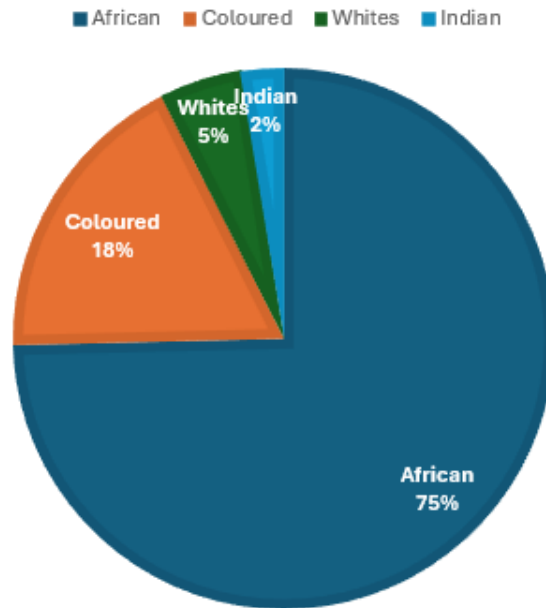


Figure 6.1: Respondents' racial composition percentage

Figure 6.1 indicates the study participants' distribution by race. The African category had the highest representation, with 30 individuals, or 75.0% of the population. The Coloured category included seven individuals, comprising 17.5% of the population. The white category was represented by two individuals, accounting for 5.0% of the population. The Indian category had the most minor representation, with only one individual, equating to 2.5% of the population ($p < 0.001$).

The table below shows the study participants' distribution regarding their qualifications.

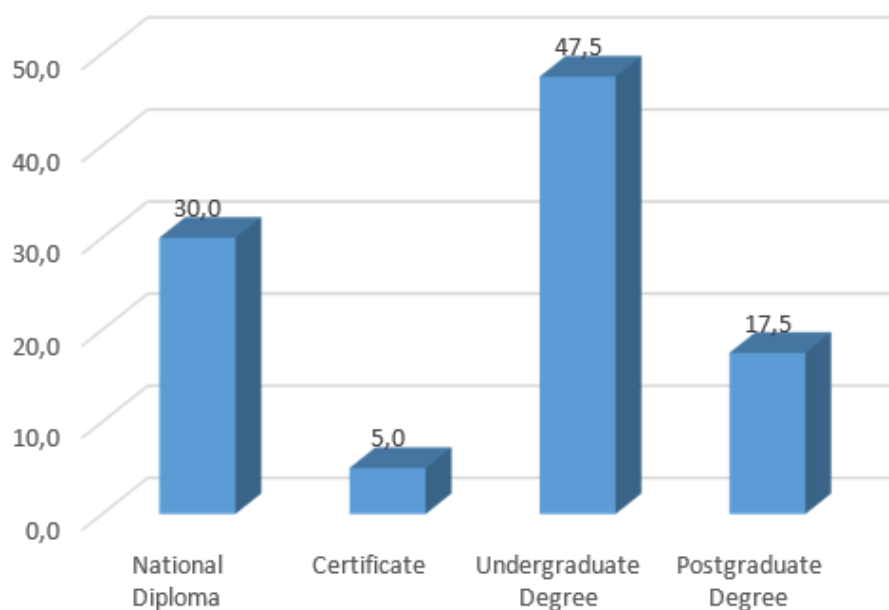


Figure 6.2: Qualification levels of the respondents

All the respondents possessed post-school qualifications, indicating that many held high educational credentials. This high education level among the respondents suggests that their responses to the study questionnaire were likely well-informed, adding a layer of credibility and depth to the data obtained.

Of the study's participants, 30% held a National Diploma, signifying a substantial technical or vocational education level. In contrast, certificates are markedly less common, comprising only 5% of the educational qualifications, which could indicate a lesser focus on short-course or specific training programmes within the sampled population. The preponderance of the respondents (47.5%) possessed an Undergraduate Degree, suggesting a strong orientation towards comprehensive higher education. Postgraduate Degrees are held by 17.5%, indicating a significant commitment to advanced studies beyond the undergraduate level. This distribution pattern may infer the value placed on formal, prolonged education or could reflect the professional requirements or the educational aspirations within the context from which the sample was drawn.

Section B

This section regards the role of the respondents concerning the MIG.

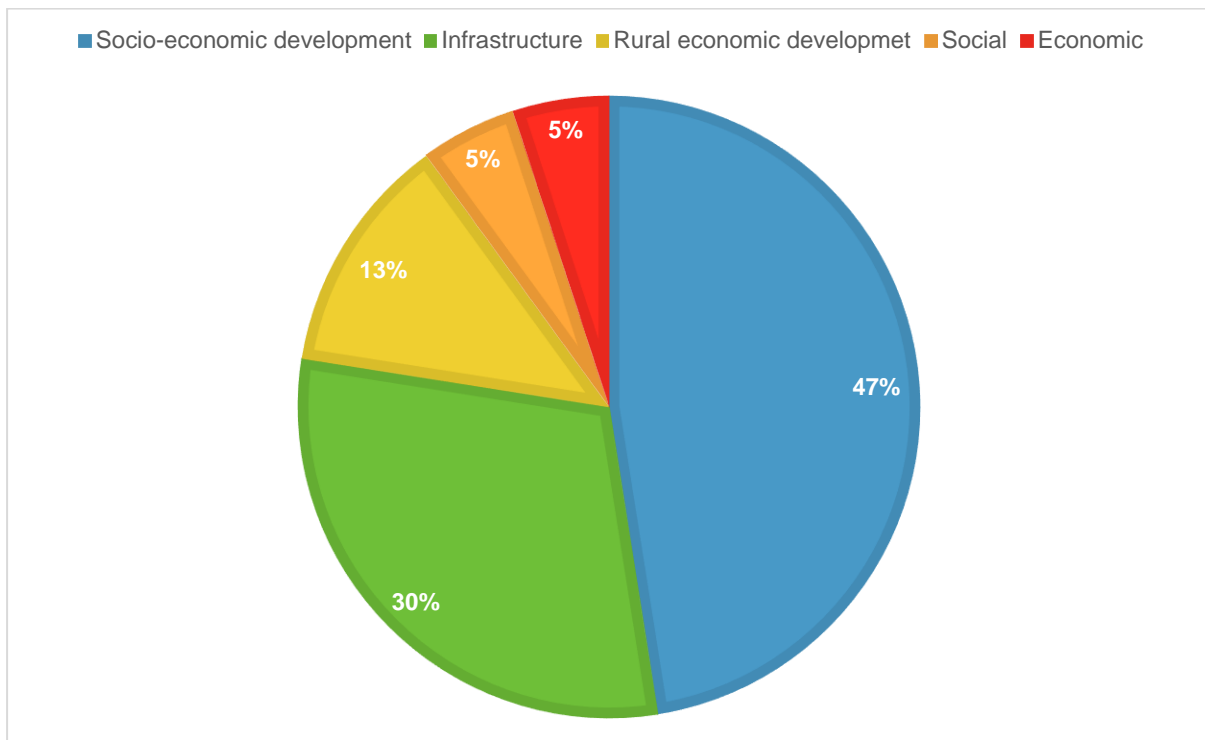


Figure 6.3: Role of the respondents in the MIG Implementation.

Figure 6.3 above summarises the frequency and proportional distribution of the participants' focus areas regarding their roles related to the MIG. The social and economic categories comprised two participants, constituting 5.0% each. The infrastructure category comprised 12 participants, 30.0% of the dataset. The most prevalent focus area, with 19 participants, was socio-economic development, representing nearly half of the sample at 47.5%. Rural economic development was represented by five participants, comprising 12.5% of the total ($p < 0.001$). Collectively, these data points provide insight into the developmental areas prioritised within the sampled population or research focus, indicating a predominant emphasis on socio-economic development initiatives.

Table 6.8: Respondents Utilisation of MIG

	Frequency	Percentage
2016/2017	40	100.0

	Frequency	Percentage
No	40	100.0

	Frequency	Percentage
MIG was not addressing the urban settlement challenges	40	100.0

The first table records that all respondents began utilising MIG in the fiscal year 2016/2017 ($n = 40, 100\%$). The subsequent table indicates that none currently use MIG ($n = 40, 100\%$). The final table provides the rationale for the discontinuation, stating unanimously that the MIG did not address the urban settlement challenges ($n = 40, 100\%$). This consistent unanimity across all responses suggests a collective evaluation of MIG's efficacy, leading to its complete cessation due to its ineffectiveness in tackling the specified challenges.

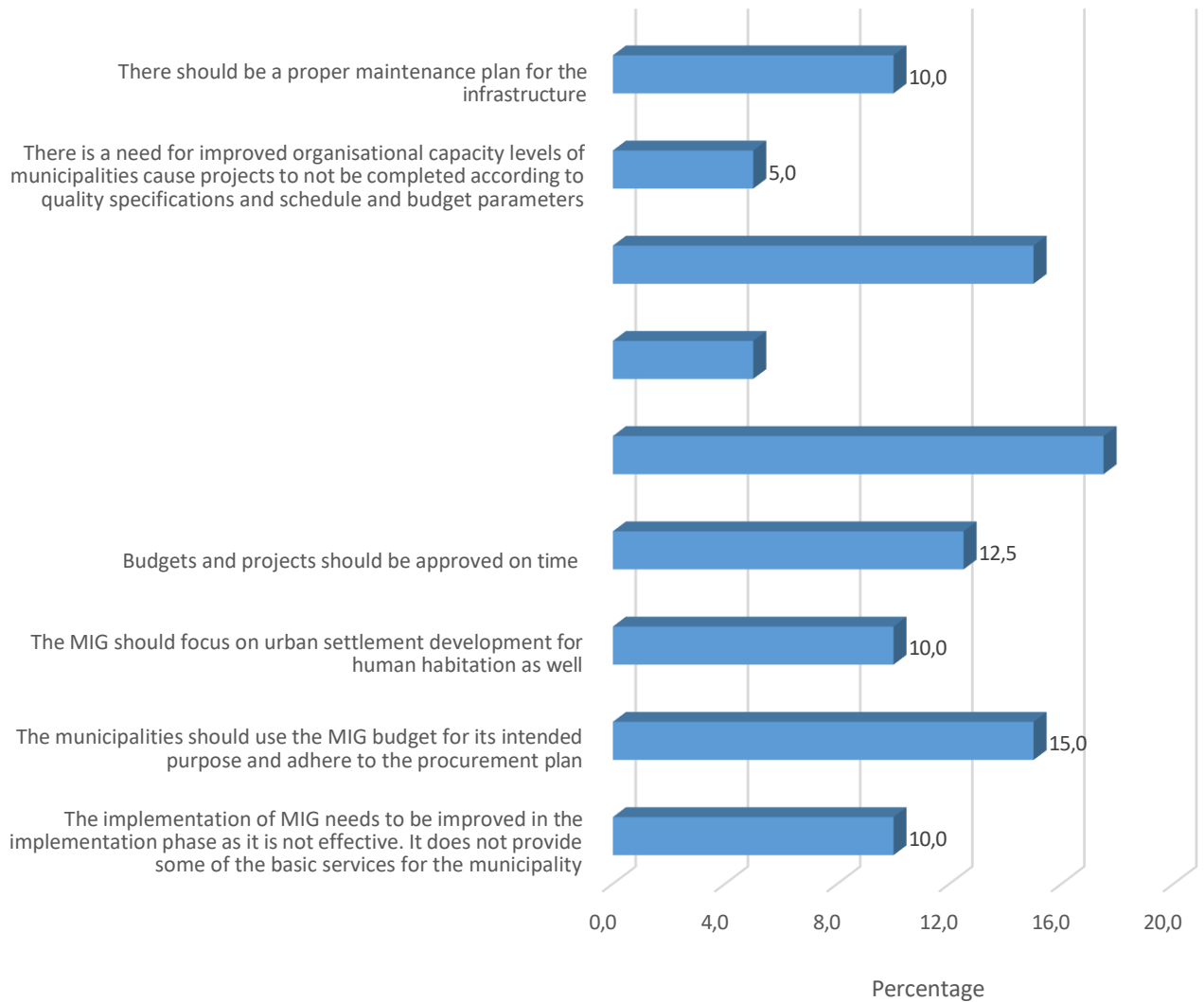


Figure 6.4: Suggestions for improvement in municipalities that still use MIG

Table 6.9 Ways to improve the MIG in NMBM

Municipalities need to have a properly developed monitoring and evaluation system.		15,0
They should have proper planning for implementing MIG projects and follow proper funds management.		5,0
Continuous monitoring and updating of project management policy		17,5

A minority of the respondents (n = 4; 10%) suggested that the MIG implementation is ineffective, particularly in its initial phases, it fails to assist the municipality in providing essential services to the community. A greater proportion of the respondents (n = 6; 15%) argued that municipalities should align their use of the MIG budget with its

intended purpose and adhere strictly to the procurement plan. Another set of respondents (n = 4; 10%) believed that the focus of MIG should also encompass urban settlement development for human habitation.

The notion of timeliness appeared in 12;5% (n = 5) of the participants' feedback, emphasising the need for budgets and projects to be approved promptly. The most prevalent recommendation (n = 7) 17;5% calls for continuous monitoring and policy updates in project management. Conversely, only a small segment of the feedback (n = 2; 5%) regarded the necessity of proper planning and funds management to implement MIG projects.

An equal number of respondents (n = 6; 15%) highlight the necessity for municipalities to develop robust monitoring and evaluation systems. Similarly, a minority (n = 2; 5%) identified the need for improved organisational capacity within municipalities to ensure project completion within quality, schedule, and budgetary frameworks. Lastly, maintaining infrastructure was considered essential by 10% (n = 4) of the participants, who advocated for a proper maintenance plan.

These insights collectively underscore a critical stance towards current MIG processes, with a clear mandate for enhanced efficiency, accountability, and strategic focus in both planning and execution stages to better meet municipal needs.

Section Analysis

The following section delves into the respondents' scoring patterns for each variable within each section. The results presented are first summarised using percentages for each section's variables, after which the analysis is deepened by examining the significance of the statements according to their perceived importance by the respondents.

Section C

This section deals with MIG implementation plans and theoretical propositions for strategy.

Table 6.9: Scoring Patterns Summary

		Never		Rarely		Sometimes		Often		Always		Chi-Square p-value
		Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	
The metropolitan municipality has a sustainable MIG strategy and implementation plan in place.	C 7	0	10.0%	4	10.0%	0	0.0%	32	80.0%	4	10.0%	< 0.001
The MIG plan/strategy is in response to the municipality's developmental agenda.	C 8	3	7.5%	10	25.0%	3	7.5%	24	60.0%	0	0.0%	< 0.001
The MIG has played a significant role in closing the disparity between the necessary infrastructure costs and the available resources.	C 9	4	10.0%	31	77.5%	4	10.0%	1	2.5%	0	0.0%	< 0.001
South Africa boasts a well-defined guide for MIG implementation harmoniously incorporated into the municipality's integrated development planning.	C 10	6	15.0%	31	77.5%	0	0.0%	3	7.5%	0	0.0%	< 0.001

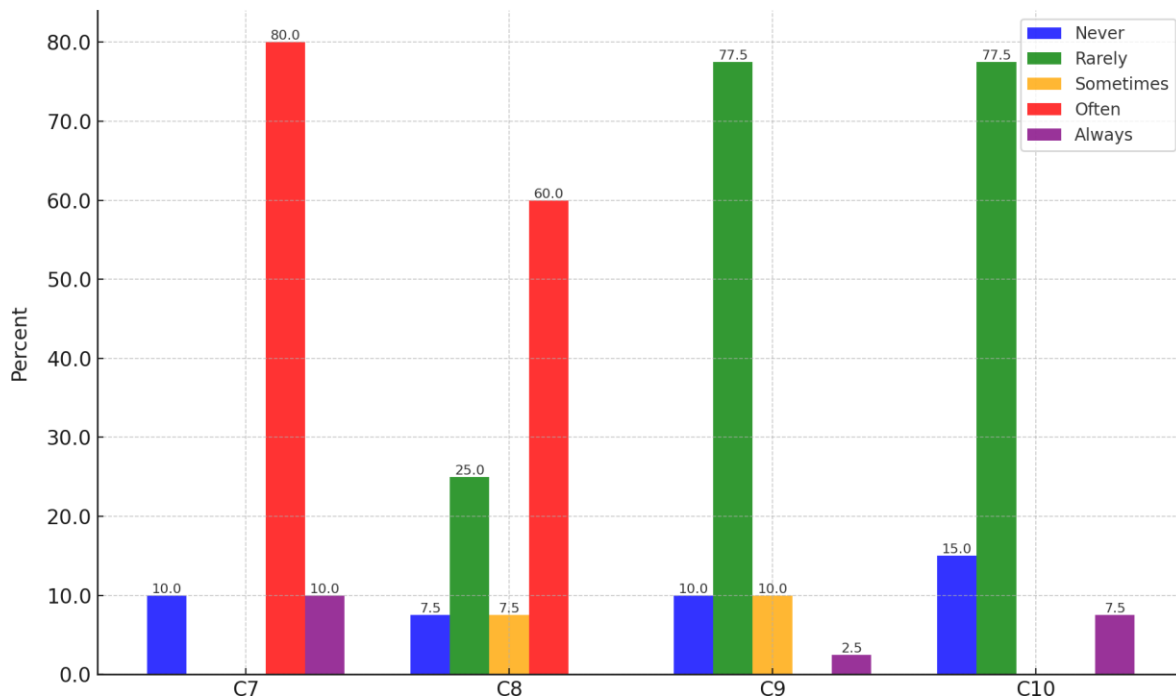


Figure 6.5: Observed patterns

The following patterns are observed:

- Two statements (C7 and C8) show (ominously) higher levels of high-frequency use, whilst others show low-frequency use
- Two statements (C9 and C10) show higher levels of low-frequency use

The implication of the alterations is tested and shown in the table

The chi-square goodness-of-fit test scores indicate statistically significant discrepancies from an expected uniform distribution of responses, showing that certain perceptions about the Municipal Infrastructure Grant (MIG) were prevalent among the respondents.

The prevailing 'Often' response to the metropolitan municipality's implementation of a sustainable MIG strategy (80%, n = 32) implies a general consensus among the participants regarding the MIG's effectiveness within these municipalities. This consensus could reflect well-established processes and a strong alignment with strategic objectives at the metropolitan level. However, the absence of 'Sometimes' responses may point to a polarised view, possibly suggesting a need for more nuanced feedback mechanisms.

The 'Often' and 'Rarely' responses regarding the MIG's alignment with the developmental agenda (60%, n = 24 and 25%, n = 10, respectively) indicate that while there is a tendency towards positive alignment, a considerable proportion of respondents perceived inconsistencies. This pattern could imply that while the strategic intent of MIG is clear, its execution may be uneven, necessitating further scrutiny of the planning and operational phases of MIG-related projects.

The overwhelming 'Rarely' response to MIG's role in bridging the infrastructure funding gap (77.5%, n = 31) is a critical indicator of a perceived shortfall in MIG's financial impact. This shortfall suggests that the MIG may not be as effective in mitigating financial constraints for infrastructure projects, which could have significant implications for future funding models and the strategic allocation of MIG resources. Lastly, the predominance of 'Rarely' responses regarding assessing the clarity of MIG implementation guidelines (77.5%, n = 31) suggests a significant gap in the perceived clarity and practical guidance provided for MIG implementation. The predominance of these responses could imply a need for more transparent, detailed, and accessible guidelines cohesively integrated with municipalities' IDP processes.

In summary, while the MIG is viewed as effective in some areas, the significant patterns emerging from the chi-square test results highlight areas of concern that warrant attention. These include the need for better-aligned, more consistently applied, and clearer implementation strategies to enhance the MIG's efficacy in addressing the infrastructural and developmental needs at the municipal level in South Africa.

A chi-square goodness-of-fit test was conducted to evaluate if there were significant differences in the scoring patterns for each statement across different options. The null hypothesis asserted that an equal number of respondents would select each response option for every statement (analysed individually). In contrast, the alternative hypothesis suggested significant variations in frequency levels across the options. The findings are detailed in the accompanying table 6.10, where the highlighted p-values are below the established significance level (0.05), indicating that the distributions across the response categories (Never, Rarely, Sometimes, Often, Always) differed significantly. While some differences in scoring patterns may seem apparent, confirming these observations to substantiate the analysis statistically is essential.

The trend is that MIG implementation does not bridge the gap between the cost of infrastructure needed and the resources available. At the same time, South Africa does not have a clear guide/strategy for MIG implementation that integrates with the municipalities' IDPs. The literature review indicates that South Africa does not have an integrated MIG implementation plan for municipalities, hence the challenges these municipalities face.

Section D

This section deals with the project management aspect of MIG implementation. The table below summarises the scoring patterns.

Table 6.10: Project management aspect in the implementation of MIG

		Strongly Disagree		Disagree		Neutral		Disagree		Strongly Disagree		Chi-Square p-value
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	
The metropolitan MIG strategy has successfully preserved and improved the quality of socio-economic-related projects.	D11	2	5.0%	26	65.0%	0	0.0%	12	30.0%	0	0.0%	< 0.001
The government's use of the MIG programme improved project management by applying construction techniques.	D12	2	5.0%	25	62.5%	3	7.5%	10	25.0%	0	0.0%	< 0.001
MIG introduced specialised resources to infrastructure development, significantly enhancing the resources and capabilities of the metropolitan government.	D13	2	5.0%	25	62.5%	2	5.0%	11	27.5%	0	0.0%	< 0.001
The use of a sustainable approach by the government to municipal infrastructure development improved the project capabilities of our municipality.	D14	2	5.0%	26	65.0%	2	5.0%	10	25.0%	0	0.0%	< 0.001
The MIG provided an opportunity for private sector participation, allowing it to contribute technical innovations to complex projects.	D15	1	2.5%	26	65.0%	1	2.5%	9	22.5%	3	7.5%	< 0.001
The absence or insufficient provision of sustainable MIG awareness and training (capacity development) impedes the planned development and growth	D16	0	0.0%	21	52.5%	4	10.0 %	12	30.0%	3	7.5%	< 0.001
The presence of MIG within the metropolitan municipality has facilitated skill development opportunities for the metro.	D17	3	7.5%	19	47.5%	8	20.0 %	10	25.0%	0	0.0%	< 0.004

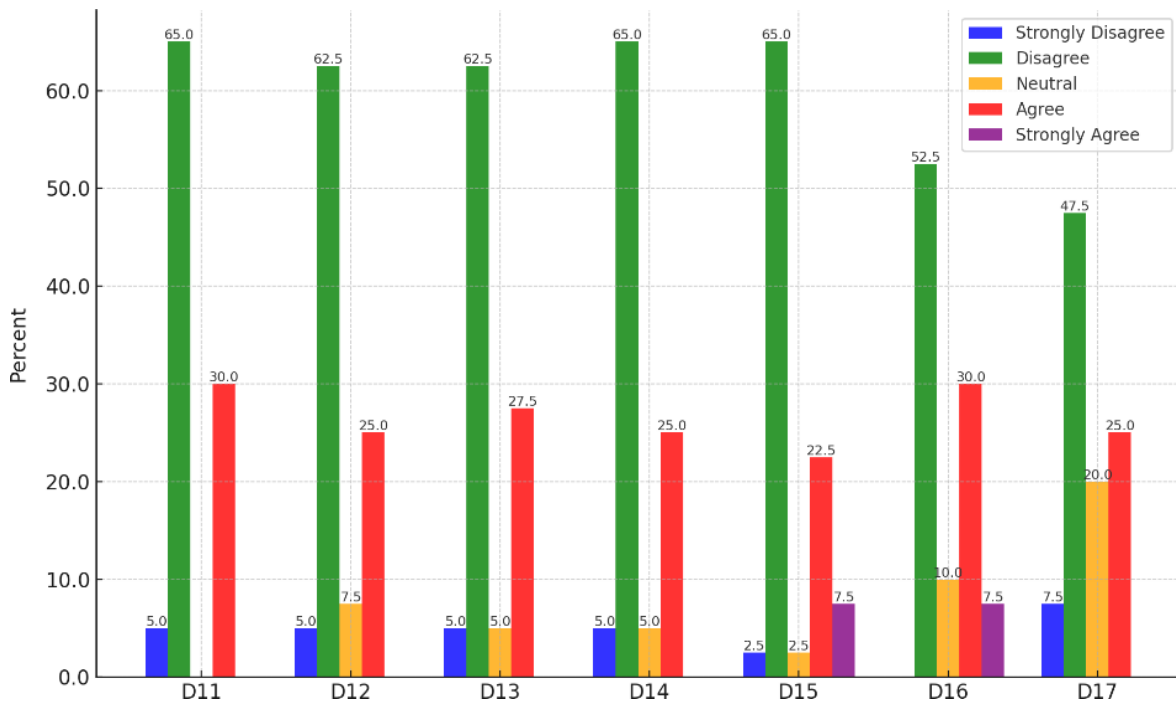


Figure 6.6: Project Management: The patterns of responses

Given the subthemes for Section D, "PROJECT MANAGEMENT," the patterns of responses suggest a critical evaluation of the MIG concerning these components.

From the factor analysis for Component 1, "Enhancement of Socio-Economic Infrastructure Quality," the respondents indicated significant disagreement with the statement that the metropolitan MIG strategy has maintained and enhanced the quality of socio-economic-related projects. The majority disagreed (65%, n = 26), with a sizable minority agreeing (30%, n = 12) with the statement, implying that while there was some recognition of quality enhancement, the prevailing sentiment was that the MIG strategy does not effectively improve socio-economic infrastructure quality to the extent expected or required.

Component 2, "Capacity Development and Specialised Resource Integration," can be interpreted through responses to statements that refer to the use of the MIG programme for improved project management, the MIG bringing specialised resources to infrastructure development, and the provision of MIG awareness and training. Most respondents disagreed with these statements, showing scepticism towards the MIG's role in capacity development and resource integration. For instance, the statement about MIG contributing specialised resources to leverage metropolitan resources and capabilities saw 62.5% (n = 25) disagreement, which points to a perceived lack of

integration of specialised resources and capabilities within the MIG framework. The consistent disagreement across these statements, alongside the statistically significant chi-square p-values, signals a discernible discrepancy between the objectives of the MIG and its perceived outcomes in practice. This discrepancy indicates a potential need for re-evaluation of project management practices, capacity development initiatives, and the integration of specialised resources within the scope of the MIG to better align with enhancing socio-economic infrastructure quality and effectively developing municipal capacities.

Section E

This section deals with the application of MIG monitoring and seeks to establish the extent to which municipalities monitor MIG projects.

Table 6.11: Scoring Patterns Summary

		Strongly Disagree		Disagree		Neutral		Disagree		Strongly Disagree		Chi-Square p-value
		Count	Row N %	Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	
Efficient monitoring of PPP projects means good implementation of the MIG project.	E18	0	0.0%	26	65.0%	0	0.0%	10	25.0%	4	10.0%	< 0.00
The metropolitan MIG have functional monitoring and evaluation systems	E19	8	20.0%	29	72.5%	1	2.5%	2	5.0%	0	0.0%	< 0.00

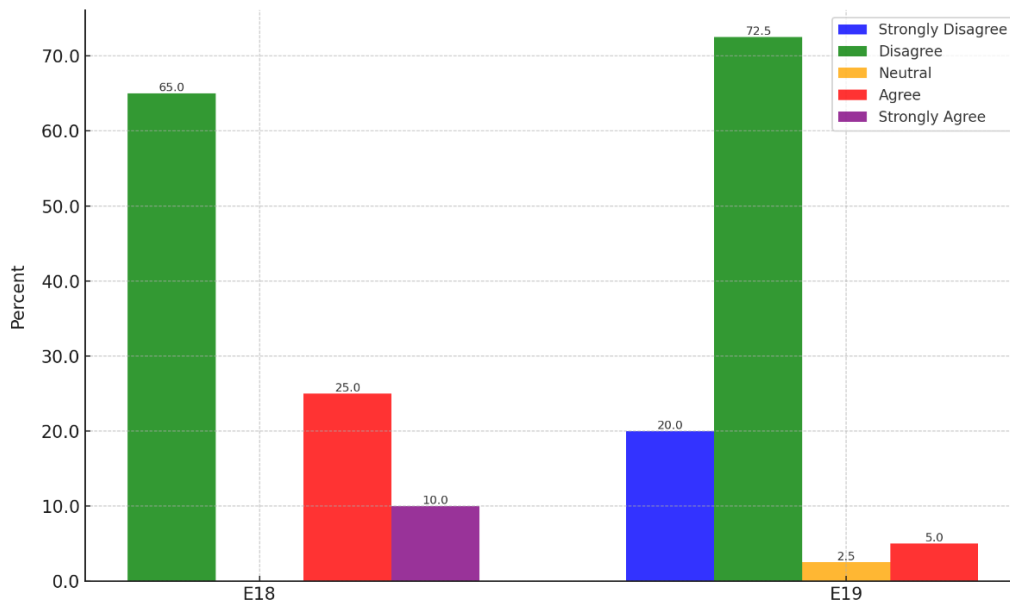


Figure 6.7: Efficient monitoring of PPP projects

For the statement "Efficient monitoring of PPP projects means good implementation of the MIG project, accordingly," the majority of respondents disagreed (65%, n = 26), with a considerable number agreeing (25%, n = 10), and a smaller fraction strongly agreeing (10%, n = 4). The absence of neutral or strongly disagreeing responses could suggest a consensus that while efficient monitoring is linked to good implementation, there may be shortcomings in the current monitoring processes of PPP projects under the MIG.

Regarding the second statement, "The metropolitan MIG have functional monitoring and evaluation systems," a significant majority of respondents disagreed (72.5%, n = 29), with a small minority agreeing (5%, n = 2), and a notable proportion strongly disagreeing (20%, n = 8). Only one respondent was neutral (2.5%, n = 1). This overwhelming disagreement indicates widespread concern over the functionality of MIG monitoring and evaluation systems within metropolitan areas.

Both statements received highly significant chi-square p-values ($p < 0.001$), suggesting that the response patterns are not random and reflect genuine sentiment among the respondents.

These results imply a critical perception of the current state of monitoring and evaluation for MIG projects, particularly those executed in partnership with the private sector. The data indicates a perceived need for improvement in the monitoring and

evaluation practices to ensure the effective implementation of MIG projects. Given the importance of PPPs in infrastructure development, the efficiency of these systems is crucial for meeting project goals and, by extension, the overarching objectives of the MIG in fostering socio-economic development through infrastructure investment.

Section F

This section deals with the policy/MIG legal framework, which is the basis for implementing MIG projects in metropolitan governments. The table below summarises the scoring patterns.

Table 6.12: Policy/MIG Legal Framework as the Basis for Implementing MIG Projects in the Metropolitan Governments

		Strongly Disagree		Disagree		Neutral		Disagree		Strongly Disagree		Chi-Square p-value
		Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	
South Africa boasts a robust legal framework for municipal infrastructure, facilitating the effective implementation of MIG projects.	F 20	1	2.5%	26	65.0%	0	0.0%	13	32.5%	0	0.0%	< 0.001
The investment environment in South Africa fosters a viable and sustainable system for MIG projects.	F 21	0	0.0%	34	85.0%	4	10.0%	2	5.0%	0	0.0%	< 0.001
The government actively supports private sector involvement in infrastructure development and service delivery.	F 22	0	0.0%	5	12.5%	6	15.0%	25	62.5%	4	10.0%	< 0.001
The MIG framework specifically permits private sector participation in the development and delivery of infrastructure services	F 23	0	0.0%	7	17.5%	6	15.0%	27	67.5%	0	0.0%	< 0.001
MIG-related policies align well with the government's socio-economic development strategies.	F 24	0	0.0%	23	57.5%	3	7.5%	14	35.0%	0	0.0%	0.001
There is ample legislative backing for entering into public-private partnership (PPP) agreements in South Africa, specifically aimed at municipal infrastructure development.	F 25	0	0.0%	36	90.0%	0	0.0%	4	10.0%	0	0.0%	< 0.001
The existing MIG regulations, frameworks, and guidelines provide a comprehensive mechanism for managing MIG activities throughout South Africa.	F 26	13	32.5%	27	67.5%	0	0.0%	0	0.0%	0	0.0%	< 0.001
The policy environment favours sustainable MIG in South Africa	F 27	0	0.0%	38	95.0%	0	0.0%	0	0.0%	2	5.0%	< 0.001

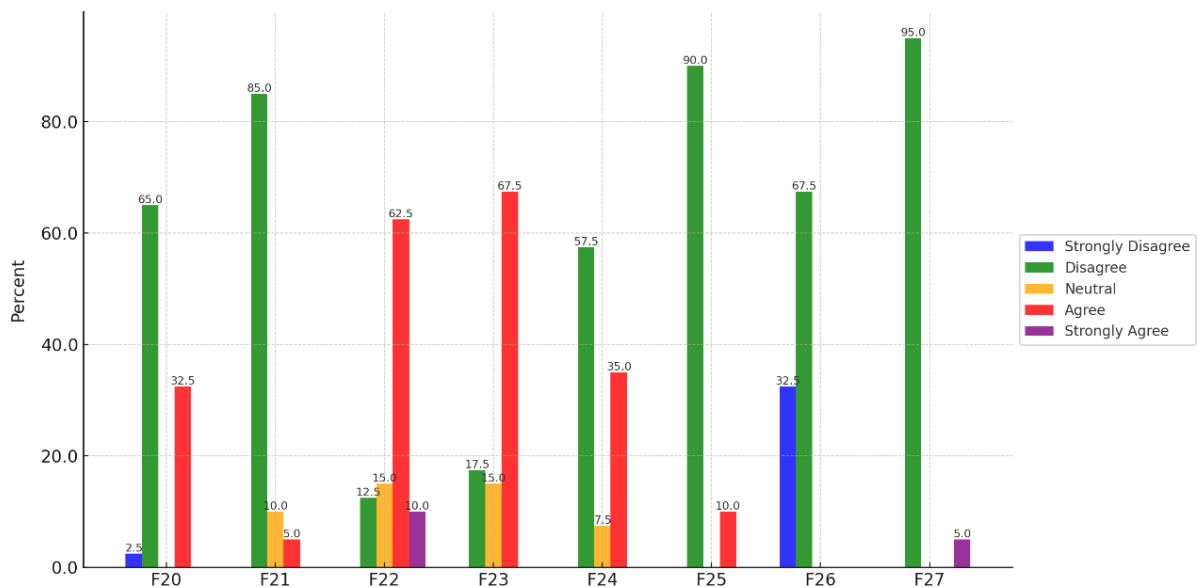


Figure 6.8: Survey of opinions on the policy and legal framework concerning PPPs and the MIG

The table regards a survey of opinions on the policy and legal framework concerning public-private partnerships (PPPs) and the MIG in South Africa, segmented into four components:

For Component 1, "Legal and Regulatory Framework for MIG Implementation," there is a notable dissent regarding the credibility of South Africa's legal framework for MIG projects, with many participants disagreeing (65%, n = 26) and a substantial minority agreeing (32.5%, n = 13). This finding highlights concerns about the adequacy of the legal framework in supporting MIG project implementation.

Component 2, "Private Sector Participation and Investment Climate," reveals a predominant view that the investment climate does not promote a viable and sustainable MIG project system, with an overwhelming majority disagreeing (85%, n = 34). This finding suggests that the current investment climate is perceived as unfavourable for sustaining MIG projects, which may impede private sector participation.

Regarding Component 3, "Policy Consistency with Socio-Economic Development," the study participants' responses indicate mixed perceptions. The majority disagreed (57.5%, n = 23) that MIG policies align with the government's socio-economic development policies, while a notable proportion agreed (35%, n = 14), reflecting a divide in opinion on policy consistency.

For Component 4, "Sustainable Policy Environment for MIG Projects," the participants' responses were overwhelmingly negative concerning the sufficiency of current MIG regulations, frameworks, and guidelines as mechanisms for MIG business, with most respondents disagreeing (67.5%, n = 27) and a significant proportion strongly disagreeing (32.5%, n = 13). Additionally, they had a near-unanimous disagreement (95%, n = 38) that the policy environment favours sustainable MIG, with very few strongly agreeing (5%, n = 2). This finding signals a critical view of the policy environment's capacity to support sustainable MIG projects.

Each statement has a statistically significant chi-square p-value, suggesting that the distribution of responses is highly unlikely to be due to chance. The patterns here indicate a perceived need for significant improvements in the legal and regulatory framework, investment climate, policy consistency, and sustainable policy environment to foster PPPs and MIG projects in South Africa effectively.

Section G

This section deals with the socio-economic impact of the MIG projects. The table below summarises the scoring patterns.

Table 6.13: Scoring Patterns Summary

		Strongly Disagree		Disagree		Neutral		Disagree		Strongly Disagree		Chi-Square p-value
		Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	
MIG management and operations are integrally connected to the socio-economic service delivery models of the metropolitan areas.	G28	2	5.0%	25	62.5%	1	2.5%	12	30.0%	0	0.0%	< 0.001
The implementation of MIG has significantly and efficiently accelerated the provision of services.	G29	2	5.0%	34	85.0%	0	0.0%	4	10.0%	0	0.0%	< 0.001
Public capital injections have ensured ample infrastructure investments, boosting economic growth within metropolitan governments.	G30	3	7.5%	34	85.0%	0	0.0%	3	7.5%	0	0.0%	< 0.001
MIG project implementations have enabled the metropolitan municipality to achieve both immediate and medium-term service delivery goals.	G31	2	5.0%	30	75.0%	2	5.0%	6	15.0%	0	0.0%	< 0.001
MIG has hastened the delivery of infrastructure and industrial facilities, thereby reducing both capital and operating costs.	G32	2	5.0%	30	75.0%	2	5.0%	6	15.0%	0	0.0%	< 0.001
The procurement processes under MIG have had a profound social impact on communities within metropolitan government areas	G33	0	0.0%	37	92.5%	3	7.5%	0	0.0%	0	0.0%	< 0.001
MIG has made significant contributions to the gross domestic product (GDP) of the metropolitan areas	G34	0	0.0%	33	82.5%	1	2.5%	6	15.0%	0	0.0%	< 0.001
It has also played a crucial role in reducing unemployment and poverty within these regions.	G35	0	0.0%	30	75.0%	2	5.0%	8	20.0%	0	0.0%	< 0.001

		Strongly Disagree		Disagree		Neutral		Disagree		Strongly Disagree		Chi-Square p-value
		Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	Count	Row N%	
Proposing an alternative MIG implementation plan could substantially benefit both metropolitan governments and the broader society.	G36	0	0.0%	0	0.0%	0	0.0%	4	10.0%	36	90.0%	< 0.001

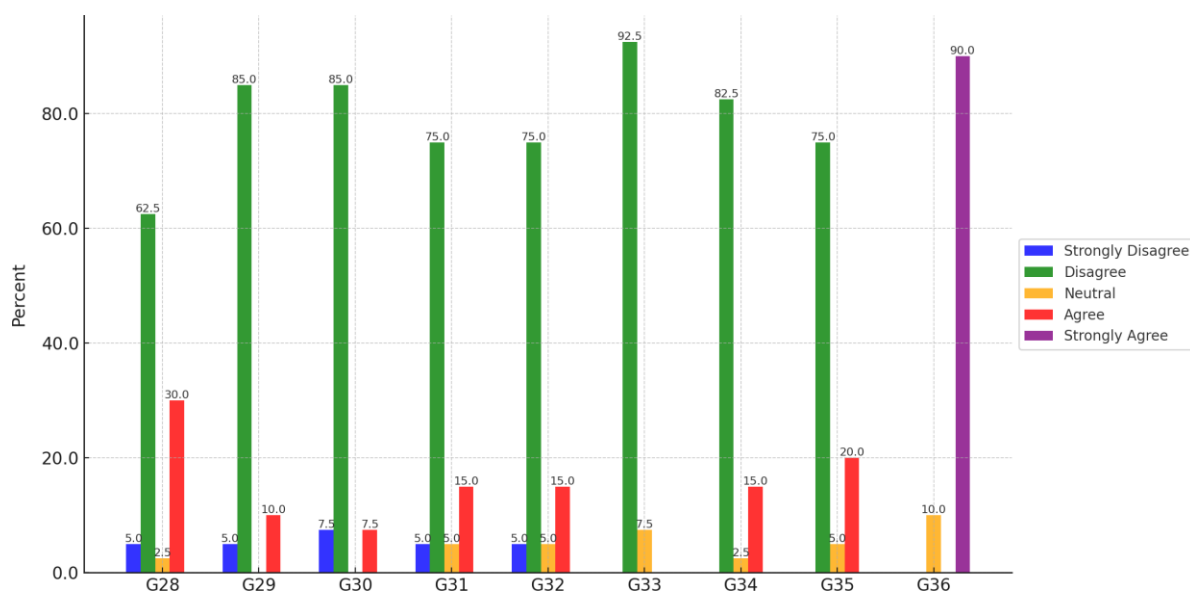


Figure 6.9: Socio-economic impact of MIG projects

For Section G, "SOCIO-ECONOMIC IMPACT OF MIG PROJECTS," the survey responses were categorised across several statements that align with the outlined subthemes:

- Component 1: "MIG's Contribution to Socio-Economic Services and GDP" suggests considerable scepticism about MIG's effectiveness in this area. A majority of the respondents disagreed that MIG management and operations are linked to the socio-economic service delivery model (62.5%, n = 25) and that MIG has contributed significantly to GDP (82.5%, n = 33), indicating concerns about MIG's contribution to socio-economic services and the broader economy.

- Component 2: "Acceleration of Service Provision and Economic Growth" was met with substantial doubt. A significant majority of the respondents disagreed that MIG has effectively accelerated service provision (85%, n = 34) and that public capital injection through MIG has sufficiently increased economic growth (85%, n = 34). These results indicate that the respondents did not perceive MIG projects as catalysts for rapid service provision or economic enhancement in metropolitan areas.
- Component 3: "Social Impact and Poverty Reduction through MIG Projects" reveals a critical stance towards MIG's social impact. There was a high level of disagreement among the respondents that MIG procurement has made a meaningful social impact (92.5%, n = 37) and contributed to reducing unemployment and poverty (75%, n = 30), suggesting that the social outcomes of MIG projects do not meet expectations. The final statement is an outlier in the pattern, with overwhelming agreement (90%, n = 36) that developing an alternative MIG implementation plan would benefit governments and society. This stark contrast to the other responses suggests a consensus that current MIG strategies are suboptimal and that a new approach could be more beneficial.

All items have highly significant chi-square p-values, indicating that the distributions are statistically unlikely to have occurred by chance. The response patterns across these components suggest a critical need for reassessment and improvement of MIG strategies to enhance their socio-economic impact, ensure they contribute meaningfully to service delivery and the GDP, and effectively address social challenges such as poverty and unemployment.

6.6 CROSS-TABULATIONS

A chi-square test of independence was conducted to evaluate whether a statistically significant relationship exists between the variables (rows vs columns). The null hypothesis posits no association between the variables, whereas the alternate hypothesis suggests there is an association.

The results of the chi-square tests are summarised in the table 6. 14. For instance, the p-value for the relationship between "The MIG plan/strategy response to the developmental agenda of the municipality" and "Gender" is 0.016, indicating a significant relationship between the variables, highlighted in yellow. Specifically, the respondent's gender significantly influenced their perceptions regarding the municipality's response to the developmental agenda.

Table 6.14: Chi-Square Test Results Summary

			Gender		Total
			Male	Female	
The MIG plan/strategy response to the developmental agenda of the municipality	Never	Count	0a	3b	3
		% within Gender	0.0%	17.6%	7.5%
	Rarely	Count	6a	4a	10
		% within Gender	26.1%	23.5%	25.0%
	Sometimes	Count	0a	3b	3
		% within Gender	0.0%	17.6%	7.5%
	Often	Count	17a	7b	24
		% within Gender	73.9%	41.2%	60.0%
Total		Count	23	17	40
		% within Gender	100.0%	100.0%	100.0%

The table presents a cross-tabulation of responses according to gender regarding aligning the MIG plan/strategy with the municipality's developmental agenda. The accompanying p-value of 0.016 suggests that there is a statistically significant association between gender and responses to the effectiveness of the MIG plan/strategy.

The following patterns are observed within the variables:

1. **Never:** All female respondents (three out of 17, 17.6%) indicate that the MIG plan/strategy never responds to the developmental agenda, whereas no male respondents (none out of 23) are represented in this category.

2. **Rarely:** A similar proportion of male (six out of 23, 26.1%) and female (four out of 17, 23.5%) respondents felt that the MIG plan/strategy rarely aligns with the developmental agenda, indicating some level of agreement across genders.
3. **Sometimes:** Again, no male respondents indicated that the MIG plan/strategy sometimes aligns with the developmental agenda, while a minority of female respondents (three out of 17, 17.6%) did.
4. **Often:** A large majority of male respondents (17 out of 23, 73.9%) believed that the MIG plan/strategy often aligns with the developmental agenda, compared to a smaller proportion of female respondents (seven out of 17, 41.2%).

The total counts confirm that the sample consisted of 23 males and 17 females, which should be considered when interpreting percentages within gender due to the different base numbers.

The observed pattern suggests that males are more likely to perceive the MIG plan/strategy as often being in response to the developmental agenda, whereas a greater proportion of females are distributed across the 'Never', 'Rarely', and 'Sometimes' categories. This gender discrepancy indicates potential gender-based differences in perceptions or experiences regarding the MIG plan's alignment with the municipality's developmental goals. The statistical significance ($p < 0.05$) implies that these differences are unlikely to have arisen by chance, warranting further investigation into the reasons behind this disparity.

All p-values more than 0.05 do not have a significant relationship.

6.7 CORRELATIONS

Bivariate correlation analysis was performed on the ordinal data, with results detailed in the Appendix. The analysis reveals specific patterns: positive correlation values indicate a directly proportional relationship between variables, while negative values suggest an inverse relationship. Significantly correlated relationships are marked with a * or **, denoting that as one variable increases, the other decreases.

Table 6.15: Bivariate correlation

			South Africa has a clear guide on MIG implementation that integrates with the municipality's integrated development planning.
Spearman's rho	Public capital injections have facilitated adequate infrastructure investments, significantly enhancing economic growth in metropolitan governments.	Correlation Coefficient	0,533**
		Sig. (2-tailed)	0.000
		N	40
	MIG procurement has had a substantial social impact on communities within metropolitan government areas.	Correlation Coefficient	-0,367*
		Sig. (2-tailed)	0.020
		N	40

The correlation values were calculated using Spearman's rho, a non-parametric measure of rank correlation. This method evaluates how well a monotonic function can describe the relationship between two variables.

- 1. Public Capital Injection and MIG Implementation Guide Correlation:** The correlation coefficient of 0.533 indicates a moderate positive relationship between the clarity of the guide on MIG implementation and the sufficiency of public capital injections to increase economic growth. This result suggests that as the clarity of the MIG implementation guide improves, there is a tendency for public capital injection to be viewed as more sufficient in driving economic growth. The significance level (Sig. 2-tailed) is 0.000, less than the conventional threshold of 0.05, indicating that this correlation is statistically significant and that the likelihood of this result being due to random chance is very low.
- 2. MIG Procurement and Social Impact Correlation:** The correlation coefficient of -0.367 signifies a weak to moderate negative relationship between MIG procurement and the perceived social impact of MIG projects. This result implies that respondents who positively rate the MIG procurement process are more likely to rate the social impact as less meaningful or vice versa. The significance level (Sig. 2-tailed) of 0.020 is less than 0.05, showing

that this negative correlation is also statistically significant, although the relationship is not as strong as the first.

6.8 STRUCTURAL EQUATION MODEL

Structural equation modelling (SEM) was employed as part of the analysis. SEM is a sophisticated multivariate statistical analysis technique integrating factor analysis and multiple regression elements. It is used to examine structural relationships between measured variables and latent constructs. In this model, some low-loading factors (statements) were omitted because they did not adequately contribute to the constructs. SEM is particularly valuable when there is a need to consider complex interrelationships among variables, such as when assessing the impact of multiple variables on a particular outcome while also considering the relationships among those independent variables. Due to the small sample size, PLS was the appropriate SEM technique.

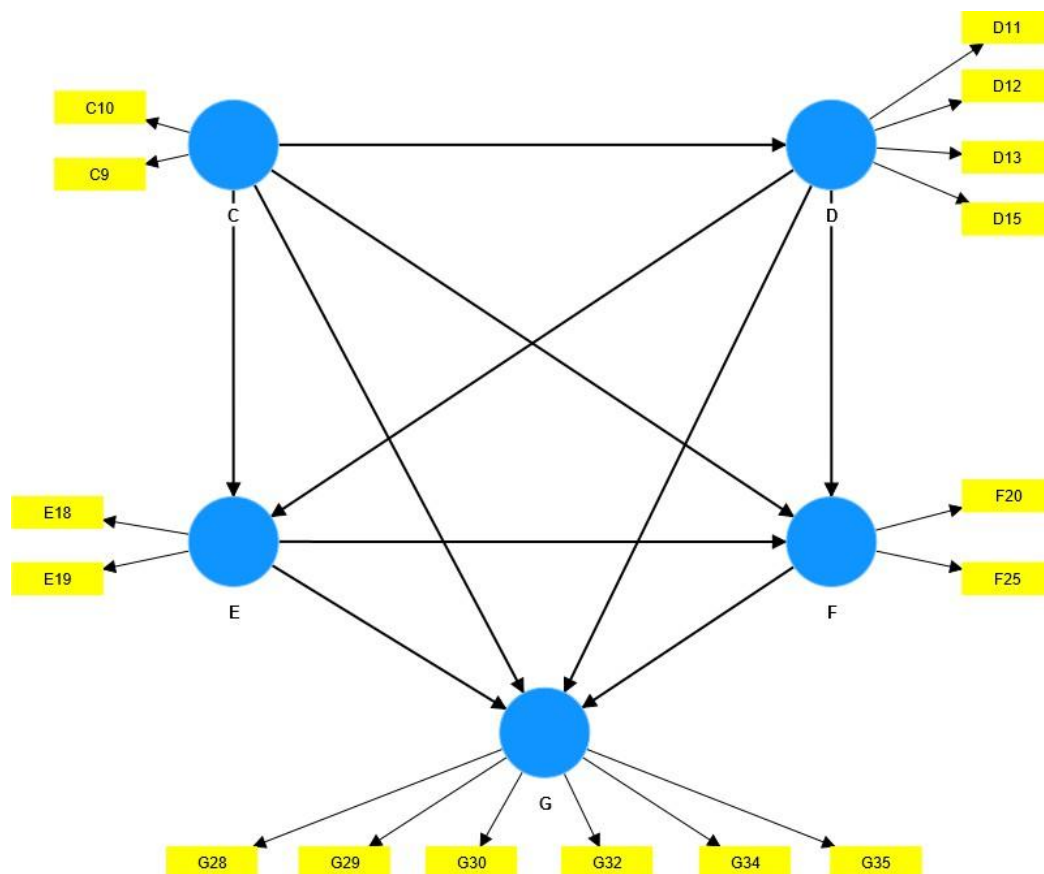


Figure 6.10: Due to the small sample size, PLS was the appropriate SEM technique to use

The results are discussed below (Reference tables are included in the Appendix).

6.9 CONSTRUCT RELIABILITY AND VALIDITY

The analysis provided metrics (sections) for various constructs, denoted as C, D, E, F, and G. The reliability of these constructs was assessed using Cronbach's alpha, composite reliability (both rho_a and rho_c), and average variance extracted (AVE).

These values suggest varying levels of reliability across the constructs, with Constructs C and D exhibiting high reliability, whereas Construct E shows notably lower reliability.

6.10 DISCRIMINANT VALIDITY (HTMT RATIO)

The Heterotrait-Monotrait (HTMT) ratio matrix was used to assess discriminant validity among constructs. The HTMT values between different construct pairs were as follows:

- D and C: 0.5775
- E and C: 2.0938, E and D: 1.3858
- F and C: 0.8884, F and D: 0.5927, F and E: 2.3308
- G and C: 0.941, G and D: 0.6811, G and E: 2.3142, G and F: 0.9224

These values indicate the extent to which constructs are distinct from one another. The higher values in specific pairs (e.g., E and C, E and D) might suggest issues with discriminant validity.

6.11 COLLINEARITY STATISTICS (VIF)

The variance inflation factor (VIF) for various items within each construct was provided to assess multicollinearity. Some VIF values are:

- C10: 1.8757
- D11: 3.2046
- E18: 1.0069
- F20: 1.29
- G28: 2.3286

These VIF values are within an acceptable range (typically VIF < 5), suggesting that multicollinearity is not a significant concern in this model.

Model Fit

Table 6.16: Model Fit Evaluation Indices

	Saturated model	Estimated model
SRMR	0.1517	0.1517
d_ULS	3.1314	3.1314
d_G	5.6347	5.6347
Chi-square	580.6979	580.6979
NFI	0.3279	0.3279

The standardised root mean square residual (SRMR) value is relatively high, and the normed fit index (NFI) is low, indicating potential issues with the model fit.

6.12 CORRELATIONS AND PATH COEFFICIENTS

The path coefficients between various constructs and their associated p-values are provided in the table below:

Table 6.17: Path Coefficients Between Various Constructs and Associated P-values

	Path coefficients	p-values
C – D	0.7582	0.0015
C – E	0.7946	0.0020
C – F	0.0782	0.7717
C – G	0.5238	< 0.001
D – E	0.8868	< 0.001
D – F	0.3580	0.0326
D – G	0.1727	0.0425
E – F	0.4589	0.0025
E – G	0.1680	0.0338
F – G	-0.0201	0.8075

These coefficients and their significance levels provide insights into the strength and significance of the relationships between constructs. Some relationships are highly significant (e.g., C – D, C – E, D – E), while others are insignificant (e.g., C – F, F – G).

6.13 OVERVIEW OF THE SEM ANALYSIS

This SEM analysis reveals a mix of strong and weak relationships between constructs, varying levels of construct reliability, and potential issues with discriminant validity and model fit.

Considering the combination of these fit indices, while the chi-square test indicates a lack of perfect fit, the other indices suggest a reasonably acceptable fit for the model. It is important to interpret these fit indices collectively rather than relying solely on the chi-square value.

An inspection of the coefficients for each latent variable shows high factor loadings and path coefficients, as depicted in the diagram 6.10. All these coefficients between latent variables are positive, indicating proportional relationships.

Given that this was a newly developed construct, it is acknowledged that the structural relationships might not have aligned perfectly. However, some indices met the criteria, indicating that the model adequately fit. Revising the model, especially concerning the measured variables that constitute the latent variables, is recommended to improve the factor loadings and overall model validity.

6.14 FOCUS GROUP DISCUSSION ANALYSIS

Two focus group discussions were conducted in NMBMM for the study. The analysis and findings from the discussions are presented thematically below. The meeting took place on June 30, 2023, in the Nelson Mandela Metropolitan Municipality at Gqeberha in the Eastern Cape Province. The first focus group discussion started at 10:00 and concluded at 11:45. There were four members in this focus group, including the researcher. Another focus group meeting took place on July 15, 2025, and it consisted of three members, including the researcher. During the meetings, the researcher explained the rules, ethical considerations, and the criteria for selecting participants for this study. Following this, the researcher explained the interview guide.

The participants and the researcher in both groups agreed to maintain confidentiality, ensuring that the respondent's identities in the report and any reflections of their views would be represented as P1 to P4 and P1 to P3, respectively, based on the number of representatives per group. The recording was not used because participants were not comfortable being recorded during the interview. Therefore, researchers took notes and recorded them immediately.

Table 6.18: Analysis and Findings from the Discussions in a Thematic Manner

KEY THEMATIC AREA	ANALYSIS AND DISCUSSION
MIG Understanding	In both groups, almost all the participants displayed a clear understanding of the MIG concept.
Level of involvement in the MIG implementation and areas of improvement	<p>In both groups, the participants declared they had been directly involved in implementing MIG projects in the municipality. Their involvement varied; some were in design and planning, and some monitored and reported on MIG projects.</p> <p>What emerged from the groups concerning the improvements in the implementation of MIG projects relates to the need for a systematic implementation guide that can be integrated into the IDP processes, not as a separate requirement. However, some of the participants in these groups with more experience in the MIG environment recorded that the issue is not integrated but external forces in implementing MIG projects coming from the political side, which compromises the quality and speed.</p>
Sustainability of the MIG implementation strategy in NMBM	Most participants in the two groups indicated that there is no MIG implementation strategy for the municipality in South Africa except a guide. This calls for developing a customised MIG implementation framework upon which a plan for institutionalisation can be developed.
BENEFITS OF THE MIG Strategy and bridging the gap between the cost of infrastructure and available resources	The groups indicated that the MIG implementation plays a crucial role in the LED agenda of the municipality in that infrastructure is a crucial enabler of development, job creation and poverty alleviation. The groups further indicated that the MIG strategy does not bridge the gap between the cost of infrastructure need versus the available resources because of the under-allocation of the MIG budget and poor implementation of MIG projects due to political forces in administrative activities.
If the MIG programme were to end, what would happen to municipal infrastructure development and maintenance?	Most of the participants in these groups stated that the end of MIG would have a tremendous negative impact on the development and maintenance and the welfare of the citizens because MIG projects contribute to the social and economic aspects of the metro. This is despite the current challenges in implementing MIG projects.
What do you think can be done to minimise the challenges that hinder the implementation of the MIG in NMBM	<p>The groups suggested the following:</p> <ul style="list-style-type: none"> • Development of a MIG implementation framework • Non-interference of politicians in the administration • Capacity building on MIG (technically) • Establishment of joint MIG implementation structures • Review and introduction of a government MIG implementation plan
Functional MIG monitoring and evaluation tool	In this area, the groups shared views in that one group indicated that the metro did not have the MIG monitoring and evaluation (M&E) tool except its own monitoring tool, which does entirely address the evaluation aspect, whilst the other group indicated that there is a functional M&E section in the municipality, whose role is to monitor and evaluate all projects implemented by the municipality. However, what came as common ground is that there is a MIG monitoring tool upon which monitoring reports are generated.

6.14.1 Input from the Focus Groups and Participants' Perspectives on Verbatim Quotations

This is a summary input of the focus group. The focus group has strong views

The focus group strongly believes that there are a number of factors that hinder the implementation of the Municipal Infrastructure Grant (MIG) in municipalities, including inadequate funding, as the demand for infrastructure development often exceeds the available resources. This situation leads to incomplete projects and leaves municipalities struggling to maintain existing infrastructure due to a lack of financial resources. Additionally, bureaucratic red tape and complex regulatory processes have slowed project implementation and increased administrative costs, further straining resources. It is essential to establish a strong policy framework that provides guidance for the implementation of MIG projects. Mokgethia & van der Waldt (2020) assert that demand for infrastructure development in municipalities often exceeds the available financial resources leading to unfinished projects.

SALGA and COGTA should enhance their support for municipalities, traditional leaders, and counsellors in project management and the roles of the stakeholders involved in project implementation. This assistance will help ensure that the MIG projects are completed on time.

Both groups shared the same sentiments that monitoring and evaluation is still a challenge in the sphere of local government as most municipalities rely on the project management unit to implement Monitoring of MIG projects and this opens the gap for corruption as municipal officials can collude with the

constructors.

P1

Do you think the metropolitan municipality had a sustainable MIG Strategy and implementation plan in place? Please explain your answer

“In my opinion, a strategic framework and implementation plan should serve as a guiding document for all stakeholders involved, including local government officials, employees, and community members. This guidance is essential to ensure that everyone understands their roles and responsibilities as the municipality pursues its objectives. Through effective communication and collaboration, the municipality can enhance its service delivery and strengthen its connection with the community it serves.

Ultimately, a successful strategic framework should not only concentrate on immediate outcomes but also consider long-term sustainability and improvement. By fostering a culture of continuous assessment and adjustment, the municipality can ensure that its services evolve in accordance with the needs of its residents, thereby enhancing the overall quality of life in the community.”

P2

How is the MIG strategy contributing to bridging the gap between the cost of infrastructure needed and the available resources in Nelson Mandela Bay Municipality?

“I think the Municipal Infrastructure Grant (MIG) is vital in addressing the financial shortfalls faced by the municipality. Without this program, essential initiatives such as infrastructure development, the integrated public transport system, electricity, and energy projects, as well as economic development, tourism, and agriculture, would struggle for funding due to a shrinking budget and inadequate revenue collection. The municipalities should provide an MIG strategic framework that guides them in effectively implementing these critical programs, ensuring a comprehensive and organised approach for municipal development.”

Focus Group 2

In your own opinion do you think the NMBM MIG had a functional monitoring and evaluation tool? Please substantiate your answer

P2

“In honest truth, the monitoring and evaluation function at the local government is still an issue in that there is no Monitoring and Evaluation framework or solid plan for the municipality. Monitoring of the grant is mainly done by the Project Management Unit (manager and technicians), which can be a problem in that there is no external eye and ear, which then becomes a problem as this opens a gap for corruption and collusion between municipal officials and contractors.”

6.14.2 Discussion

The contribution of the respondents in this study is an eye opener as their contribution was based on their experience, expertise, and policies related to the MIG. The respondents in each group assisted the researcher in gaining more knowledge on the subject. The groups indicated that the strategic framework and implementation plan should serve as guiding documents for all stakeholders involved in the implementation of MIG for municipal development.

The lack of a well-structured Monitoring and Evaluation(M&E) Framework for municipalities was strongly highlighted by both groups concerning MIG projects, which led to poor service delivery and delays in project completion. As highlighted by Maake (2017), effective Monitoring and Evaluation is essential for determining whether the project is complying with all the MIG conditions. This clearly indicates that developing and implementing a comprehensive M&E framework is key to enhance the accountability and improve service delivery to municipalities for infrastructure initiatives.

One noteworthy contribution from a group outside the focus of this study was the observation that metros have stopped using the Municipal Infrastructure Grant (MIG) in favor of the Urban Settlement Development Grant (USDG). This grant emphasises urban settlement infrastructure. The group's view was that municipalities still relying on MIG funds should also enhance their efforts to address the infrastructure needs of rural towns.

6.15 CONCLUSION

This chapter summarised the data collected through structured questionnaires and focus group discussions, highlighting the prevailing challenges with the Municipal Infrastructure Grant (MIG) implementation. Respondents identified the inadequacy of

the existing MIG implementation plan as a critical issue. They advocated for an enhanced strategy, emphasising the necessity for additional capital investments in municipal infrastructure development grants. The discussion reveals that the current MIG implementation has failed to adequately bridge the gap between the cost of required infrastructure and the resources available, contributing to ongoing development challenges in the metropolitan area. A recurrent theme regarded the struggle with maintaining municipal infrastructure, which has left many municipalities underdeveloped, undermining social and economic development efforts. Sound infrastructure development is crucial for local economic growth, and inadequately maintained or underdeveloped infrastructure can stifle economic activities, restrict access to essential services, and hinder municipal progress.

Respondents emphasised the need for rigorous monitoring of MIG projects to gauge their socio-economic impact based on the objectives specified in the MIG project plans. A significant consensus indicated that South Africa lacks a robust MIG policy implementation framework, suggesting a need for an effective monitoring and evaluation framework to oversee the progress and impact of MIG-funded projects within municipalities. Establishing key performance indicators (KPIs) and regularly assessing project outcomes against these indicators was suggested to provide essential feedback and facilitate necessary adjustments and improvements to the MIG implementation strategy. The findings indicate that MIG projects have a positive socio-economic impact on the municipalities involved in the study. The study respondents acknowledged that metropolitan municipalities could enhance service delivery by forming structured partnerships with the private sector, which brings essential technical skills such as project planning, management, and implementation.

The next chapter proposes a new MIG implementation strategy/plan developed from this study's empirical and theoretical findings. This plan/strategy aims to address the identified challenges and optimise the effectiveness of MIG projects.

CHAPTER SEVEN

PROPOSED SUSTAINABLE MIG IMPLEMENTATION FRAMEWORK FOR MUNICIPAL DEVELOPMENT

7.1 INTRODUCTION

This thesis thoroughly discusses the development of a sustainable Municipal Infrastructure Grant (MIG) implementation strategy aimed at enhancing service delivery within a South African metropolitan municipality alongside the empirical data collected. This systemic framework for MIG project implementation in South Africa aims to provide a comprehensive understanding of the processes and dynamics involved in MIG projects.

The rationale for establishing an institutional framework for municipal infrastructure is to clearly define the roles and responsibilities of different government spheres and sector departments. It also aims to acknowledge the importance of cooperative government and sector collaboration while minimising overlapping mandates (DPLG, 2006). This framework facilitates a continuous iterative review of the MIG life cycle and its environment, essential for identifying practical actions to achieve set goals.

This framework focuses on developing a logical process for MIG strategy that includes inputs, outputs, outcomes, and, ultimately, the impact of the MIG projects. Leedy and Ormrod (2016:37) assert that any study of performance management systems should aim to analyse current operational systems and design new systems to achieve desired goals more efficiently regarding resource expenditure. South Africa requires MIG practitioners who are well-equipped with the necessary tools to guide planned activities towards efficient and impactful processes that benefit society.

Performance management is crucial for assessing the impact of MIG implementations on service delivery. This chapter first analyses the existing MIG model and implementation framework used by the Nelson Mandela Bay Metropolitan Municipality (NMBMM). It then proposes designing and introducing an alternative, sustainable MIG

implementation strategy tailored to the South African metropolitan municipality context.

Systemic frameworks, established at the outset of project activities, ensure that resources are coordinated effectively and efficiently from the planning stage or early phases of a proposed development. Such frameworks are beneficial for setting realistic expectations for desired outcomes and are adaptable for ongoing projects to clarify the extent of project activity implementation. They facilitate achieving goals and identifying appropriate data sources and collection methods (Nyangwachi, 2008:168).

7.2 SYSTEMIC IMPLEMENTATION FRAMEWORK/STRATEGY

Edward (2011:46) describes a framework as a substitute for reality, a representation that is, ideally, adequate for addressing the problem at hand. It comprises factors relevant to a specific situation and the relationships between them. This definition led to the development of two dimensions within the framework: (a) a guide that facilitates the production and provision of goods and services as final outputs, and (b) situational (internal and external) factors that play a crucial role in shaping the nature and effectiveness of MIG.

Carbonara and Pellegrino (2014:28) emphasise the need to address MIG's contextual design and implementation challenges by considering the social, economic, political, and constitutional environments. The municipal and community context and situational factors are essential for achieving value for money in MIG projects. The success of a MIG framework depends on the project environment and the competencies of the parties involved (Nikolaidis & Roumboutsos, 2013:65).

Contingency methods allow for the specification of variables such as the leadership of the parties that directly or indirectly influence the outcomes of MIG projects (Carmeli & Cohen, 2001:97). In this framework, entities like the National Treasury's PPP Unit, the DPLG, and the metropolitan government measure the success or failure of MIG projects based on motivational styles, resource dimensions, and situational factors that dictate the effectiveness of management and the contingency approach in determining MIG's success.

7.3 RATIONALE FOR A SYSTEMIC MIG IMPLEMENTATION STRATEGY

The MIG programme's vision is to ensure that by 2013, all South Africans have access to at least a basic level of service, achieved through grant financing designed to cover the capital costs of essential infrastructure for impoverished populations. However, the objectives of the MIG have not been achieved since its implementation as South Africans still have desire for the basic services. The MIG programme plays a critical role in the delivery of municipal services.

In South Africa, the MIG framework is oriented towards development. Adopting a systemic, participatory, and inclusive approach is crucial for the success of MIG projects within the DLG framework. This approach is designed to meet the basic needs of communities effectively. The terms 'inclusive', 'systemic', and 'participatory systems' all emphasise the importance of stakeholder involvement in the planning, implementing, and monitoring of developmental projects. This involvement is vital to ensuring sustainable and cost-effective provision of services by metropolitan municipalities. Additionally, systemic models serve as valuable tools for demonstrating integrated and logical planning to achieve pre-set objectives, thereby enhancing the effectiveness of project outcomes (Nyagwachi, 2008:160).

The term 'participatory' originates from 'participation,' which involves the engagement of the local population and, at times, additional stakeholders such as the private sector, non-governmental organisations (NGOs), and community-based organisations (CBOs) in the creation, content, and execution of an LED programme or economic policy aimed at transforming people's lives. It is founded on the belief that citizens and other stakeholders can be trusted to shape their future (Dewar & Uytendogaardt, 1991:16). The Asian Development Bank (2001:8) defines participation as the process through which stakeholders influence and share control of developmental initiatives, decisions, and resources that affect them. This process enhances stakeholder ownership and commitment, giving the poor and disadvantaged a voice. Consequently, this model bridges the gap between previously disadvantaged people and businesses by mainstreaming the local economy through promoting Black economic empowerment (BEE) programmes (Macozoma, 2004:9).

According to Mbanga (2012:84), the graphic features of a framework illustrate the relationships among the components of the MIG project. The model provides a common vocabulary to describe elements of project work, encouraging a more profound understanding across various projects. Once internalised within the MIG sector, this approach will transform the mindset of MIG managers, enabling them to solve MIG-related problems systematically.

The proposed new MIG implementation framework is designed to be an efficient and effective instrument for conveying the desired outcomes and impacts of MIG projects based on their scope. It represents a unified vision wherein MIG implementers and stakeholders actively participate in the planning process and contribute to achieving the anticipated results through strategic resource allocation and activity planning. Furthermore, the MIG implementation framework aims to methodically direct all activities within the confines of established project management methodologies, clarifying responsibilities towards the agreed-upon outcomes.

This framework uses a graphic model to illustrate the connections between MIG project features, activities, and resources. This visualisation aids MIG role-players in better monitoring and evaluating the progress of project activities against the most critical project objectives, those predetermined at the project's inception. Systemic frameworks support structured, practical project planning and help investors realistically foresee the outcomes of implementing planned activities and delivering intended outputs. This approach also includes risk management for complex and large-scale projects (Wibowo & Patria, 2007:47).

MacNamara (2006:73) states that a systemic implementation framework organises key project activities and desired outcomes. It proves particularly effective in PPP project planning, implementing project activities, and monitoring and evaluating project successes. However, it is important to note that while a systemic framework model illustrates the relationships among various MIG project elements, like expected results and changes or effects induced by project activities, it is not a substitute for MIG project performance indicators.

The ultimate goal is to evolve the systemic implementation framework into a participatory and dynamic tool that enhances the MIG team's planning, implementation, and evaluation efforts. According to the DPLG (2003), the MIG approach is designed to:

- Support municipalities' capital budgets
- Facilitate integrated development planning
- Allow flexibility in budget programming

However, currently, there is a lack of a specific framework or strategy on how municipalities can effectively use MIG to achieve their goals and objectives, indicating a critical area for development in municipal management and planning.

7.3.1 THE MIG INTERNAL AND EXTERNAL ENVIRONMENTS

Before initiating actions to enhance socio-economic development and improve service delivery in local government, it is crucial to understand the context in which these activities occur. The underlying rationale is that socio-economic development, the provision of essential municipal services, and MIG processes do not occur in isolation. Instead, they unfold within a specific environment that can significantly influence these processes. This environment can positively or negatively impact decisions related to service delivery and the planning and implementation phases. Understanding this context is essential for effectively navigating and managing the factors that can affect the outcomes of government initiatives. One of the positive aspects of the environment often leads to the realisation of predetermined objectives of local governments enshrined in the Constitution of the Republic of South Africa, 1996.

In contrast, the negative aspects of service delivery can be caused by natural happenings or government. A natural incident relates to the creation of service disparities, such as when there is a flood, a volcanic eruption, or a drought. Similarly, a high level of corruption in government and incompetent municipal personnel resources affect the value chain of service delivery. In future, it is vital that metropolitan governments learn to manage and influence their service delivery environment from where they operate in meeting their constitutional mandate.

The systemic MIG implementation framework operates within two critical environments that demand close attention: the macro-environment and the micro-environment. The macro-environment includes broader external factors such as political, social, economic, technological, and legal elements influencing the framework's effectiveness. These elements define the broader context in which MIG activities are conducted. Conversely, the micro-environment involves interactions with stakeholders specifically, such as private sector suppliers and government agencies directly involved in the execution process. For instance, it is the government's duty to regulate the delivery of municipal services to beneficiaries. This regulation is implemented through a participatory approach encompassing monitoring, controlling, and evaluating municipal performance and stakeholder engagement, enforced through established rules, regulations, and by-laws. Both the macro- and micro-environments are essential for successfully deploying MIG projects, requiring strategic management to navigate the unique challenges and leverage the opportunities they present, ensuring effective governance and service provision. As a result, it is relevant to briefly discuss some elements of a logical service delivery approach, which links directly with the systemic MIG implementation framework, such as inputs, outputs, outcomes, and impacts (Woetzel & Mischke, 2016:47).

A. Inputs

In essence, the injection of economic inputs can significantly boost investments for socio-economic development within metropolitan governments. Local economic development (LED) inputs are akin to 'micro impetuses' since specific environmental factors shape them. Often, when focusing on these inputs, resources can become strained due to the vast needs of the community, necessitating the prioritisation of these resources. To effectively fund the implementation of the MIG model, metropolitan governments need access to adequate capital. Furthermore, it can be contended that if a local economy registers a high growth rate, the municipalities should use this opportunity to their advantage to increase their source of the municipal revenue base. Additionally, more people would likely be employed and afford to pay for municipal services. The Treasury Regulations of the Republic of South Africa (2011) identify that municipal revenues are primarily generated through subsidies, grants, taxes, service charges, and intergovernmental transfers from national and provincial governments.

With the current pressured government fiscal situation, the local government will remain challenged due to underdevelopment, so finding other ways to enhance revenue collection would contribute to service delivery most efficiently and effectively. In this context, service inputs must be managed according to performance standards and productivity optimisation, with a focus on measuring the actual outputs of service delivery (Eastern Cape Provincial Growth and Development Report, 2014:14). Service delivery partnerships can reduce input costs and prevent unnecessary municipal spending while enhancing service outputs (RSA, 2006:37). The systemic framework mandates that all institutions interested in development improvement actively participate in LED programmes or processes, including municipal LED activities.

Effective strategies for implementing LED programmes often involve various organisational models such as corporatisation, special purpose vehicles, privatisation, build-operate-transfer (BOT), build-own-operate-transfer (BOOT), and build-operate-train-transfer (BOTT) mechanisms. These models, where contractors may build an asset, operate it for a period, and then transfer it to the municipality (White Paper on Local Government 1998:100), help to streamline operations and optimise resource use in municipal projects.

B. Outputs and outcomes: A development-oriented aspect

Developing procedures for assessing, evaluating, and analysing the overall outcomes of socio-economic development policies is crucial in a developmental local sphere environment. According to Yong (2010), local governments often struggle to measure local economic growth and social development effectively. These challenges are better addressed when these concepts are assessed independently, considering various factors and variables. Yescombe (2017:54) highlights that growth and development involve distinct variables, such as quantitative progress versus qualitative progress of LED, expansion of the local economy versus the distribution of economic growth outputs, efficiency versus equity, aggregate output increase versus structural changes to accommodate BEE programmes, income change versus income distribution, number of jobs created versus job quality, and static efficiency versus dynamic efficiency.

Therefore, it is recommended that metropolitan governments focus on enhancing local economic growth, job creation, poverty alleviation, and social development. They should ensure that growth and development are effectively facilitated within their jurisdictions to improve the overall well-being of their citizens. The success of initiatives aimed at fostering job creation, reducing poverty, and significantly addressing underdevelopment relies on the vibrancy and sustainability of local economies. By prioritising these areas, metropolitan governments can create more robust and resilient communities.

Felsenstein and Taylor (2001:34) argue that political practicality often equates job creation with growth and development. However, there is no guarantee that economic growth will occur locally or that its benefits will target the 'correct' sections of the population and improve their welfare. Economic growth in South Africa often disproportionately benefits those least in need, such as high-skilled individuals who already have jobs or those who were previously advantaged before 1994.

Interestingly, all metropolitan governments in South Africa have formulated social and LED policies. Major cities like Cape Town, Tshwane, and Johannesburg have established methods to assess, evaluate, and analyse the welfare outcomes of their social and LED policies. However, it has been observed that the Nelson Mandela Bay Metropolitan Municipality (NMBMM) has shown limited patience in measuring the positive impacts of its LED policies and public-private partnership (PPP) projects. Municipalities must evaluate whether their developmental policies effectively foster LED, contributing to job creation, poverty alleviation, inequality reduction, and underdevelopment mitigation.

7.4 PROPOSED SYSTEMIC MIG IMPLEMENTATION FRAMEWORK

The proposed framework comprises various components, as depicted in Table 7.1 below.

7.4.1 Political Advocacy

As highlighted towards the end of this chapter, every developmental initiative occurs within a specific environment, with the political environment being particularly critical in policy development and implementation. This role is primarily for municipal

executives, such as members of the Executive Committee (MEC) or mayors (both executive and non-executive), whose key responsibilities include lobbying for political support and mobilising stakeholders through consultation during the MIG project design and planning phases. This role ensures that the projects are aligned with broader political objectives and community needs, facilitating smoother implementation and a more significant impact.

7.4.2 The Strategic MIG Project Specialist

Designing, planning, and implementing MIG programmes are among the DLG's most demanding, technical, and complex functions. These tasks require a well-rounded and experienced individual with a deep understanding of the MIG projects' policy environment, procedures, and processes, ensuring accountability for value for money. According to Allison (2012:75), the MIG project manager's principal responsibility is to deliver the project end-item, which is the service that meets specified and preselected objectives. Typical responsibilities include designing, planning, organising, implementing, and controlling project resources; assembling and coordinating the project team; interfacing with stakeholders; monitoring and evaluating project status; identifying and resolving practical and significant issues; and concluding the project (Allison, 2012:75). The strategic MIG project specialist should also establish a fully functional institutionalised framework that includes a technical project support office, staff, and necessary infrastructure, with clearly defined roles and sufficient authority to initiate, plan, and manage MIG projects effectively.

7.4.3 MIG Project Risk Champion

Given the potential for significant financial losses and poor service delivery, effective risk management is crucial within the MIG framework. The MIG project risk champion is responsible for leading risk management efforts within the MIG Unit, including establishing technical risk assessment committees to thoroughly identify and minimise potential risks. Risk management is an integral part of an organisation's strategic direction, indicating that it should not be isolated from the fundamental functions of the MIG project agreement (Farquharson et al., 2011:63).

7.4.4 MIG Project Accountant

The MIG project accountant ensures standard project procedures are maintained throughout the MIG contract and operational stages to meet quality-related requirements for services or assets. This role includes maintaining awareness of quality standards and implementing improvements to enhance MIG operations and achieve predetermined goals.

7.4.5 MIG Education, Training, and Awareness

Addressing MIG challenges in South Africa and the SADC region requires a significant shift in thinking among MIG role players from traditional approaches to a combination of systemic and logical thinking. These issues should be considered from a broader and more practical perspective. MIG role players must foster learning organisations to approach challenges systemically. This involves systematically organising all related components and fostering continuous training and awareness to create a supportive environment conducive to MIG processes. The slow pace of deal flow in South Africa often results from various systemic and external issues within the MIG delivery system.

7.4.6 Motivation for the New Framework

The newly proposed MIG framework is grounded in the systems theory developed in the 1950s. This framework embraces a systems approach to operations, encouraging stakeholders to see the broader operational picture and the interdependent relationships within MIG projects (Delmon, 2011:137). A significant challenge related to system thinking within MIG approaches is a deficiency in project management expertise. The proposed framework advocates for a comprehensive system that enhances the delivery process, ensuring effective and efficient project execution. Table 7.1 depicts the proposed task linkage and causal loop diagrams, respectively.

Table 7.1: Proposed task linkage and causal loop diagrams

Suggested heading		Content
No	Title	
1	Programme / project objectives	An indication of the programme / project and identified objectives
	Scope, budget and schedule	In deference of each project or package for the financial year under consideration: <ul style="list-style-type: none"> • outline of the scope, • the authorised expenditure, broken down into financial years • the control budget for each project, broken down into work packages and financial years • the overarching control budget and authorised expenditure for each financial year proposed / actual start and end date for the project
3	Key success factors and Key Performance Indicators	Key success factors and the key performance indicators which need to be measured, monitored and evaluated
4	Outline of procurement strategy	Procurement strategy in summary form for each project or order issued in terms of a framework contract, i.e. <p>Project delivery options (if applicable) - design strategy and interface management strategy</p> <p>Packaging strategy – framework / non-framework agreements and interface management considerations including those associated with boundaries between or overlaps in geographic areas, facilities, responsibilities or scopes</p> <p>Contracting strategy – contract type, standard form of contract and procong strategy Targeting strategy </p> <p>Selection method</p>
Suggested heading		Content
No	Title	
5	Time management plan	A time management plan for each project in the form of a Gantt Chart for the financial year under consideration, i.e. the baseline against which progress towards the attainment of milestone (key deliverables) target dates can be measured.
6	Projected budget and cash flow	The projected budget and cash flows for the financial year under consideration and subsequent financial years, which will enable planned and actual expenditure to be compared and revisions to the budget to be approved, and multiple project budgets to be managed

7	Procurement plan	The timeline for the financial year under consideration for advertising and closing of tenders and the obtaining of gate approvals leading up to the award of the contract including information such as: - Tender number, title, broad scope of work <ul style="list-style-type: none"> - Estimated total of the prices for the contract / order - Proposed dates for o Approval of procurement documents (PG3) o Advertising of tender or submissions o Closing of tenders or submissions o Confirmation of the budget (PG4) o Authorisation to proceed to the next phase (if applicable) (PG5) o Initiation of next phase (if applicable) o Tender evaluation completed o Approval of tender recommendations (PG6) o Acceptance of the offer (PG7) the issuing of an order in terms of a framework agreement including information such as: <ul style="list-style-type: none"> - Confirming justifiable reasons for selecting a particular framework contractor (FG1) - Obtaining approval for procurement documents (FG2) - Confirmation of the budget (FG3) - Authorising of the issuing of an order (FG4)
8	Major risks	The identification of major risks, their likely impact and how such risks are to be mitigated or managed
9	Health, safety and environmental and socioeconomic risks	An outline of the controls and measures which will address health, safety, socioeconomic or environmental risks
10	Quality plan	An indication as to how quality requirements and expectations are to be met and managed
11	Communication plan	A communication plan which determines the frequency of meetings, meeting deliverables, the lines of communication, and the key activities associated therewith
12	Allocation of resources	An indication of the assigned internal and external resources with implementation responsibilities

7.5 APPLICATION OF THE NEW MIG IMPLEMENTATION FRAMEWORK

This proposed framework is designed to be suitable for all municipal infrastructure development projects within the Eastern Cape local government, provincial government and the national government. It is anticipated that MIG experts and those in non-MIG roles within the service delivery environment across South Africa will utilise this framework.

As highlighted in the study, the framework is recommended for all local government municipalities in South Africa, extending beyond the Eastern Cape metropolitan municipalities. It is mainly aimed at public policymakers and decision-makers at the National Treasury, the Department of Cooperative Governance and Traditional Affairs, and sector departments and local government entities focusing on metropolitan areas. Furthermore, community members involved in community development cooperatives,

NGOs, and CBOs engaged in MIG implementation and seeking to enhance socio-economic development would find this framework beneficial.

7.6 CONCLUSION

The systemic MIG implementation framework was developed to enhance the socio-economic conditions in the Nelson Mandela Bay Metropolitan Municipality (NMBMM). This framework aims to mitigate the disadvantages or research problems identified in Chapter 1, providing substantial benefits for metropolitan governments and private entities involved in all phases of MIG implementation as outlined in the contract or agreement.

Each MIG project within the framework is designed to have a clear strategic direction, encompassing vision, purpose, strategic goals, objectives, and an implementation plan that starts at the input phase. Following the input conversion phase, which allows for preparing development-oriented budgets, decision-making processes should adopt a participatory development approach. It is essential to recognise that economic growth is invariably influenced by both external and internal factors, as explained by this systemic model based on systems theory.

Applying systems thinking, as Senge (2000) advocates, is a powerful tool for comprehending and addressing complex planning, management, and implementation challenges in MIG projects. This approach has been successfully applied for over three decades and requires a paradigm shift among MIG managers. They must move beyond analysing isolated incidents to understanding the MIG environment as an interconnected system. By focusing on the internal structure of the MIG system rather than just events, improvements in MIG performance are possible due to addressing the root causes within the system's structure.

In conclusion, achieving development and growth involves overcoming inherent challenges within development systems. Nevertheless, the framework developed is both a tool and a catalyst for change intended to empower metropolitan governments to deliver effectively and efficiently on their mandates through robust MIG procurement arrangements, facilitating better service delivery and contributing to broader socio-economic development.

CHAPTER EIGHT

SUMMARY, CONCLUSION AND RECOMMENDATIONS

8.1 INTRODUCTION

Based on a literature review and the empirical research conducted in Nelson Mandela Bay Metropolitan Municipality (NMBMM), this study revealed both positive and negative aspects of the nature and sustainability of the Municipal Infrastructure Grant (MIG) implementation strategy. These variables represent the study findings analysed, interpreted, and presented in the previous chapter (Chapter 7). This chapter, therefore, furthers the preceding analysis by forwarding culminations by briefly discussing the main emerging findings from the study. Thereafter, recommendations for areas of improvement are made.

The NMBMM is a Category A municipality that performs all local government functions within its jurisdiction. The local government sphere is characterised by its distinctiveness from, and interrelatedness and interdependency with, the national and provincial spheres of government. In practice, this implies that local government has an immense responsibility to provide municipal services to citizens because all government services are delivered at the ward level (RSA, 1996). Furthermore, the Municipal Structure Act (No. 117 of 1998) affirms the establishment of local government and its vast responsibility towards realising DLG goals.

Maserumule and Mathole (2006) write that the fundamental rationale behind the government practice of public management is to improve the quality and sustainability of services provided to citizens. The constant service delivery protests are evidence that communities are unhappy with the space and quality of government services (metropolitan government in this case).

As a result, Mditshwa (2017) writes that the government cannot fulfil citizens' desires entirely without the involvement of other sectors through partnerships. This inability is because the South African government has limited financial resources. However, that should not take away municipalities' fundamental responsibilities.

Infrastructure development is central to LED and the creation of vibrant economies that can create jobs and contribute to poverty alleviation and inequality (Binza, 2009:250). Local-based infrastructure also assists with generating income. (Scharle, 2002:229). As a result, this study revolves around the sustainable implementation of MIG in the Nelson Mandela metropolitan area.

The Municipal Finance Management Act (No. 56 of 2003) provides conditions and processes for the MIG to which all metropolitan municipalities must adhere. All MIG arrangements sealed through a sustainable MIG implementation strategy must uphold the governance principles and conditions by which the MIG can abide.

The provision of public services to communities over the past year has rapidly declined despite the increased demand for quality services. Infrastructure development is the critical driver of development, so it becomes a significant concern when municipalities struggle with the implementation of MIG projects (Randor, 2007:77). Technical capacity and governance in infrastructure development are leading requirements to drive LED and subsequently improve the general welfare of citizens (Flynn, 2012:85).

According to Try (2007), contemporary public sector programmes face the challenge of limited resources coupled with unlimited community demands. Service delivery occurs within a heavily legislated environment, and public sector organisations are subject to legislative oversight processes that are often politically driven (Thesis, 2008:325). These challenges restrict creativity and innovation in the public sector service delivery environment.

Conversely, Trafford and Proctor (2006:120) argue that a modern-day government should pursue a modernising agenda, which includes ensuring that policymaking is coordinated and strategic, focusing on public service users rather than providers by tailoring services to meet people's needs and delivering high-quality, efficient public services.

In the broader context, governments need to leverage the MIG arrangement as an alternative approach to service delivery, primarily because current public funding alone is insufficient to meet the demands for public service infrastructure. Before initiating

collaborative efforts with the private sector, it is essential to understand the nature of these private sector organisations succinctly.

Transitioning from government-only service provision to involving the private sector is not straightforward (Leach et al., 1996:11). Critics, particularly from socialist perspectives, argue that PPPs fundamentally represent a form of privatisation. They contend that privatisation can lead to job losses, more expensive services, an increased wealth gap, and a decline in transparency and accountability (Posusney & Cook, 2002:26–27; Vorhies, 1990:19). Michael Watts in *Crush* (1995:44) suggests that overcoming the stagnation in metropolitan governance and its associated challenges requires igniting the imaginations of individuals and channelling their energies towards LED.

Watts further asserts that more robust measures are needed beyond promises of better resource allocation or lower bread prices to help those experiencing poverty. There must be faith in the partnership between metropolitan governments and the private sector to dismantle the extensive routine involvement of the government in the economy. This partnership can enhance the efficiency of LED, reduce unemployment, and combat poverty. Leach et al. (1969:2) concur that metropolitan governments must operate through a complex network of partnerships, contracts, and influence to achieve effective service delivery and local socio-economic development. This study was conducted to ascertain a sustainable MIG implementation strategy to propose as an alternative tool to deliver infrastructure development.

8.2 CONCLUSION

The deductions from the assessment of relevant literature, questionnaires, and focus group discussions are the following:

- In all settings, there is a clear understanding of the MIG concept, as most of the participants were directly involved in implementing MIG projects in the municipality. Their involvement varied; some focused on the design and planning, and others on monitoring and reporting on MIG projects.

- The participants indicated that MIG implementation plays a crucial role in the municipality's local economic development (LED) agenda in that infrastructure is an essential enabler of development, job creation, and poverty alleviation. The participants further indicated that the MIG strategy does not bridge the gap between the cost of infrastructure needs versus the available resources because of the underallocation of the MIG budget and poor implementation of the MIG project due to political forces in administrative activities.
- There is no MIG implementation strategy for the municipality or South Africa except a guide. This calls for developing a customised MIG implementation framework upon which a plan can be designed for institutionalisation.
- The existing MIG policy framework is adequate, and monitoring is required to ensure proper implementation of infrastructure projects.
- The management of MIG projects indicates that MIG is deficient due to the absence of an MIG implementation framework.
- MIG monitoring and evaluation are essential for the successful design and sustainable implementation of infrastructure projects

Chapter 7 presented a discussion and introduction of a systemic MIG framework/strategy for effectively implementing the MIG project in the metropolitan government in South Africa. This approach provides a holistic comprehension of MIG processes and the complexity of the interrelations within the MIG environment. Considering the problem statement, systemic MIG planning, monitoring, and evaluation provides an opportunity to successfully design the MIG cycle, considering the environment within which infrastructure projects are implemented.

8.3 RECOMMENDATIONS

Chapter 7 delved into developing a systemic framework for implementing, monitoring, and evaluating the performance of MIG projects in South Africa. This framework offers a comprehensive view of the MIG processes and the complex interrelationships within the MIG environment. Systemic MIG design, planning, and procurement are approached as strategic processes that translate ideas and beliefs into policies and projects, treating the entire MIG process and environment as a cohesive system. With a clearly defined problem statement, systemic MIG planning, procurement, and

management involve a continuous iterative analysis of the MIG cycle and its context, aiming to identify and pursue the most effective courses of action to achieve the set goals.

The following recommendations are based on the findings and conclusions of the study:

- Adopting a robust project management model is essential for effectively implementing MIG projects across metropolitan governments and at all levels in South Africa.
- There is a critical need for ongoing MIG awareness programmes, training, and community education. These initiatives serve as fundamental tools for mainstreaming and ensuring the success of MIG projects within South Africa and potentially internationally.
- Where appropriate, PPPs should be considered as an alternative procurement strategy. Research findings suggest that PPPs can offer substantial benefits, particularly regarding budget constraints within public sector capital budgets.
- Metropolitan governments must develop and maintain adequate capacity to facilitate deal flow for MIG projects at the provincial and municipal levels.
- There is a significant need to provide project management training to accounting officers and other relevant staff to enable the conceptualisation of viable MIG projects and increase their throughput.
- Empirical evidence indicates that the high costs associated with MIG projects often stem from government budgetary constraints or insufficient subsidies.
- It is imperative that MIG agencies ensure fair and proper risk allocation among all parties involved to prevent substantial financial losses and poor service delivery.
- The current MIG policy framework and guidelines in South Africa are considered adequate. Proper interpretation and application of these frameworks can catalyse further MIG projects and stimulate growth in the infrastructure sector.

- MIG guidelines and implementation toolkits should be standardised and uniformly utilised across various MIG agencies to ensure consistency and efficiency in project execution.

8.4 FUTURE RESEARCH

The following future research recommendations are based on the findings and conclusions of this study:

- Further research should explore the causal interrelationships among various factors within the MIG environment to better understand the dynamics at play.
- Research on the frequency and effectiveness of MIG performance evaluations is needed. Conducting surveys and trend analyses can provide decision-makers with valuable insights for developing an effective monitoring and control system.
- Further studies can pursue the performance of MIG to improve infrastructure and economic development in South Africa.
- Exploring beneficiaries' understanding of the MIG can be valuable for future research. Understanding beneficiaries' perceptions of MIG can provide insights into the programme's effectiveness, areas for improvement, and potential strategies for enhancing its impact.
- Government and municipalities should invest in capacitating the MIG specialists to keep up with the service delivery environment dynamics.

8.5 SUMMARY

This final chapter summarises the thesis in terms of the nature and scope of the study, and the MIG. The study sought to identify obstacles hindering the successful implementation of the MIG within the NMBMM. The study used a mixed method approach, a semi-structured questionnaire and focus group discussions were used as data collection tools. The research findings suggest that PPPs can offer substantial benefits, particularly regarding budget constraints within public sector capital budgets.

The overall conclusion drawn from this study's findings is that MIG projects have a positive socio-economic impact on the said municipalities. The research findings also suggest that metropolitan municipalities could enhance service delivery by forming structured partnerships with the private sector, which brings essential technical skills such as project planning, management, implementation, and substantial benefits, particularly regarding budget constraints within public sector capital budgets. Therefore, the study recommended that implementing a structured, well-designed project management framework is essential for the successful delivery of MIG projects across metropolitan municipalities in South Africa. This could involve standardizing processes for planning, scheduling, resource allocation, risk management, and performance monitoring. The study further recommended that the strategic use of PPP arrangements can help address budget constraints faced by the public sector. PPPs can leverage private sector expertise and financing to supplement government resources for MIG projects. The upskilling of the NMBMM officers and relevant staff in project management was also recommended in this study to enhance their ability to conceptualize viable MIG projects.

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Appendix A: Letter of information



LETTER OF INFORMATION

Title of the Research Study: Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for Municipal Development: The case of Nelson Mandela Bay Municipality, Eastern Cape.

Principal Investigator/s/researcher: (Zolani Tafeni, National Diploma in Local Government Finance, B-Tech Public Management, Masters in Public Administration)

Co-Investigator/s/supervisor/s: (Prof. Bheki R Mngomezulu, Ph.D. in African Political History)

Brief Introduction and Purpose of the Study: The MIG gained momentum since its introduction and became the first infrastructure development policy document for the Department of Provincial and Local Government. Municipal Infrastructure Grants are intended to eliminate municipal infrastructure backlogs in poor communities so that essential services, such as water, sanitation, roads, and community lighting, can be provided sustainably. The Department of Cooperative Governance and Traditional Affairs is responsible for managing the MIG and providing support to provinces and municipalities in implementing MIG projects. Therefore, the purpose of this study is to investigate the challenges associated with MIG implementation and to explore alternative MIG implementation strategies for municipal development in Nelson Mandela Bay Municipality.

Hello.

I am Zolani Tafeni a Ph.D. student in Public Administration at DUT doing research for my Ph.D. My research focuses on the Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for Municipal Development: The case of Nelson Mandela Bay Municipality, Eastern Cape.

I would like to invite you to participate in this research. Please understand that your participation is voluntary you are not being forced to take part in this study. Please understand that if you chose to take part in this study you are free to ask questions that you don't understand.

This research is a systematic search, and the aim of this study is to investigate the challenges associated with MIG implementation and explore alternative MIG implementation strategies for municipal development in Nelson Mandela Bay Municipality. The specific objectives are 1. To examine the factors impeding the MIG's successful implementation in Nelson Mandela Bay Municipality. 2. To explore existing MIG implementation gaps within the Nelson Mandela Bay Municipality. 3. To explore an alternative MIG implementation strategy concerning Nelson Mandela Bay Municipality for municipal development. 4. To investigate ways to improve the MIG Implementation Strategy in the Nelson Mandela Bay Municipality. This study will use a mixed-method approach to get a deeper understanding of the phenomena from your point of view. This study will conduct a pilot test from 10 people who are involved in the MIG in NMBM before a full data collection to test the questionnaire and interview guide.

For the actual data collection, I would like to have a brief 20-30 minutes of your time to answer and complete the questionnaire. This study will also have a Focus Group Discussion for in-depth interviews, the FGD will be divided into two groups of ten respondents in each group. For FGD I would like to have 45 minutes for each FGD. In FGD an interview guide with unstructured questions will be used. For this study, you will purposively be selected based on your knowledge and experience of MIG, availability, and willingness to participate in this research. You will be included in this study because you have been involved in municipal development issues within the Nelson Mandela Municipality, you have stayed in Nelson Mandel Bay Municipality for the past 12 Months, you hold a municipal position as provided for by the Municipal Structures Act and you have reached the age of consent. You will be excluded from this study because you do not have any knowledge of MIG, you have stayed in the Nelson Mandela Bay Municipality for less than 12 months, and you do not hold a position that allows them to participate in development issues

within the municipality and you have not reached the age of consent. This study will involve a sample of 44 respondents based on their availability and willingness to participate in this study. Please note that there are no identified risks for participants of this research. If you agree to participate in this study, you have a right to withdraw at any time should you wish to do so and there will be no penalties. You can withdraw from the study should you feel you are not comfortable answering some questions from this study. In case you feel you are sick to continue to participate in this study you can withdraw. Please inform me as soon as you decide not to continue participating in this study. As a researcher I may decide to withdraw you from participating in this study should I find out you're not from the targeted respondents for this study or you do not have a knowledge of the phenomenon even after I have clearly explained what the research is all about. I will let you why you cannot continue to participate, and you will not be penalized. The consent form is attached at the back of the questionnaire for you to make an informed and voluntary decision to participate in this study.

Therefore, all the ethical issues in this study will be considered.

There are no immediate benefits to you from participating in this study. However, the results of this study will be helpful to make recommendations for an alternative framework to the implementation of the MIG and it will also benefit other researchers in the field for areas that need further research. Also, the researcher will share the results of this study with all the stakeholders that took part in this study through a presentation.

There will be no monetary or other types of remuneration received by you for participating in this study. You are not expected to cover any costs towards this study.

The information will remain confidential This means that your name will not be linked in any way to the answer you give in this study. The research data will be anonymous and research findings will not be interpreted on an individual basis.

The researcher will disseminate the results of this study through publications of research papers, and conference presentations, and by presenting the research findings to those who participated in the research.

The are no expected injuries related to this research so there are no funds that have been put aside by the researcher for compensation or treatment in case of injury. Therefore, please be advised that if it happens that you get an injury while participating in this research you or your medical aid can cover your medication or treatment.

The hard copies & electronic devices with data for this study will be kept in a locked file cabinet in the personal possession of the researcher and the data recorded for analysis will be stored in a zip file folder in a researcher's personal laptop. The data will be kept until the research is finalized and submitted. The data will be used to produce thesis and research papers. The electronic data will be deleted, and the hard copies will be shredded after a period of five years.

In the event of any problems or queries contact (Supervisor: Prof: Bheki R. Mngomezulu and Cell No. 072 351 1947) Please contact the researcher (tel no 043 701 3021/ 078 522 5345.), my supervisor (tel no. 072 351 1947) or the

Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: of

Research and Postgraduate Support Prof. Motaung at TtiDirector@dut.ac.za

Appendix B: Consent form



CONSENT

Full Title of the Study: Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for Municipal Development: The case of Nelson Mandela Bay Municipality, Eastern Cape.

Names of Researcher/s: Zolani Tafeni

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, **Zolani Tafeni** about the nature, conduct, benefits and risks of this study – Research Ethics Clearance Number: _____.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant **Date** **Time** **Signature / Right Thumbprint**

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher Date Signature

Full Name of Witness (If applicable) Date Signature

Full Name of Legal Guardian (If applicable) Date Signature

Appendix C: Permission Letter



ANNEXURE

Corporate Services

Your ref:

Tel: +27 (0) 41 506 3463

Our ref:

PO Box 215, Port Elizabeth, 6000
Republic of South Africa

Date: 4 October 2022

e-Mail: snofilita-doni@mandelametro.gov.za

Who deals with this: Ms S Nofilita-Doni
Dear Mr Z Tafeni
University of Cape Town
Private Bag X3
Rondebosch
7701

LETTER OF AUTHORIZATION TO CONDUCT RESEARCH AT THE NELSON MANDELA BAY MUNICIPALITY (NMBM)

This letter serves as authorization for Mr Z Tafeni, registered for PhD Public Administration at Durban University of Technology, to conduct a research project under the supervision of Prof B Mngomezulu, in the Department of Facility of Management Sciences, entitled: "*Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for Municipal Development in Nelson Mandela Bay Municipality, Eastern Cape.*".

Upon a review of the letter sent to us, we are pleased to offer Mr Z Tafeni an opportunity to conduct the relevant study in the Nelson Mandela Bay Municipality. All interviews and surveys in the Municipality and the distribution of questionnaires are to be treated as confidential and will be supervised by the Office of the Executive Director: Corporate Services (Skills Development & Employment Equity sub directorate). Please note that due to the nature of the research, there might be a potential risk to be allowed access to sensitive documents.

In conducting research, please ensure compliance with the regulations in terms of Covid-19, particularly in terms of minimum contact with officials. Due to the limited number of officials currently back at work, be conscious of the time they need to spend on the relevant research exercise.

You are welcome to contact the Office of the Deputy Director: Skills Development & Employment Equity with inquiries. We wish you all the best in your research.

Yours faithfully,

~~MS S NOFILITA-DONI~~
DEPUTY DIRECTOR: SKILLS DEVELOPMENT & EMPLOYMENT EQUITY

www.nelsonmandelabay.gov.za



Appendix D: Ethics Form



Institutional Research Ethics Committee
Research and Postgraduate Support
Directorate
2nd Floor, Berwyn Court
Gate 1, Steve Biko Campus

Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375 Email: lavishad@dut.ac.za

http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

19 May 2023

Mr Z Tafeni
P. O. Box 4388
King Williams Town
5600

Dear Mr Tafeni

Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for Municipal Development in Nelson Mandela Bay Municipality, Eastern Cape

I am pleased to inform you that PROVISIONAL APPROVAL has been granted to your proposal subject to:

Piloting of the data collection tool. Please note that should there be any changes to the data collection tool, in a letter signed by the researcher and supervisor, list the changes to the documents and submit to DUT-IREC with the final data collection tool. Even when there are no changes to the data collection tool, DUT-IREC has to be notified.

PLEASE NOTE THAT THIS IS NOT A FINAL APPROVAL LETTER. KINDLY SUBMIT THE ABOVE MENTIONED DOCUMENTS WITHIN THREE MONTHS TO THE DUT-IREC OFFICE. DATA COLLECTION CAN ONLY COMMENCE WHEN DUT-IREC ISSUES FULL APPROVAL

The Proposal has been allocated the following Ethical Clearance number IREC 011/23. Please use this number in all communication with this office.

Approval has been granted for a period of ONE YEAR, before the expiry of which you are required to apply for safety monitoring and annual recertification. Please use the Safety Monitoring and Annual Recertification Report form which can be found in the Standard Operating Procedures [SOP's] of the DUT-IREC. This form must be submitted to the DUT-IREC at least 3 months before the ethics approval for the study expires.

It is compulsory for a student or researcher to apply for recertification on an annual basis. The failure to do so will result in withdrawal of ethics clearance. It is the responsibility of the researcher and the supervisor to apply for recertification.

Yours Sincerely

Prof J K Adam
Chairperson: DUT-IREC

Appendix E: Questionnaire



R/No.

SUSTAINABLE MUNICIPAL INFRASTRUCTURE GRANT (MIG) IMPLEMENTATION STRATEGY FOR MUNICIPAL DEVELOPMENT IN NELSON MANDELA METROPOLITAN MUNICIPALITY, EASTERN CAPE.

QUESTIONNAIRE

PART I: GENERAL

A. DEMOGRAPHIC INFORMATION OF RESPONDENTS (Quantitative data)

1. What office/post do you hold?		
An elected representative/Councillor		1
Municipal/City Manager		2
Business Unit Manager		3
Executive Director		4
Manager		5
LED Specialist/ practitioner		6
Labour Union Rep		7
Other? Specify		8

2. Please indicate the age group you fall into?		
18-34		1
35-44	X	2
45-54		3
55-64		4
65 and above		5

3. Please Indicate you Gender		4. Indicate you Race Group	
Male	1	African	1
Female	2X	Coloured	2X
		Indian	3
		White	4
		Other	5

5. Academic Qualification: Please indicate your highest level of qualification:	
National Diploma (Technikon or University)	1
Certificate (s) (Technikon or University)	2
Undergraduate Degree (University)	3
Postgraduate Degree (University)	X4
Other.....	5

B. SUSTAINABLE MUNICIPAL INFRASTRUCTURE ROLE-PLAYERS

1. Which of the following best describes your role in the Development Agenda?	Tick one	B1
Social		B2
Economic		B3
Infrastructure	X	B4
Socio-economic development		B5
Rural-economic development		B6

PART II: INFORMATION ON MUNICIPAL INFRASTRUCTURE GRANT(MIG) .

2.1 Have ever used the MIG in NMBM?

Choose an appropriate answer and mark it with an X next to it.	
0= Yes	X
1=No	

2.2 If your answer in 2.1 is Yes, when did you start to use it. YES.....?

2.3 Is the MIG still in use in NMBM?

Choose an appropriate answer and mark it with an X next to it.	
0= Yes	
1=No	X

2.4 If your answer in 2.3 is No, when, and why did you stop 2016/2017

2.5 Also, if you no longer use the MIG, did you replace it with another grant?

Choose an appropriate answer and mark it with an X next to it.	
0= Yes	X
1=No	

2.6 If your answer is Yes, what is the name of the Grant you currently use? (USDG)..

2.7 Would you say the grant you currently use has similar objectives or goals as MIG? YES but one of its objective is to deal with development of Urban settlement.

2.8 Based on your experiences of working with MIG and USDG, what improvements would you suggest for the municipalities that still use MIG? Good implementation plan.

PART III: IMPLEMENTATION OF MUNICIPAL INFRASTRUCTURE GRANT(MIG) PLAN/STRATEGY FOR MUNICIPAL DEVELOPMENT.

Use a scale 1 (never) to 5 (always) and put a check () to indicate the extent to which each of the following statements applies to MIG in the Local Government Infrastructure development environment.

SCALE							
1=Never	2=Rarely	3=Sometimes	4=Often	5=Always			
C	THEORETICAL PROPOSITION 1: MIG IMPLEMENTATION PLAN/STRATEGY	1	2	3	4	5	Code
7	The metropolitan municipality has a sustainable MIG Strategy and implementation plane in place				<input checked="" type="checkbox"/>		C7
8	The MIG plan/strategy response to the developmental agenda of the municipality				<input checked="" type="checkbox"/>		C8
9	The MIG contributed in bridging the gap between the cost of infrastructure needed and the resources available				<input checked="" type="checkbox"/>		C9
10	In South Africa, there is a clear guide on MIG implementation, that integrates with the integrated development planning of the municipality.				<input checked="" type="checkbox"/>		C10
SCALE							
1=Strongly Disagree	2=Disagree	3=Neutral	4=Agree	5=Strongly Disagree			
D	THEORETICAL PROPOSITION 2: PROJECT MANAGEMENT	1	2	3	4	5	Code

11	The Metropolitan MIG strategy maintained and enhanced the quality of the socio-economic related projects.				x		D11		
12	The use of MIG programme by government provided improved project management through construction techniques application.				x		D12		
13	The MIG brought specialised resources to infrastructure development that significantly leveraged the resources and capabilities of the metropolitan government.				x		D13		
14	The use of sustainable approach by government on Municipal Infrastructure development improved the project capabilities of our municipality.				X		D14		
15	The MIG offered the opportunity for the private sector involvement to apply its expertise to bring technical innovation to complex projects.				X		D15		
16	Lack of or inadequate provision of sustainable MIG awareness and training (Capacity development) hinders the intended development and growth.		X				D16		
17	The existence of the MIG in the metropolitan municipality provided skills development opportunities for the metro		X				D17		
SCALE									
1=Strongly Disagree		2=Disagree		3=Neutral		4=Agree		5=Strongly Disagree	
E	THEORETICAL PROPOSITION 5: MONITORING OF PPP PROJECTS	1	2	3	4	5	Code		
18	Efficient monitoring of PPP projects means good implementation of the MIG project, accordingly.					X		E18	
19	The metropolitan MIG have functional monitoring and evaluation systems		X					E19	
F	THEORETICAL PROPOSITION 6: POLICY/PPP LEGAL FRAMEWORK	1	2	3	4	5	Code		
20	South Africa has a credible legal Municipal Infrastructure framework for the implementation of MIG projects					X		F20	
21	The existing investment climate in South Africa promotes a viable and sustainable MIG project system.			X				F21	
22	The current government is committed to private sector participation in infrastructure development and service delivery.					X		F22	
23	The MIG framework allows private sector to participate in infrastructure development and delivery of services					X		F23	
24	Policies relative to MIG are consistent with socio-economic development policies of government.			X				F24	
25	There is sufficient legislative authority for entering into PPP agreement by government in South Africa for Municipal Infrastructure Development					X		F25	
26	The existing MIG regulations, frameworks and guidelines are sufficient mechanism for MIG business in South Africa		X					F26	
27	The policy environment favours sustainable MIG in South Africa			X				F27	
G	THEORETICAL PROPOSITION 7: SOCIO-ECONOMIC IMPACT OF MIG PROJECTS	1	2	3	4	5	Code		
28	MIG management and operations is linked to socio-economic service delivery model of the metropolitan.					X		G28	
29	The MIG undoubtedly and reasonably accelerated service provision in a most effective and efficient manner.		X					G29	
30	Public capital injection provided sufficient infrastructure investments to increase economic growth of the metropolitan governments.					X		G30	
31	The MIG projects implementation assisted the Metropolitan Municipality to realise its immediate and medium service delivery interventions.					X		G31	
32	The MIG implementation expedited the delivery of infrastructure and industrial facilities and services to reduce capital and operating costs					X		G32	

33	The MIG procurement has made a meaningful social impact to the communities within the metropolitan government space.			X			G33
34	The MIG has contributed greatly to the GDP of the Metropolitan			X			G34
35	The MIG project implementation contributed to metropolitan unemployment and poverty reduction		X				G35
36	The development of an alternative MIG implementation plan would benefit both the metropolitan government and the society at large.					X	G36
	<p>1. Please provide any suggestion that you think might contribute towards the development of a sustainable MIG Implementation Plan for municipal development. The implementation plan must have one of its objective as monitoring and evaluation for MIG.</p> <hr/> <p>2. What do you think are the challenges towards the implementation of sustainable MIG?</p> <p>.....</p> <p>Lack of good MIG implementation strategy.....</p>						

THANK YOU FOR COMPLETING AND RETURNING THE QUESTIONNAIRE

Appendix F: Interview Questions



The Focus Group Discussion guide on Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for Municipal Development in Nelson Mandela Bay Municipality, Eastern Cape.

Please Note that:

1. Information provided will be treated with confidentiality.
2. Information provided will only be interpreted for research results.
3. There is no wrong or right answer.

Date of the FGD:

Q1. What is Municipal Infrastructure Grant (MIG) in your understanding?

Q2. How have you been involved in the MIG implementation strategy?

Q3. How long did the NMBM use the MIG?

Q4. Over all the years that you have been part of the MIG implementation strategy in the Nelson Mandela Bay Municipality, what do you think were the challenges to use MIG?

.....

Q5. In your own opinion, what could have been done to ensure that the MIG implementation strategy for municipal development in Nelson Mandela Bay Municipality is sustainable?

.....

Q6. Do you think the metropolitan municipality had a sustainable MIG Strategy and implementation plan in place? Please explain your answer

Q7. How does the MIG strategy benefit the municipality in its developmental plan?.....

Q8. What are the NMBM developmental programs that are supported by the MIG and what criteria were used to select the programs to be supported by the MIG?

Q9. How is the MIG strategy contributing to bridging the gap between the cost of infrastructure needed and the available resources in Nelson Mandela Bay Municipality?.....

Q10. Over the past years, how did the MIG contribute to the GDP of the NMBM?.....

Q11. If the MIG program was to come to an end, what would happen to the municipal infrastructure development and maintenance? Please explain your answer

Q12. What do you think can be done to minimize the challenges that hinder the implementation of the MIG in NMBM?

Q12. In your own opinion do you think the NMBM MIG had a functional monitoring and evaluation tool? Please substantiate your answer.....

Thank you for your participation.

Appendix G: Proofreading Certificate



Proofreading Certificate

It is hereby certified that this dissertation has been proofread and edited for spelling, grammar and punctuation by a professional English language editor from www.OneStopSolution.co.za

Client

Zolani Tafeni

Sustainable Municipal Infrastructure Grant (MIG) Implementation Strategy for
Municipal Development in Nelson Mandela Bay Municipality, Eastern Cape

Editor

Matthew Harvey

.....
Name

Signature

07 June 2024

.....
Date

I cannot guarantee that the changes that I have suggested have been implemented nor do I take responsibility for any other changes or additions that may have been made subsequently. The track changes of the language editing will be available for inspection upon enquiry, for a period of one year.

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