

The Effects of Load-shedding on Small, Medium, and Micro Enterprises in Seshego Township, Polokwane Local Municipality, Limpopo Province

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By

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Declaration

I, Jacob Ngwako Mokgotho, student number 201627329, declare that this Masters' dissertation entitled: The Effects of Load-shedding on Small, Medium, and Micro Enterprises in Seshego Township, Polokwane Local Municipality is my original and independent research. It has not been previously submitted for a degree at any other university. All sources have been appropriately acknowledged.

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Dedication

This dissertation is firstly dedicated to the Lord Almighty for his protection and unconditional love throughout my academic life. It is also dedicated to my late grandmother Mokgadi Aletta Mokgotho, who passed away in 2017 and my late mother Merriam Moipone Mokgotho, who passed away in 2005. Finally, it is dedicated to my loving and supportive grandfather, Mathopa Ngwagwe, my friends and my whole family.

Acronyms

CBD	Central Business District
COSME	Competitiveness of Enterprises and Small and Medium-Sized Enterprises
COP 26	Conference of the Parties
COVID-19	Coronavirus Disease 2019
DA	Democratic Alliance
DME	Department of Minerals and Energy
EC	European Commission
EIB	European Investment Bank
EIF	European Investment Fund
EPSRP	Economics of Power System Reliability and Planning
ESKOM	Electricity Supply Commission
G-20	Group of twenty
GCRI	Global Climate Risk Index
GDP	Gross Domestic Product
GTERS	Gauteng Township Economy Revitalization Strategy
HIV	Human Immunodeficiency Virus
ICEA	India's Central Electricity Authority
IDP	Integrated Development Plan
IEA	International Energy Agency
LED	Local Economic Development
LNG	Liquefied Natural Gas
LSFS	Load Shedding Fact Sheet
NFSD	National Framework on Sustainable Development
NSDP	National Strategy for Development and Promotion
NYDA	National Youth Development Agency
PLM	Polokwane Local Municipality
SALII	Southern African Legal Information Institute
SBA	Small Business Act
SBDC	Small Business Development Corporation
SEDA	Small Enterprise Development Agency
SMEs	Small, and Medium-Sized Enterprises

SMMEs	Small, Medium, and Micro Enterprises
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
StatsSA	Statistic South Africa
UK	United Kingdom
US	United States
ZESCO	Zambia Electricity Supply Corporation Limited

Abstract

The energy crisis is a growing issue amongst countries affecting business ventures, particularly within developing countries. The unreliable electricity supply in developing countries has become a great concern when considering economic growth targets. A significant number of people globally use electricity, which has led to increased demand for energy and the perpetuation of the energy crisis. Load-shedding has become a strategy used by various countries as a mitigation to the current energy crisis. However, load-shedding has affected the development and growth of Small, Medium and Micro Enterprises (SMMEs) particularly those operating in the townships. As a result, a significant number of these SMMEs' owners are failing to cope with load-shedding induced challenges, and they end-up closing their businesses. On this note, this study sought to analyse the effects of load-shedding on SMEs in Seshego Township under Polokwane Local Municipality. Participants comprised SMMEs owners aged 19 years and older (n= 25) and five municipal officials. The study adopted a mixed methods approach by using in-depth interviews and questionnaires to collect participant data. Consequently, the study employed purposive and random sampling techniques in selecting the study's participants within Seshego Township. The study was framed within the Economics of Power System Reliability and Planning theory, which put emphasis on the importance of a stable and reliable power supply in ensuring local economic development and growth. Findings of the study showed that load-shedding is affecting township SMMEs negatively due to disturbance during production and operational hours, resulting in the loss of profits. Business owners relying only on electricity without any alternative power source are significantly affected. However, the study also noted that township SMMEs are essential to local economic development by creating employment opportunities and enabling easy access to services within South African townships. As such, the study notes that it is essential for the relevant stakeholders to assist township SMMEs by providing the necessary support that enables them to grow.

Keywords: Energy Crisis; Entrepreneurship; Load-shedding; Small, Medium, and Micro Enterprises; Township economy.

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Chapter one

Introduction and Background

1.1 Introduction

This chapter provides an overview of the study background. It also outlines the problem statement and the significance of the study. The research aim, objectives and questions of the study are also discussed in this chapter. Furthermore, the chapter provides definitions of key terms and the research methodology used in this study. Lastly, the chapter outlines the dissertation's structure, presenting the chapters' sequence.

1.2 Background of the Study

The global energy crisis has negatively impacted many institutions, households, schools, and other sectors of the economy across the globe. Li et al. (2022) also note that the energy markets across the globe started to experience tightness because of factors such as an unexpected rapid economic rebound after the COVID-19 pandemic in 2021. This situation has dramatically escalated into a full-blown energy crisis because of Ukraine's invasion by Russia in 2022. The prices of natural gas also hit the bar, which led to an increase in the prices of electricity in other markets as well. Even their oil prices reached the highest level since 2008 (Li et al., 2022).

The rapid increase in the prices of energy has resulted in an unbearable high inflation, it pushed more families into poverty, forced some enterprises to produce poor quality or even shut down (Zuk & Zuk, 2022). The economic growth also slowed down to an extent that some countries are even heading toward severe recession (Hutter & Weber, 2022). Some of the countries in Europe found themselves in a situation where they could face gas rationing because they heavily depend on the supply of Russia, while more emerging economies are experiencing higher import bills and shortages of fuel (Li et al., 2022). According to Prisecaru (2022), the output of other gas-manufacturing plants in Europe has decreased as they could not afford to operate anymore. On the contrary, the power supply in China was completely cut (Prisecura, 2022). Kuzemko et al. (2022) noted that the higher energy prices or bills

contributed towards extreme poverty and stagnant progress towards reaching universal and developing economies, particularly the part of the household budget spent on food and energy is considerable. Also, the more advanced economies have seen increasing prices which impacted vulnerable households and caused significant social, political, and economic strains (Kuzemko et al., 2022).

For Basdekis et al. (2022), energy prices kept going up due to rapid economic recovery, weather conditions in different parts of the world and maintenance work that had been delayed by the pandemic and gas companies and exporting countries to reduce investments in 2021. Ukraine's invasion by Russia further exacerbated the situation, resulting in dire consequences for the economy as it was not easy to overcome the repercussions of the pandemic faced (Basdekis et al., 2022). Tuna (2022) believes that more advanced economies which are confronted by energy crisis can address the challenge by turning to renewable sources like sun, wind, steam, and water. Learning how to use energy, which includes knowing how to use less of it and preserve it, can also help address the issue of the energy crisis. To add, other measures include lighting controls, performing energy audits and common stand on climate change (Tuna, 2022).

South Africa is one of the African countries which are currently confronted by a massive electricity crisis (Nhleko & Inambao, 2020). The failure to supply households, institutions, businesses, and other related structures such as workplaces with sufficient electricity remains one of the critical issues of this country. Undoubtedly, the frequent occurrence of load-shedding is harshly affecting the economy negatively (Berahab, 2022). Given how the country is currently trying to resolve the electricity crisis, load-shedding in future could remain a possibility as much of the country's electricity generation infrastructure is heading toward an age at which it will be needed to be replaced (Moodley, 2019). Looking back at the country's track record of building a new generation capacity since the new dawn of electricity crisis in 2007, it could be taken that there is no hope or that the issue will not be resolved any time soon, this is according to both Berahab (2022) and Moodley (2019). Nhleko and Inambao (2020) argue that the country's major power stations are overburdened and behind schedule and that the country's electricity reserve margin will continue to suffer if this pattern persists.

As such, it is vital to understand the influence load-shedding has on all businesses in South Africa (Meyburgh, 2021). This is relevant and true, particularly for small businesses, as the impact of load-shedding is complex and dynamic on consumers (von Blottnitz, 2009). Unlike a factory wherein a power outage results in a predictable and measurable loss of productivity, the value generated by the small business sector is not a linear production system (von Blottnitz, 2009). As such, one could deduce that the effects of load-shedding on SMMEs are not well understood for this reason, irrespective of the sector being one of the primary and significant contributors to the country's economy.

In South Africa, the small, medium, and Micro Enterprises (SMMEs) sector remains one of the significant employers who currently account for about 50 per cent to 60 per cent of the labour force and contribute approximately 34 per cent of the country's Gross Domestic Product (GDP) (Zhou & Gumbo, 2021). Scholars and researchers such as Zhou and Gumbo (2021) argued that the sector is a crucial driver of consumption and is associated with high linkages and spillovers. It is also seen as the one is hype-competitive product market. For this reason, there is no doubt that the sustainability or survival of small businesses in the country depends on a reliable electricity supply. Equally, it is fair to say that problems at the Electricity Supply Commission (ESKOM) threaten the growth and thriving of the SMME sector and the ability of small business owners to produce products at affordable prices.

The current research analyses the effects of unreliable and unstable electricity supply on SMMEs. This stems from the crisis of electricity at ESKOM and its negative influence on the economy. The crisis gained popularity in 2007 because of widespread load-shedding, and it is linked to a chronic shortage of supply (du Venage, 2020). According to Joffe (2012), ESKOM was not entirely or solely responsible for the failure to cater to the growing electricity demand. A white paper by the Department of Minerals and Energy (DME:18) in 1998 acknowledged that:

“Eskom's latest integrate electricity plan predicts that Eskom's present generation capacity surplus will be fully used by 2007. Timely steps will have to be taken to ensure that demand does not exceed available supply capacity and that appropriate strategies, including those with long lead times are implemented in time”.

Due to a series of reasons during that period, the government did not act as ESKOM had suggested or recommended. As a result, an insufficient energy supply occurred, as predicted (du Venage, 2020:18).

Limpopo Province is merely like all other provinces in South Africa. These provinces are affected in the same way, particularly during the period of load-shedding. All the regulations implemented and imposed by ESKOM apply to every local municipality within the province. In Limpopo Province, most people resort to the SMME sector for employment as it is relatively easy to start a small business like the ones found in Townships. Presumably, most people are found in this sector because of this reason. The frequent events of load-shedding could determine whether the small businesses that need electricity make a loss or not during load the shedding period. Power cuts affect almost every establishment; even households and institutions are affected. As such, ESKOM and the municipality might decide to implement load-shedding because the energy demand tends to exceed the supply. In light of the above, this study assumed that load-shedding affects SMMEs in the Seshego Township.

1.3 Statement of Research Problem

After gaining its democracy in 1994, South Africa has made tremendous progress in overcoming the years of apartheid, colonialism, and inequality (Mlambo, 2020). Despite the country's progress, its economy is exposed to the current energy crisis (Goldberg, 2015). South African economy has since been struggling to thrive due to this occurrence which contributes negatively to these livelihoods' activities. Most African countries like South Africa are extremely rich and wealthy in natural resources and minerals; however, it faces several socio-economic challenges, such as high unemployment and poverty (Mlambo, 2020). Maka et al. (2021) note that unemployment remains key in the country and fails to create employment for its people. During the 20th century, unemployment was regarded as an alarming issue in the world, but currently, youth unemployment has gained concern (Maka et al., 2021). Unfortunately, load-shedding does not even do justice to this group of individuals who tend to resort to the SMME sector for employment.

Slowly but surely, the utility company, ESKOM, is proving to be more of a threat to the economic stability of the country because of significant losses which transpire because of load-shedding (Makgopa & Mpetsheni, 2022). According to Makgopa and Mpetsheni (2022), about 90 per cent of power in South Africa comes from ESKOM. One could say the utility is supposed to supply electricity. Still, with frequent load-shedding incidents, they only provide darkness. Whenever the name ESKOM is spoken of, the public develops negative emotions because of the constant power cuts that the country endured for many years, which seems to be worsening. Load-shedding threatens people's lives and is a considerable risk to those who depend on electricity for medical support (Makgopa & Mpetsheni, 2022).

The unreliable electricity supply in the country has become a great concern to investors; this disrupts production and affects the national economy negatively (Rankumise, 2017). Load-shedding is not only expensive to ESKOM but the country. As load-shedding continues, it will cause interruptions, negatively impacting small businesses within various sectors (Rankumise, 2017). Makgopa and Mpetsheni (2022) and Rankumise (2017) share the same sentiment in that most of the companies which depend on electricity must reduce their hours of operation or shut the doors of the business because of power cuts, but this results in loss of income and may even lead to high levels of the unemployment rate. Even the currency of South Africa has been affected as no one is willing to invest in an unstable economy.

For Chimucheka (2013), many people, particularly youth, regard the SMMEs as a ladder which they can climb to escape poverty and reach employment. The SMMEs employ approximately 50 to 60 per cent of South Africa's workforce across all sectors (Maduka & Kaseeram, 2021). Gupta et al. (2013) also emphasized that SMMEs do not only help in the creation of jobs domestically but worldwide. They maintained that the sector is mainly dominated by those without the necessary training, skills, and experience. Drbie and Kasshan (2013) argued that the industry employs more unemployed youth than other age groups.

Presumably, townships are known to have limited or poor access to public services compared to urban areas. For instance, SMMEs in urban areas may be exposed to better access to financial resources which could enable them to afford secondary sources of energy, which they employ as a mitigating strategy during the load-shedding period because of where their

businesses are situated or operate. In simple terms, government services provided in urban areas differ from those rendered in townships. For this reason, the SMMEs in townships tend to be more exposed to power cuts than those in urban areas, as their settings or conditions are different. They greatly suffer as they do not receive the same services as the SMMEs in urban areas. In addition, most SMMEs in urban areas are registered, making them more recognized by insurance companies that provide them with alternatives in case of power cuts.

Given the rising statistics of high unemployment and poverty levels in the country, most individuals, especially in South African Townships, resort to the SMME sector for employment. However, the given frequent power cuts in the country tend to restrict or limit them from pursuing their livelihoods as many lack alternative energy resources to employ. Some of the challenges faced by SMMEs in Seshego Township include production and productivity loss; most of the businesses in the recent century require electricity to produce their products and services. So, spending some hours of business without electricity means pausing the day's work. As such, they could be a real loss of business, unable to fulfil orders and customers' requests. Another challenge is the increased cost of alternative supplies; most small businesses must invest in secondary energy sources to help them combat power cuts. The study, therefore, attempted to examine how SMMEs in the study area mitigate the effects of load-shedding.

1.4 Research Questions.

The general research question of the study was formulated as follows: how does load-shedding affect small, medium, and micro enterprises?

Specific research questions are formulated from the general research question as follows:

1.4.1 What types of small, medium, and micro enterprises are dominating the township economy?

1.4.2 To what extent does load-shedding affect small, medium, and micro enterprises in the study area?

1.4.3 How do the small, medium, and micro enterprises mitigate the effects of load-shedding?

1.5 Research Aim and Objectives.

The aim of the study was to analyse the effects of load-shedding towards small, medium, and micro enterprises using the Economics of Power Systems Reliability and Planning as a theoretical framework.

Specific objectives from the aim are formulated as follows:

1.5.1 To identify the types of medium and micro enterprises dominating the township economy.

1.5.2 To assess the extent to which load-shedding affects small, medium, and micro enterprises.

1.5.3 To examine the strategies used by small, medium, and micro enterprises to mitigate the effects of load-shedding.

1.6 Significance of the study

In the modern world, almost every sub-sector of the economy relies on providing energy to function properly; this also applies to households, industries, and other institutions (Ahlborg et al., 2015). Olajuyin & Mago (2022) put that poor energy provision tends to put the growth and survival of many livelihoods, especially the vulnerable ones primarily found in rural or townships than urban areas or cities, at risk. The South African provider of electricity, known as Eskom, has introduced load-shedding to come up with a way of saving energy to ensure that the country does not run out of electricity entirely (Macaulay, 2023). During this period, most economic or household activities are drastically disrupted. In other words, this implies that much cannot be done as most activities cannot be performed without electricity. So this means a loss to those participating in the SMME sector without secondary energy sources.

For Kemp & Bowman (2015) and Sambo (2015) unemployment and poverty are some of the dominating issues affecting the majority of the South African population. People living in high levels of poverty and unemployment will not wait for the government to come to save them (Conradie et al., 2015). On the contrary, people turn to the SMME sector for employment to uplift themselves. However, recognizing and or accepting such as their

livelihood, their practices are in jeopardy due to continuous or frequent energy cuts. This applies only to those whose businesses depend on or require electricity to function and are in or no secondary energy sources, as the current study targeted. Such difficulties are experienced mainly by SMMEs operating in townships, as those operating within cities or urban areas are more likely to have alternatives during the load-shedding period.

Therefore, based on this background, the current study holds the following significance: to begin with, it exposed how SMMEs in the study survive when load-shedding is implemented and what measures are employed during this period. Furthermore, the study contributed to the existing body of knowledge on the debates surrounding South Africa's energy crisis. Additionally, the findings of the study will be shared with the affected participants if they wish to do so, even with those who are not affected but wish to avoid being in the same situation. Importantly, those who conducted the same study can use the current study's findings to improve their findings. Finally, the study's findings can be shared with the policy makers as this will help them design and implement better policies or strategies that will cater for those affected accordingly.

1.7 Brief of the research methodology

The study used a mixed methods approach. A comprehensive description of the research methodology is presented in chapter 3; hence, this section briefly outlines the study's methodology. The mixed methods approach used in the study enables one to explore the opinions, views, and perceptions of the business owners towards the effects of load-shedding on their ventures in Seshego Township. The mixed methods approach was appropriate as it provided insight into different aspects shaping the participants' perceptions about power outages. The current study used a quantitative approach in which participants were randomly picked to complete a questionnaire on the effects of load-shedding on SMMEs. The questionnaire was built up of only closed-ended questions seeking to quantify the participant's practice and how they are affected by power cuts in the study area. Data obtained from the structured questionnaire given to participants were entered into a Microsoft Excel spreadsheet and later into Statistical Package for Social Sciences (SPSS) version 26 for analysis. In-depth interviews were undertaken to gain an understanding of the business

owners on how power outages affect their businesses. As demonstrated in the methodology chapter, purposive sampling was employed to identify key interviewees.

1.8 Definition of Key Terms.

1.8.1 Load-shedding

The study borrowed the definition of load-shedding from the Western Cape department on the Load-Shedding Fact Sheet (LSFS) (City of Cape Town, 2019) and is as follows: load-shedding is a strategy of an energy utility that is mainly used to reduce the demands on the energy generation system by switching off the supply of energy temporarily in the specific geographical areas. It is often applied when the system fails to maintain or fulfil all energy demands due to limited capacity. Also, it is implemented to optimally manage the available energy to ensure the system's stability (City of Cape Town, 2019). The study employed this definition because it best suited the settings or context of the study area and stuck to it throughout the study.

1.8.2 Small, medium, and micro enterprises

The definition of small, medium, and micro enterprises varies across countries, but SMMEs are primarily defined based on their revenue, asset ownership and the number of employees. For instance, in South Africa, Maduka and Kaseeram (2021) and Mutyenyo and Madzivhandila (2014) tried to give the same definition of small, medium, and micro enterprises “SMMEs refers to businesses that are registered with no more than 250 employees”, but this is not the case in other countries. The study borrowed the definition of SMMEs from the National Small Business Act of 1996, which regards SMMEs as business ventures comprising cooperative enterprises managed by one or more owners, including its subdivisions, and can be found in any sector of the economy (Soni et al., 2015). Hence, the study employed a definition that suits the context of small, medium, and micro enterprises in South African townships, particularly in Seshego Township.

1.8.3 Township

Considering the South African context, Bvuma and Marnwick (2020:12) defined a township as “an area on the periphery of a town that has historically been used to uphold racially

segregated living arrangement”. The township system came as a result of apartheid, a political system that was established from 1948 to the early 1990s. Only white people were permitted to live in cities under this system; those not legally considered white were not permitted in cities; they were allowed to live in townships instead. The living conditions in townships were typically overcrowded and poor (Bvuma & Marnwick, 2020). The study adopted this definition as it is relevant and relates to the conditions in the study area.

1.8.4 Energy Crisis

An energy crisis refers to any massive shortfall in providing or supplying energy (Festus & Ogoegbunam, 2015). In addition, an energy crisis is a struggle to maintain a stable and continuous supply of energy resources without cutting short of their supply and even entirely exhausting them in exploiting, exploring, transforming, and utilizing them to achieve socio-economic goals. The current research adopted this definition of an energy crisis because it best suits the study.

1.8.5 Entrepreneurship

There are two ways of defining entrepreneurship outside mainstream economics (Casson, 2010). One represents entrepreneurs concerning the economic function that they perform. This study adopted the following definition by Casson (2010:6) as it best suited this research: “entrepreneur refers to the founder or owner-managers of small or medium-sized enterprises with the potential to grow”. Casson (2010) emphasized that entrepreneurship is setting up or starting up a business. An entrepreneur is commonly taken as an innovator, responsible for generating new ideas, goods, services and business or procedures.

1.9 Chapter Sequence

Chapter 1 presents the introduction and background of the study. This chapter provides the problem statement, research questions, aim, and objectives. The definition of key terms, the significance of the study and a concise research methodology are provided in this chapter. The chapter simply gives an overview of the energy crisis and its connection to township livelihoods, such as small businesses. It briefly demonstrates whether load-shedding has a positive impact on the local economy or not.

Chapter 2 reviews the literature on the energy crisis and its impact on small, medium and micro enterprises. It also provides the theoretical framework that guided the study. The chapter further integrates the literature that was reviewed with the framework to establish its relevance. The theory used in the study makes links and demonstrates the significance of reliable electricity for small businesses.

Chapter 3 presents the location of the study where data related to the effects of load-shedding on SMMEs was collected. The chapter further presents the methods, procedures and techniques used by the researcher in this study to collect data. It outlines the methodological procedures utilized in selecting the participants. Finally, the chapter discusses data validation, ethical considerations, and the study's limitations.

Chapter 4 presents data collection and presentation of results. The chapter starts by presenting the background information of the participants. This is followed by the typology of the businesses owned by the participants. A key theme presented in this chapter is strategies employed by business owners to curb the effects of power outages.

Chapter 5 provides a comprehensive summary of the research findings. It presents the conclusions of the study, which emphasizes the impact the energy crisis had on the SMMEs in the study area. The chapter closes by giving recommendations to municipal officials and owners of SMMEs.

1.10 Summary of the Chapter

The chapter started by presenting the background of the study, highlighting the energy crisis within the context of European countries and African countries, particularly South Africa. It briefly demonstrated how a shortage of energy could hinder improving the country's economic status, uplifting and empowering people. It is noted that the energy crisis affects industries, businesses, and households differently. The chapter dealt with the stated problem, which noted that even after many years of democracy in South Africa, the country is still confronted by real issues that need immediate attention. The chapter further presented the significance of the study and a brief outline of the methodological framework which drove this study. Finally, this chapter provided a dissertations' structure, which gives the chapter

sequence. The subsequent chapter provide review of literature on how load-shedding affects the SMMEs and establishes whether there is a relationship between the two concepts.

Chapter two

Literature review and theoretical framework

2.1 Introduction

This chapter provides a review of scholarly work on the debate around the energy crisis. It starts by providing an overview of the energy crisis on a global stage and the factors exacerbating the crisis. This is followed by how energy crises and power outages confront South Africa. Thereafter, an outline of key legislation or policies which are designed to address this challenge in the country is briefly discussed. The chapter also discusses the nature of SMMEs, the challenges facing the sector, and the government's initiatives to deal with these challenges on the international and domestic levels. Furthermore, it describes how the SMME sector is affected by the energy crisis or load-shedding and outlines strategies countries employ to minimize its effects on the sector. Finally, a theoretical framework that guides this study is outlined in this chapter.

2.2 An Overview of the energy crisis

In the 21st century, energy has gained popularity and become the word of the day since almost everything depends on it. Energy is regarded as a force in our bodies which propels our vehicles and lights our world (Chakraborty et al., 2021). Coyle and Simmons (2014:1) state that “our modern lives, both individual and societal, have come to rely on its abundance, convenience and potential”. For these authors, this is apparent as living without energy for even 15 minutes or considering a power outage or a flat cell phone battery shows its indelible mark on daily activities. Concurrently, as resilient as it is fragile, we exist or inhabit a fantastic ecosystem. Energy comes from and returns to the global environment (Vaughan, 2022). According to Coyle and Simmons (2014), the world is in a predicament due to this situation. The implication behind this assertion is that much cannot be done without a reliable source of energy, as almost everything during the recent century depends on electricity. However, this does not imply that in the past centuries, most activities did not rely on energy; it just means that because of how fast the world is evolving or changing, more energy is currently required as compared to the past.

Coyle and Simmons (2014) said that their writing at that time was not of gloom and doom but that of policy and technology. Their intention was not to discourage but encourage and motivate that a lot can be done to prevent the world from facing energy challenges. For Chakraborty et al. (2021), both policy and technology are crucial since they help us understand the context of energy and climate of our world and give room for ideas and solutions to solve its challenges. Both Coyle and Simmons (2014) point out that the past has taught or demonstrated that there would be a failure in their collective promises if technology and policy are not well-proportioned or aligned. However, they can be the stimulus behind a new and far superior energy future if they are combined in a coordinated, practical, and intentional way. This is what the world needs currently more than before.

The energy crisis confronting the planet Earth is due to an escalation in the global energy demand, persisting reliance on fossil-based fuels for energy generation, transportation, and a growing population worldwide, which exceeds seven billion people and increasing steadily (Coyle & Simmons, 2014). Excessive burning of fossil fuels depletes natural resources and sharply increases carbon dioxide emissions (Singh, 2021). Researchers such as Kennedy-Darling et al. (2008) believe that this situation only results in rising average global temperatures. Although natural cyclical variations occur in regional and international climates, recently, there has been a widespread agreement that the scientific communities and governments that the recent climate change is accelerating rapidly due to human interaction and that rapid and profound measures will be required to reduce harmful impacts (IEA, 2021). There is a steady increase in the concentration levels of greenhouse gases, which are recently greater than at any time in the past eight hundred thousand years (Kennedy-Darling et al., 2008). If necessary, measures are not put in place, and significant changes to the world climate may occur, presenting real effects on households, industry, and the world economy (IEA, 2021). In efforts to reduce the upward trend in atmospheric emissions, the International Energy Agency (IEA) has outlined critical steps that need to be implemented quickly, including increased energy efficiency and conservation, efforts to alternative energy technologies, and efforts to control future energy demand.

Factors such as low overseas shipments, low natural gas stockpiles and sluggish maintenance work that put nuclear generators and other plants offline were the cause of a rise in the price of electricity (Reijnders & Huijbregts, 2007). In Europe, the cost of electricity sharply went up by over 200 per cent in Spain, particularly during the winter season Martins et al. (2019) note that a continued increase in the electricity price resulted in a strike by consumers. Most European countries like Italy, Greece, Spain, and the UK attempted to address the energy issue by adopting national measures to deter the crisis (Martins et al., 2019). Martins et al. (2019) achieved this by giving the energy providers subsidies and imposing price caps. Reijnders and Huijbregts (2007) argued that this was only done to protect the citizens from rising electricity costs as their economies recover fully from the COVID-19 pandemic.

An unexpected shortage of lack of coal for utilities was witnessed by both India and China in Asia (Karmaker et al., 2020). In China, the government decided to ration power supply to factories in numerous provinces since mid-year in 2021 (Karmaker et al., 2020). In contrast, India enjoyed approximately 70 per cent of the power generated from burning coal (Karmaker et al., 2020). However, later that year, India was confronted by coal shortages in the form of inventory coal, with power plants reaching critically low levels (Leonard et al., 2020). In 2021, India's Central Electricity Authority (CEA) reported that the entire coal stock in the country went down to 8.317 million in August from 37.41 million in January (Leonard et al., 2020). The CEA further highlighted "the 8.317 million can only meet energy demand for about five days". Leonard et al. (2020) maintain that the government resolved the situation in India by diverting coal away from non-power uses so that the coal supply is only available for power uses. Leonard et al. (2020:86) put, "the implication is that non-power users of coal will not have access to coal energy". Karmaker et al. (2020) emphasise that most of the households in India were affected by an increase in the prices of global oil products when demand for cooking gas, diesel and petrol grew almost 11 per cent.

European countries get assistance from African countries to build their energy reserves amidst the global shortage (Ozili & Ozen, 2021). For instance, Spain receives some of its natural gas supplies from Algeria. Spain gets its natural gas from Algeria through Morocco, which accumulated 7 per cent of the gas delivered to Spain through the pipelines of Morocco since

1996 (Goldemberg, 2006). Currently, the two countries, Algeria and Morocco, had to cut ties with one another due to diplomatic conflict between them. As a result, Algeria had to find another way of supplying natural gas to Spain (Goldemberg, 2006). Both Ozili and Ozen (2021) and Goldemberg (2006) agree that this will eventually result in a higher cost to Spain, thereby increasing the price of natural gas in the country. Makgopa and Mpetsheni (2022) highlight that putting attention to Southern Africa, in Africa, South Africa is known to be the largest producer and exporter of coal. They also point out that coal is solely responsible for 86 per cent of South African electricity, compared to the global average of 34 per cent, surpassing India, which about 71 per cent of its electricity is generated by coal. The group of twenty (G-20) puts South Africa under increasing pressure to lower its coal resources, so the country will be complaint to the 26th session of the Conference of the Parties (COP 26). Botswana and Zimbabwe are heavily dependent on coal for electricity generation, according to Makgopa and Mpetsheni (2022).

2.3 Factors Contributing to the energy crisis.

Since the beginning of 2021, energy prices globally have increased due to various economic, environmental, political, and social realities (Fazelianov, 2022). The causes of increased costs were different weather conditions around the world, fast economic recovery, delayed maintenance work due to the pandemic and other related factors or reasons, such as reduced investments by exporting countries. Significantly, the energy crisis continues to be a topical issue because it is demanded more than it is supplied, and this tends to hinder crucial aspects of the economy worldwide. For Li et al. (2022), tight supplies occurred when Russia stopped the gas supply to Europe in 2021 before it invaded Ukraine. Basdekis et al. (2022) maintained that this situation was made worse by Russia's attack on Ukraine. The United States (US) and European Commission (EC) enforced a series of restrictions on Russia, and the European countries declared their intentions to phase out Russian gas imports completely (IEA, 2021). For the IEA (2021), Russia is currently regarded as the biggest provider of fossil fuels worldwide, even a significant supplier to Europe. Russia will provide almost a quarter of all energy consumed by EC countries in 2021. Meanwhile, Russia has increasingly curtailed or even turned off its export pipelines.

The prices of US, Australian and Qatari Ship borne liquified natural gas (LNG) were bid up by Europe, which pursued to substitute Russian gas (Fazelianov, 2022). The process of raising and diverting supply away from the real or traditional LNG customers in the Asian continent was caused by the incident. Fazelianov (2022) argued that power prices also rose as the prices at which electricity is sold rely on gas. Based on this realization, there should be a rapid initiative or action to construct a new infrastructure to increase how much LNG can be treated globally by both producers and importers of LNG; however, these projects take time to complete because they are expensive (IEA, 2021).

After most of the European countries and their partners in Asia, the US reached an agreement that they would no longer purchase oil from Russia, oil prices initially soared (IEA, 2021). Some shippers declined the request to transport or carry oil from Russia due to restrictions and insurance risks. This occurred despite the incentive of sky-high prices, as there has been no investment during the current years (Chakraborty et al., 2021). These authors also claim that as the prices decreased from their peaks, there is uncertainty regarding the outlook due to emerging rounds of European sanctions on Russia.

A study conducted by Berahab (2022) demonstrated that common causes or factors contribute to this crisis. This crisis is caused by a confluence of supply and demand factors that tightened markets progressively (Gilbert et al., 2021). For Gilbert et al. (2021:2) “global energy supply crises have been typically limited to oil, but currently, natural gas seems to be at the center”. Berahab (2022), who conducted a study on global energy crises, has outlined the following as the major factors that lead to energy crisis across Europe: “greater interconnectedness of natural gas markets, COVID-19 and supply chain disruptions and signs of energy price volatility during the energy transition”. Given the occurrence of the pandemic in early 2020, there is no doubt that the energy market has experienced the magnitude of the energy crisis on a global scale. The growing population across the globe also makes it difficult for countries and energy entities to meet the energy demand. Alvarez and Molnar (2021) state that there was a rapid drop in fuel prices and a significant decline in global energy consumption. However, energy prices bounced back because of the rapid global economic recovery, a way lower-than-expected increase in supply and long periods of cold winter in the Northern

Hemisphere (Alvarez & Molnar, 2021). In Asia and Europe, natural gas prices increased sharply and reached record levels (Martins et al., 2019). Dire effects confronted the coal market, leading many markets, such as Europe, Asia, and the US, to resort to coal instead of natural gas (Pescatori et al., 2021). For the authors, coal got to be in high demand because it is seen as the closest replacement of power plants, and they are also in the same demand as coal; however, the prices of coal went up to their highest level since the year 2001.

The energy sector saw a dry season during the emergence of the pandemic in 2020. This led to retrenchment of many employees within the industry, and many supply chains were greatly affected. Berahab (2022) conducted a study which shows that a dry season within the sector has resulted in a shortage of energy supply; for example, natural gas production in the US persists in remaining behind pre-crisis levels, also the production in both Norway and Netherlands continues to decline and Russia, which is the major supply to Europe, has been cutting back on shipments recently. As such, an increase in demand after COVID-19 has complemented the slow supply, which was intended to respond to price indicators due to lack of labour, poor and lack of interest in investment from fossil fuel companies, maintenance backlogs and longer lead times for new projects (Pescatori et al., 2021). Undoubtedly, these shortages are the reason for higher coal and gas prices, which also altered electricity costs.

Although it contributed about 4 per cent of global carbon dioxide emissions in 2019, Africa is one of the continents most affected by climate change (IEA, 2021). The Global Climate Risk Index (GCRI) (2021) indicated that Africa consists of half of the ten countries which are confronted mainly by extreme weather in 2019 (Eckstein et al., 2021). Concurrently, the continent is blessed with significant fossil-fuel resources, including gas and oil, that it exports globally; this also includes renewable energy resources ranging from solar to wind to hydro to geothermal (Eckstein et al., 2021). Therefore, there is no doubt that the global markets will impact Africa, given the current disruptions within the sector. For Eckstein et al. (2021), since each continent comprises not less than heterogeneous countries and their various levels of development and resources, the energy crisis faced in each country will differ. However, some similar economic implications can be highlighted.

Choi (2021) believes that a vital implication here includes persistent inflation due to higher energy prices, which pressure domestic consumption. This refers to a case of Africa's post-pandemic economic recovery because steep energy prices could suppress the promising recovery before it gains momentum (Choi, 2021). A study conducted by Mutua (2021) revealed that increasing food prices, together with a spike in the costs of energy, are pushing up inflation in many African economies. For example, Okwedy (2021) found that the increasing global natural gas prices caused cooking gas prices to rise to more than 100 per cent during 2021 in Nigeria, making it more difficult for some households to afford. As a result, most. Despite these resources being the most reliable and affordable alternatives, they tend to impact the environment, people's health, and quality of life in a negative way. Mutua (2021) also noticed the same pattern of events in Kenya, which is also faced with rising living costs, a chaotic gas market and high prices at the pump. In 2021, gasoline prices increased by 6 per cent in Nairobi due to the removal of oil subsidies, which left many Kenyans unhappy (Mutua, 2021). Undoubtedly, the increasing demand for energy, which is not easy to decrease, is due to more household and personal consumption, which in most cases is made worse by the growing population worldwide.

2.4 Energy Crisis and Load-shedding in South Africa

South Africa has not been spared from the current global energy crisis; the country is experiencing a power crisis, as evidenced by load-shedding schedules administered to communities. The South African government has declared a "state of disaster" due to ongoing power shortage (Macaulay, 2023). For Macaulay (2023) and Mkhize (2022), the country's energy crisis includes sustained load-shedding at varying intervals. Currently, load-shedding throughout the country results in localized power outages of almost six hours or more daily (Mkhize, 2022). Many institutions, such as private residences, hotels, businesses, and households, are negatively affected by these planned electricity outages (Gbadamosi, 2023). Rolling blackouts can also affect numerous aspects of people's lives. Additionally, Bloomberg (2023) maintains that power outages could increase the crime rate, for example, opportunities for smash-and-grab crime during traffic jams when the lights are out, and residences are the potential targets in this period as security systems are not functioning. He

furthermore states that the country has experienced an ongoing condition that has led to increased protests and demonstrations.

The recent events of the energy crisis in the country have forced the government to act. Those relevant or responsible have indicated earlier this year (2023) that an action plan announced by the country's president, Cyril Ramaphosa, was the one to lay out the plan last year (2022) and designed with a long-term goal of securing a reliable supply of electricity for the country (Macaulay, 2023). However, this contradicts what Mondli Gungubele, a government minister, said "there is no immediate panacea to this crisis" (Macaulay, 2023: online). ESKOM and the South African government's poor planning and inconsistent historical cost accounting policies caused the current electricity constraint (Joffe, 2012). He further maintains that a situation whereby ESKOM was selling electricity at a price below the actual cost of generation resulted from declining electricity tariffs. Over the years, ESKOM could not fully recover the cost of capital invested in generating capacity (Longano, 2022). Even when profit was generated, the parastatal could not finance further capital investments needed to meet demand (Longano, 2022). Joffe (2012) notes that in 1990 and 2000, ESKOM appealed to the government to finance extra generation capacity because solid economic growth and the resulting robust growth in electricity demand showed that the country would face capacity problems in terms of supply before 2010. However, these appeals were not attended to quickly enough, and this caused the issue of load-shedding to cause an urgency of the matter to fall into sharp focus in 2007 and 2008, which was high on the political agenda. In late 2007, ESKOM resorted to national rotational load-shedding to protect the power system from an overall blackout (Makgopa & Mpetsheni, 2022). Additionally, a national emergency was declared in early 2008 (Joffe, 2012). Furthermore, load-shedding lasted until March 2008, whilst a recovery plan was initiated by ESKOM, with the assistance of businesses and the government (Makgopa & Mpetsheni, 2022).

For Joffe (2012), a cheap and abundant electricity supply is one of South Africa's key sources of competitive advantage, which has become a limiting element and potential danger risk to foreign direct investors. He argued that the economic recession assisted primarily in providing area for recovery, and ESKOM made important progress towards stabilizing the power system

from 2008. However, the supply margins were constrained and significant delays in constructing the Kusile and Medupe power plants; eventually load-shedding became a norm in 2014. Most of the stations operated beyond their maintenance window to ensure that lights are on during the six years after the initial spate of load-shedding in 2008. Consequently, load-shedding became consistent for the last two months in 2014 and the first seven months in 2015. Therefore, ESKOM should consider ensuring their power stations have an ever-increasing amount of routine maintenance (Olajuyin & Mago, 2022). This is so because many of these stations are in their mid-life, and because they have been run hard over the past few years to compensate for shortage of capacity (Joffe, 2012).

2.4.1 The reasons for load-shedding

The main reason why there is still an occurrence process or action of switching off parts of the power grid to ensure stability at ESKOM is that the government did not consider the warning of ESKOM during the late 1990s (Makgopa & Mpetsheni, 2022). ESKOM suggested that the government must consider building new power stations if the country is to escape the powers supply challenges in 2007 (Makgopa & Mpetsheni, 2022). However, during that time, the government was interested in permitting private electricity producers the platform to generate power for the national grid. Still, in 2002 no one had invested in private power generation. This occurred because Eskom wanted to retain 70 per cent dominance of power production in South Africa (Assan & Masibi, 2015).

Furthermore, Assan and Masibi (2015) point out that Thabo Mbeki, the former president in 2007, accepted that the government slipped by overlooking the pending power demand disaster. Makgopa and Mpetsheni (2022) note that the government had many unskilled labourers and poor leadership inside ESKOM when they decided to address the issue of greater demand. According to Makgopa and Mpetsheni (2022), growth started to take shape after subsidizing the labour force by 50 per cent. Although, the cut down of staff added to drastically maintained power stations, which led to load-shedding. Another cause of infrequent load-shedding was the construction workers' strike which delayed ESKOM's expansion Programme (Rankumise, 2017). These are a few of the reasons why load-shedding was implemented.

The recent event of the energy crisis has shaped matters differently and load-shedding is implemented for different reasons than it was in the past (Macaulay, 2023). For example, in late January 2023, ESKOM released a statement which stated that the utility “is trying to reduce frequent episodes of these outages and increased stages of load-shedding does not imply a blackout on the power system. Load-shedding occurs as a means of preventing a blackout” (Macaulay, 2023: online). Based on this, there is no doubt that the energy utility company in this country resort to load-shedding as it has no other means of balancing the power system. Importantly, this is done to ensure the country does not run out of electricity completely.

2.5. The key energy legislation and policies in South Africa

There are a number of policies implemented in South Africa that are aimed at addressing energy issues. These policies are vital as they ensure that all energy challenges are dealt with suitably. Since almost everything in the modern day relies on supply of energy to function, countries across the world, including South Africa, have come up with means of intervention to ensure that the supply of energy in the country meets the demands of end users. This can include industries, institutions and businesses which drives the economy of the country. To deal with the energy crisis confronted, several policies are put in place.

2.5.1 The white paper on the energy policy of the Republic of South Africa 1998

DME released the long-awaited white paper on energy policy of the Republic of South Africa in 1998. The document consisted of a broad set of policy objectives organized into five main themes: increased access to affordable energy services, improving energy governance, stimulating economic development, managing energy-related environmental impacts, and securing energy supply through diversity (DME, 1998). The main themes are briefly discussed below:

- **Increasing access to affordable energy services:** This simply implied that all vulnerable and disadvantaged small businesses, households, and small farmers and community services would have access to energy services which would be promoted by the government (DME, 1998).

- **Improving energy governance:** The focus or emphasis was on that governance of energy must be improved. DME (1998) emphasized that the respective duties and functions of different energy governance institutions will be clarified, meaning there will be accountability and transparency in terms of the operation of these institutions, and their membership will become more representative, particularly in relation to participation by blacks and women. Notably, there will be consultation amongst stakeholders regarding the formulation and implementation of new energy policies to ensure that policies are sympathetic to the needs of a wider range of stakeholder communities (DME, 1998). To achieve greater integration in energy policy formulation and implementation, there will be an improvement in co-ordination between government departments, government policies and different spheres of government. For better formulation and implementation of energy policies, government capacity will be strengthened (DME, 1998).
- **Stimulating economic development:** This will be achieved as the government encourages competition in the energy markets. The government will intervene in cases where market failures are identified, this will be done through transparent, regulatory, and other carefully defined and time-delineated mechanisms to ensure that customers are rendered effective energy services (DME, 1998). The DME (1998) government policy is in place to remove distortions and encourage energy prices to be as cost reflective as possible. If there is a need for subsidies, then they ought to be transparent for implementation based on common criteria. Although energy taxation might continue to remain an option in the government's fiscal policy, it will be exercised carefully for the economic and behavioural impacts of such policies (DME, 1998). According to the DME (1998), aspects such as good governance, stable, transparent, regulatory regimes and other appropriate policy instruments will be used to initiate an investor-friendly in the energy sector of the government.
- **Managing energy-related environmental impacts:** The emphasis is on the fact that the government has a role of promoting access to basic energy services for poor households as this will enhance the negative health impacts arising from the use of certain fuels (DME, 1998). The government also has a role of ensuring the acceptance

and establishment of broad national targets for the reduction of energy-related emissions which threatens the environment and human health (DME, 1998). It remains crucial for the government to guarantee a balance between the maintenance of acceptable environmental requirements and exploiting fossil fuels.

- **Securing energy supply through diversity:** The government will pursue energy security by fostering a diversity of both supply sources and primary energy carriers because of the increased energy trade opportunities in the Southern African region (DME, 1998).

2.5.2 Electricity Regulation Act 4 of 2006

According to the Southern African Legal Information Institute (SALII, 2008), the Electricity Regulation Act 4 is expected to ensure access to efficient, effective, sustainable, and orderly development and operation of South African electricity supply infrastructure in South Africa. This simply puts more emphasis on the interest and needs of both the current and future generation of electricity users, and customers are protected and met, paying great attention to governance, effectiveness, efficiency and long-term sustainability of the supply of electricity in the broader context of economic energy regulation in the country (SALII, 2008). The Act further objected to facilitating investment within the electricity supply industry and universal access to electricity (SALII, 2008). In addition, the act is tasked with promoting the use of diverse energy sources, energy efficiency, competitiveness, and customer and end-user choice (SALII, 2008). Finally, facilitates a fair balance between the interest of end users and the interests of customers, licenses, and investors within the electricity supply industry and the public (SALII, 2008).

2.5.3 The Minister of Electricity

Pillay 2023 claims that the appointment of Dr Kgosientsho Ramokgopo as minister of electricity, who will specifically deal with or address the unprecedented power shortages in South Africa, clearly indicates how recently the country has been affected by power cuts. The country's president, Cyril Ramaphosa, appointed Dr Kgosientsho as a minister in the presidency to solely address the electricity crisis in the country (Pillay, 2023). During the appointment of the new minister of electricity, the president himself stated, "Ramokgopo will

be tasked with significantly reducing the severity and frequency of load-shedding” (Pillay, 2023: online). Dr Kgosisentsho will have political responsibility, authority, and control over all critical aspects of energy action plan. This will also help to deal with the challenges of fragmentation of responsibility across different departments and ministers which, while appropriate under normal circumstances, is not conducive to crisis response. According to Nkanjeni (2023), the new minister of electricity will continue to assume his position until the country’s energy crisis is addressed. The minister is also expected to work with different departments and entities responsible for power crisis response, and this includes leadership in ESKOM (Nkanjeni, 2023). Nkanjeni (2023) also note that Ramokgopo will be working closely with the relevant stakeholders to improve existing power stations' performance and ensure rapid procurement of new generation capacity. In addition, the minister will also oversee the state of national disaster and issue directions that will exclude critical facilities from load-shedding (Pillay, 2023).

2.6 The nature and characteristics of SMMEs

In Europe, Small and Medium-Sized Enterprises (SMEs) are the backbone of the economy, as they constitute about 99 per cent of all businesses within the continent (EC, 2022). To the European Commission (EC), these enterprises are a source of employment for approximately a hundred million people. They account for more than half of the continent’s GDP and play a significant role by contributing significantly to every sector of the economy. The author further expresses issues like resource efficiency and social cohesion, climate change is more likely to be addressed by solutions brought by SMMEs, and they also help spread innovation throughout Europe’s regions. As such, it becomes undeniable that they form the centre of EU’s twin shifts to a sustainable and digital economy (EC, 2022).

Significantly, SMMEs are crucial to Europe’s economic and technological sovereignty, industrial ecosystems, competitiveness and prosperity, and resilience to external shocks (Muller et al., 2015). These authors also argue that SMMEs are an essential part of the economy in this continent as most such business ventures fall under this category. In the context of Europe, SMEs are divided into three categories, firstly, the micro-sized enterprises, which absorbs between zero and nine people; secondly, a small business which employs

between 10 and 49 employees; and lastly, medium-sized businesses that consist of about 50 and 249 workers (Laurențiu, 2016). The author notes that the smallest size category holds most of the SMEs in terms of enterprise numbers, with micro-sized enterprises representing 21.6 million of the 23.1 million SMEs in the EC.

Scholars such as Rotar et al. (2019) indicated that the SMMEs in Europe may share the same attributes, but how they contribute to the economy differs from country to country. For instance, even though Germany is seen as the nation with the biggest economy within the entire EU, it remains behind countries like Spain, France, and Italy, with only the fourth-highest number of SMMEs (Rotar et al., 2019). Cicea et al. (2019) believe that this is because these countries comprised a significant number of micro-sized businesses within the continent, at 2.46 million, 2.81 million, and 3.36 million, respectively. Muller et al. (2019) highlighted that Germany had a higher number of small businesses, at 363 462 and medium-sized enterprises, at 55 518 respectively. Regardless of these larger SMEs being fewer in number than micro-sized businesses, they account for a similar share of value-added and employment (Cicea et al., 2019). Within the EC, almost 84.6 million people are employed within the SMEs sector and hold a combined value of 3.9 trillion euros (Laurențiu, 2016). The author points out that the wholesale and retail trade sectors were the most common industry sector among micro-sized and small enterprises. Among medium-sized businesses, manufacturing was the most common industry sector.

The SMMEs are defined by looking at the number of workers within the business and other related aspects like annual turnover. In Britain, a small business consists of approximately 2 million annual turnovers or not more than that, with less than 200 workers who are paid (Stephen & Wasiu, 2013). Furthermore, SMMEs can be defined as small enterprises managed by a single owner or more than one individual within the space in any sector or sector of the economy at a national level (Kemp & Bowman, 2015). In South Africa, the small, medium, and micro enterprises are expanded and operate within various industries: farming, tourism, wholesaling, retailing, manufacturing, mining, service, and construction. Chimucheka (2013) believes that an enterprise can be regarded as small if it consists of a relatively small share of its marketplace, the part owners or owners manage it within their capacity and by a formalized

structure of management that is medium, it is a stand-alone or does not depend on anything, in a way that it will not form or create a big enterprise.

High levels of labour intensity characterize the SMMEs as opposed to larger enterprises, and their employment creation results in low capital costs (Abor & Quartey, 2010). The authors further stated that more employment creation is generated or created because of capital that is invested per unit; these firms act as a mechanism or instruments in which talents can be realized or used, entrepreneurship or strengths of people whose full potential cannot be tapped or attained within more prominent organisation or institutions. SMMEs are found to be flourishing when they offer services, particularly to a restricted or small market which more significant firms find unattractive (Lekhanya et al., 2017). They also form an environment in which entrepreneurial skills or talent can be realized, the competitiveness of the economy is harnessed by the SMMEs, and they ensure social stability as compared to large factories; it does not contribute more to the physical damage of the environment, it stimulates personal savings, increase wealth in rural areas, and generally, it increases the level of economic participation of a certain population (Chimucheka, 2013).

There are five stages of development whereby the National Small Business Act 102 of 1996 in South Africa categorizes SMMEs, namely, survivalist, micro, very small, small, and medium-sized enterprises (Chimucheka, 2013). To begin with, survivalist these type of enterprises falls under the informal part of the economy and are usually undertaken by individuals who are not working or form part of the labour force, and their main goal is to survive economically as well as to make ends meet (Chimucheka & Mandipaka, 2015). For these authors, this type of enterprise is associated with little investment of capital, and this implies that less income is generated, those who own such enterprises have no suitable skills and training that is needed to run the business, and there is less exposure to opportunities in which the business can grow or expand. These enterprises involve vendors, hawkers, and subsistence farmers.

In addition, micro-enterprises, this type of enterprise usually involves approximately five workers and similarly to survivalist, they also form part of the informal part of the economy; the owners lack the necessary skills required to run a business, they are not recognized or

licensed, and this means that there is no compliance with legislation. As opposed to the survivalist enterprise, their annual turnover is at the VAT registration level of R300 00 per year and they hold a great deal of capabilities that would see them moving or becoming part of the formal small business (Chimucheka, 2013). These types of enterprises include minibus taxis, household industries and spaza shops. Furthermore, very small enterprises form part of the formal economy, with a minimum of 10 workers in sectors besides manufacturing, electricity, mining, and construction comprising almost 20 workers. The persons associated with this type of enterprise are usually those with the skills and training to run a business or the professionals who can use technology (Chimucheka, 2013; Chimucheka & Mandipaka, 2015).

Moreover, small enterprises, unlike very small ones, are well established because they operate as registered entities in a fixed business space. They consist of complex organisational structures of almost 100 workers (Laurențiu, 2016). Finally, medium enterprises, similarly to small enterprises, are associated with complex structures of about 200 workers who carry out their duties within a fixed business space and comply with the law. However, they are owner-managed (Chimucheka, 2013).

2.6.2 Township Economy versus urban area's Economy

A country's economy exists in townships and cities in almost every country, particularly in African countries like South Africa. In South Africa, the socio-economic parameters distinguish townships from cities (Bvuma & Marnewick, 2020). For example, the Gauteng Township Economy Revitalization Strategy (GTERS) (DA Gauteng, 2019: online) put “the poor live to the south and on fringes of the city in townships in Johannesburg, whilst the wealthy live to the north of the city centre in the northern suburbs”. Bvuma and Marnewick (2020) complement this in that the environments vary, SMMEs are not affected similarly, and some are confronted with technological issues, socio-economic factors or perceptions of business owners based on their lived experience. Most of the townships in South Africa are associated with subsistence levels. They are prone to poor conditions due to a lack of access to basic infrastructure, which hinders the progress or journey to achieving economic growth and development (DA Gauteng, 2019). The author further points out that the country still

faces challenges impeding the growth of township profile SMMEs and well-structured geographical inequalities regardless of gaining independence in 1994. After the apartheid era, South Africa is still enduring challenges related to policies that were designed to promote exclusion and lack of access to resources, exclusion from participating within the small business sector and segregation of townships and cities (Cant, 2020).

Before 1994, township SMMEs were excluded from government policies as they were not regarded by the apartheid government (Cant, 2017). This resulted in most business schools and university commerce departments wiping off many SMMEs from the research agenda (DA Gauteng, 2019). The more significant business ventures, which were owned by white people and operated in cities, were regarded as potential enablers for creating jobs and economic growth (Cant & Rabie, 2018). The GTER (DA Gauteng, 2019) notes that the SMME sector occurred during the 1970s and 1980s. Small Business Development Corporation (SBDC) was initiated by the South African government in South Africa in 1989s to support SMMEs. The policy framework's designation and implementation to address the classification of SMMEs and allow them to be part of the economy was also initiated by the government of this country in 1995 (Cant, 2020). This was the government's National Strategy for Development and Promotion (NSDP) of small businesses (National Framework on Sustainable Development (NFSD, 2008; DA Gauteng, 2019). The author further outlines that an overall objective of this framework was to ensure that the growth of SMME is realized through an enabling environment in the country to tackle fundamental inequalities in the economy. Despite the government's efforts and intervention to address challenges confronting the SMMEs, the sector remains in acute problems which prevents them from effectively participating in the economy.

2.7 The challenges confronting SMMEs.

Scholars such as Del Baldo et al. (2022) believe that the SMMEs sector was the worst crippled entity by the coronavirus restrictions and financial difficulties in 2022. A significant number of SMMEs were hit hard by the financial difficulty during the pandemic, and this was evident in most of these enterprises as they relied heavily on financial support from the government (Kalaj, 2022). The Office for National Statistics (2021) reported that about 1.3 million

businesses and 11.6 million jobs were supported by the furlough scheme (Kalaj, 2022). In the United Kingdom (UK), approximately 9 per cent of employees were motivated by their work as opposed to 14 per cent in Europe, down five percentage points before COVID-19, placing the UK out of 38 European countries (Zainal et al., 2022). IEA (2022: online) put that “all SMEs experienced difficulties because of the impact from Brexit, Ukraine and COVID on the cost of living, fuel, food prices, employment, inflation and skills”. Ghak and Zarrouk (2022) conducted a study which found that 9 per cent of businesses, out of over 1000 UK SME owners and senior leaders across 20 sectors, picked financial challenges as a major concern.

Furthermore, the study found that about 21 per cent were dependent on financial support provided by the government during that period, leaving many in debt. This is contradicted by the study conducted by Rankhumise (2017), who found that the significant challenges faced by SMMEs are the lack of special tools to render services, entrepreneurial skills and proper infrastructure as opposed to financial challenges. However, Lekhanya (2015) conducted a study which complements Rankhumise (2017) in that entrepreneurship education is the most significant contributor towards the failure of SMMEs in South Africa. On this background, it is undeniable that most SMMEs experience many challenges in developed or developing countries. Other factors that affect SMEs in Europe include environmental awareness and sustainability challenges (Del Baldo et al., 2022). A similar study by Ghak and Zarrouk (2022) also revealed that business owners and leaders, who comprise about 39 per cent were passionate about turning their business ventures into more sustainable enterprises, as roughly 88 per cent maintained that their job is more fulfilling when they presented opportunities to make a positive impact on environmental and social issues and in the UK, only 57 per cent mentioned that they are willing to buy good that is environmentally friendly.

Zainal et al. (2022) assert that barriers in the business's operations and functional management areas threaten the growth and survival of SMMEs. In less developed countries, various identified factors such as poor managerial skills, lack of planning skills, inexperience within the business sector, and lack of market research skills as the key challenges delaying the success of SMMEs (Chimucheka & Mandipaka, 2015). In addition, other previous studies found that the business community possessing technical background may face challenges in

managing operations and functional areas of the business (Chimucheka & Mandipaka, 2015). Another factor that hinders the success of SMMEs is poor bookkeeping practices (Chimucheka, 2013). Failure to keep business records accordingly will negatively affect an enterprise as they are crucial in helping one budget accurately. In addition, having poor bookkeeping practices means one will fail to maintain organized records, which tends to hinder any business's progress.

In developing countries, environmental challenges are also more likely to impede the survival and growth of SMMEs, including an unfriendly business environment, competition, government regulatory and law issues, competition, and the state of the economy (Soni et al., 2015). The authors claim that significant challenges confronting SMMEs are meeting local and global competition from well-established businesses in these countries. Human resource and development skills and access to adequate finance are the most common factors which hinder the competitiveness of SMMEs (Bushe, 2019). This is so because having aspects like human resource and development skills in a business means that one will see better performance within the entity. This includes productivity by workers. It also helps with building better relationships between employees and employers. Access to adequate financial resources is critical in a business because it gives a cushion if business funds get tight and ensures the business's day-to-day expenses are covered. For these reasons, lack of access to financial resources, insufficient human resources, and development skills are considered barriers to SMME's success. Chimucheka & Madipaka (2015) and Chimucheka (2013) outline regulatory and legal issues as major challenges experienced by SMMEs. They believe that the owners of small businesses, in most cases, may fail to understand the law, which may lead to being fined and penalized. The less developed countries are exposed to a lack of macroeconomic policies and other regulatory policies, which hinder the success of SMMEs.

For Bowen et al. (2009), SMMEs have difficulties accessing correct information due to a lack of knowledge on how to use computers and other machines. In most instances, these business ventures use foreign technology to hire or share ownership with other business counterparts (Bowen et al., 2009). Makgopa and Mpetsheni (2022) believe that regardless of internet availability, its constant utilization is impeded by a shortage of electricity, especially in rural

areas and load-shedding in urban areas. They also state that limited access to market information is also another challenge experienced by SMMEs, and a very limited number of these businesses have access to communication technology like telephones.

Lack of access to equipment, poor infrastructure, corruption, and access to international markets are other acknowledged challenges that affect small business development negatively (Fubah & Moos, 2022). According to these authors, lack and poor support services hamper the efforts of SMMEs to improve their management as firms which are consulted are sometimes found with no appropriate, cost-effective management solutions for SMMEs. Despite many institutions providing training and advisory services to SMMEs, the SMME sector is still associated with the skill gap. This is caused by the inability of these business owners to pay the high cost of training and advisory services, whilst others think it is less important to upgrade their skills (Fubah & Moos, 2022).

2.8 Governmental initiatives aimed at promoting SMMEs.

Countries across the globe employ several programmes which focus on promoting small businesses and improving their well-being. For example, in Europe, there is a programme known as the Competitiveness of Enterprises and Small and Medium-Sized Enterprises (COSME), which is a plan of the EC for the competitiveness of Enterprise and SMEs, starting from 2014 to 2020, with a budget of 2.3 billion Euros (EC, 2022; Previati et al., 2022). The programme aims to support SMEs in the following areas, and these are outlined by the European Commission (EC, 2022); firstly, facilitating access to finance which is the key objective of COSME that aims to provide SMEs with enhanced access to finance across various phases of their lifecycle which include creation, expansion, or business transfer. The EC must mobilize loans and equity investment for SMEs to achieve this objective. Furthermore, supporting internationalization and access to markets, speaks to the programme being able to aid European Enterprises so that they can benefit from the EC's single market and take advantage of opportunities given by markets outside the EC.

Moreover, creating an environment favourable to competitiveness, this goal emphasizes that COSME must support initiatives to improve the framework conditions within which

enterprises operate in certain SMEs. This is done by limiting administrative and regulatory burdens which are not necessary. EC (2022: online) illustrates that “initiatives of this kind may include measuring the impact of Union law on SMEs, developing smart and business-friendly regulation for them and reinforcing the use of the think small first principle for policymaking at a national and regional level”. Finally, encouraging an entrepreneurial culture, emphasized implementing the Entrepreneurship 2020 Action Plan, which COSME supports through a wide range of activities. These comprise research, mobility exchanges, best practices diffusion and pilot projects within areas like mentoring or development of guidance, entrepreneurship education, and support services for emerging and potential entrepreneurs, which could be young, women and senior businesspeople.

Another programme used by countries in the European continent is the Small Business Act (SBA) for Europe (2008). SBA intended to create a new policy framework integrating the existing instruments and forming the European Charter for small enterprises and current SME policy for growth and employment. The key objective for this initiative was to improve the overall approach to entrepreneurship in the EC by “thinking small first” (EC, 2022). The commission within the SBA made cutting red tape and bureaucracy a major priority. It is essential to make public administration more responsive to the needs of SMEs because this can add value to their growth. EC (2022) demonstrated “the amendment to the late payment and directive on e-invoicing was helpful, particularly to the small businesses”. Due to the modernisation of the EC public procurement policy, SMEs will experience a lighter administrative burden when accessing public procurement and have better opportunities for combined bidding. Many small business practitioners commended this approach. They believe it simplifies financial reporting obligations and reduces administrative burdens for SMEs (EC, 2022).

Moreover, the commission targeted improving access to finance by the European small business sector. There has been a realization within the financial markets that the SMEs faced some failures in acquiring financial support. However, progress in improving the availability of credit and financing for SMEs through the provision of loans, guarantees venture capital has been made. The European Investment Fund (EIF) and European Investment Bank (EIB)

have increased their operations regarding these enterprises. The SBA identified access to finance as the second-biggest challenge that individual SMEs experience. As such, the commission suggested an “action plan to improve access to finance for SMEs”. The action plan focuses more on easing SME access to the venture capital market (EC, 2022).

Conversely, South Africa employs different programmes to promote SMMEs in the country. Firstly, the Small Enterprise Development Agency (SEDA) intends to strengthen small businesses' contribution to the South African economy and foster economic growth, job creation, and equity. The agency created and implemented small business development support programs to aid in the establishment of profitable and competitive businesses (SEDA, 2017). SEDA (2017) states that one of the agency's goals is to design and implement developmental support programs and to establish a service delivery network. Another goal of this organisation is to increase the ability of service providers to SMMEs to successfully compete in both the domestic and global markets. The organisation oversees carrying out the national government's policy on small business development. To support the growth of small businesses, it also creates and implements a uniform national distribution network that is regularly used throughout South Africa.

The task of SEDA is to facilitate the development of an environment advantageous for small enterprises and the promotion of entrepreneurship. One of the agency's other responsibilities is facilitating small firms' access to non-financial resources and services that help them expand their capacity, goods, and services. The mission of enabling the domestic and international markets for the goods and services provided by small businesses falls under the purview of SEDA. The agency should also encourage, establish, coordinate, and nurture collaborations with other key parties, including the private sector and other government agencies, to help it achieve its goals. The organisation is also responsible for promoting a service delivery network to make it easier for people to access and reach out to development assistance for small enterprises (SEDA, 2017).

The agency's facilitation and coordination of research pertaining to small business programs and its provision of guidance, information, analysis, and support throughout the execution of SEDA policy are among its other duties. To effectively carry out its duties, the agency must

ensure that the public is aware of the contribution made by SMMEs to domestic economic growth, job creation, and the general establishment of provincial structure (SEDA, 2017).

The National Youth Development Agency (NYDA) is another programme used in South Africa to assist SMMEs. According to Hlophe (2014), NYDAs' mission includes government-wide concerns related to youth development. The author posits that the organisation is anticipated to address issues like unemployment and poverty by bringing together business and public parties. The responsibility of NYDA is to implement long-term solutions that enhance the lives of South African youth. This organisation also functions at the micro, community, provincial, and federal levels. On the micro and communal levels, individuals and the community are thus directly targeted. Youth involvement in policies that influence South Africa's socioeconomic environment is one of the micro-levels. The organisation oversees advocating for youth development in all fields. The agency is required to organize and carry out programs as well. The organisation then keeps track of and assesses its development and encourages youth involvement. It also addresses business development and education for young people (Hlophe, 2014).

Finally, Local Economic Development (LED) is also tasked with promoting the well-being of the local economy across the country. One of the goals of LED is to switch to a strategy that is more focused on the growth of local economies and overcoming current obstacles. Supporting local economies in reaching their full potential and transforming them into active players in the national economy is a key component of another goal. Another LED goal is to emphasize the importance and centrality of locally viable economies in expanding the national economy. One of the goals of the LED is to make local discussions, plans, and activities more effective in the national fight against poverty. Additionally, LED seeks to increase community access to information, support services, and economic opportunities (Meyer, 2014).

2.9 The role of SMMEs in the local economy

Studies by Gupta et al. (2013), Swart (2011), and Drbie and Kasshan (2013) agree that SMMEs have a shared role play in the economic sector on a global scale. Even the EU

countries have acknowledged its significance by setting the framework to promote entrepreneurship, simplify the regulatory and policy environment for the SMMEs and eliminate the remaining hindrances to their development (Fiseha & Oyelana, 2017). Notably, SMMEs are regarded as the critical driver of economic growth and have a crucial role in creating employment opportunities to combat unemployment (Mmbengeni et al., 2021). Mmbengeni et al. (2021) state that the current years in Europe have seen a macroeconomic environment more conducive to SMEs' growth. The authors further argue that many active enterprises in the EC are considering employment and other performance figures. SMMEs formed part of mechanisms which can ensure that the key objectives of the Europe 2020 strategy, sustainable and inclusive growth, are realized. The European continent accepted these enterprises as a crucial part of national economies contributing to value added and employment (EC, 2022). The European Commission maintained that SMMEs in the EC represent over 99 per cent of the enterprises within the non-financial business economy. Of these, 93 per cent are micro-enterprises, below 6 per cent are small enterprises, and less than 1 per cent are small and medium enterprises. According to Laurentiu (2016), the micro-enterprises contribute just about 30 per cent of employment, whilst SMMEs contribute almost 20 per cent and 17 per cent, respectively. About 66 per cent of the total EC employment and over 57 per cent of total value added are generated from the SMMEs.

Furthermore, the SMMEs significantly contribute to creating employment worldwide (Gupta et al., 2013). The authors maintain that SMMEs employ those who lack the necessary skills, training, or experience. Most studies reveal that SMMEs present employment opportunities to most unemployed youth and serve as an instrument that helps with household income and personal savings (Drbie & Kasshan, 2013). In South Africa, about 80% of all local employment opportunities are created by SMMEs, particularly in the local sphere of government (Swart, 2011). According to Kemp and Bowman (2013), on a national level, almost 53.9% of the entire workforce in the SMMEs is employed in South Africa. Although the unemployment rate in South Africa is 25.5 per cent, this implies that there may not be enough job opportunities, and this can be achieved through successful SMMEs who will create and expand job creation along the process.

For this reason, Kemp and Bowman (2015) and Abor and Quartey (2010) believe that the levels of unemployment will decrease. In Botswana, about 75 per cent of the formal sector employment is created by SMMEs. In Kenya, the sector led to more than 50 per cent of new jobs being created in 2005 (Mwobobia, 2012). Based on the author's claims, it can be argued that other African nations have SMMEs that employ more people than SMMEs in South Africa. Therefore, there is a need for exposure to a favourable environment if these enterprises are to expand and prosper.

Authors like Chimucheka (2013) argued that the SMMEs gather the community's local resources to offer goods and services back to the community where they do business. It is argued that economic transition is being realized because the skills and talent of local people are used without requiring high-level training, complicated technology, and much capital. For this reason, starting a business becomes easy and preferable as much experience, knowledge and skills are not needed. As a result, income generation, poverty alleviation and a decrease in the unemployment rate can be attained (Habtama & Nigasu, 2013). Based on the current reports, it has been revealed that poverty is still a disturbing factor and is critically higher, especially in developing countries. In South Africa, for example, about 20.2 per cent of the population on the national scale faces extreme poverty. About 45.5 per cent of the population is found in moderate poverty, whereas in the United States, almost 14.8 per cent of the population lives in poverty. It is for this reason that the South African government has identified SMMEs as an instrument that can alleviate poverty (Kemp & Bowman, 2015).

Sambo (2015) put that South Africa is also one of the African countries that experienced the apartheid period. This period resulted in discrimination, categorization of race and division of the population into different groups. This division or separation ruled every corner of life, especially from education to employment. As a result, most black people in South Africa, particularly from this generation, are workers without skills (Sambo, 2015). Therefore, starting your own business made sense or appeared to be the only option because it requires less training and provides employment (Conradie et al., 2015). The strategy that the government of South Africa has been heavily paying attention to is the improvement of the SMMEs, particularly in communities that were disadvantaged or vulnerable in the past. Such

communities have been identified as part of the population exposed to the harsh treatment of apartheid, together with its segregationist development policies before 1994. SMMEs have proved to be the primary driver of economic and employment opportunities for the local members of society. The income gap between people or population groups is believed to be high in South Africa, which is why these enterprises are believed to be the cure to this challenge (Chimucheka, 2013).

Swart (2011) states that almost 30% of the national gross domestic product in South Africa comes from SMMEs. This indicates that the sector is a huge contributor to the country's economy; hence, a more significant portion of the population depends on it to make ends meet. Moreover, the developing countries economic and social development depends on how the small business sector performs. Drbie and Kasshan (2013) and Chimucheka (2013) stress that through small businesses, people who are found to earning low income in the country can gain access to economic opportunities. These authors see the SMME sector as the vehicle of growth of the economy, and its development appears to be significant towards addressing many challenges that society faces, including job creation. Furthermore, this sector creates employment opportunities, pays taxes, and can be involved in government statistics and in labor market information analyses. The youth also benefit from the sector as it offers them apprenticeships in the form of training grounds.

Ensuring that the performance of the SMMEs has improved is the most significant factor that can lead to sustainable development. This will be achieved through contributing towards economic growth, job creation, low crime rate, poverty alleviation, and community development (Chimucheka, 2013). This is supported by Rankhumise (2017), who also indicated that to achieve or improve the performance of SMMEs, there is a need to put measures in place to minimise challenges such as poor infrastructure and special tools to render services. However, this is not only limited to these challenges but others like access to finance, entrepreneurial skills or education. Therefore, putting measures in place will undoubtedly ensure or prolong the existence and survival of SMMEs in the country.

2.10 The effects of load-shedding on SMMEs

In the modern world, as Coyle and Simmons (2014) indicated, energy plays a critical role in the success of many things, for example, household activities, running a business and other activities that require energy. Studies by Mwila et al. (2017), Makgopa and Mpetsheni (2022), and Olujayin and Mago (2021) complement one another in that electricity enhances productivity both at the firm level and economy-wide. In Europe and India, electricity is predominantly used by the majority of small manufacturing firms (Olajuyin & Mago, 2021). The authors further put that firms with higher levels of productivity have access to electricity than those without it. But conditions such as location, access to finance and management competence possess a great deal of impact regarding access to electricity affects small businesses overall. Joffe (2012) argues that having access to electricity has a slight positive effect on micro-enterprises' productivity. The reason is that they hardly use electricity-dependent equipment and processes and have a shortage of backup power capacity that could withstand outages if they increase their dependence on processes or machinery that requires electricity.

Almost every sub-sector of the economy requires electricity to function properly. The availability and quality of electricity can determine the success or failure of the development activities. The validity of this argument is seen as the supply of energy to both small and large businesses is observed, especially those that deal with the provision of services and manufacturing in which most of the endeavours depend on power as an input for operations or production process instead of a final consumption service (Kazungu et al., 2014). Hence, stopping power temporarily can result in relative chaos. Although in the context of a smaller scale, losing power may not be a significant threat, it can lead to a decrease in productivity or loss of revenue (Kazungu et al., 2014)

In African countries such as Ghana, it was reported that the effect of electricity power outages on small businesses has resulted in a loss of almost US\$686.4 million in annual sales, equivalent to 10 296 million rands (Yao & Solomon, 2016). About a quarter of small businesses in Ghana were affected mainly by the electricity challenges, which led to a loss of approximately US\$2.2 million every day, equivalent to 33 million rands. This formed about

50 per cent of their daily sales (Yao & Solomon, 2016). The extent to which the impact of power outages can affect the company depends on its ability to respond or deal with any shock. For this reason, there is no doubt that medium-scale firms can handle or respond better to any shock as compared to small-scale enterprises.

Tanzania is one of the African countries comprising small businesses affected by electricity power outages (Kazungu et al., 2014). For Kazungu et al. (2014), there is a strong positive correlation between rationing and a decrease in productivity. Furthermore, they stress that most small businesses that depend on electricity to function and for the operation of the business suffer a lot from the loss of production. Several businesses, such as hairdressing, barbershop, photocopying, printing, and stationery, decreased between 50 and 60 per cent. The existence of power limiting or regulating results in the deprivation of electricity for many small businesses to run their operations effectively, this leads to less productivity because of the absence of power to drive the business (Kazungu et al., 2014).

According to Mwila et al. (2017), other African countries, such as Zambia, were confronted by the long-lasting hours of load-shedding, which led to an outcry from customers of Zambia Electricity Supply Corporation Limited (ZESCO) because of the negative impacts of load-shedding regarding their daily and fundamental business endeavours. Most of the small businesses were forced to dismiss some of their employees. In contrast, others had to completely shut down because of low revenues generated by a decline in production to meet the business's expenses. Additionally, some small businesses had to shut down because of damaged materials and equipment. Such impacts would adversely affect the gross domestic product of the country. Mwila et al. (2017) put that; as a result, small businesses are unable to meet customer demand due to reduced business income.

Authors such as Chimucheka (2013) believe that small businesses play a pivotal role in the development of an economy, for example, through job creation, increased tax base for the country and better incomes for the low earners, amongst other benefits. Eighteen per cent of the labour force, including 47 per cent of women, were employed within Zambia's small, medium, and micro enterprises (Nuwagaba, 2015). This implies that load-shedding targeted at a sector like that could devastate the economy. Kaseke and Hosking (2012) outline three

types of damages that firms suffer from in terms of an outage; first, the production is less as many production processes stop without electricity. An example of this is unsaved computer files; if they are lost, it will take time to start production again. Secondly, some businesses may require employees to work overtime, which means extra costs may be incurred to pay those workers. Thirdly, other goods and resources may be damaged, for example, hot steel in a steel plant may cool down and must be reheated. The type of damage that an interruption of electricity could cause in a firm is equivalent to the amount of value it would initially have added in that period (Kaseke & Hosking, 2012).

2.11 Measures employed by SMMEs to cope with the energy crisis

SMMEs continue to employ several measures to reduce the impact of power cuts on their business outputs. Notably, the most widely used strategy to help mitigate the effects of load-shedding is self-generation (Tembe & Hengwa, 2020). This undoubtedly makes a standby generator the leading mitigation strategy used mostly by businesses such as restaurants. This is followed by reduced hours and modifications in operations. According to Olujuyin and Mago (2021), in developing countries, the execution of generators is about 33 per cent, mainly in countries like Nigeria, which is confronted by high levels of load-shedding, so almost 86 per cent of the energy supply comes from generators. The 2019 World Bank report indicated that during 2007, load-shedding affected almost 44.9 per cent of firms with a 4.5-hour average outage, and generators were used by only 18.4 per cent (Doe & Asamoah, 2014). For Doe and Asamoah (2014), this is closely related to South Africa, in which approximately 53.2 per cent of small enterprises have generators—showing a significant increase in the utilization of generators to ease the consequences of load-shedding.

Botha (2019) notions that firms' investment in self-generation significantly influences their ability to invest in other productive activities that may have yielded noticeable returns. For Olajuyin and Mago (2021), this self-generation method tends to add significantly to operating costs and capital as it is regarded to be more expensive than electricity which Eskom supplies. Schoeman and Saunder (2018: 329) attests “business potential loss incurred due to failure to employ a generator when load-shedding occurs +/- R13 000 per hour, whereas those who use a generator during this period only lose +/- R919 an hour”.

Businesses such as restaurants, fast food, internet cafes and barbershops or salons that cannot afford the high cost of generators have resorted to other methods, such as changes in operations, to mitigate the effects of load-shedding. Reduction in the number of hours and workers, closing the business doors, and working extra hours to prepare for load-shedding could be the referred changes in the business operations. To support this, Botha (2019) and Steenkamp et al. (2016) have mentioned that some businesses have been forced to close the doors of their businesses due to failure to provide services to customers. Olujayin and Mago (2021) assert that shortening the menu has also been exercised as certain items cannot be made without power. Botha (2019:32) conducted a study where a manager of a particular restaurant stated that “the guests are not allowed to order everything on the menu, and there are essential items that be served. You cannot even serve coffee and cocktails as they use the blenders. This had a major impact on guests that visit the restaurant regularly.” According to Doe and Asamoah (2014), keeping up with the load-shedding schedule is the last resort or method to best prepare for load-shedding although it is sometimes deemed unreliable.

2.12 Theoretical Framework

According to Corlery and Gioia (2011), a theoretical framework advances the knowledge-making process in a scientific discipline, guiding research towards critical questions. In addition to this, theories are there to help with identifying factors to be studied and how and why they are related. A theoretical framework intends to indicate emerging academic linkages and give clear implications of the theory for problem-solving (Corley & Gioia, 2011). The study employed the Economics of Power System Reliability and Planning (EPSRP) Theory to describe how power cuts affect SMMEs. It also uses this theory to establish the relationship between load-shedding and SMMEs. The theory can also be used to identify solutions to address challenges that come with load-shedding.

2.12.1 Essence of power system reliability

For Feng and Tong (2020:2), the fundamental purpose of the power system reliability is to

“take economic and reasonable technical means and management methods to provide full play to maximum potential of power supply system, to continuously deliver stable power energy to all users, to achieve the goal of total quality management and comprehensive safety management for the entire power system. In general, improving the health level of power supply equipment, extending the service life of the system, improving the safe operation environment of the system and related activities to improve the level of power system reliability belong to the scope of power industry reliability work”.

In light of the above, it is expected that the power system reliability ensures that the supply of energy is always consistent, as the utility companies intend to satisfy the needs and wants of their customers. There should never be a failure to provide energy to its users (Feng & Tong, 2020).

2.12.2 The economics power systems reliability and planning theory.

EPSRP was first developed by Mohan Munasinghe in 1979. The theory's main argument is centred on the importance of electrical energy increasing productivity and attaining local development (Munasinghe, 1979). The theory contends that the availability of stable power is a determinant factor for one to assert (Kufeoglu & Lehtonen, 2016). This assertion demonstrates that all sectors of the economy, even those outside the industry, require or rely on stable electricity to function properly. The three basic elements, namely generation, transmission and distribution, are prescribed by the EPSRP theory as a channel through which customers or end users must receive reliable electricity provided by an electric power system at the required time and location (Anwar et al., 2022). Hence, electricity becomes unreliable and unstable during power surges, voltage level drops, load-shedding, brownouts and blackouts (Anwar et al., 2022). Olajuyin and Mago (2022:2) posit

“the effects of unstable and unreliable electricity, like load-shedding, can be calculated by estimating the industrial outage cost based on comprehensive study of spoilage, the production made idle, and the recovery of lost production during both normal working hours and overtime which leads to poor business performance.”

The implication is that the end-users of power can notice the negative or positive outcomes of load-shedding after they were hit by this period. As such, electricity supply to end-users or customers is more likely to be disrupted by electricity generation, transmission, and distribution (Ibiene et al., 2018). However, in some instances, exogenous factors like adverse weather conditions and strike action by employees within the utility company are the causes of disruptions. According to IEA (2022), this situation is more like most European countries, which are more likely to be confronted by energy shortages during winter.

The EPSRP theory argues that the effects of power outages differ based on the type of industry or consumers involved, the period or duration of the interruption and the time of occurrence (Munasinghe, 1979). Supply of reliable and stable electricity is necessary to produce and distribute goods and services for SMMEs in the food industry. They are at risk of low performance or productivity due to poor service delivery and food spoilage (Akuru & Okoro, 2014). Joffe (2012) supported this statement by arguing that adequate access to electricity leads to positive returns in most micro-enterprises. Alby et al (2012) emphasizes that a business's productive output will always increase if there is a reliable power supply. Thus, the EPSRP theory argues that the supply of reliable electricity remains an indispensable input for the productivity of SMMEs (Alby et al., 2012). Onwumere et al (2016) believe that electricity reliability is positively correlated with business performance. Based on this, one contends that businesses or industries with exposure to better access or reliable power are more likely to perform better than those with unreliable access.

The disruptions of electricity affect the quality of goods in industries such as fast-moving consumer goods since they require reliable electricity for storing and preserving goods (Onwumere et al., 2016). Furthermore, such businesses generate more income, and this increases their longevity or survival. This denotes that not every enterprise or industry is affected by load-shedding in the same way as some do not rely on or require electricity for storing and preserving goods but for printing and copying, in the case of internet cafés. Therefore, load-shedding is a challenge that affects the performance of SMMEs in all industries but differently depending on their typology. The overlapped Figure 2.1 shows the

relationship between a reliable electricity supply and the performance of SMMEs. In contrast, Figure 2.2 demonstrates how load-shedding leads to poor performance in SMMEs.



Figure 2.1: Ideal Process (Source: Olajuyin & Mago, 2022:2)

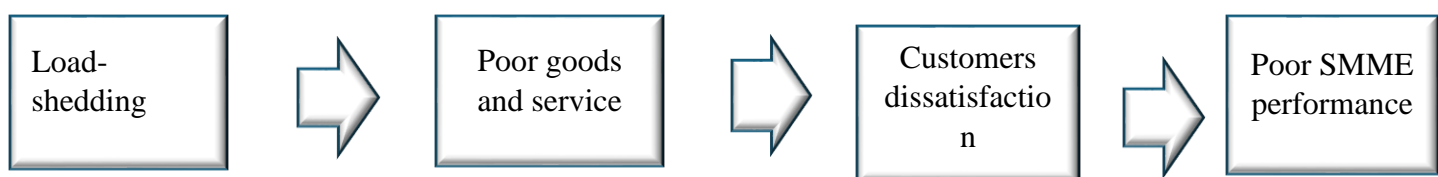


Figure 2.2: Reality (Source: Olajuyin & Mago, 2022:2)

Figure 2.1 demonstrates that better performance of SMMEs primarily depends on stable or reliable electricity supply of power. This means that an unreliable supply of energy will significantly hinder the success and performance of many SMMEs. This is apparent since the EPSRP theory states that every business activity needs electricity to be performed duly. The theory further exposes that satisfying service delivery and quality products always lead to customer satisfaction. Overall, enterprises or industries are more likely to perform exceptionally when they are rendered or supplied with reliable power.

Figure 2.2 above indicates the opposite of Figure 2.1 which elaborates that reliable electricity supply has positive outcomes on SMMEs. According to Figure 2.2, power cuts affect SMMEs negatively, threatening the survival or longevity of these enterprises. The occurrence of load-shedding disrupts firms or businesses in that they fail to meet the customers' demands, which results in customers not being happy or satisfied with the services rendered. So, in many ways, load-shedding becomes an obstacle towards the success and survival of many SMMEs.

The EPSRP Theory is critically important to the study as it clearly exposes the connection between load-shedding and SMMEs. The theory clearly narrates the significance of reliable energy supply to different institutions, firms, or industries and what would happen if there

was a shortage in the supply of electricity. EPSRP theory formed part of this study as this current research aimed to assess how load-shedding affects SMMEs and to what extent. Using this theory helps to achieve that. Employing this theory benefited the study as it exposed what could happen to the livelihoods of individuals should an unreliably supply of power or load-shedding persist for an extended period.

2.13 Summary of the chapter

The literature reviewed has demonstrated that the energy crisis has a massive impact on the growth, survival, and longevity of many SMMEs, which proved to be playing a massive role in the economy of any country. These roles include reducing poverty levels, empowering people, especially among youth, and providing employment opportunities to anyone regardless of age or gender. This statement is supported by the fact that the sector accounts for about 99 per cent of all businesses and employs around a hundred million people in Europe. Whereas in South Africa, approximately 80 per cent of local employment comes from the SMMEs. Despite the role or contribution of the sector to the economy, it is heavily confronted by the energy crisis now, and this tends to threaten its growth, development, survival, and longevity, as mentioned. The chapter covered the following areas: an overview of the global energy crisis, factors worsening this crisis, and key energy legislations or policies designed to address the crisis. This is followed by the nature and traits of SMMEs worldwide, challenges faced by the sector and government initiatives or programmes which addresses these challenges. Furthermore, the role of SMMEs, how energy crises or load-shedding affect this sector and how those participating in within the sector mitigate these effects are also covered in this chapter. The last part of this chapter is the theoretical framework which guided this study. The next chapter discusses the research methodology and tools employed to collect data in this study to successfully answer the research questions and achieve the objectives of the study.

Chapter three

Research design and methodology

3.1 Introduction

This chapter describes the research process undertaken by the researcher, looking specifically at the research design and methodology adopted in the study. It also outlines the mixed method approach, which enabled the researcher to gain insights into how load-shedding affects the SMMEs in the study area. Furthermore, description of the research paradigm and sampling technique which allowed the researcher to select the participants in this study are provided in this chapter. The location of the study where data about the effects of load-shedding and the procedures used to collect data are also covered in this chapter. Additionally, the chapter explores the data analysis and techniques employed by the study. Finally, the ethical considerations, data control measures, and limitations of the study are covered in this chapter as well.

3.2 Description of Study Area

The study was based in a township called Seshego under the Polokwane Local Municipality (PLM), which has an estimated population of approximately 83 863 (StatsSA, 2022). According to the Integrated Development Plan (IDP) for the Polokwane Local Municipality (PLM IDP) for 2020/2021 (IDP, 2020), the township is situated west of the Central Business District (CBD), and it is regarded as the economic hub of Polokwane as it holds a significant number of formal and informal economic activities within the areas. The PLM IDP (2020/21) outlined that Seshego township is divided into eight sections or zone areas, and all those who participated in this study were located within all these zones. The South African Constitution states that the local government is responsible for providing services to the local communities (Beyers, 2015). As such, it is expected that the PLM must provide services to the township, and these services are expected to promote local development and economy.

According to the draft PLM IDP 2021/2026 (IDP, 2021), the largest share of the population in the municipality belongs to the young working age (25-44 years) category, which accounts

for 32.52 per cent of the entire population. The age category with the second largest number of people is the babies and kids (0-14 years) age category, comprising 28.92 per cent of the population. This is followed by the teenagers and youth (15-24 years) age category, representing 16.78 per cent of the population. The age group with the least number of people is the retired or old age (65 years and older). In light of the above, one is justified to contend that youthful persons dominate the PLM. Therefore, it is suggested that schemes or programs for business development be designed to economically empower young people as they dominate the study area (IDP, 2020).

The statistics from IDP (2020) indicate that, compared to others, unemployment is regarded as one of the social drivers of crime, HIV and STIs and substance abuse among youth. In 2019, South Africa's unemployment rate was 27.6 per cent, Limpopo was 16.5 per cent, and Polokwane Local Municipality was 14.9 per cent. The unemployment rate in the municipality, accounting for 14.9 per cent was lower than that of the province. However, most people turned to SMME sector for employment and income generation, particularly young people in the study area (StatsSA, 2022).

3.3 Research Design

Research design is a plan that the researcher follows or uses to conduct the research (Akhtar, 2016). The current study adopted a descriptive research design. This type of design refers to a systematic process of describing and analyzing. For Myers et al. (2010), the design provides numerical descriptions that identify what is being investigated in terms of its frequency, size, and location. According to Akhtar (2016), the design is more suitable in a case where the aim is to identify characteristics, trends, categories, frequencies, and the behaviour of people. For instance, the present study intended to identify the types of SMMEs dominating the local economy. Myers et al. (2010) also emphasized that the descriptive research design is suitable when little about what is being studied is unknown.

According to McCombes (2022), a descriptive research design can use broad different research methods to investigate one or more variables, and this design is usually quantitative in nature. A descriptive research design allows a researcher to observe and measure variables

instead of experimental research in which the researcher controls or manipulates variables (Bloomfield & Fisher, 2019). For Bloomfield and Fisher (2019), one of the advantages of this research design is that it allows one to analyse facts and helps develop an in-depth understanding of research problems. They further argued that it enables you to determine people's behaviour in a natural setting. A descriptive research design was used to describe the types of SMMEs in the study area. This design was also used to analyse how the SMMEs were affected by load-shedding in the Seshego township. It is for these reasons that the study adopted the descriptive research design.

The current study also employed an exploratory research design, and this is defined by George (2023) as a type of methodological approach that investigates research questions on which much is not known or studied previously. It is also used where a problem has not been clearly defined and it is usually qualitative in nature (Cabrera, 2011). Scholars like George (2023) and Cabrera (2011) alluded that the design does not intend to give final and conclusive answers to the research questions but only explores the research topic with varying levels of depth. For instance, in this study, the researcher employed the exploratory research design to explore the coping strategies which SMMEs utilize to mitigate the effects of load-shedding in the study area. Employing this design made it possible for documenting how SMMEs operating within townships are affected by load-shedding. The exploratory design enabled the researcher to explore the settings where the SMMEs exist in the study area. It was for these reasons that the study adopted the exploratory research design.

3.4 Research Approach

The research approach is the researcher's methodology for conducting the research (Akhtar, 2016). The study adopted a mixed methods approach which Cresswell (2014) defined as the one in which a researcher combines elements of both qualitative and quantitative approaches for the purposes of broad understanding and justification. Johnson et al. (2007) identified different types of mixed methods approaches, but a parallel approach was employed for this study. A convergent parallel approach involves gathering quantitative and qualitative data simultaneously and analysing them separately. This design allowed the researcher to analyse the results from both data sets and make an interpretation to check whether the results

complement or contradict each other. The convergent parallel approach was used in this study because either qualitative or quantitative data was only going to sufficiently answer the research question of the study.

A convergent parallel approach was used because it allowed the participants to answer both qualitative and quantitative questions simultaneously. The participants independently answer questions from the structured questionnaire without any interference from the researcher. This approach further enabled the researcher to gather qualitative data, which included the participants' opinions, views and perceptions about the effects of load-shedding on their business ventures. The coping strategies that could be in place to mitigate the effects of load-shedding were noted and described through this approach. The approach was useful in assessing the extent to which SMMEs are affected by load-shedding, and this formed part of the quantitative data the researcher obtained in the study. To achieve this, the researcher had to rely on the judgement of the participants. The surroundings in which the businesses of the participants exist was observed using this approach.

3.5 Research Paradigm

The study adopted the interpretivism paradigm as a methodological approach that guided this study. Interpretivism is an approach to social science that states that understanding individuals' beliefs, reasoning, and motivation in a social situation is crucial to interpreting the meaning of data that can be collected around a phenomenon (Alharahsheh & Puis, 2020). According to Cresswell (2014), understanding of the phenomenon and its complexity in its unique context instead of trying to generalize the base of understanding the whole population can be achieved by employing this paradigm. One of the advantages of interpretivism is that a researcher cannot only describe objects, humans, or events but also deeply understand them in a social context (Pham, 2018). Pham (2018:7) further iterates “an interactive interview which allows researcher to investigate and prompt things we cannot observe, researchers can probe an interviewee’s thought, values, prejudice, perceptions, views, feelings and perspectives”.

Interpretivism paradigm was used to interpret the views, opinions, perceptions, and experiences of SMMEs owners about the effects of load-shedding. This paradigm was employed in order to get an in-depth understanding of the effects of load-shedding on SMMEs, while data collected from the LED officials enabled the researcher to take note of government's interventions towards minimizing these effects. The paradigm was more appropriate because the study targeted only participants operating SMMEs in an area constantly subjected to load-shedding. By employing this paradigm, the researcher got an in-depth understanding of the SMMEs operating within the township rather than just exploring the participants. There was an engagement between the researcher and SMMEs owners which yielded a detailed understanding of how small businesses are affected by power cuts. The extent to which different people think load-shedding affects SMMEs is based on their social values, as such views or opinions of people were influenced by their social values individually.

Practically, interpretivism was used to explore the extent to which load-shedding affects SMMEs in the study area. The extent to which ESKOM's different load-shedding levels in Seshego township affect SMMEs was analyzed using interpretivism. This approach was employed to describe and interpret the participants' beliefs, experiences, attitudes, meanings and views about load-shedding effects on SMMEs. The participants were expected to share information describing the effects of load-shedding in their area based on their understanding to confirm how they understand load-shedding effects and how that affect SMMEs, particularly in income generation. The interpretivist approach simply focuses on understanding how people operate within the social world. Significantly, the approach was pursued because people did not only serve as primary source of data, but it also seeks their perception of load-shedding as a hindrance and predicament in which SMMEs fail to grow and improve their income generation.

3.6 Research Methodology

Research methodology is regarded as how research is conducted by the researcher (Cresswell, 2014). It covers aspects such as target population, sampling methods and procedures, data required, data collection methods and procedures, and data analysis methods and procedures.

3.6.1 Target Population

The target population is a group of people or objects the researcher is interested in which will be sampled (Ndjama, 2020). The owners of SMMEs in Seshego Township were of interest during this research. The participants were chosen because they provided the information that the study required. The owners of SMMEs were targeted because their businesses are directly affected by the electricity cut-off, and their businesses depend on electricity to function. Involving them was merely on the fact that they are involved in the daily operations or running of the business. For this reason, SMMEs owners whose businesses depend on electricity to operate were selected. The employees or family members were not included or identified as potential participants.

Furthermore, SMMEs owners in this study also played the role of key informants. They served as key informants because of deeper experience or insights they possess. Part of the reason also includes the fact that they are directly affected by the power cuts, so relevant information could be given by them than just a random person. Those who had more years in the sector, which was achieved by asking each of them how many years they spent operating the businesses were targeted. These SMMEs owners were expected to provide information about how they mitigate the effects of load-shedding or operate their business ventures during this period. They were also expected to share what they think should be done to lessen the effects of load-shedding and to indicate whether there is any support they receive from the local government or their respective municipality.

Since the study sought to determine the role or extent the government supports the small business sector, the study had to consult or involve municipal officials such as the LED officers. These officials formed were included because they are the closest sphere to SMMEs and are responsible for the well-being or development of these enterprises. The municipal officials provided the information required by the study, including the type of support or assistance offered to SMMEs to help minimize the effects of load-shedding in Seshego township. The current study made the LED officers part of it as they are responsible for the development and growth of SMMEs. Another role that these officers are presumably tasked with is ensuring that there is a conducive environment that enables the local businesses to

grow, consequently resulting in the growth of the local economy. It is for these reasons that the LED officers were included in the present research. Again, the researcher was interested in this study's National Youth Development Agency (NYDA) officers. The NYDA officer provided information that the study needed, including promoting and providing funds to small businesses in the study area. As such, both LED and NYDA officers were targeted because of their direct relationship and expertise towards the SMMEs in the study area.

3.6.2 Sampling Methods

Berndt (2020:224) defines sampling as “the selection of smaller group of participants from the population of interest”. Brendt (2020) argues that one may feel that it is ideal for the whole population to be investigated to form part of their study, but this may not be feasible logistically. Therefore, generalizing the results back to, in particular, the quantitative part and make inferences about the entire population can be done by investigating a smaller and representative group obtained from your population of interest (Etikan & Bala, 2017). There are two types of sampling, namely, non-probability and probability sampling. Etikan and Bala (2017) and Brendt (2020:224) both share the same sentiment on non-probability sampling and explain it as follows: “a sampling method that uses non-random criteria like the availability, geographical proximity or expert knowledge of the individuals you want to research to answer a research question”. This sampling method is one in which not everyone member of the population has an equal chance of being chosen (Gill, 2020). Brendt (2020:224) put “probability sampling is a method that involves randomly selecting a sample or part of the population you want to research or investigate”. Probability sampling gathers a random selection from the whole population whereby everyone or object has an equal chance of being picked (Berndt, 2020).

The current study employed simple random sampling, classified as probability sampling and purposive sampling known as non-probability sampling. In simple random sample, every member of the population has an equal opportunity of being chosen. Simple random sampling was used to randomly pick the owners of SMMEs in the Seshego township for quantitative data. Since the study area consists of eight zones, about five business owners were randomly selected from each zone to complete the questionnaires. The researcher targeted the whole

Township because every zone within it had many small businesses that depended on electricity. The researcher used simple random sampling as it gives anyone who owned a small business for at least not less than 24 months a chance to be picked in Seshego Township. This was done to ensure that all the participants in the study provided the necessary and adequate information or data required by the study.

On the other hand, purposive sampling was employed to choose participants to be interviewed and the researcher confirmed that they have been in the SMME sector or owning a business for not less than 24 months. Being in the business for such a period implies that these participants have the appropriate or adequate experience which would enable them to share enriched information and ensure that the researcher achieves his objectives successfully. Purposive sampling was used to select the owners of SMMEs who played the role of key informants for qualitative data, and even the municipal officials were selected using this sampling method. About three participants from each zone were purposively chosen for in-depth interviews. The researcher had to rely on his judgement to make such a selection based on the years spent by the participants operating their businesses. With purposive sampling, only those with the characteristics that allow them to answer the study's research questions stand a chance of being picked. The characteristics which the researcher considered include the years or duration that the participants owned the business for and the location where the business is operated.

For the purposes of qualitative data, only 15 participants were purposively selected out of 45 business owners who also filled out the questionnaire the researcher provided. The researcher interviewed 15 owners of SMMEs, but only ten transcripts were used as the information given by the participants was adequate to answer the study's research questions. This suggests that if the researcher continued to interview more of these participants, then the information that he gathered would serve no purpose as the researcher would have already achieved the study's objectives. The primary reason the information gathered was the same could be because almost every participant shared the same socio-economic background, and their business ventures were based in the same conditions or environment. They were all exposed to frequent power cuts at the same intervals (load-shedding schedules), and most did not possess

secondary energy sources. Even with the municipal officials, not everyone who was interviewed formed or contributed to this study's qualitative part or data because they did not provide new information different from the one obtained. Only five scripts out of ten municipal officials who were interviewed were used for qualitative information in this study. Table 3.1 below illustrates the participants' total sample size and roles.

Table 3.1: Sample size of participants

Participants	Location	Number of participants	Reason for involvement
SMMEs owners	Seshego	25 (from the 45 who filled the questionnaire)	Gave information required by the study
SMMEs owners	Seshego	10 (from the 15 who were interviewed)	Gave information about the disruption of power cuts on SMMEs and what is employed during the period
LED officer		4 (out of 7 who were interviewed)	Gave information about the role of government on the development and growth of SMMEs
NYDA officer	Polokwane	1 (out of 3 who were interviewed)	Gave information related to the provision of funds and other sources of financing the SMMEs
Total		40	

Source: Survey Data from study (2022)

3.6.3 Data Utilized

Both primary and secondary data were required in the study. Primary data is the one which is provided by the participants in the study (Mesly, 2015). Whilst secondary data is the one which is already available from different sources such as journals, dissertations, reports, and literature from books (Martins et al., 2018). In this study, primary data was obtained from SMMEs owners. The primary data was collected from those whose businesses were affected by load-shedding in the study area. Municipal officials also provided primary data concerning government intervention or support towards the SMME sector in the study area. Secondary data was obtained by an extensive review of literature on the energy crisis, load-shedding, SMMEs and through document analysis in which documents about the phenomenon were systematically selected. The data obtained from both sources was important because it enabled the researcher to answer the research question and achieve objectives of the study.

3.6.4 Data Collection Methods

Data collection is usually defined as a process of gathering, measuring, and analyzing accurate data that will answer research questions problems and, evaluate the results and predict trends and probabilities from the relevant sources (Palinkas et al., 2015). For other scholars like Palinkas et al. (2015), researchers need to identify the data types and methods used while collecting data. The current study is both quantitative and qualitative (mixed methods) in nature and as such, the researcher opted to employ a structured questionnaire and an in-depth interview to collect data in this study. The structured questionnaire was used as it can enable the participants to answer the questions on their own, at their time and pace without interference from anyone, including the researcher. Also, in-depth interviews were used because they can ensure that the necessary information is gathered from the participants.

3.6.4.1 Structured questionnaire

Structured questionnaire is a document given to respondents by a researcher collecting data. It is made up of a set of questions standardized with a predetermined framework that sets the precise language and sequence of questions (Patten, 2016). Palinkas et al. (2015) maintained

that the structured questionnaire usually asks worded questions. This type of questionnaire can gather a heap of helpful information that provides an in-depth understanding of the thoughts of most respondents, depending on how they are set up (Patten, 2016). Some of the advantages of this method of collecting data include its capability to generalize the findings to generate empirical claims that support decision making, it is user-friendly and easy to quantify and can consist of many responders (Palinkas et al., 2015).

A questionnaire that consisted of two sections: Section A comprised of personal information of the participants, which involves age group, gender distribution, and level of education attained, and Section B, which had close-ended questions which permitted free responses was used (See Annexure A). About 45 SMMEs owners were given the questionnaire directly by the researcher to fill it in on their own, but only 25 questionnaires were used for the purpose of quantitative data. The purpose of quantitative data in this regard was based on aspects like the duration and hours spent by small businesses without electricity in the study area not on the number of SMMEs dominating the township economy. Questionnaires were given to avoid any interference from anyone, and to ensure that the participants answered comfortably and freely. This will ensure that they answer questions honestly and truthfully as they will not be under any pressure or feel like they are wasting the researcher's time if he conducts this. To ensure what is mentioned above, the researcher employed a questionnaire that was written in English and translated into the local language, Sepedi (See Annexure A). This structured questionnaire enabled the researcher to collect quantitative data about the effects of load-shedding on SMMEs that the study required.

3.6.4.2 In-depth interviews

According to Morris (2015:39), an in-depth interview is a “process of collecting data that allows interviewers to collect high-quality, detailed information from interviewees”. Rutakumwa et al. (2020) state that in most instances, researchers do not usually receive written feedback as others conduct their interviews electronically or survey responses because other respondents find the survey inconvenient. This can hinder the researcher or interviewers from obtaining intended data or genuine responses. Therefore, conducting in-depth interviews can guarantee intended data because researchers interact more closely with the respondents,

permitting a large amount of high-quality data to be gathered. Due to the nature of most interviews (face-to-face), the interviewer can make the interviewee feel comfortable, relaxing them and encouraging them so that they can answer questions freely and truthfully (Rutakumwa et al., 2020).

The in-depth interviews were conducted to ensure that data were collected from the owners of SMMEs. Furthermore, such interviews are a better way of collecting data if planned properly, even though exhausting. Schroder (2016) states that this type of interview allows for more in-depth data collection and comprehensive understanding. The interviewer can probe for explanations of responses (Schroder, 2016). Part of the information that the study required them to provide includes their opinions, views, and perceptions about the effects of load-shedding on SMMEs, and how they mitigate the effects during the load-shedding period. The in-depth interviews were conducted in a favourable and convenient environment which they chose. An interview guide was used during the interviews to guide the researcher with the questions to ask (See Annexure B).

Furthermore, to ensure that the participants felt free, comfortable, and answered all questions appropriately, an interview guide translated into the local language was also employed (See Annexure B). The interviews allowed the researcher to obtain enriched descriptive information. This enabled him to understand the challenges arising or coming from load-shedding and how that impacts income generation. These interviews also allowed the researcher to understand how the implementation of potential strategies could address or deal with load-shedding effects. The municipal officials were also engaged through the in-depth interviews to allow them to give detailed insights and information based on their knowledge as they are more associated with ensuring that SMMEs thrive and grow. An interview guide was also employed to assist with relevant questions to ask the participants (See Annexure C). Interviews were conducted with owners of SMMEs and municipal officials to allow for face-to-face interaction and using other methods such as recordings. With the participants' permission, a voice recorder was used to record information the researcher may have forgotten or understood clearly during the interviews. These recordings were later transcribed to ensure no information was omitted and participants were not misquoted. For ethical reasons and

safety, data which were transcribed was stored in zipped files. Table 3.2 below demonstrates the schedule followed to collect data.

Table3.2: Data collection schedule

In-depth Interviews (SMMEs owners)				
Participants	Location	Time for conducting interviews	Approximate Minimum Duration of Interviews	Dates for collecting data
Participant 1	Seshego Zone 1	08:00-09:00	50 minutes	04/05/2022
Participant 2	Seshego Zone 2	08:00-09:00	50 minutes	05/05/2022
Participant 3	Seshego Zone 2	16:00-17:00	50 minutes	06/05/2022
Participant 4	Seshego Zone 3	08:00-09:00	50 minutes	10/05/2022
Participant 5	Seshego Zone 4	16:00-17:00	50 minutes	12/05/2022
Participant 6	Seshego Zone 5	08:00-09:00	50 minutes	16/05/2022
Participant 7	Seshego Zone 5	16:00-17:00	50 minutes	16/05/2022
Participant 8	Seshego Zone 6	16:00-17:00	50 minutes	19/05/2022
Participant 9	Seshego Zone 7	16:00-17:00	50 minutes	23/05/2022
Participant 10	Seshego Zone 8	08:00-09:00	50 minutes	25/05/2022
Participant 11	Seshego Zone 1	10:00-11:00	50 minutes	04/05/2022
Participant 12	Seshego Zone 3	12:00-13:00	50 minutes	10/05/2022
Participant 13	Seshego Zone 2	12:00-13:00	50 minutes	05/05/2022
Participant 14	Seshego Zone 4	13:00-14:00	50 minutes	12/05/2022

Participant 15	Seshego Zone 7	13:00-14:00	50 minutes	23/05/2022
Municipal officials				
LED officer A	Polokwane	10:00-11:00	60 minutes	01/06/2022
LED officer B	Polokwane	12:00-13:00	60 minutes	03/06/2022
LED officer C	Polokwane	14:00-15:00	60 minutes	10/06/2022
LED officer D	Polokwane	09:00-10:00	60 minutes	13/06/2022
LED officer E	Polokwane	14:00-15:00	60 minutes	03/06/2022
LED officer F	Polokwane	09:00-10:00	60 minutes	14/06/2022
LED officer G	Polokwane	12:00-13:00	60 minutes	10/06/2022
NYDA officer A	Polokwane	15:00-16:00	60 minutes	13/06/2022
NYDA officer B	Polokwane	09:00-10:00	60 minutes	16/06/2022
NYDA officer C	Polokwane	13:00-14:00	60 minutes	16/06/2022

Source: Survey Data from study (2022)

The appointments with the participants regardless of their location or distance since the study area is divided into eight zones were organized by the interviewer. It was easy to set appointments and conduct interviews with the municipal officials as they were all located in the City of Polokwane. All the participants gave permission to be interviewed on their preferred day, but they indicated the appropriate time to conduct the interviews. They all requested to be interviewed when they knew that electricity would be taken away, which meant that their daily operations would not be affected, or interviews would be interrupted by customers. This was conducive and beneficial as there is a public platform which informs or alert the public with the load-shedding schedule, this made it easy to have enough time to

prepare for the interviews. However, due to financial constraints, some of the interviews had to be conducted on the same time, and this may have limited the quality of data shared. For example, this was ideal as it helped to avoid a situation whereby interviews could have been conducted with three participants on different days, instead more attention was paid to ensuring that the interviews are held on the same day for those participants in the same zone. This is illustrated in Table 3.2 above. As for the municipal officials, they all indicated and requested that since they work in the formal setting, it would be better for them to advise when to meet and be interviewed based on their schedules and this was suitable because of their reason.

3.6.5 Data Analysis Methods and Procedures

Data analysis is the process in which the researcher brings order, structure and meaning. Both qualitative and quantitative methods of analyzing data were employed. Data was analysed separately before it was combined. Through these methods, data was broken into components and connections were made. Qualitative research is different from quantitative research in that it makes use of words instead of numbers or figures to show data collected. The qualitative procedure leads to predictions or connection of events whilst the quantitative procedure involves gathering data in a numerical form instead of words (Ott & Longnecker, 2015).

The thematic analysis procedure was used for qualitative data. Data from interviews was classified into themes. Thematic analysis is more appropriate for qualitative research as it brings about a systematic element to data analysis, leading to accuracy and enhancing the whole meaning of the research (Kiger & Varpio, 2020). The first step taken was to listen to the voice recorder repeatedly to internalize the content and transcribe it verbatim. Some participants provided information in the local language. Allowing them to use their own language (Sepedi) enabled them to provide the researcher with detailed information. The use of local language ensured that they engage freely and comfortably. This information was first translated into English before it was analysed. A voice recorder was listened daily to gather and transcribe data because it was still rich, new, and fresh. This ensured valid and reliable information and that sound conclusions were drawn. The transcripts were carefully and

thoroughly read, and to avoid omitting information, ideas were jotted down on paper as they came to mind.

According to Brendt (2020:224) “the quantitative data refer to recorded data of the structured questionnaire and were presented according to various sections and subsections of the questionnaires”. Therefore, raw data was coded and captured for quantitative analysis on Statistical Package for Social Sciences (SPSS) software version 26. This SPSS software was employed to compute and provide descriptive statistics such as percentages and frequencies. The graphs, charts, and tables were used to present the quantitative data. An analytical description and interpretation of data through descriptive statistical procedures through visual presentation of data in numbers and data was provided with ease.

3.7 Data Control

Data control speaks to the issue of validity and reliability of data. Both concepts are used to evaluate the quality of research. They indicate how well a method, technique, or test measure something. The term reliability relates to the consistency of a measure whereas validity is about the accuracy of a measure (Mohajan, 2017). Validity and reliability in this study were used in structured questionnaire, the aim was to collect valid data from relevant participants. Furthermore, in-depth interviews were reviewed and analysed to guarantee credibility, comfortability, trustworthiness, transferability, and dependability. The participants were given interview scripts to ensure that proper data collection procedures were followed. These data quality assurance was employed to analyse findings, identify gaps, and detect errors to ensure that participants answered the research questions. A local language was used to ensure that the participants answered all questions freely. Participants contributed to the study willingly, knowing that there were no incentives or rewards for doing so. The participants were protected from any threat.

3.8 Ethical Consideration

Arifin (2018:30) describes ethical considerations as a “set of principles that guide one’s research designs and practices”. Researchers and scientists should always adhere to a certain code of conduct when data is collected from people (Arifin, 2018). Roberts (2015) outlines

the goals of human research as follows: studying effective treatments, investigating human behaviours, understanding real life phenomena, and improving lives in other ways. Therefore, key ethical considerations should determine what to research and how to conduct it. Such considerations are vital in protecting research participants' rights, enhancing research validity and maintaining scientific or academic integrity (Roberts, 2015).

Both the issues of anonymity and confidentiality were considered. Arifin (2018) emphasized that the difference between the two is that anonymity suggests that one does not know who the participants are, whilst confidentiality implies that the participants are known, but their identity will not be revealed in one's research report. Hence, the identity of participants who wished to remain anonymous was promised and that the identity of participants would never be revealed unless the participants wished so. The names of the participants were protected, and no information was shared, no information was disclosed without their permission, and it was kept safe in zipped files. Moreover, the participants were made aware that they can only share information willingly, they were not coerced to take part in this study. Furthermore, in ensuring the privacy of the participants, no information was obtained without their consent or knowledge.

The participants were requested to sign a consent form (See Annexure D). Most importantly, the researcher explained the study's purpose to clarify and ensure that respondents contributed to the study knowing exactly what it entails. The University of Mpumalanga's ethical conduct policies were followed during the research, and the university granted the researcher permission to conduct the study (See Annexure H). The Polokwane Local Municipality granted permission to conduct the study in Seshego (See Annexure G). The participants were not allowed to take part until they understood the role to be played in the study. The researcher also emphasized that participation in this study is not compulsory. Any form of harm in the study was avoided, ensuring that participants were protected from harm. To ensure the safety of both the participants and the researcher, all the COVID-19 protocols were adhered to during this study, especially when collecting data.

3.9 Limitations of the Study

The economy's formal and informal sectors both consist of small and big businesses worldwide. However, the study tends to be limited to the problem of load-shedding on small businesses only. Moreover, the study is also limited to one township in which targeted individuals or groups were studied. Again, this study is taken under one local municipality, Polokwane local municipality, under the Capricorn district municipality, in which about three local municipalities exclude Polokwane. In contrast, it would be ideal to conduct the study in all municipalities in the province. However, the study was only conducted in Polokwane local municipality because of time, financial resources, and other related constraints. Hence the researcher does not intend to generalize from the study, and the study's findings will only be applicable to the study area. In addition, problems are never static, but are dynamic and situational (Beyers, 2016). Therefore, all the challenges this local municipality faces cannot be claimed to be solved successfully by the study.

Several challenges were experienced when data was collected. These challenges are as follows, to begin with, some of the business owners that were approached, especially foreigners (Indians and Pakistans), thought that the researcher was a government official who was there to investigate other matters that was not related to the study. They were afraid and unwilling to share information regardless of how they were repeatedly explained the purpose of the study. Additionally, some of the participants were reluctant to share the information as they thought the answer was obvious, as a result they pointed out that the researcher will be wasting their time and there was no need for them to participate. Furthermore, the researcher had to explain the purpose of the study repeatedly because some of the participants expected incentives and to be compensated by the researcher for participating. Finally, some of the participants were willing to share the information as they believed that the researcher was there to assist them with community work or issues related to service delivery. However, all the municipal officials, namely officers from the NYDA officer and officers from LED, were never hesitant in terms of sharing the information with the researcher because they understood the nature, value, and purpose behind the study. They shared information willingly and this made things easier for the researcher. All the COVID-19 protocols were adhered to

throughout the process of gathering data. This was done to ensure the safety of both the participants and researcher.

3.10 Summary of the Chapter

This chapter covered the research procedures that guided this study. The research designs adopted in the study are exploratory and descriptive; the research approach used is the convergent parallel mixed method. The interpretivism approach as a methodological framework that guided this study was employed in this study. Both thematic, for qualitative data, and IBM Statistical Packaging for Social Sciences version 26, for quantitative data, were used to analyse data that were collected from participants. The chapter also included ethical issues, study limitations and the population size that the researcher was interested in or managed to sample. Additionally, the data control measures, which include data validity and reliability, were also covered under this chapter. The next chapter presents and discuss the data collected from Seshego township under Polokwane Local Municipality.

Chapter four

Findings and discussions

4.1 Introduction

This chapter presents data which was collected from the participants in Seshego Township within the Polokwane Local Municipality. The objectives of the study and data collected assisted in developing the themes used to analyse the effects of load-shedding on SMMEs in the study area. The chapter starts with presenting the participants' background information, including data on who participates in small-scale business, the gendered effects of power outages and how this affects operations, and the influence of education in relation to mitigating the effects and age of the participants. Table 4.1 below shows themes emerging from the study:

Table 4.1: Emerging themes from the results of the study

Themes	Sub-themes
Nature of Township SMMEs	<ul style="list-style-type: none">➤ Business Typology➤ Contributions of SMMEs on local economy
Nature of Frequency of Load-shedding	<ul style="list-style-type: none">➤ Effects of power cuts on daily operations and income generation
Participants' Perceptions of Load-shedding	<ul style="list-style-type: none">➤ Participants' Attitudes on Load-shedding➤ Effects of Load-shedding on SMMEs
Strategies Employed to curb Power Outages	<ul style="list-style-type: none">➤ Participant's perceptions about strategies employed.➤ Strategies put in place to minimize the effects of Load-shedding

4.2 Background information of the participants

The demographic characteristics of the participants presented below provide an overview of who the participants are in small, medium and micro enterprises in the study. This data includes the age structure of the participants, gender distribution, and educational level. Identifying the characteristics of the participants clarifies who is involved and explains the representation of various groups, which is vital in generating conclusions and making recommendations that best suit the situation. The identification also provided information about the current trends and practices in the small business sector in the study area. Hence, the identified characteristics included the age structure, gender distribution and level of education of the participants. The choice of variables was informed by challenges experienced, such as youth unemployment, gendered access to income generation, hindrances experienced and the belief that SMMEs have the potential to address unemployment challenges in the study area. Gaining insight into who is involved was believed to have influenced the strategies used to mitigate the challenges presented by power outages. The duration or period of participation in the SMME sector also formed an important variable of this study. This only implies that the more years spent in the sector, the better experience or insights that would enable the participants to provide relevant answers required by the study. The demographic information was provided by individuals whose SMMEs require electricity to function and Table 4.2 below indicates the participants involved.

Table 4.2: Demographic Characteristics of participants

Variable	Sub-Variable	Number (#)	Percentage (%)
Age (Years)	19-35	15	60
	36-55	8	32
	Over 56	2	8
	Total	25	100
Gender	Male	13	52
	Female	12	48
	Total	25	100
Educational level	Primary	0	0
	Secondary	16	64
	Tertiary	9	36
	Total	25	100
Participation duration in the sector (SMME)	0-12 months	0	0
	13- 24 months	5	20
	Over 25	20	80
	Total	25	100

Source: Survey Data (2022)

The data presented in Table 4.2 above indicates that the majority (60 per cent) of the participants found in the small, medium, and micro enterprises (SMMEs) were young people between 19 and 35 years of age. This is interpreted as the dominance of young people in the sector, and the age category that follows is between 36 and 55, comprising the age group that is defined as able-bodied. The dominant participation rate of the two age groups noted in the area could be attributed to various reasons, including unemployment and strategies to mitigate poverty. Stats SA (2022) also indicates a 42 per cent youth unemployment rate in the country. The only question brought by the results is whether the participants have adequate entrepreneurial skills to operate their small businesses and whether support is provided to

assist the youth as future creators of employment. Sambo (2015) found youth unemployment to be a challenge but noted that youth engagement and support in entrepreneurial activities could be beneficial in terms of job creation, economic growth, and poverty reduction. This validates the importance of looking into the age structure of the participants to establish how engaged the youth is in small businesses and what support is provided to enhance their businesses and to mitigate the challenges of power outages.

Furthermore, this study showed that more men (52 per cent) participated as compared to women. Only participants that were engaged in small, medium and micro enterprises were interviewed. The picture painted by the data collected on gender distribution suggests that the sector is probably male-dominated. This could mean that more males are involved in the small business sector than females in the study area. This is linked to existing issues related to inequality and discrimination between men and women concerning access to assets and finance to enhance business operations and other challenges. The SMMEs present a fertile ground for all to participate, irrespective of gender, but limitations could pose challenges and threats for specific sectors of the population. According to Paul and Rani (2017), men have more or easy access and control over resources compared to women, implying that access to crucial economic resources varies between men and women. The findings established more participation of men in SMMEs, though not the central focus of the study, but suggests that support must be provided to enhance the participation of all, particularly women, for the role played in the household.

Probably, most women are not involved in this sector in the study area because of other engagements or other roles to play, such as household duties and taking care of their children, which in most cases is not the responsibility of males. This could mean that men have more time for entrepreneurial activities than women. However, Sechele-Manana (2019) argues that women are responsible for taking care of their families physical and financial needs, including older relatives or parents. This necessitates the need to participate in household income generation. Sechele-Manana (2019) further maintains that women tend to feel undermined in their work or environment and must work harder than men to be seen as equals. The

networking opportunity is another factor which allows men to thrive and dominate the sector as women do not have time for this because of their other roles (Sechele-Manana, 2019).

Concerning the educational attainment of the participants, Table 4.2 above shows that most (64 per cent) of the participants in the small business sector attained secondary school education, followed by a few (36 per cent) who acquired tertiary education in the study area. The data collected depicts that everyone who participated obtained formal education in the study area although it was at a different level. This suggests that those involved in the SMME sector in the study area are literate, which means they can be taught or equipped with skills or knowledge such as bookkeeping and other related skills. Vocational training programmes are vital tools to address issues of unemployment and poverty among women and youth and to improve access to resources and the standard of living within developing nations (Rao et al., 2017). Most of the participants in Seshego Township can benefit from such initiatives as they all received formal education, which implies that they will not have any difficulties when taught or equipped with information.

The average years of participation in the SMME sector were over 25 months, followed by at least 24 months. Most of the participants who indicated that they have been in the sector for more than three years have mentioned that the cause was the failure to find employment and because SMMEs are not expensive to sustain. In support, Muteswa (2016) also note that it does not require much to ensure small business continuity and survival. Small business owners in the study area stated that keeping their businesses alive during the current event of power outages has not been easy as they have no support. This was also supported by the municipal officials that the small business sector in the study area is not supported and that they are on their own. Participants emphasized that the sector has been their main source of survival and income regardless of challenges encountered. Hence, they are still participating in the sector.

Additionally, those who alluded that they only have to nearly two years of operation were mainly because they struggled a lot to find jobs after graduation, and they believed that starting a small business does not require a lot of capital and other related resources. This is supported by a study conducted by Aronson et al. (2015) in the US, Michang College, which

found that many wanted to work after completing their degrees but could not find a job. Furthermore, significant underemployment and mal employment characterized the experiences of new graduates.

4.3 Types of Business in Township (Seshego)

Every Township economy consists of various types of businesses. This factor was considered because as it permitted identification and description of the type of SMMEs which dominate the township economy in this study and determine the extent to which these businesses are affected by power outages. This factor made it possible to determine and understand how and which aspects affect these business ventures. Table 4.3 below presents business typologies owned by participants in Seshego Township.

Table 4.3: Business typology of the participants

Business type	Number (#)	Percentage (%)	Ownership (%)	Age (#)	Educational level (#)	
Restaurant / Fast Food	8	32	Male	8	Over 51 (2)	Tertiary (1) Secondary (1)
			Female	24	19-35 (3)	Secondary (2) Tertiary (1)
					36-50 (3)	Secondary (3)
Internet Café	8	32	Male	32	19-35 (8)	Tertiary (4) Secondary (4)
			Female	0		
Barbershop / Salon	9	36	Male	12	19-35 (3)	Tertiary (1) Secondary (2)
			Female	24	36-50 (6)	Tertiary (2) Secondary (4)
Total	25	100		100	25	25

Source: Survey Data (2022)

About (36 per cent) participants were interested in the salon or barbershop business. Of these, 12 per cent were males who indicated that they owned a barbershop, and 24 per cent were women in the salon business. Javan (2021:1) differentiated barbershops from salons as follows “traditionally, a barbershop is where men can go to get shorter, masculine haircuts.

Barbers are trained and skilled in using clippers and working primarily on men whereas salon stylist are trained in the art of cutting long hair and working with different styles and layers”. According to Javan (2021) most people are involved in this type of business because it is very easy and cheap to start, regardless of location. Table 4.3 above demonstrates that the study area is dominated by older women between the ages of 36 and 50 who own salons, followed by younger men aged 19-35 who run barbershops. When interviewed, one of the participants mentioned that they are in this type of business, because it generates a lot of income for them. This is supported by Javan (2021) who indicated that barbershop generates a lot of money, since a barber that charges R30 for a haircut and gets around 20 customers a day comes to make close to R18 000 a month. This implies that even the salon stylists could make close to the same amount or even higher if they are nearly the same amount. To add on the findings, it was revealed that all participants in the barbershop / salon industry had acquired both secondary and tertiary education. Most of them were in possession of secondary qualifications as opposed to tertiary education. In support of this, one of the participants alluded:

“I did not further my education after receiving my matric certificate because I was already involved in running a business while still attending secondary school, so the business was already making enough for me and my family. I saw no need to go to tertiary or seek employment as I was able to afford both personal and households needs”.

Another participant posited:

“I decided to start this business while I was still in grade 10 as we could not afford anything at home. After that realization, I never thought of going to tertiary, plus almost everyone in the family depends on me as they consider me as the breadwinner. So going to varsity was not ideal for me because of these reasons”.

In support of this, a study conducted by Jones (2022) in Jamaica found that most learners do not pursue their studies due to the financial burden of accommodation and tuition fees. Her study also revealed that some of these individuals had to work for a few years to get some money so that they could be able to afford the fees associated with the university. The major finding was that regional student experience financial, and geographic isolation barriers to

university dreams (Jones, 2022). The participants in this study emphasized that financial constraints were the main reason they could not pursue their tertiary education to realize their university dream. As a result, majority of them indicated that they found some financial security through owning or running a business.

As depicted in Table 4.3 above, about 32 per cent of the participants in Seshego Township indicated that they own a restaurant or are associated with the fast-food business. Out of the 32 per cent, only 8 per cent were young females between 19-35 years, followed by approximately 24 per cent of females between the ages of 36 and 50. Only two men over 51 years of age were found to be owning a restaurant. As such, one contends that the study area is dominated by more females who own or run the restaurant or fast-food type. Their dominance could be because women growing up were more expected or tasked with the household duties such as cooking and cleaning, which is more driven by a societal belief or pressure that such responsibilities are to be performed by females instead of males. This is also justified by the phrase “a women’s place is in the kitchen” which is believed to be an old-fashioned and inherently sexist one (Wilder, 2022: online). The women in this type of business indicated that they received formal education in the form of both secondary and tertiary education, this also goes for males as well.

Women have different means for access to critical economic resources worldwide as compared to men, especially in developing countries. They also have different levels of control and decision-making power, which affects their lives in various ways, leading to gender inequality within society (Paul & Rani, 2017). Paying attention to the results presented in Table 4.3, not even a single woman was found to be participating in or owning an internet café business in Seshego Township. Presumably, this could be the main reason men were found to have absolute dominance in the internet café business within the study area. Sechele-Manana (2019) notes that women are more likely to be threatened in their line of work. This implies that they tend to be uncomfortable in areas in which they have not spent much time, which may make them less competent in other types of business. Those participants in the Internet café business were also found to have formal education, comprising both secondary and tertiary education. This could also explain why men have so much dominance in this type

of business since the tertiary level provides exposure to the use of technology rather than the kind of exposure one gets in secondary schools.

4.2.2. The contributions of SMMEs towards economic growth and development

The SMME sector in both developing and developed countries has been the biggest contributors to the economy and development in people's lives. Several researchers like Gupta et al. (2013), Swart (2011) and Drbie and Kasshan (2013) share the same notion that the SMME sector plays a crucial role in the economy of any country and towards the development of rural and urban areas or societies. The data the participants and municipal officials provided in the current study also complements this assertion. The data collected revealed that SMMEs contribute differently to the economy; for example, the participants indicated three ways the sector plays its role, including reducing unemployment and poverty and equipping individuals with skills. This was also supported by Drbie and Kasshan (2013), who posited that the SMME sector presents employment opportunities, especially for young people in the country. Even Swart (2011) argue that the majority uses the sector as a ladder they can climb to escape poverty. As such, it can be deduced that employment in African townships like Seshego can be achieved successfully through this sector, most particularly by youth as emphasized by the participants. In support, one of the participants uttered:

“I believe that SMMEs are a source of employment in every municipality including ours. People turn to SMMEs to better their lives and that of their family members or children. Most of the people earn income from SMMEs, and this income is used for their basic needs. Therefore, SMMEs are significant for growth of the economy and development of the people in the municipality.”

In addition to the above, another participant alluded:

“SMMEs create employment and poverty. Most people can put bread on the table and don't go to bed hungry because they are able to generate income through this practice.”

This is supported by Habtma and Nigasa (2013), who argued that the SMMEs help with the generation of income, poverty alleviation and reduce the unemployment rate in the country.

Therefore, because of their crucial roles, SMMEs can be regarded as the heart of every economy in developing and developed countries. Drbie and Kasshan (2013) study noted that this sector is the biggest enable and contributor towards most household and personal savings. Most of the participants concur with this assertion as they emphasized that the sector enables them to afford some of their household needs, including some of their personal desires. This viewpoint demonstrates the significance of this sector to those participating within it.

The municipal officials believe that the sector plays more role than just reducing poverty and unemployment rate in the study area. These officials regard the SMME sector as one of the ways to keep most youth off the streets and help improve the infrastructure within the community through investment by interested stakeholders. The IDP (2020) notes that the crime rate within the Polokwane Local Municipality was at its peak a decade ago, but after a noticeable rate of participation in the small business sector, the rate of crime declined. The municipal officials stated that they believe this number went down because more people were involved or did something like opening a business to keep them busy and generate income for them. To back this up, one of the participants briefly alluded:

“Looking carefully at who owns small businesses in the area, which is youth who are also associated with criminal activities. There are no longer higher levels of crime in the community as these people have got something that keeps them busy off the streets. I also think the government should do something to promote or improve participation of people, young, as they are mostly taken as the future of the country”.

Another participant further elaborated:

“Having a high number of small businesses in the Township is beneficial to its development because it attracts more investors who to some extent forces the government or relevant departments to build us better infrastructure to ensure that these investors do not lose interest. For example, the roads in the community are improved as they are regularly used for transportation of our goods, even though some of our clients are not from here so they need to use a convenient and comfortable road”.

Additionally, one of the participants stated:

“I think SMMEs in Seshego Township come as an encouragement and motivation to many because others start to open or own their own business after seeing that it is possible from those who already have their own businesses. Others improve their entrepreneurial skills through running such businesses while others gain or acquire such skills for the first time as running a business requires one to have some skills at a certain point”.

The participants’ arguments are justified by Malefane (2019), who argues that the SMMEs have the greatest potential to eradicate poverty, create more employment, generate income, contribute towards skills development, and lower the rate of crime and service delivery protests and attract local investment within the local municipalities. Hence, they are regarded as the mechanism with the potential to contribute towards the local economic base of restructuring of local government in South Africa (Malefane, 2019). In light of the above, it would be futile to dispute that the SMME sector’ role in all sectors of the economy is not massive.

4.4 Nature of frequency of load-shedding

Table 4.4 below presents the average hours of power outages in the study area. This determines the length of time businesses are non-operational, particularly those who are without alternative means to mitigate the outages and are solely dependent on Eskom provision. This aspect helped with unmasking how these businesses survive during load-shedding period.

Table 4.4: Duration spent and endured without electricity.

Variable	Description	Number (#)	Percentage (%)
Occurrence of load-shedding	Once a day	4	16
	Twice a day	5	20
	Thrice a day	8	32
	Over Five times	6	24
	Other (0)	2	4
	Total	25	100
Absence of electricity	One-Two hours	4	16
	Three-Four Hours	5	20
	Five-Six Hours	8	32
	Seven-Eight Hours	6	24
	Other (0 Hours)	2	4
	Total	25	100
Hours endured without electricity	One-Two Hours	15	60
	Three-Four Hours	6	24
	Five-Six Hours	0	0
	Seven-Eight Hours	0	0
	Other (0 Hours)	4	16
	Total	25	100
Influence of load-shedding	High negative effect	12	48
	Moderate negative effect	8	32
	No effect at all		
	Moderate positive effect	1	4
		2	8

High positive effect	2	8
Total	25	100

Source: Survey Data (2022)

Data depicted in Table 4.4 above is a concrete confirmation that the power outages, in the same way, do not confront township SMMEs. Most (32 per cent) of the small business owners in the Seshego Township indicated that their businesses experience about three times a day, equivalent to five to six hours without business or no operation. Presumably, these businesses do not employ any mode or secondary resources during load-shedding. This is followed by the 24 per cent of SMMEs owners who demonstrated that power outages hit their businesses over five times a day, amounting to almost seven to eight hours without electricity. The findings of this study also imply that these businesses lack other sources of energy that they use during load-shedding. Hence, they stay for a longer period without operating. About 20 per cent of the participants in the SMMEs sector in the study area showed that they only experience load-shedding twice a day, and this equals three to four hours of outages, whereas 16 per cent indicated that they only face this period once a day and equals to one to two hours spent without electricity. Such occurrences occurred differently since these businesses were found in different zones or sections within the Township. The implication is that the zones of this Township experience different stages of power cuts all the time. In support, Macaulay (2023) argued that load-shedding across the country occurs at varying intervals, which could last for about six hours or more daily.

The theory contends that the availability of stable power is a determinant factor for one to assert that the load-shedding effects differ based on the type of industry one is involved in, also the duration and period of occurrence. The present research deduces that the occurrence of load-shedding will differ for this reason. In addition to the findings, only two of the participants, which account for 8 per cent of the sampled population, indicated that the power cuts do not confront them. In support, both the participants alluded:

“Load-shedding never disrupts my daily operations within the business because electricity is not the main or dependent resource of the business. A generator is normally used during the absence of electricity”.

For Botha (2019), businesses that own a secondary energy source have thought properly about the future of its existence. This was proved to be correct by the participants who demonstrated that their businesses are not exposed to power cuts.

The data presented in Table 4.4 above demonstrates that most (60 per cent) of the participants indicated that their businesses could go less than two hours without electricity in a day. These businesses were found to be the ones which have no strategies to minimize the effects of power outages. Some of the interviewed participants mentioned that the only solution applicable to their businesses during this period is to close the business doors. This implies that there is no operation for the period electricity takes away. A few (24 per cent) of the participants demonstrated that their businesses could withstand or endure the absence of electricity for about three to four hours per day. It was found that these businesses employ some secondary resources during the power outages period. However, some mentioned that they struggle to keep up with the cost of having additional sources of energy. This implies that if electricity is taken away for more than four hours daily, these businesses will be forced to close their doors. The least (16 per cent) of the participants showed that their businesses run or operate as usual, power outages or no power outages, to them, it is just business as usual.

The study found that these enterprises do not entirely rely on electricity to operate but employ other resources during this period, whilst others do not. This statement contradicts what the mission or intention of the framework employed by the study strives to achieve, which is to ensure that the supply of energy is always consistent. Simply, if these participants were without secondary energy sources, then there would not be any operation. Importantly, this suggests that failure to supply reliable and stable electricity to SMMEs will only lead to their death. Therefore, as articulated in the EPSRP theory, the purpose of this theory which is to deliver stable power energy to all users, must be realized or achieved as it is the responsibility of the utility company to satisfy the needs and wants of their customers.

Most (48 per cent) of the participants indicated in Table 4.4 above that their businesses were affected by power cuts in a highly negative manner. These participants mentioned that the reason for this is a lack of secondary sources of energy. The effect in this regard was measured in terms of income generation in general. During the interviews, most of them stated that their level of income generation was never the same and that the business was taking more money out than bringing or generating. About 32 per cent of the participants demonstrated that their businesses were moderately affected in a negative way. This proves the theory employed in the study to be true, stating that unreliable and unstable electricity, which results in load-shedding, can either lead to negative or positive outcomes. The end users usually notice this.

These were the ones who were found to possess alternative energy sources that they use during load-shedding. They maintained that even though their level of income generation never remained the same, the damage or loss was not that great. A few (16 per cent) of the participants showed their businesses were affected positively by the period of power cuts. This could mean that they tend to gain more customers during this period as they do not stop operating as they are not dependent only on electricity. These business owners emphasized that they only see positive returns without electricity as they receive a high volume of customers. Even though they rely on alternative sources of energy to operate during load-shedding, their articulation concurs with the EPSRP theory, which emphasizes that the availability of stable energy determines whether industrial and other sectors can produce adequate goods and services. The theory further illustrated in chapter two that customer satisfaction leads to survival and growth of SMMEs. It goes beyond to prove that all sectors of the economy, even those outside the sector require stable electricity to function properly, this is supported by the theory used in the study. So, it could be deduced that this period is most beneficial to those who employ secondary sources of energy. However, the situation somehow affects them as these resources require capital or money to function. This merely speaks to the high fuel prices required to operate resources like generators. Only one business owner in the sector indicated that there is no effect at all. They kept saying electricity is only used for lighting, especially at night.

4.4.1.1 Income generation

The findings of this study show the impact of load-shedding on income generation, which is proved by the difference in income generated before load-shedding and current income. Participants in this study had to indicate whether power cuts affect their business or not. This helped the researcher find out if load-shedding impacts SMMEs in Seshego Township, particularly on income generation. Table 4.4 below illustrates the rate of responses of the participants.

Table 4.5: Effect of power cuts on income generation

Variable	Sub-Variable	Frequency (#)	Percentage (%)
Whether income generation is affected	Yes	24	96
	No	1	4
Changes in income	Yes	24	96
	No	1	4
Income before load-shedding	Below R10 000	12	48
	Between R10 000 & R20 000	10	40
	Between R20 000 & R30 000	3	12
	Total	25	100
Current income during load-shedding	Below R10 000	22	88
	Between R10 000 & R20 000	2	8
	Between R20 000 & R30 000	1	4
	Total	25	100

Source: Survey Data (2022)

Power outage events bear or bring losses to many small businesses as they do not have strategies to diminish the consequences of such incidents. However, other business ventures tend to benefit as they employ secondary resources or energy sources. Most (96 per cent) of the participants agreed that they had seen many changes in income generated. These participants shared the same worry: they could not even measure the income generated during that period. They emphasized that they doubt if such changes would bring positive or create a conducive environment that would allow their businesses to flourish and survive for a long period. In support, Makgopa and Mpetsheni (2022) and Rankumise (2017) argue that frequent events of load-shedding hit small businesses most severely to the extent that these enterprises start to experience a decline in income generated. They further maintained that such altercations in small firms tend to threaten their survival and lifespan. To support this, one of the participants mentioned:

“I am not even sure how long my business can survive because these changes in income harshly affect the survival of the business. Sometimes I even think of closing my business for good as I do not have anything that could help my business survive during this harsh period”.

Another participant added:

“I hate load-shedding because it put my business at a big risk. The income which is the main source of the business, is no longer the same and there is no guarantee that it ever become better if load-shedding is still there”.

As indicated in Table 4.5 above, only 4 per cent of the participants contradicted what other participants said. These participants mentioned that load-shedding does not affect their business in any way as they have not seen any changes in the level of income generated. This could be because their enterprises are not entirely operated using electricity only. Even Botha (2019) supports this by arguing that those businesses who have thought about investing in secondary sources of energy will reap what they sow during a time of need. The participant said they doubt if load-shedding will ever affect their income because everything is in control. This is what the participants mentioned:

“I do not want to lie, generally, my business is not affected by the load-shedding situation. It normally operates every day”.

The data presented in Table 4.5 above indicates a decrease in income generated during load-shedding compared to the income generated before the load-shedding period. This implies that more income is lost during load-shedding than before the load-shedding period. In support of this, a survey of small businesses conducted by technology firm Diphoko (2019) revealed that 80 per cent of the participants experienced a decline in revenue while 20 per cent stated that they will close their businesses if load-shedding continued. The probable cause of this is the lack of secondary sources of energy, as alluded to by participants who indicated that they are affected by load-shedding.

The above table shows that most (88 per cent) of the participants in the SMMEs sector in the study area generated less than what they used to generate before load-shedding. Some participants emphasized that their income level has drastically changed, and they make very little profit in the absence of load-shedding. Only a few (12 per cent) of the participants managed to maintain a certain level of income generated. This could be due to various reasons such as having other sources of energy, such as generators or gas stoves. Data presented demonstrate that more income was generated before the load-shedding period than during the load-shedding period; this is evident in that about 8 per cent of the participants could generate at least over R30 000 before load-shedding, whereas that amount could not be generated during the load-shedding period. The differences between income generated, as noticed in the data presented in the table above, implies that the absence of electricity influences income generation regardless of the type of business.

The participants who indicated that their businesses could only survive for one hour without electricity were those who generated R10 000 during load-shedding. Given the everlasting occurrences of load-shedding, this implies that these participants generate far less income as compared to before load-shedding. The participants who indicated that they generated more than R10 000 during load-shedding were individuals who did not rely on electricity entirely to operate or run their businesses in the study area. This implies that these individuals could

maintain or even generate more during this period as they can mitigate the effects of power cuts.

The participants in the internet café industry mentioned that they experienced a quick decline in income during the load-shedding period compared to the income generated before the power cuts period. One participant emphasised that they depend on electricity only to operate their businesses. This implies that no electricity means no operation for these businesses. The participant further stated that they are more likely to generate less income during this period, as without ESKOM's energy source, nothing can be done. The participant also alluded that some customers lose hope and trust in them because they fail to render services in time.

The participant further explained:

“All of our equipment cannot work without electricity so during load-shedding we cannot work and if we cannot work, we will experience problems with our customers and we will even fail to pay rent.”

One of the participants added:

“The load-shedding period causes problems for me because my customers call me a liar as I fail to bind or print their documents on agreed schedule.”

Kaseke and Hosking (2012) supported the above statement: production is less as many production processes stop without electricity. The EPSRP theory also shows that unreliable electricity will always cause disruptions and ruin the relationship between the customer and service provider. An example of this is unsaved computer files, which will take time to start production again if lost.

4.4.2 Challenges of load-shedding on SMMEs

The participants in this study indicated that several consequences due to load-shedding confront them. However, they stated that the occurrence of load-shedding hit them differently. This factor was significant since the researcher sought to reveal strategies employed by SMMEs during this period. Table 4.6 below illustrates challenges or problems caused by power outages in the study area.

Table 4.6: Consequences and challenges of load-shedding

Variable	Sub-variable	Number (#)	Percentage (%)
Consequences of load-shedding	Staffing	5	20
	Operations	5	20
	Additional costs	1	4
	Damages to equipment	1	4
	Decrease in income.	9	36
	Other (Increase in income)	4	16
	Total	25	100
Challenges of load-shedding	Loss of internet	5	20
	Unable to trade.	15	60
	Other (Vandalism and Theft)	5	20
	Total	25	100

Source: Survey Data (2022)

Data presented in Table 4.6 revealed that the SMMEs in Seshego Township face many problems and hiccups because of power outages. Although power outages are highly associated with negative impacts on business ventures, some (16 per cent) of the participants in the SMME sector within the study area indicated that they saw positive returns, an increase in income, from their enterprises. The EPSRP theory used in this study argues that reliable and stable provision of energy will always result in high returns. These participants mentioned that they do not operate their businesses using electricity only. On the contrary, the majority (36) of the participants indicated that they experienced decreased income generated. These people maintained that they only depended on electricity to run their businesses. Olajuyin and Mago (2022) argued that SMMEs that rely on only electricity would be exposed to the challenges of load-shedding, threatening their livelihoods. About 20 per cent of the participants, as indicated in Table 4.6 above, have had to fire some of their employees because of power cuts. These participants said they had to do so as they could not afford to buy other business expenses and pay their workers. Mwila et al. (2017) also states that small businesses sometimes must fire some employees, whereas others must completely shut down due to low revenues generated. In support of this, some of the participants elaborated:

“Load-shedding does not only affect us the owners of the businesses but also our employees. For example, when the business cannot afford other expenses, we have no other choice but to fire them or put them on leave to monitor the situation”.

Additionally, to the study's findings, about 20 per cent of the participants in the sector indicated that load-shedding completely disrupts how they operate their businesses. They mentioned that during this period, the only option they are left with is to close the business doors as nothing can be done without electricity. One of the participants said they are forced to wait for the electricity to come back as they only depend on this practice to survive. They further maintained that this situation is caused by the fact that they cannot afford a generator, which negatively impacts their trading hours. These participants strongly argued that this situation is exacerbated by poor lack of access to finance or borrow money which could be used to fund their businesses during such difficult times. Steenkamp (2013) and Botha (2019) support this assertion by positing that firms which cannot afford the high cost of generators

have resorted to other methods of mitigating the effects of load-shedding, and these methods include reducing hours of operation, and the number of workers, also closing the doors of the business. In support, one of the participants added:

“My customers are always dissatisfied with the service I offer them and disappointed as I am failing to fulfil their expectations as I used to before this period”.

The above statement demonstrates the significance of the EPSRP theory employed in this study which also outlines that the users of electricity should always receive energy consistently because the utility companies aim to ensure that the needs and wants of their customers are fulfilled. The utility must never fail to supply electricity to its users (Feng & Tong, 2020).

Data presented in Table 4.6 above indicate that most (60 per cent) of the participants in this sector cannot trade when electricity is taken away. Bloomberg (2023) supported this by stating that rolling blackouts can also affect a number of aspects of people’s lives, such as internet connectivity and cell phone network coverage. This is more applicable to participants involved in the Internet café business. As the participants indicated, this failure is caused by a lack and inability to afford to buy secondary sources of energy. For example, another participant, who accounts for only 4 per cent indicated that they struggle with the costs of operating a generator. The participant mentioned that the cost of fuel is increasing frequently. As such, the role played by the generator sometimes is not visible or noticed. Olajuyin and Mago (2021) support this viewpoint by emphasizing that self-generation greatly contributes to operating costs and capital as it is seen as the most expensive as opposed to electricity. This simply imply that if these individuals were to have access to the financial institutions or resources which would complement them during the period when electricity is taken away, this challenge could be dealt with or addressed, which will ultimately ensure that these small businesses thrive even during load-shedding period.

Table 4.6 demonstrates that almost 20 per cent of the participants are exposed to theft and vandalism. A lack of security measures in place could cause this. The participants alluded that their businesses are situated in a place that is not protected in any way, which jeopardizes

everything. Kaseke and Hosking (2012) are in support of this; for example, they mention that some resources or equipment of businesses which are not protected are exposed to external threats. Even Bloomberg (2023) supports these participants by arguing that power outages increase the crime rate, for example, the opportunity for smash-and-grab crime when security systems are not functioning in potential target residences. Those in the internet café business cried a lot about the loss of internet connection; these participants account for 20 per cent. They mentioned that they cannot do anything without electricity as their equipment or machines are operated using this type of energy. It can also be used using other sources of energy, but these participants were found in no possession of such. The EPSRP theory also supports this standpoint in that every sub-sector of the economy requires stable and reliable energy or electricity to perform appropriately.

4.5 Perceptions of SMMEs owners towards load-shedding

How people perceive electricity cut-off will never be the same because of their experiences and how differently it affects their daily lives and activities. As such, several views were outlined by owners of small businesses concerning how power outages affect the SMME sector in Seshego Township. It was revealed that during this period, most of these businesses do not operate because nothing can be done without electricity, as the participants argued. Their argument complements what the EPRSP theory employed in this study emphasized, which is that every sector of the economy can only be able to render services to its customers through reliable electricity or energy. When interviewed, most of the participants alluded that load-shedding snatches away their daily bread as it disrupts their daily operations within the business. Some of the participants believe that this period has the potential to take them back to poverty because their daily income is threatened. This means they cannot afford their household needs and even generate personal income. The participants argued that they are more likely to be part of the unemployed statistics if power outages persist for more than they should. The above standpoints are in line with Kazungu et al. (2014), who argued that stopping power temporarily in the context of small firms may not be a great threat, but it has the potential to cause relative chaos and resulting in a decrease in productivity or loss of income. To support the participants' viewpoints, even Mwila et al. (2017) noted that the

presence of power outages in any sector of the economy tends to be a huge threat as the business stands a chance of not being able to afford the expenses of the business.

The owners of small businesses further mentioned that load-shedding will always remain a threat to them, especially since they do not have secondary sources of energy which they employ during that period. Even a study conducted by Schoeman and Saunders (2018) exposed that most SMMEs in the country are vulnerable and prone to collapse because they lack alternative energy sources that they can employ during power outages. However, they further argued this is not the case for all these enterprises since those in possession of secondary sources of energy are more likely to enjoy the benefit or advantage of owning such. Even though most participants indicated that they are affected by load-shedding, a few argued that this period came as an auspicious or favourable occurrence to them. This is so because they stated that they could operate their businesses regardless of the availability of electricity. In essence, they maintained that they generated more income in this period because of the number of customers they got. This is in line with the assertion of Saunders and Schoeman (2018), as articulated above. Collected data from the participants suggest that a livelihood may be lost, and the crime rate might rise as it is believed that the rate of crime in the study area remains low as more people, especially youth, get employed. The notion that SMMEs have the potential to reduce the crime rate is emphasized by the IDP (2020).

To support the SMMEs owners' point of view on how the duration of power cuts affects their businesses, the municipal officials added that most of these businesses would experience low levels of productivity and production. This will cost these enterprises' customers as their needs or demands will not be satisfied or rendered accordingly. The EPSRP theory complements this statement in that unreliable electricity supply will lead to dissatisfaction with customers, resulting in poor SMMEs performance. To support this, one of the municipal officials argued as follows:

“There are lot of business ventures which provide the same products or goods in the same area across the country. For example, you may find out that a township like Seshego has more than seven barbershops or restaurants that offer the same products, but the difference is the quality of these products and how services are offered. My point is that what is of utmost

importance is the quality offered especially in a business which deals with perishable goods, businesses like restaurant, and there is no guarantee that these products will not get rotten given the recent conditions, load shedding, that we find ourselves in”.

Another official and participant shared the same view:

“It is hard to survive under load-shedding if you do not have a generator, especially those dealing with fragile goods which need to be refrigerated frequently. Load-shedding is just a nightmare for SMMEs which cannot operate without electricity”.

Onwumere et al. (2016), using the EPSRP theory employed in this study, supported the above-mentioned by putting that the disruptions caused by load-shedding have a negative impact on the quality of products in industries such as fast-moving consumer goods because they need a reliable source of energy to store and preserve goods. They further elaborated that the reliability of electricity is positively correlated with the business’ performance. Xu et al. (2012) also hold the same sentiment as municipal officials in that the quality of a product is one of the characteristics of a successful business. Xu et al., (2012) further indicated that this is usually seen when customers’ satisfaction is met because of the quality of goods. They also emphasized that product quality does not only improve customer satisfaction, but it can influence the buying intention between customers and increase existing relationships between parties.

4.6 Strategies used to mitigate effects of load-shedding.

Undoubtedly, anything that causes disruption or appears to be a hindrance towards the success of any livelihood must be addressed accordingly or dealt with to ensure the survival of such livelihood activity. This section describes the coping strategies which these township SMMEs use to deal with dire effects of power cuts.

4.6.1 Describing strategies employed by SMMEs to minimize power outage effects.

Given the current frequent episodes of power outages, the SMMEs which cannot function without electricity are forced to seek or find ways to survive the situation if their existence is to remain intact. The findings of the present study revealed that there are several measures or

strategies employed by some of the SMMEs in Seshego Township. The study also observed that some of the small businesses in the area would like to employ their preferable strategies, but because of a lack of support or funds, they cannot afford to do so. A generator was found to be the least of the measures put in place by the SMMEs in the study area. This finding contradicts the argument of Tembe and Hengwa (2020), who maintained that a generator is the most used resource by small businesses that are confronted by load-shedding. However, Tembe and Hengwa (2020) were correct to say that this strategy is mostly employed by those who own restaurants, which is justified by the participants in this study, who mentioned that they possess a generator. In support, a participant involved in the restaurant industry said:

“Owning a generator in this type of a business is convenient and advantageous though costly because we deal with goods that get spoiled easily so there must be something that can substitute electricity when it is taken. Otherwise, these products will be thrown away as they cannot be used in that state”.

However, this does not deduce that all the restaurants in the study area owned a generator. Some of the participants stated that they are in possession of a gas stove which serves as a replacement for electricity, while only one participant in this type of business said that they use electricity for lighting only, as the primary energy source is a gas stove. In addition to strategies used by SMMEs in the study area, it was found that most of these businesses could not afford to buy generators together with its cost. As a result, they opted for other options, including closing the business doors and reducing the number of workers and hours. To support this, Makgopa and Mpentsheni (2022) conducted a study whose results complement the findings of this same study. They found that most of the small businesses which had difficulties with buying or acquiring generators resorted to the same measures that this current study found. A few of the participants in the study area mentioned that keeping up with the load-shedding schedule is what they resorted to even though this suffocates the business, as sometimes load-shedding occurs during peak hours of the business. Doe and Assamoah (2014) concur with this by stating that the last resort for minimizing the effects of load-shedding is to keep up with the schedule of load-shedding though it is unreliable.

4.6.2 Perceptions about strategies used and how power outages effects on SMMEs could be alleviated.

The different strategies used by SMMEs do not have the same influence on any type of business, in some businesses they are more effective whereas in others may be ineffective. Therefore, the owners of SMMEs needed to outline how effectively the strategies are used. Data collected from the participants in this study showed that there are strategies which are more effective during the load-shedding period whilst others were found to be less effective or ineffective. Most of the SMMEs owners in this study reiterated that strategies which were employed by their businesses were less effective. On the same arm, the participants also suggested what they think should be done to help or support their businesses. This includes closing the doors of the shop, reducing the number of employees and trading hours. The reasons for the ineffective of these strategies are simply because closing the business means that no income is generated at that period, whereas reducing the number of workers implies that there will be low productivity and reducing hours also means less profit.

Participants alluded that their business would perish if load-shedding does not end, because such businesses cannot bear with the above-mentioned negatives. The municipal officials iterated that the relevant stakeholders such as the Department of Small Business Development, must come to the party and perform its role which is to ensure that SMMEs are not affected by anything that will endanger or put their existence in jeopardy. Even the owners of the SMMEs agree with the officials as they maintained that they should be provided with financials and other resources to help them ease the effects of load-shedding. The municipal officials further emphasized that the business owners must try to create a club or group wherein there will be a contribution of money that will buy something like a big generator which they will share. This was directed to businesses situated in the same area for the purpose of convenience.

In contrast to the ineffectiveness of strategies employed by the majority of SMMEs in the study area, a few of the participants mentioned that employing generators within their establishment was the best action they took. The participants mentioned that this type of machinery keeps their businesses going even when they have no hope. However, the

municipal officials are little bit opposing this viewpoint as they mentioned that employing this type of machine is costly and sometimes it may take close to half of what the business has made or generated. To back up this, one of the participants argued:

“Although owning a generator comes at a price, I am happy that I am owning one because it tends to ensure or guarantee the survival of my business. I can generate income, despite it being little, I can afford some expenses of the household and personal ones. All these are possible thanks to the generator”.

Based on the above assertion, there is no doubt that secondary sources of energy such as generator are viable option for business owners, however, heavy reliance on them can lead to environmental degradation. Even though it is not cheap to use as indicated above, it has been proven beneficial especially to those who own them. This implies that if every participant owned an alternative source of energy, the effects of power outages on their businesses would be less.

4.7 Summary of the Chapter

The purpose of this chapter was to reveal the presentation of findings from the structured questionnaire survey and in-depth interviews. The first part of this chapter was on the questionnaire, which dealt with the participants' background information. This is followed by interviews which revealed the participants' perceptions, views and opinions concerning the effects of load-shedding on SMMEs. Emanating from the interviews, the SMME sector in the study area is not supported by structures such as the Department of Small Business Development, which is responsible for the wellbeing of small businesses. Hence, the participants iterated that their businesses are extremely affected by problems of power outages. As a means of mitigating the effects of load-shedding, it was found that most of the SMMEs were forced to close the doors of the business and reduce the number of workers. This situation tends to exacerbate the unemployment rate in Seshego Township, leading to a high crime rate. SMMEs in this Township can grow, flourish, and survive for a long period if the relevant stakeholders come to the party and support the sector accordingly. The following chapter presents the conclusion and recommendations of the study.

Chapter five

Conclusion and recommendations

5.1 Introduction

This chapter presents conclusions which describe what the findings imply about the effects of load-shedding in the small business sector. Furthermore, the recommendations intended to assist the SMMEs with strategies they could use to mitigate the load-shedding effects are made based on the findings of the study.

5.2 Conclusion

The findings demonstrates that SMMEs in South African Townships are at the brink of collapse or death, especially during the load-shedding period. The theoretical framework informing this study, the Economics of Power Systems Reliability and Planning Theory, focuses on reliability, quality, and consistency of supply. The theory confirms the importance of the availability of power as a determinant for the adequate supply of goods and services and that supply increases productivity or attainment of local economic development. However, the challenges faced by SMME sector due to power cuts in the country nullifies the role played by the sector in terms of employment creation, economic development, and livelihood generation. It would greatly help to promote the sector and ensure its growth and development, especially at a grassroots level. As such, the conclusions from the findings are drawn as follows:

The findings revealed that load-shedding affects SMMEs in the study area regardless of the typology. This finding further shows that repetitive events of power cuts would mean the destruction and non-functioning of these businesses because some fail to operate even if the power cuts last for about two hours. It transpired from the results that the businesses cannot function without electricity. This implies that such businesses would literally collapse if power cuts continued to occur almost every day for about four to six hours. However, this is not the position or applies to other businesses as the findings revealed that not every small business depends on electricity to function in the study area. This finding further showed that

this is a beneficial situation for those with alternative sources of energy. This denotes that should every small business be in possession of secondary sources of energy, the power cuts effects on SMMEs will be a thing of the past.

Furthermore, it was revealed that the SMME sector is not only the backbone of the economy but an industry that most people, especially youth, resort to for employment opportunities. This finding means these people resort to the sector to generate personal and household income. However, this tends to be hindered by the everlasting events of power cuts that take place in townships. The finding further shows that this period affects not only business owners but also those employed within these businesses as they are prone to losing their jobs as their employers cannot afford to pay them. This situation may lead to an increase in the rate of youth unemployment. The finding also revealed that most small business owners lack other energy sources to use during load-shedding. The participants blamed the municipality and the department of small business development as they maintained that they were not happy with the involvement of these stakeholders. As such, there is a serious need for these stakeholders to prioritize the small business sector and finance or support it accordingly for the survival and growth of the sector.

5.3 Recommendations

The following recommendations are formulated based on the study findings, particularly regarding the effects of load-shedding on SMMEs and the support which could be given to these small businesses. It is recommended that concerted efforts be made to deal with challenges facing SMMEs to grow or improve SMMEs. However, all the relevant stakeholders including the government and SMMEs must come to the party and play their respective roles to create a conducive environment so that SMMEs can thrive. Further research also needs to be conducted and policies reviewed to improve the current strategies to address challenges confronted.

5.3.1 Recommendations for the Government and Department of Small Business

Development

- It is recommended that the red tape should be reduced to avoid and encourage the emergence of new business growth and allow better access to official support.
- There is a need to provide more tax breaks for recognized and registered enterprises as this will ensure or lead to the emergence of new businesses or increased participation by individuals in this sector due to tax or other incentives.
- There is a need to improve access to finance to allow the owners of small businesses to obtain or lend money because many fail to do so due to poor credit records.
- It is recommended that the government improve investment in education because this will produce competent employees, entrepreneurs and better quality of workers or entrepreneurs.
- It is recommended that the government should provide adequate funding by increasing funds and subsidies to make it easy for those who want to start new businesses.
- There is a need to prioritize the well-being of SMMEs in townships, as this will ensure their longevity and survival.

5.3.2 Recommendations for the small business owners

- There is a need to develop a close working relationship between the government and business owners, as this will allow for smooth and better communication.
- It is recommended that small business owners change their mindset and attitude towards the government regarding its role in the growth and development of the business.
- It is recommended that small business owners learn to take matters into their own hands and solve their challenges instead of waiting for the government to assist them.
- There is a need for small business owners to familiarize themselves with the load-shedding schedule as this will allow them to prepare accordingly and avoid having to throw away some of the perishable items.
- It is recommended that small business owners in the same area form a club in which they would own one big generator as this will ease the burden by sharing the costs.

5.4 Suggestions for future research

The findings of the current study have raised several questions that needs to be addressed or answered by future research as suggested below:

- Investigating the effectiveness of alternative power sources such as generators on SMMEs and its consequences on the environment since some run for long hours as discovered by this study.
- Exploring the importance of governmental support given to SMMEs particularly those operating in townships and rural areas.
- Importance of acquiring entrepreneurial skills and education on SMMEs growth and sustainability.

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List of Appendices

Appendix A: Questionnaire Survey SMMEs' owners / Dihlahlobo tsa borrakgwebo / mmakgwebo



UNIVERSITY OF MPUMALANGA.

Research Project Title: The effects of load-shedding on small, medium, and micro enterprises in Seshego Township, Polokwane Local Municipality.

This questionnaire is designed to collect information about the effects of load-shedding on SMMEs. This research paper is registered with the Department of Development Studies in Faculty of Economics, Development and Business Sciences at the University of Mpumalanga, Mbombela Campus. The survey results are intended for only academic purpose. The responses from participants will be kept confidential. Furthermore, anonymity is guaranteed, and participation is completely voluntary, meaning no one will be forced to contribute or part take in this study. Assisting the researcher by providing the required information in this questionnaire will be highly appreciated.

Thank you!

Section A: Demographic characteristics of participants / Tshedimoso ya mokgathatema

1. Age / Ngwaga (Indicate with a tick / Laetsa ka nhla)

19-35	
36-55	
Over 56 / Godimo ga 56	

2. Sex / Bong (Indicate with a tick / Laetsa ka nhla)

Male / Monna	
Female / Mosadi	

3. Educational level / Magomo a thuto (Indicate with a tick / Laetsa ka nhla)

Primary / Thuto tsa fase	
Secondary / Thuto ye phagamego	
Tertiary / Thesiare	

4. Duration of participation in the SMME sector / Nako ye oe feditsego o le mo hwebong
(Indicate with a tick)

0-12 Months / Kgwedi tse 0-12	
13-24 Months / Kgwedi tse 13-24	
Over 25 Months / Godimo ga kgwedi tse 25	

Section B: Nature of Township SMMEs / Hlago ya hwebo

5. What type of a business do you own? (Indicate with a tick) / Naa hwebo ya gago ke ya mohuta mang? (Laetsa ka nhla)

Restaurant or Fast food / Lefelo la go jela	
Internet Café / Lefelo la inthanete	

Barbershop or Salon / Lefelo la go hlwekisa hlogo	
Other (Specify) / Ye nngwe (Hlalosa)	

6. How many times is electricity taken away in your area? (Indicate with a tick) / E ka ba mohlagase o kgaolwa ga kae ka letsatsi tikologong ye? (Laetsa ka nhla)

Once a day / Ga tee ka letsatsi	
Twice a day / Ga bedi ka letsatsi	
Thrice a day / Ga raro ka letsati	
Other (Specify) / Yenngwe (Hlalosa)	

7. How many hours is electricity taken away in your area? (Indicate with a tick) / E ka ba mohlagase o kgaolwa iri tse kae tikologong ye?

1-2 hours / iri 1-2	
3-4 hours / iri 3-4	
5-6 hours / iri 5-6	
7-8 hours / iri 7-8	
Other (Specify) / Yenngwe (hlalosa)	

8. How many hours can your business survive without electricity? (Indicate with a tick) / E ka ba hwebo ya gago o ka e sepetsa e iri tse kae ntle le mohlagase? (Laetsa ka nhla)

1-2 hours / iri 1-2	
3-4 hours / iri 3-4	
5-6 hours / iri 5-6	
7-8 hours / iri 7-8	
Other (Specify) / Yenngwe (hlalosa)	

9. How would you describe the effect of load-shedding on your business? (Indicate with a tick) / Hlalosa ka tsela yeo go kgaolwa ga mohlagase o amilego hwebo ya gago ka gona (Laetsa ka nhla)

High negative effect / Gampe Kudu	
Moderate negative effect / Ga nnyane	
No effect / Ga o na Kamego	
Moderate positive effect / Magareng	
High positive effect / Gabotse kudu	

10. Did load-shedding affect your income generation? (Indicate with a tick) / Naa e ka ba go kgaolwa ga mohlagabe oa ama letseno la gago? (Laetsa ka nhla)

Yes / Ee	
No / Aowa	

11. Did you experience any changes in your income generation? (Indicate with a tick) / Naa oe temogetse diphetogo mabapi le letseno la gago? (Laetsa ka nhla)

Yes / Ee	
No / Aowa	

12. How has your income generation been before load-shedding? (Indicate with a tick) / Naa letseno la gago le be le le jwang pele ga go kgaolwa ga mohlagase? (Laetsa ka nhla)

Below R10 000/ Fase ga R10 000	
Between R10 000 & R20 000 / Magareng ga R10 000 & R20 000	
Between R20 000 & R30 000 / Magareng ga R20 000 & R30 000	

13. What is your current income during load-shedding period? (Indicate with a tick) / Naa letseno la gago la ga bjale le eme jwang? (Laetsa ka nhla)

Below R10 000/ Fase ga R10 000	
Between R10 000 & R20 000 / Magareng ga R10 000 & R20 000	
Between R20 000 & R30 000 / Magareng ga R20 000 & R30 000	

14. What consequences have you encountered? (Indicate with a tick) / Naa o itemogetse ditla morago dife? (Laetsa ka nhla)

Staffing / Phokotso ya bashumi	
Operations / Ditshipidiso	
Additional costs / Koketso ya ditheko	
Damages to equipment/ Ditshenyagalelo ya didiriswa	
Decrease in income / Phokotso go letseno	
Other (Specify) / Yenngwe (Hlalosa)	

15. What challenges have you come across? (Indicate with a tick) / Naa ke dihlohlo dife tse o kopanego le tsona?

Loss of internet / Tahlagelo ya neteweke	
Unable to trade / Tshitiso ya go rekisa	
Other (Specify) / Yenngwe (Laetsa)	

Thank you for your participation!

Appendix B: Interview Guide for SMMEs owners



UNIVERSITY OF MPUMALANGA.

Research Project Title: The effects of load-shedding on small, medium, and micro enterprises in Seshego Township, Polokwane Local Municipality.

This interview guide is designed to collect information about the effects of load-shedding on SMMEs. This research paper is registered with the Department of Development Studies in Faculty of Economics, Development and Business Sciences at the University of Mpumalanga, Mbombela Campus. The interview results are intended for only academic purpose. The responses from participants will be kept confidential. Furthermore, anonymity is guaranteed, and participation is completely voluntary, meaning no one will be forced to contribute or part take in this study. Assisting the researcher by providing the required information in this interview guide will be highly appreciated.

Thank you for your participation!

Research interview schedule for SMMEs owners in Seshego Township, Polokwane Local Municipality / Dihlahlobo tsa beng dihwebo tse dinnyane tikologong Seshego

The interview schedule consists of the following questions: / Dipotsitso tsa hlahlobo ye ke tse dilatelago

1. Can you tell me about the type of business you own? / Naa o ka mpotsa ka mohuta wa hwebo ya gago?
2. Please share with me why you are involved in this business? / Naa ke ka lebala la eng o le mo hwebong ye?
3. Can you tell me how long you have been in this business? / Ke sebaka se sekakang o le mo hwebong ye?
4. Can you please outline how load-shedding affects your business? / Naa go kgaolwa ga mohlagase o ama hwebo ya gago jwang?
5. Please tell me how you operate your business during load-shedding? / Naa o ka mpotsa ka tsela yeo o sepedishago hwebo ya gago ka gona ge mohlagase o se gona?
6. What are the operational challenges you face during load-shedding? / Naa ke dihlotlo dife tseo o itemogelago tsona ge mohlagase o sego?
7. What are some of the significant differences between the pre-load-shedding period and the current load-shedding era in relation to your business? / Gona le phapano magareng ga ge mohlagase o kgaotswe le ge o sa kgaolwa mo hwebong ya gago? Mpotse ka ga diphetogo tse.
8. How will you ensure sustainability of your business within the context of the on-going load-shedding? / O nagana gore hwebo ya gago e ka tswela pele le ge mohlagase o kgaotswe?
9. Where do you think your business would be right now if there was no load-shedding? Please tell me more about this. / O nagana gore hwebo ya gago nka be e le kae ge nka be go sena go kgaolwa ga mohlagase?
10. What can be done to lessen the effects of load-shedding on SMMEs? / O nagana gore go ka dirwa eng go fokotsa ditlamorago tsa go kgaolwa ga mohlagase?
11. Can you please tell me about governmental support or initiatives in place to support local SMMEs. / E ka ba gona le tsela yeo mmuso o go thekgago ka gona?

Appendix C: Interview Guide for Municipal Officials



UNIVERSITY OF MPUMALANGA.

Research Project Title: The effects of load-shedding on small, medium, and micro enterprises in Seshego Township, Polokwane Local Municipality.

This interview guide is designed to collect information about support offered to SMMEs. This research paper is registered with the Department of Development Studies in Faculty of Economics, Development and Business Sciences at the University of Mpumalanga, Mbombela Campus. The interview results are intended for only academic purpose. The responses from participants will be kept confidential. Furthermore, anonymity is guaranteed, and participation is completely voluntary, meaning no one will be forced to contribute or part take in this study. Assisting the researcher by providing the required information in this interview guide will be highly appreciated.

Thank you for your participation!

Research interview schedule for Municipal Officials from Polokwane Local Municipality.

The interview schedule consists of the following questions:

1. Can you tell me about the contribution or role of SMMEs towards the Township economy?
2. What challenges do you think SMMEs in Townships are faced with?
3. What potential do you think SMMEs have in terms of empowering people, especially youth, in Seshego?
4. Do you think SMMEs have the potential to expand or grow into big enterprises? Please tell me more.
5. Can SMMEs survive without support from any structure or government?
6. Can you tell me about the support given to SMMEs in Townships?
7. What do you think should be done to improve the conditions of SMMEs in Townships?
8. Is there anything you would like to share with me?

Thank you for your participation!

Appendix D: Consent Form

Consent Form for participation in research

I..... agree to participate in a research project conducted by Mokgotho Jacob Ngwako (201627329) who is doing his master’s degree in Development studies at the University of Mpumalanga. This participation form serves as a permission that I am giving to the researcher regarding my full participation in this research.

The participation form also acknowledges the following aspects:

- 1. I have adequate information about the research topic, and I understand the study.
- 2. I understand that my participation is based on voluntary participation. Therefore, the role that I will play in the study has been clearly outlined to me and I understand the role.
- 3. I am fully aware that since my participation is voluntary there is no force used on me to participate in the study. I can withdraw at any stage of the researcher when I no longer feel comfortable sharing any information.
- 4. I understand that during the data collection process, the researcher will take written notes and use a tape record to record our conversation for the purpose of the study. I give the researcher full permission to take written notes and I am aware that I can choose to not be recorded by the researcher.
- 5. I am aware that my anonymity, privacy, and confidentiality will be respected in this study. Therefore, the researcher will only share information that I have fully agreed upon for the need of the study.

.....

.....

Participants signature

Date

.....

.....

Researcher signature

Date

Appendix E: (Translated) Foromo ya kutlwisiso

Foromo ya kutlwisiso ya go ba karolo ya dinyakishisho.

Nna.....ke dumela go ba karolo ya dinyakishisho tse di dirwago ke Mokgotho Jacob Ngwako yo a dirago master's degree in development studies ya gagwe Unibesithing ya Mpumalanga. Foromo ye ke seshupo sa go laetsa tumelelo ye e fa go monyakishishi ka ga kamego yaka.

Foromo ye e amogela tse dilatelago:

1. Ke na le tshedimosho ye etletsego ka se go bolelwago ka sona ebile kea kweshisha ka botlalo.
2. Kamego go dinyakishisho tse ke kgetho yaka. Ke kwesisha tema ye ke e kgathago ebile ke hlaloseditswe ka botlalo.
3. Kea kweshisha gore ka ge kamego yaka e se kgapeltso, ke na le tokay a go e kgoegela morago g eke ikwa ke sa lokologa.
4. Kea kweshisha gore go tlo dirishwa didirishwa tse mmalwa go dumelela monyakishishi go humana tshedimoso ya maleba, le gore tshedimosho yeo ke ya moshomo wo.
5. Ke netefaleditswe gore leina laka leka se utullwe ntle le tumelelo yaka.

Mosaeno wa moamegi:

.....

Letsatsi:

.....

Mosaeno wa monyakishishi:

.....

Letsatsi:

.....

Appendix F: Access letter requesting permission

University of Mpumalanga

Private Bag x 11283

Mbombela

1200

The Municipal Manager

The City of Polokwane

Seshego Township

Dear Sir/Madam

I am a student registered for the Development Studies Degree in the Faculty of Economic, Development and Business Sciences, at the University of Mpumalanga. I hereby request permission to conduct research among the community members of Seshego Township and officials of the City of Polokwane in charge of the Community Services Unit. The research is mainly for my academic growth and personal development. I have applied for the Ethical Clearance Certificate and got feedback from the University Ethics Committee. The proposed title of my research is the effects of load-shedding on small, medium, and micro enterprises. The findings and conclusions drawn from the proposed study will be shared with the relevant stakeholders and the Municipality.

Please find attached herewith the data collection instruments that I will use to collect data from the participants of the study. Should you wish to obtain more information or have questions related to the study, please do not hesitate to contact me or my supervisor. Our contact details are as follows:

Supervisor.

Cell phone number: 0823581172

Email Address: Thandeka.Sabela@ump.ac.za

Researcher.

Cell phone number: 0634121606

Email address: 201627329@ump.ac.za

I hope my request will be in order to meet your set requirements.

Yours Faithfully

Mokgotho Jacob Ngwako.

Appendix G: Municipal Permission Letter

MS. R.E RAMELA (EXT 2344)

DIRECTORATE: CORPORATE AND SHARED SERVICES

ITEM:

FILE REF: # 515557

REQUEST TO GRANT MR. JACOB NGWAKO MOKGOTHO PERMISSION TO CONDUCT RESEARCH WITHIN POLOKWANE MUNICIPALITY

Report of the Director: Corporate and Shared Services

Purpose of the Report

To request the Municipal Manager to grant Mr. Jacob Ngwako Mokgotho to conduct research at Polokwane Municipality.

Background and Discussion

Mr. Jacob Ngwako Mokgotho sent a letter requesting permission to conduct research at Polokwane Municipality. Research topic is title: "The effects of load-shedding on small, medium and micro enterprises in Seshego Township, Polokwane Local Municipality, Limpopo Province".

"A copy of the letter from University of Mpumalanga"

Financial Implication

There is no financial implication.

Recommend

1. That approval be granted to Mr. Jacob Ngwako Mokgotho to conduct research within Polokwane Municipality.
2. That the findings emanating from the research study be shared with the Municipality before they are published.

3. REQUEST TO GRANT MR. JACOB NGWAKO MOKGOTHO PERMISSION TO CONDUCT RESEARCH



MR MANAMA
HUMAN RESOURCE MANAGER

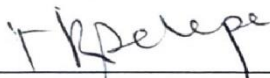
Recommended / Not Recommended



MRS. M.M. MATSHIVHA

Director CORPORATE AND SHARED SERVICES

Approved / Not ~~Approved~~



MR. N.R. SELEPE
ACTING MUNICIPAL MANAGER

12 / 05 / 2022

Appendix H: Ethical Clearance

Research Ethics Clearance Letter

UMP

—



**UNIVERSITY OF
MPUMALANGA**

Ref:

UMP/Mokgotho/MDev/2021

Date: 8 November 2021

Name of Researcher: Jacob Ngwako Mokgotho

Student number: 201627329

Supervisor: Dr T Sabela

School / Department: School of Development Studies

Faculty: Faculty of Economics, Development and Business Sciences

RE: APPROVAL FOR ETHICAL CLEARANCE FOR THE STUDY:

The effects of Load-shedding on Small, Medium, and Micro Enterprises in Seshego Township, Polokwane Local Municipality, Limpopo Province.

Reference is made to the above heading.

I am pleased to inform you that the Chairperson has on behalf of the University of Mpumalanga's Research Ethics Committee approved ethical clearance of the above-mentioned study.

Please note:

Any alteration/s to the approved research protocol i.e., Questionnaire/Interviews Schedule, Informed Consent form, Title of the project, Location of the study, Research Approach and methods must be reviewed and approved through the amendment/ modification prior to its implementation.



Research Ethics Clearance Letter

UMP

A handwritten signature in blue ink, appearing to be "E. Boshoff".

Prof Estelle Boshoff

Chairperson: University of Mpumalanga's Research Ethics Committee.

Date: 8 November 2021.

Appendix I: Editorial Certificate



CONFIRMATION OF EDITING - REPORT

14 May 2023

Client: Mr JN Mokgotho

Via Email: mokgothongoakojacob29@gmail.com

Masters submission: Professional Language editing

Professional Language Editing, Layout and Formatting of Dissertation - The Effects of Load-shedding on Small, Medium, and Micro Enterprises in Seshego Township, Polokwane Local Municipality, Limpopo Province

Dear Mr JN Mokgotho,

Thank you for the privilege of being a part of your dissertation. The editing has been concluded, and all recommended changes are tracked.

- All grammar has been corrected.
- All punctuation and sentence construction has been corrected.

References:

- All references have been standardised to Havard referencing.
- I have corrected references which were incorrect, intext and within the list. Incomplete references have also been corrected.
- Missed references were added
- The entire reference list has been re-written

All the best!

Many thanks

Dr Ara

Dr Ara Ph.D (UKZN)
083-3665635
The Research Coach is part of the
DARA Group (PTY) LTD
Currie Road, Musgrave, Durban
2020/067901/07