Examining profitability and sustainability of South African SMMEs in the telecommunications transmission network rollouts

Gary Tshehla Mollo

Student number: 0512838N

Student email and mobile (mollogt@gmail.com/ 0512838N@students.wits.ac.za /0615433593_0648707974)

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DECLARATION

I, **Gary Tshehla Mollo**, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Masters in Business Administration at the University of the Witwatersrand, Johannesburg. This research report has not been submitted before for any degree or examination at any university.

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Gary Tshehla Mollo

Signed at : **Johannesburg**

On the **05th** day of **June** 2025

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ABSTRACT

Small, Medium and Micro Enterprises (SMMEs) play a crucial role in the South African economy, particularly in the telecommunications sector. The study focuses on examining the profitability and sustainability of SMMEs involved in the rollout of the telecommunications transmission network. A qualitative research approach was used to collect data through interviews with key stakeholders and analysed using NVivo software to identify recurring themes and challenges.

The findings highlighted that while SMMEs contributed significantly to infrastructure expansion, they face major hurdles such as financial constraints, regulatory compliance issues and competition from larger companies. Limited access to funding and high operational costs were identified as key barriers to profitability.

Additionally, sustainability concerns stem from the slow adoption of advanced technologies and a shortage of skilled labour. However, the study also identifies opportunities for growth, including expansion into underserved markets, technological innovation and strategic industry collaborations.

To enhance SMME profitability and sustainability, this research recommends targeted government support, streamlined regulatory frameworks, improved financial accessibility and investment in skills development. The study concludes that fostering a more inclusive and supportive business environment will enable SMMEs to thrive and contribute more effectively to South Africa's telecommunications sector.

KEYWORDS

- SMMEs
- Telecommunications
- Transmission Network Rollout
- Profitability
- Sustainability
- Capital Expenditure (CapEx)
- Outsourcing
- Operational Costs
- Cash Flow
- Access to Finance
- Regulatory Compliance
- Skilled Labour
- Technological Adaptation
- Market Competition
- Risk Management
- Porter’s Five Forces
- South Africa

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LIST OF ACRONYMS

Acronym	Meaning
SMME	Small, Medium and Micro Enterprise
Telco	Telecommunications Company
CapEx	Capital Expenditure
OEM	Original Equipment Manufacturer
ICT	Information and Communications Technology
ROI	Return on Investment
NVivo	(Brand name) Qualitative data analysis software
KZN	KwaZulu-Natal (province in South Africa)
CEO	Chief Executive Officer
CTO	Chief Technology Officer
SLA	Service Level Agreement
QCTO	Quality Council for Trades and Occupations
SITA	State Information Technology Agency
ICASA	Independent Communications Authority of South Africa
NDP	National Development Plan
OPEX	Operational Expenditure
1G	First Generation (analog mobile communication)
2G	Second Generation (digital mobile communication, e.g., GSM)
3G	Third Generation (mobile broadband, e.g., UMTS)
4G	Fourth Generation (high-speed mobile broadband, e.g., LTE)
5G	Fifth Generation (ultra-fast, low latency mobile broadband)
GSM	Global System for Mobile Communications
LTE	Long-Term Evolution
VoIP	Voice over Internet Protocol
ISP	Internet Service Provider
IoT	Internet of Things
IP	Internet Protocol
VPN	Virtual Private Network
DNS	Domain Name System
Wi-Fi	Wireless Fidelity
LAN	Local Area Network
WAN	Wide Area Network
SIM	Subscriber Identity Module
MVNO	Mobile Virtual Network Operator

CHAPTER 1. INTRODUCTION

1.1 Statement of purpose

This research examined the profitability and sustainability of Small, Medium and Micro Enterprises (SMMEs) in the telecommunications transmission network rollout. The qualitative method was used to conduct this research in the form of interviews. The theoretical framework that was applied was Porter's competitive advantage theory.

1.2 Background of the study

Telecommunications is a crucial need globally as it drives technological innovation, economic growth and social development. It ensures that it keeps nations, communities and individuals interconnected worldwide. It is therefore critical that there is constant investment and policy support for this industry as it benefits the country and the entire society (Technology, 2019). The transmission network is the backbone infrastructure that is responsible for connecting various network elements to ensure the transfer of voice, data and multimedia over significant distances (Dutta, 2003). There is always a need for faster, more efficient and more reliable network infrastructure because it allows telcos a wider customer reach, improved efficiencies and a better customer service offering (Patra, 2021).

In recent years, Telecommunications sector has witnessed a surge in demand for connectivity and infrastructure development, presenting numerous opportunities for SMMEs to participate in the rollout of transmission networks. To manage their costs, Telecommunications companies have outsourced certain functions to SMMES to handle the installation portion of their transmission rollout projects (Back Office Outsourcing, 2022). The SMMEs are key to the economic development of South Africa as they play a critical role in the reduction of unemployment, inequality and poverty through the creation of jobs. These enterprises are classified based on the *total number of employees, total annual turnover and total gross asset value number* (Writer, 2019). However, despite their potential, SMMEs face significant challenges that hinder their profitability and long-term sustainability, including financial constraints, regulatory complexities, competition from larger firms and inadequate risk management strategies.The sector also has a high failure rate compared to other countries internationally, according to (Angus Bowmaker-Falconer, 2022) 70%-80% of SMME businesses fail within the first 5 years of being in operation due to various factors. It is therefore important that the SMMEs are given enough support to grow and maintain their businesses, as this also has a direct impact on the economic development of the country.

Pricing plays a huge role in ensuring that the appointed SMMEs can deliver on the installations for the transmission rollout project. SMMEs involved in these projects apply the cost-plus pricing which involves labour, material overheads and the profit margin. The recent activities within the industry have shown that the telcos have been cutting on the installation price, some are offering bundled pricing to improve their efficiencies and cost management (Back, 2023).

The South African government and various industry stakeholders have introduced policies and programs aimed at SMME growth within the telecommunications sector. Nevertheless, the success of these initiatives depends on a comprehensive understanding of the barriers and enablers affecting SMME performance.

This study seeks to explore the profitability, sustainability and risk management strategies of SMMEs involved in the telecommunications transmission network rollout, providing insights into the factors influencing their success and identifying potential solutions to enhance their viability.

1.3 Research problem

The transmission network rollout space has seen a high turnover of contractors (SMMEs) over the years, this has presented several challenges to the telcos which include missed project timelines, quality of service issues and overall delays in infrastructure build targets (Sweeting, 2023).

The network rollout projects are broken down into three major cost driving parts based on the planning and budgeting done beforehand by the engineering team (Harrison-Harvey, et al., 2024). These three critical parts are as per below:

- Purchasing of equipment from the OEM/s
- Inhouse support team or outsourced managed services team
- Appointed SMMEs responsible for onsite installations

These three costs are budgeted from the CapEx (capital expenditure) spend of the rollout and closely monitored throughout the project, these are then reviewed yearly based on the contract signed between the contracting parties (Newman, 2021).

The identified issue in this case is the price cuts around installation where SMMEs are contracted to provide a service, these cost cutting measures have an impact on the overall rollout. While the research acknowledges that SMMEs play a crucial role in network installation projects, it does not provide an in-depth analysis of the long-term profitability and sustainability of these enterprises. Particularly, it does not sufficiently analyse how these reductions impact the ability of SMMEs to maintain service quality while remaining profitable. Therefore, there is a need to understand the trade-offs between cost efficiency and quality of network rollout when SMMEs operate under constrained budgets.

1.4 Research questions

The research questions that needed to be answered by this research project are listed below:

1. What are the key financial, operational and market factors influencing the profitability of SMMEs?

2. How can SMMEs ensure long-term sustainability in the telecommunication sector?

1.5 Research Objectives

The primary objectives of this study were:

- To assess the profitability of SMMEs in the South African telecommunications transmission network rollout.
- To examine the sustainability challenges faced by SMMEs in the sector.
- To gather strategic recommendations for enhancing the role of SMMEs in the telecommunications industry.

1.6 Significance of the research study

This research is significant as it provides valuable insights into the financial and operational dynamics of SMMEs in the telecommunications sector. By highlighting the key challenges and opportunities faced by these enterprises, the study contributes to a broader understanding of how SMMEs can be supported to enhance their profitability and sustainability. The findings will be useful for policymakers, financial institutions, industry regulators and business owners, aiding in the development of targeted interventions that foster an inclusive and competitive business environment. Additionally, this research will also contribute to the academic literature on SMME development, telecommunications industry challenges and risk management practices, serving as a reference for future research in these fields.

1.7 Delimitations of the study

This research study was based on South African SMMEs that have direct contracts with the telcos to help execute their rollout projects.

1.8 Assumptions

The assumptions of this study are the things the researcher believed would happen during the research. First, it was believed that most of the people chosen for interviews would agree to take part. Second, it was expected that they would answer the questions honestly and would not feel uncomfortable or upset. Third, the researcher assumed that the interviews would give enough useful information to answer the research questions.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The telecommunications industry in South Africa has witnessed significant growth and development, particularly in the rollout of telecommunications transmission networks. This has however led to the telcos outsourcing the infrastructure builds to SMMEs to control costs and improve efficiency within the rollout. This presented an opportunity to SMMEs within the telecommunications industry as SMMEs play a crucial role in these projects, providing services such as infrastructure build, maintenance and support (GlobalData, 2023). However, the profitability and sustainability of SMMEs in this context remained a topic of interest. This literature review aimed at examining the profitability and sustainability of SMMEs in the telecommunications transmission network rollout.

2.2 Definition of topic or background discussion

The telecommunications industry plays a vital role in the economic development of countries, providing efficient communication channels for businesses and individuals (Technology, 2019). The relationship between outsourcing of services to SMMEs, the pricing of such strategies and how this leads to the sustainability and profitability for SMMEs was looked at.

2.3 Managing CapEx budget usage in Telecommunication companies

Telcos apply different strategies in their technical operations to ensure that they optimize their operations by outsourcing non-critical services allowing them to focus on core business. It can be noted that other studies conducted have shown the importance of telecommunications operators controlling their CapEx and according to a survey done by PwC, it found that telecoms operators might be overspending on their CapEx by over 20% per financial year (Meakin, 2011).

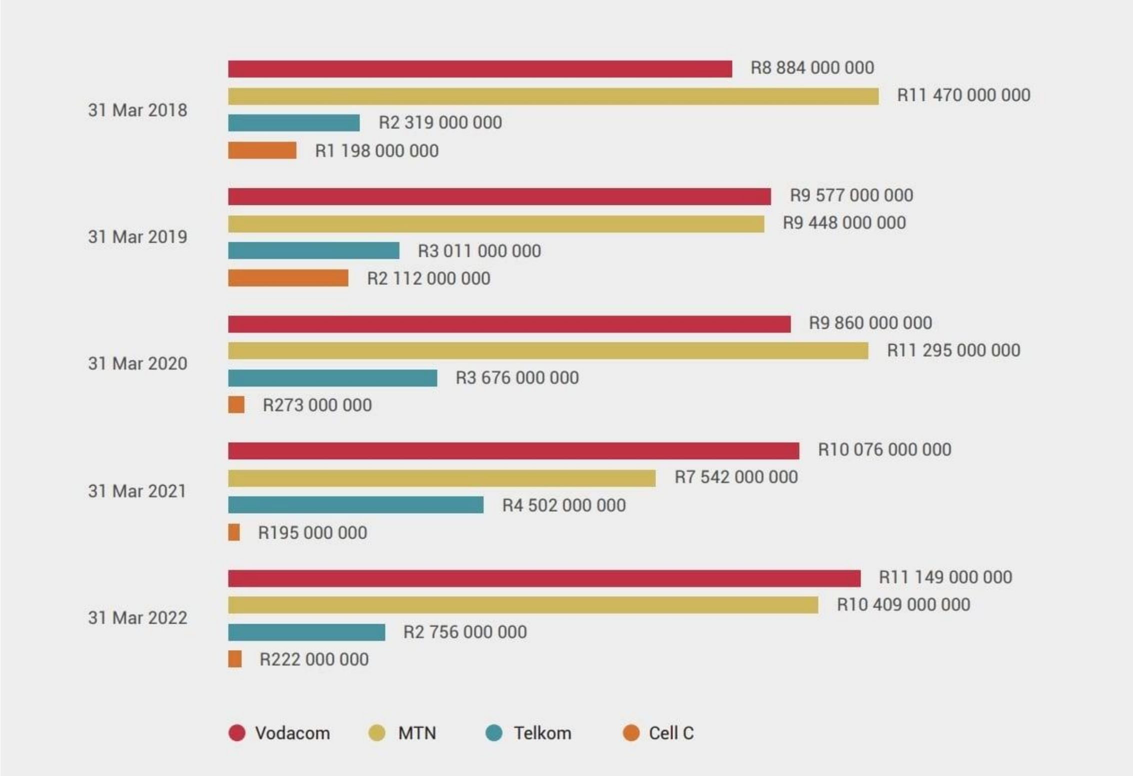

Figure 1 :Capital expenditure from Vodacom, MTN, Telkom and Cell C between 2018 and 2022 (Daily Investor, 2022)

Telcos invest heavily on their network infrastructure projects allowing them to upgrade their network capacity and network reach to grow their customer base and improve their service offering (M Ariff, 2008). Deploying latest next-generation technologies ensures that the network stays future ready and that they can take advantage of new features and monetize new offerings.

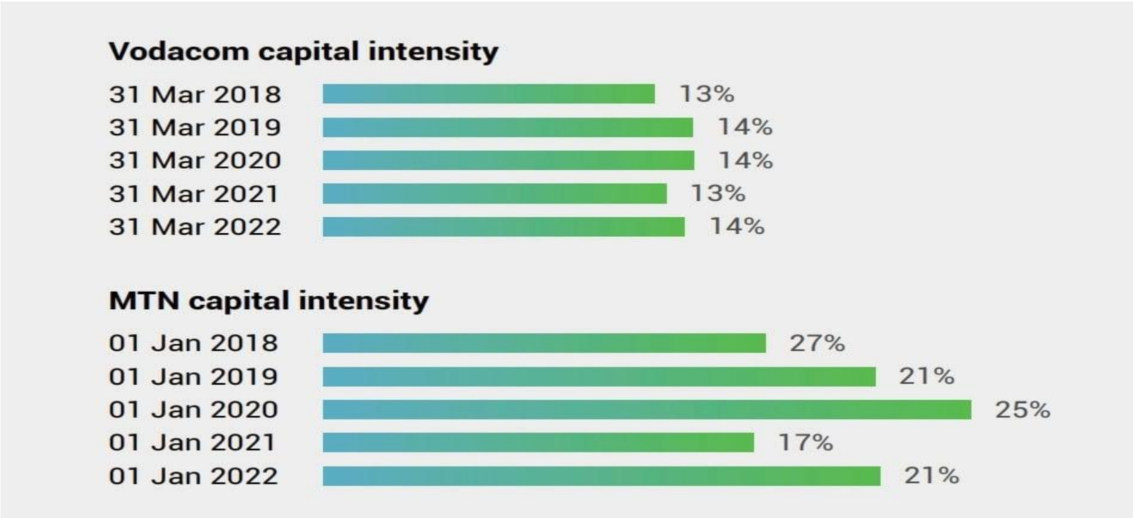

Figure 2 : Vodacom and MTN's capital intensity between 2018 and 2022. (Daily Investor, 2022)

Daily Investor (2022) reports on the capital intensity of the top telcos taking note that this is the income percentage that is spent on the network. This is looking at CapEx as percentage of revenue and this has been a clear driver as to why the big telcos have moved more into outsourcing to manage their budgets. Over the last 5 years, Vodacom has had a 20% rise in CapEx budget but maintained a capital intensity of 14%. MTN on the other hand, has had a 10% decrease in CapEx budget but have managed an intensity of an average of 20% (Daily Investor, 2022).

2.3.1 *Outsourcing services to SMMEs*

When outsourcing for infrastructure, telcos use two scenarios with one being outsourcing the entire project to OEMs and the OEMs getting their own SMMEs. The other option is buying equipment and service support from OEMs, then handling their own SMME onboarding (Shrinivas Patil, 2015).

The appointment of SMMEs for infrastructure builds come with its own advantages and benefits to the telcos, these advantages include them having a better understanding of the local landscape, community needs and local regulations (Patra, 2021). SMMEs have lower overhead costs and provide faster deployment due to their agility and flexibility.

There were findings made by Pia Ellimäki (2021) that companies that are more efficient are companies that acquire services from their outsourcing providers as this gives them a competitive advantage, allowing them to manage their costs. This setup also allows for the two parties to enter a service level agreement that will govern the working relationship formed.

Shrinivas Patil (2015) states that outsourcing should not only be viewed with the benefit of costs, but companies should also consider the strategy and risk associated with outsourcing. The findings highlight the negative impact that outsourcing might have if the is degration of service as this might lead to loss of clients or business. Some of the risks that will need to be addressed will be maintaining communication channels through regular feedback and reports. Key to this is also making sure that data is maintained by applying stringent data protection measures.

2.4 SMME Pricing strategies

Looking at the pricing strategies, there are multiple types of pricing strategies that can be applied by the SMMEs based on the service or product they provide. They include cost-plus, competitor based and value-based pricing. SMMEs within the telecommunications transmission rollouts utilise the cost-plus pricing which involves labour, material overheads and the profit margin (Back, 2023).

Obigbemi (2010) states that pricing drives critical decisions that SMMEs can make as they drive whether the business can be successful or not. He speaks about how strategies that are employed must take into consideration increase in sales, market, profit as well as market penetration. On the other hand, Michael Cant (2016) says two main factors to determine strategy should be orientated around profit and sales. He further states that external influences on these strategies include consumers, demand and competition.

From the literature, Michael Cant (2016) proves the theory that competitor pricing sets the tone for strategies that are developed by SMMEs. Several environmental factors such as fuel and operation costs also drive the need for these pricing strategies. Chai (2023) also states that profitability is determined by the efficiency of developed strategies and this plays a role in the success of SMMEs.

2.5 SMME Success rate in South Africa

The sector also has a high failure rate compared to other countries internationally, according to Angus Bowmaker-Falconer (2022) 70%-80% of SMME businesses fail within the first 5 years of being in operation due to various factors. It is therefore important that the SMMEs are given enough support to grow and maintain their businesses, as this also has a direct impact to economic development of the country.

Smit (2012) highlights the significance of SMMEs in their capacity to absorb unskilled labor and foster entrepreneurial skills. However, due to South Africa's high SMME failure rate, these advantages are often not realized. Key factors contributing to SMME success include agility, flexibility and a willingness to take risks.

2.6 Market and industry challenges for SMMEs

According to Rhyn (2024) SMMEs within the telecommunications industry have a challenge of access to markets and this can be attributed to their limitation to resources and networks, only 20% of these companies have national footprint in terms of their operations. The fact that most of these companies are limited in terms of their market reach contributes to their failure to reach the broader market.

The other challenge faced by SMMEs within this industry are the changes in technology which directly impacts their competitiveness and growth. The challenge is that the technology adoption that they need to acquire to help improve their operations is costly and is a barrier to improving the efficiency of their operations (Malinga, 2024). This also highlights the importance of providing digital skills training for SMMEs and their employees. This training becomes critical in them being able to implement and utilise these new technologies. Malinga (2024) states that 32% of these SMMEs lack the necessary digital skills training and this becomes hinderance to their ability to fully leverage on this new technology.

Wijnberg (2024) states that high competition and gate keeping by large corporations within the industry is also one of the challenges for SMMEs, this leads to limited opportunities for the SMMEs because more lucrative projects and contracts are won by larger corporations. This also adds to the challenge of SMMEs being able to expand their operations and market reach.

The other challenge in the industry is the security and safety risks which impacts both the telcos and the SMMEs. The telecommunication infrastructure is exposed to theft and vandalism and this adds to the telcos expenses in fixing and protecting this infrastructure. On the SMME side, it increases the risk of having their assets stolen or damaged when they go to site, putting their technicians at risk of being attacked by criminals (Dludla, 2024).

Talent acquisition and staff retention is also a challenge that SMMEs are facing because they are competing with large corporates for the same skilled employees with limited resources on their side. Larger corporates have the budget to offer their employees competitive compensation and benefits Nourhan (2024) and are able to also provide training and professional development for their employees, whilst SMMEs are faced with financial constraints which prevent them from offering all these benefits (Nourhan, 2024).

Unreliable power supply in the form of loadshedding within the industry also adds to the challenges faced by SMMEs, this brings a negative impact to the SMME’s operations. This challenge causes operational disruptions, financial strain in terms of needing to invest in alternative power solutions, revenue losses due to time losses during load shedding and decreased efficiency. This challenge also increases the operational costs and disadvantages the SMMEs that do not have resources to invest in alternative power solutions (Mabunda M. V., Mukonza, Mudzanani, & Manyaka, 2024).

2.7 Financial aspects and profitability for SMMEs

According to Bowmaker-Falconer & Meyer (2022) access to finance for SMMEs is an obstacle because of stringent lending criteria and the fact that most SMMEs do not or lack collateral. This lack of funds affects their ability to fund their operations and to maintain a healthy cash flow, this has trickling effect as it prevents them from growing their market share and growing their revenue (Bailey, 2018). The other challenge faced by SMMEs is late payments from their clients which in return affects their daily operations and the ability to meet their financial obligations. This makes it difficult for SMMEs to service their debt and pay of salaries and other commitments (Bailey, 2018).

According to a study conducted by Xero it indicates that there are 91% of SMMEs which are owed for over 18 days past the payment term. This causes pressure on operations and hinders the growth of the business and its ability to service its debt (Bailey, 2018).

There are several external and internal key factors influencing profitability for SMMEs working in these projects, these factors become critical determinants on the ability of SMMEs operating at a loss of making a profit. Top on the key factors is the ability to access funding because failure to secure adequate funding negatively affect the business operations and expansion (Fatoki & Asah, 2011).

Cashflow management is also key to the SMMEs sustainability because with delayed payments, high operational costs and inefficiency from the operational activities the business suffers on the day to day running. It is therefore critical to properly manage] cashflow by doing a forecast, invoicing on time and improving your operational efficiency (Kimanzi & Gamede, 2020).

Herrington, Kew, & Mwanga (2017) states that it is important that SMMEs have multiple streams of income by having multiple service contracts or multiple products as well as maintaining a consistent revenue generation. It is important to ensure that profitability is measured using key financial indicators which include return on investment (ROI), gross profit margin and net profit margin as these help assess the business performance. This also touches on financial planning which includes budgeting and cost benefit analysis, to help with ensuring that SMMEs are profitable in the long term (Musara & Nieuwenhuizen, 2020).

2.8 Risk management for SMMEs

SMMEs working in transmission rollout projects face a lot of security and safety risks, this has a direct impact on the financial stability, long term sustainability and operational efficiency.

According to Chenesai (2022), financial risks faced by SMMEs in the telecommunications projects are late payments, cash flow issues and high operational costs. Many SMMEs are affected by delayed payments from clients which in return cause cash flow issues and instability in the operations. Rangwets (2021) states that high operational costs affect the profitability of the business, these operational costs can vary from labour, high cost of material and compliance requirements. It is therefore important to apply cost management strategies and negotiate better project agreements.

Based on Ogunsola, Potwana, & Chikosha (2013) operational risks include project delays which can be caused by workforce shortages, supply chain disruptions and regulatory approval delays. The other risk is on equipment theft and vandalism which also adds to the project costs and forces the SMMEs or telcos to invest in various security measures.

Unreliable Power Supply or loadshedding is a risk to the operations of SMMEs in South Africa because it affects network deployment as it causes delay in the execution of a network build and increase operational costs since technicians will need to wait for a planned outage schedule to clear before continuing with the work. SMMEs need to invest in alternative energy sources like generators which can help with mitigating this risk (Mabunda, Mukonza, & Mudzanani, 2023).

2.9 Regulatory & Compliance Risks

Licensing & Legal Requirements is key in the telecoms operations as it governs and regulates the infrastructure space. A company and its employees being non-compliant with the industry regulations can lead to not being allowed to carry out any work until you are compliant. Working without being compliant can lead to project terminations, penalties and legal action being taken against you. Always seek counsel by engaging legal experts to ensure compliance is adhered to and any regulatory changes are implemented (Treasury, 2021).

Health and Safety Compliance is also key when working in telecom because infrastructure builds involve high safety risks. Technicians work on heights and use power tools, so it is important to adhere to occupational health and safety standards by providing competency training and ensuring the use of protective equipment can prevent accidents and liabilities (Meyer, 2019).

2.10 Theoretical Framework

Theories play a significant role in clarifying phenomena by providing a view through which they can be interpreted and understood. Researchers use theories to explain a systematic and complex set of relationships with the aim of providing explanations for certain outcomes (Welman, Kruger, & Mitchell, 2005).

2.10.1 *Porter's Competitive Advantage Theory*

This theory will look at five competitive forces faced by SMMEs, which are threats of new entrants, rivalry among competitors, buyers bargaining power, suppliers bargaining power and threat of substitute service.

According to Smit (2012), this theory searches the aspects that contribute to an organizations competitive advantage. It can be used to examine the sustainability and profitability of SMME's competitive advantage. Understanding the impact on market share, customer loyalty and variation can provide visibility into the long-term viability of SMMEs in the face of competition.

Porter's Five Forces Model				
Threat of New Entrants	**Bargaining Power of Suppliers**	**Bargaining Power of Buyers**	**Threat of Substitutes**	**Industry Rivalry**
High entry costs and regulatory requirements create barriers for new SMMEs.	Limited access to essential telecom equipment increases dependency on major suppliers.	Large corporations exert pricing pressure on smaller service providers.	Alternative technologies and service providers impact market stability.	Intense competition limits profitability and sustainability.

Table 2.1: Porter's Five Forces Model (Smit, 2012)

2.11 Conclusion of Literature Review

This literature review looked in at the participation of SMMEs in the transmission rollout projects, with the highlight being on the operational and financial challenges, risk management strategies and theoretical models. The focus of the next chapter will be to discuss the research methodology that will be used in analysing the sustainability and profitability of the SMMEs in this sector.

CHAPTER 3. RESEARCH METHODOLOGY

This section of the project provided details on which research methodology was followed to examine the profitability and sustainability of SMMEs in the telecommunications transmission network rollout. It also looked at various topics that include the research approach, research design and data collection methods.

3.1 Research design

The research approach that was used for this research was a qualitative method. The qualitative information was gathered through the form of interviews that were conducted with the SMMEs. This involved conducting interviews with different business leaders from the SMMEs companies. This helped in getting in-depth insights into the profitability and sustainability of SMMEs through the interviews that were conducted, this approach was seen to be better because the participants could provide detailed explanations unlike the structure of surveys were participants are limited to the multiple answers already given by the researcher. This meant getting real life experiences faced by SMMEs in the sector.

3.2 Data collection methods

There are two data collection methods, namely primary data collection and secondary data collection. The primary data collection is referred to as data that has not been published yet and has not been changed by anyone and the secondary data collection refers to the data that has been sourced from published sources (Taherdoost, 2021).

For this research primary data collection method was used in form of interviews. We have three types of interview modes, namely being structured, semi-structured and unstructured interviews. This research adopted semi-structured interview, where the Participants were interviewed online. The benefit of a semi-structured interview is that it is flexible and allows for an engagement between the researcher and the interviewer allowing deeper probe into responses capturing their experiences (Taherdoost, 2021).

3.3 Population and sample

The SMMEs operating within the telecommunications transmission rollout projects were selected for this research. The reason for choosing this population was based on the relevant data that was drawn from the experiences that these individuals have within the industry. From this target population, 11 SMMEs operating within the telecommunication transmission rollout projects were interviewed. The reason why this sample was targeted it is because they offer real life experiences and first-hand information. The SMMEs population selected was critical in providing information from the end of the companies (SMMEs) that are contracted to these telcos for the purposes of assisting in the rollout projects. This sample size was deemed sufficient as data saturation was achieved, where no new themes or insights were emerging, indicating that the sample adequately captured the key dimensions of the phenomenon under investigation (Guest, Bunce, & Johnson, 2006).

3.4 The research instrument

The interview schedule was selected as a research instrument for this qualitative part of the research. Interviews are typically open-ended in nature as they permit the respondents to be asked about factual matters as well as their opinions and interpretation of topics (Steber, 2017). The semi structured format of interviews assisted the researcher to also be able to direct the conversation to the research topic effectively. This is important with researching topics that have an ever-changing setup and could possibly have differing impacts on the group of interviewees. (Steber, 2017) Says that semi-structured interviews are seen as flexible as they can neither be regarded as fixed as well as free formatted. The interviews followed initial predetermined questioning structure but allowed to adapt into a conversational style of interviewing.

All interviews were conducted online (Microsoft teams) and were only conducted in English as a language of communication.

The following research questions were addressed through the means of interviews:

1. What are the key financial, operational and market factors influencing the profitability of SMMEs?

2. How can SMMEs ensure long-term sustainability in the telecom sector?

The Research instrument for the sample group is found in Annexure 1.

3.5 Procedure for data collection

The interviews targeted a group of 11 individuals representing SMMEs involved in telecommunication transmission rollout projects.

The interviewees were provided with sample questions when an Interview confirmation email was sent to them. This was done 2-4 days in advance to allow then to prepare and think about the topic at hand. This was also a platform that the researcher used to inform the interviewee that the session was recorded. Consent for session recording was also recorded. These interviews were recorded electronically using Microsoft teams recording capabilities as well as on paper in the researcher’s notebook. The aim of recording the interview was to afford the researcher the ability to replay and listen to the interview again post the interview to ensure that they obtain all information from the interview.

Permission to record was obtained with the interviewees prior to start of the interviews. This also included asking for permission to use the interview content.

3.6 Data analysis strategies and interpretation

Interviews, once all the answers have been documented, the researcher identified comparable and contradictory themes. This allowed the researcher to be able to see the comparisons and the contrast in the answers that have been received.

The chosen research method has a tendency for respondents not to be open and truthful which might position itself as a limitation to the accuracy of the study. Additionally, due to the unpredictability of the sample, the research cannot validate the accurate representation of the entire population and the results can change over time (Welman, Kruger, & Mitchell, 2005).

3.7 Quality Assurance

3.7.1 External validity OR transferability

The external validity tests whether the research findings can be generalised to other contexts (Matthias Egger, 2007).

The research met the external validity based on the research sources in the form of interviews from factual sources with verified information. Also, the participants interviewed are industry experts in their fields and making the results credible.

3.8 Ethical considerations

This study adhered to high ethical standards, with ethics clearance obtained from the University of Witwatersrand before data collection. Informed consent was secured from all participants, ensuring they understood the study's purpose and their voluntary involvement. Confidentiality was strictly maintained, with data securely stored on a password-protected laptop and later backed up to the cloud.

4. RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings from the qualitative data analysis in the form of semi-structured interviews with 11 SMMEs involved in the telecommunications transmission rollout projects. The results are presented using tables and themes to facilitate understanding of the interview data that was collected. The most important themes that resulted from the analysis were carefully selected and compared with the current literature and quotes from the research participants in view of answering the research questions proposed in section 1.4 of this report. Below are the questions:

1. What are the key financial, operational and market factors influencing the profitability of SMMEs?
2. How can SMMEs ensure long-term sustainability in the telecom sector?

The following section contain the demographic information of the research participants and the presentation of the study results.

4.2 Demographic information of the research participants

The 11 participants interviewed include both female- and male-led businesses with varying years of experience within the industry as shown in Table 4.1.

Table 4.1: Demographic information of the research participants

Participant ID	**Gender**	**Role in Business**	**Years in Business**	**Industry Sector**	**Geographical Presence**
P1	Male	Founder & Managing Director	4 years	Telecom (Decommissioning switches and installing new switches or	Mpumalanga, KZN, Gauteng
P2	Male	Founder & Managing Director	2 years	Telecom Network provider	Mpumalanga, Gauteng
P3	Female	Founder & CEO	8 years	Telecom Provider of 2G, 3G and 5G connections	Mpumalanga, KZN, Gauteng, Limpopo
P4	Female	Founder & Managing Director	9 years	Telecom Building infrastructure	Mpumalanga, KZN, Gauteng, Limpopo, Free State
P5	Male	Founder and Managing Director	12 years	Telecom Wireless, fibre transmission	Free State, Gauteng

P6	Male	Founder & CEO	8 years	Construction Fiber Optic built and Maintenance	Gauteng, North West
P7	Female	Founder & Head of Operations	2 years	Telecom Installation and maintenance of microwave networks	Mpumalanga, Free State, Limpopo, Gauteng
P8	Male	Founder & CEO	25 years	Telecom Transmission, specialized in the installations of microwave	Eastern Cape, Limpopo, Gauteng, Free State
P9	Male	Founder & CEO	11 years	Telecom Resale of products, maintenance and installation of equipment	Gauteng, Limpopo
P10	Male	Managing Director	4 years	Telecom Network infrastructure roll out	Gauteng
P11	Male	Chief Technology Officer	15 years	Construction of ICT infrastructure such as towers	Mpumalanga, Limpopo, Gauteng

As shown in Table 4.1, the type of businesses in the research participants are mostly telecommunications companies that have been in the industry from 2 years to 25 years. Also, there are two research participants from construction companies that have been in the telecommunications industry for 8 years and 15 years respectively. The activities of the research participants' companies include microwave installation, maintenance and decommissioning and construction of ICT infrastructure such as towers and fibre rollout. In addition, the research participants were inspired to enter the industry because of reasons ranging from personal ambition to vast experience in the industry or sector.

4.3 Presentation of Findings

This section presents the data analysis results and explains the coding and thematic data analysis processes that were utilised.

4.3.1 Thematic data analysis

Fereday & Muir-Cochrane (2006), describe thematic analysis as a method for identifying key themes or concepts within semi-structured qualitative data, such as interviews. This approach involves recognizing patterns in the data, with significant themes serving as categories for qualitative analysis.

Table 4.2 presents the interview questions, literature review subtopics and the themes that came out from the interview data that was collected.

Table 4.2: Interview questions, literature review subtopics and emergent themes

Interview question	Literature review subtopic	Emergent theme
(1) Financial Aspects and Profitability a) What challenges do you face in maintaining consistent cash flow? b) How do you measure profitability and what have your recent financial trends been? c) What is the impact of operational costs (e.g., labour, training, equipment and materials) on your profit margins?	Financial aspects and profitability for SMMEs in the telecommunications industry.Access to finance. Late Payments.Key factors influencing profitability. Efficient time management. Operational costs.	Challenges in maintaining consistent cash flow. Access to finance. Late Payments. Key factors influencing profitability. Efficient time management. Operational costs.
(2) Market and Industry Challenges a) What are the primary challenges facing SMMEs in the telecommunications industry? b) What role does technological advancement play in your ability to remain competitive? c) Are you experiencing any barriers to market entry or expansion?	Market and industry challenges for SMMEs in the telecommunications industry. Access to markets. Changing technology. High competition and gate keeping. Security and safety risks. Talent acquisition and staff retention. Unreliable power supply.	Primary challenges facing SMMES. Access to markets. Changing technology. High competition and gate keeping. Security and safety risks. Talent acquisition and staff retention. Unreliable power supply.
(3) Access to Resources a) How easy or difficult is it to secure financing for your projects? b) Do you receive any support (financial, technical, or regulatory) from the government or private sector? c) How do you approach talent acquisition and retention for skilled labour in telecommunications?	Access to resources for SMMEs in the telecommunications industry. Cash flow. Access to markets. Access to finance. Talent acquisition and staff retention.	Primary challenges facing SMMES. Challenges in maintaining consistent cash flow. Access to markets. Access to finance. Talent acquisition and staff retention.

Interview question	Literature review subtopic	Emergent theme
(4) Risk Management a) What risks do you perceive in the rollout of the telecommunications transmission network? b) How do you mitigate financial and operational risks? c) How has load shedding or unreliable electricity impacted your business operations?	Risk management for SMMEs in the telecommunications industry. Security and safety risks. Mitigating financial and operational risks. Unreliable power supply.	Primary challenges facing SMMES. Security and safety risks. Mitigating financial and operational risks. Unreliable power supply.
(5) Recommendations and Feedback a) In your opinion, what can policymakers or industry leaders do to better support SMMEs in the telecommunications sector? b) What advice would you offer to new SMMEs looking to enter the telecommunications network rollout?	Recommendations to support SMMEs in the telecommunications industry. Government involvement. More dialogue and support from telcos and government.	Recommendations to support SMMEs.

4.3.2 The coding process

The qualitative evaluation used a sample of eleven research participants that comprised of the executive team and entrepreneurs of SMMEs in the telecommunications industry in South Africa. The interview transcripts were uploaded into NVivo 12 (2025), then each interview transcript was read several times and the very useful information were coded into themes using NVivo 12 (2025).

The eleven research participants were identified as Participant 1 to Participant 11 to ensure their privacy as agreed at the start of the study. The coding process resulted in themes that answered the research questions. Table 4.3 shows the code book, there are sixteen nodes or bins that translate to the themes into which information was coded. Also, in Table 4.3, the sources show the number of research participants who spoke about a theme and the references show the total number of comments in connection with a theme made by the different research participants. Further, the description in the code book on Table 4.3 explain the meaning of the themes.

Table 4.3: The code book showing the emergent themes

Name	Description	Sources	References
Contributing Factors to Budgeting	Contributing factors to budgeting	11	92

Name	Description	Sources	References
Challenges in Maintaining Consistent Cash Flow	Challenges in maintaining consistent cash flow	11	69
Access to Finance	A challenge in maintaining consistent cash flow	11	62
Late Payments	A challenge in maintaining consistent cash flow	10	14
Key Factors Influencing Profitability	Key factors influencing profitability	11	50
Efficient Time Management	A key factor influencing profitability	11	34
Operational Costs	A key factor influencing profitability	11	43
Mitigating Financial and Operational Risks	Mitigating Financial and Operational Risks	8	17
Primary Challenges Facing SMMES	Primary challenges facing SMMES	11	72
Access to Markets	A primary challenge facing SMMES	8	21
Changing Technology	A primary challenge facing SMMES	11	37
High Competition and Gate Keeping	A primary challenge facing SMMES	11	54
Security and Safety Risks	A primary challenge facing SMMES	11	40
Talent Acquisition and Staff Retention	A primary challenge facing SMMES	9	32
Unreliable Power Supply	A primary challenge facing SMMES	8	24
Recommendations to Support SMMEs	Recommendations to Support SMMEs	11	36

Source: NVivo 12 (2025)

4.4 Presentation of interview results

4.4.1 Theme 1: Financial Sustainability and Profitability

4.4.1.1 Sub-theme: Revenue streams and profitability

The findings from the interviews show that SMMEs are reliant on multiple streams of income, which would come from different projects that they might be involved in at the time. It is also noted that not all the SMMEs in this sector have the privilege or resources of working on multiple projects at the same time. The key factors that were identified as key drivers of revenue growth were good financial management practices, the efficiencies in delivering the work, cash flow consistency and the use of advanced technologies.

The participants had different inputs into these sub-themes and the findings were that 36% of the participants (four participants 1, 3, 4 and 11) stated that they have other projects that they are involved in and this helps with insuring that their overall operations are sustainable and profitable. Whilst the remainder of the participants indicated that they are only working on one rollout project and have highlighted that they face challenges of remaining sustainable and profitable and this is due to cash flow inconsistencies and lack of additional projects which will present multiple streams of income.

Participant 3: Our financial trends at the moment have been quite stable, if I may say so. We've got a new client, so they've been able to pay timelessly. So, we've been stable in the past six months, but I cannot say the same for prior to that six months.

Participant 10: You know, we've seen that our profits have degraded for about 50%. And that now has led to us in terms of trying to manage the profitability we basically run each team as if it were his own business.

The above data is the snippets of the different views from our participants.

4.4.1.2 Sub-theme: Cost structures and financial constraints

Most participants highlighted high operational costs as a significant challenge that is affecting their profitability and this is due to fixed costs that they have to service every month even when there is limited work available. This then puts pressure on their finances and limits their ability to service the monthly cost and overall sustainability of the business. Some of the costs mentioned include health and safety compliance trainings, fuel, vehicle payments and accommodation from time to time.

Participant 4: So, the work that we get from our clients is not consistent, it's a bit difficult really to plan your cash flows because you know the revenues are sort of unknown.

Participant 3: Well, the operational cost to reduce our profit margins, but all I can say is that they've been consistent and predictable. So at least we're able to budget accordingly and to plan accordingly.

Participant 2: We also have issues with suppliers not sticking to payment terms, whether it be payment in full or timely payments, according to SLAs.

4.4.2 Theme 2: Market challenges and industry barriers

4.4.2.1 Sub-theme: Competitive disadvantages against large companies

The findings from all the participants have shown that the SMMEs are also competing with large companies that have access to capital, are established in the markets and economies of scale. The participants also mentioned that these big companies also get most of the lucrative contracts and make it difficult for the SMMEs to secure these contracts.

4.4.2.2 Sub-theme: Access to funding and investment barriers

Access to funding has been mentioned as a huge issue for SMMEs and 91% of the participants indicated having issues with securing funding. Only participant 4 indicated getting some form of support through supplier development program, but also had issues securing financing from traditional banks. Their failure to access funding varies from stringent collateral requirements, lack of investor confidence and high interest rates.

Participant 4: Yeah, I did from a supplier development program and this is mostly technical if I can call it that. So, they would fund our health and safety certifications for our teams. And now and again they would make funds available for anything that we might need within the business (Marketing sales skills).

Participant 3: It's quite difficult to whether it's approaching the banks, or even approaching the government. I think it's because maybe of our previous financial constraints because they look at your financials and your cash flow and they think you're not a good investment. So that's the major issue.

4.4.2.3 Sub-theme: Market entry barriers

The findings from all the participants indicate that new entrants and existing small businesses find it challenging to secure contracts with big telcos. This is because of limited access to industry networks, high setup costs and their limited national footprint which also restricts their market expansion. Participants also emphasized the difficulty of breaking into market without the necessary financial backing and already established relationships.

4.4.3 Theme 3: Operational risk and sustainability

4.4.3.1 Sub-theme: Workforce development and skills gap

The shortage of skilled labor is a challenge for SMMEs and many participants have indicated the cost burden they have to carry when training their employees as this increases their costs. On the other hand, large companies have the financial resources to invest in employee development and this makes it difficult for SMMEs to attract and retain skilled resources.

Participant 3: We're able to train our staff adequately in order to take advantage of the new opportunities. We'll make sure that we are able to take advantage of that new direction that they're taking or else we are obsolete and irrelevant.

4.4.3.2 Sub-theme: Regulatory compliance

All the participants highlighted the importance of regulatory compliance within this industry and how non-compliance can lead to contract terminations and legal penalties. The other critical compliance issue that was mentioned is the health and safety compliance, these specialized compliances are compulsory for all technicians working in these projects. They also highlighted the lack of regulation within the industry specifically dealing with the relationship between SMMEs and the telcos.

Participant 10: You would know that, for instance, your ICASA is regulating in terms of operators Competition Commission. But there are no clear guidelines in terms of the relationship between the what you call the operators and the suppliers.

Participant 1: I would say the biggest one is standardization and what do I mean by that? Is that if you look at these other industries at the level of the relationship of a supplier and a contractor or investor visa? There's some form of Regulation or standardization in terms of telecommunication, there isn't.

4.4.3.3 Sub-theme: Technological adaptation and digital transformation

The technological adaptation and digital transformation were highlighted as critical within this sector. All participants acknowledged the importance and benefit of technological advancements, as these help achieve operational efficiency and reduction of operational cost in long run. The only barrier they had with the technological adaptation is the associated high adoption costs.

Participant 4: It plays a big role because it helps us to make things a bit more efficient, right? It brings in efficiencies into a business and by bringing in efficiencies you are able to then you know, cut costs. You know that you otherwise have had to maybe hire someone to do a certain job. But because of technology now you don't need to hire that person.

Participant 3: We must constantly be aware of which direction the technology is moving in order to stay relevant. So that we can provide our client with the service that it needs. We're able to train our staff adequately in order to take advantage of the new opportunities.

4.4.3.4 Sub-theme: Infrastructure and power challenges

Majority of the participants highlighted the significant impact of infrastructure and power related changes in their operations. Loadshedding causes disruptions in the network rollout and this leads to project delivery delays and financial losses to the SMMEs. This issue led to SMMEs investing in alternative backup power solutions, which also added to the operational costs. Lack of infrastructure also poses a challenge as it creates logistical difficulties for SMMEs to deploy and maintain the network equipment efficiently.

Participant 9: Then it was really affecting us, but we had to come up with solutions to mitigate the risk of load shedding in terms of getting your generators, making sure that our teams have generators and its things that we had to take them at our cost

Participant 6: I'm honestly speaking because of we work in the field or let me say outside in the field. I haven't had any issues because of most of the machinery that we that we used. It's soft power machines.

4.4.4 Theme 4: Growth Opportunities and future outlook

4.4.4.1 Sub-theme: Business growth strategies

The participants provided various strategies for their future growth and key to this is securing long term contracts, training their employees and the adoption of technologies that will assist with operational efficiencies. Better financial planning, expanding their market reach and getting access to other forms of funding were also mentioned as critical for business growth.

Participant 4: So, if you look at the operators in this space right so they're positioning themselves as technology companies. So, we are also aligning ourselves with that strategy in that we don't want to just box ourselves and say we're a telecoms company

Participant 3: What is your vision? Yeah. More access to market, being able to access platforms like the innovation hub. Be able to access government opportunities in the form of your QCTOs and SITAs, so that's our vision for the future. Being able to work with government and also private sector.

4.4.4.2 Sub-theme: Policy and industry support needs

Participants suggested that the policy makers and the industry leaders must reduce barriers for SMMEs, implement inclusive procurement policies and provide financial assistance programs targeted at SMMEs. They also highlighted the need for government backed initiatives that will promote skill development and technology adoption by the SMMEs.

Participant 3: They've got very good policies on paper, but the implementation side it takes a little bit long.

Participant 7: I think they can provide, you know, easier access to financing, make sure that the smaller companies are supported in terms of finance and offer, you know, technical training programs.

4.4.4.3 Sub-theme: Advice for new entrants

Below are some of the advice that the participants gave:

Participant 4: know your competition because your competition Is not your typical SMMEs it's also the big guys right that are your biggest competition you need to know

Participant 3: I would also say they must diversify, not have all their eggs in one basket. They should try have different sources of income, different sources of revenue from different people in order for them to stay afloat. But the major one is to keep your operations as lean as possible.

Participant 1: My advice would be try knock on different doors and try to upscale yourself with the latest technologies that are on offer and try to get into many vendor Databases as you can and try to work with all different technologies.

Participant 7: Invest in learning and growing in this technology in this industry because it's quite it changes, so you can't be stuck in one place. You need to invest in continuous learning and also prioritize great service delivery to our customers.

Participant 10: The advice I'll offer them basically for me is to start small and when I say small, I mean like very small so that they can understand the industry very well.

Participant 11: Don't try to take everything because you might get everything and I've explained that to raise capital, it's very serious. I mean it's very challenging.

4.5 Conclusion

Chapter 4 has presented the qualitative data analysis results of this study. It explains the thematic and coding processes that were used during the qualitative data analysis. Also, the demographics of the research participants were presented and the emergent themes from the data were compared to the interview questions and current literature. Chapter 5 of this study presents the discussion of research findings.

5. DISCUSSION OF RESEARCH FINDINGS

5.1 Introduction

This chapter focuses on the detailed discussion of the interview results that were obtained from the interviews conducted with SMME participants involved in the rollout of telecommunications transmission network in South Africa. The research questions and the existing literature were utilised in analysing the findings. The discussion is structured around key themes, including profitability, sustainability, challenges and opportunities for SMMEs in the sector.

The interviews were conducted with SMME founders, managing directors, CEOs and chief operations officers operating within various segments of the telecommunications industry. The demographic attributes of the participants, as outlined in Chapter 4, show diversity in terms of gender, years in operation and geographical distribution.

5.2 Profitability of SMMEs in Telecommunications

This section presents the discussion of research findings from the interviews conducted with the SMMEs, with the focus being on the profitability of SMMEs within this sector. The focus will be on what the SMMEs view as key to revenue growth and profitability and challenges when it comes to the their cost structures and financial constraints.

5.2.1 Revenue Growth and Profitability Factors

The research findings have indicated that the profitability of SMMEs within the transmission rollout projects is dependent on the time management and how efficient the installation teams are, consistent cash flow, technology investment and proper financial management. The other finding was based on how important it is for SMMEs to be paid on time and ensuring that they also have other solid contracts to help their revenue growth to maintain constant revenue streams as this will ensure profitability for the SMMEs.

This finding is consistent with Herrington, Kew, & Mwanga (2017) which stated that it is important that SMMEs have multiple streams of income by having multiple service contracts or multiple products and to also maintain a consistent revenue generation. It is also important to ensure that profitability measured using key financial indicators, which include return on investment (ROI), gross profit margin and net profit margin are done regularly as these help assess the business performance.

5.2.2 Cost Structures and Financial Constraints

The high operational costs which compromised of buying of consumables, health and safety compliance, fuel costs, car repayment or rental payment, accommodation on some sites and hiring of skilled labour had a big impact on the profit margin of these SMMEs.

The study found that most of the participants highlighted the fact that these projects are cash intensive with low profit margins and this means that they need to ensure that their teams are highly efficient and can complete a task on that specific day and specified time. The aim is to have a low to no return to site when working on these projects, or else they will be working on a loss or breaking even. They also indicated that the telcos would normally pay for the return to site only if the delay was on the telco's side, if the delays were caused by the contractor they are responsible for that cost. This finding is consistent with Back (2023) which stated that pricing plays a huge role in ensuring that the appointed SMMEs are able to deliver on the installations for the transmission rollout project. SMMEs involved in these projects apply the cost-plus pricing which involves labour, material overheads and the profit margin. The recent activities within the industry have shown that the telcos have been cutting on the installation price, some are offering bundled pricing in an effort to improve their efficiencies and cost management (Back, 2023).

The research also exposed the challenge of access to credit facilities which still remains a major challenge, because many SMMEs businesses are struggling to meet collateral requirements. The participants have indicated that this makes it difficult for them to finance their operations, this affects their ability to expand their operations. This in return also affects their ability to grow their revenue and affects their profile with the companies they doing business with. This finding is consistent with Bowmaker-Falconer & Meyer (2022) which states that access to finance for SMMEs is an obstacle because of stringent lending criteria and the fact that most SMMEs do not or lack collateral. This lack of funds affects their ability to fund their operations and to maintain a healthy cash flow. This has trickling effect as it prevents them from growing their market share and growing their revenue (Bailey, 2018).

5.3 Sustainability of SMMEs in the Telecommunications Sector

5.3.1 Workforce Development and Skills Gap

The participants also highlighted how critical having skilled labour is in their operation and the impact it has on the overall performance of the team. Shortage of skilled labour was identified as a critical challenge, which affects service quality and operational efficiency. They mentioned that they are reliant on external training courses, which increase costs and reduce business agility. Competition with larger corporates for resources was also highlighted. What was said is that bigger corporates have the financial means to develop their employees and be in a position to compete and improve their operational efficiencies. The finding is supported by Nourhan (2024) which states that larger corporates have the budget to offer their employees competitive compensation and benefits Nourhan (2024), they are able to also provide training and professional development for their employees, whilst SMMEs are faced with financial constraints which prevent them from offering all these benefits (Nourhan, 2024).

5.3.2 Regulatory Compliance

The participant highlighted the critical importance of the regulatory compliance and the challenges they face with non-compliance, one being unable to carry out any projects and having their contracts terminated due to non-compliance. Also many SMMEs are facing bureaucratic challenges in obtaining licenses and meeting environmental standards. This finding is also supported by Treasury (2021) which states that Licensing & Legal Requirements is key in the telecoms operations as it governs and regulates the infrastructure space. A company and its employees being non-compliant with the industry regulations can lead to not being allowed to carry out any work until they are compliant. Working without being compliant can lead to project terminations, penalties and legal action being taken against you. Always seek counsel by engaging legal experts to ensure compliance is adhered to and that any regulatory changes are implemented (Treasury, 2021).

Participants also mentioned that the other critical aspect to compliance in this industry was health and safety compliance. They indicated that each of their technicians need to have certain health and safety competency certificate for them to be approved to work in the rollout projects. These competencies are a form of training to technicians on the scope of work they will be delivering on. This finding is also consistent with Meyer (2019) who states that Health and Safety Compliance is also key when working in telecoms because infrastructure builds involves high safety risks. Technicians work on heights and use power tools, so it is important to adhere to occupational health and safety standards by providing competency training and ensuring the use of protective equipment that can prevent accidents and liabilities.

5.3.3 Technological Adaptation and Digital Transformation

The research findings have indicated how important technological adaptation and digital transformation is to the SMMEs. They indicated that they need to always have the latest technological skills through forms of training, because this gives them a competitive edge over their competitors and increases their chances of securing new projects from the telcos. Findings also showed that investing in modern telecommunications technologies improves their operational efficiency and reduces their future operational costs, but the challenge that still remains is the high associated costs of technological adoption. These finding are also supported by Malinga (2024) which states that the other challenge faced by SMMEs with this industry are the changes in technology which directly impacts their competitiveness and growth. The challenge is that the technology adoption that they need to go through to help improve their operations is costly and is a barrier to improving the efficiency of their operations (Malinga, 2024). This also highlights the importance of providing digital skills training for SMMEs and their employees, because this training becomes critical in them being able to implement and utilise these new technologies. Malinga (2024) states that 32% of these SMMEs lack the necessary digital skills training and this becomes hinderance to their ability to fully leverage on this new technology.

5.4 Challenges Faced by SMMEs in Telecommunications

5.4.1 Competitive Disadvantages Against Large Corporations

The participants mentioned that SMMEs struggle to compete with large companies that dominate the sector due to better access to capital, established market presence and economies of scale. The NVivo analysis showed that " High Competition and Gate Keeping " was a recurrent theme among respondents. This finding is supported by Wijnberg (2024) who states that high competition and gate keeping by large corporations within the industry is also one of the challenges for SMMEs, as this leads to limited opportunities for the SMMEs because more lucrative projects and contracts are won by larger corporations. This also adds to the challenge of SMMEs being able to expand their operations and market reach.

5.4.2 Access to Funding and Investment Barriers

The majority of the participants state that SMMEs limitation to access funding remains a major constraint. This is attributed to high-interest rates that financial institutes charge, stringent collateral requirements and a lack of investor confidence preventing SMMEs from accessing funding and scaling their operations. This finding is supported by Bowmaker-Falconer & Meyer (2022) which states that access to finance for SMMEs is an obstacle because of stringent lending criteria and the fact that most SMMEs do not or lack collateral. This lack of funds affects their ability to fund their operations and to maintain a healthy cash flow, it has trickling effect as it prevents them from growing their market share and growing their revenue (Bailey, 2018).

5.4.3 Market Entry Barriers

Many new entrants and existing SMMEs looking to secure new projects face significant obstacles, including high setup cost requirements and difficulty securing contracts with major telecom companies. This is what the participants highlighted and this finding is supported by Rhyn (2024) who states that SMMEs within the telecommunications industry have a challenge of access to markets and this can be attributed to the their limitation to resources and networks. Only 20% of these companies have national footprint in terms of their operations. The fact that most of these companies are limited in terms of their market reach contributes to their failure to reach the broader market.

5.5 Conclusion

This chapter analysed the study's findings in relation to existing literature and industry practices, this was done with the guidance of the research questions in chapter one. The findings in this research study were similar to what was found in the literature review in chapter two of this report. The study concludes that while SMMEs play a vital role in the telecommunications industry, their profitability and sustainability are hindered by financial constraints, regulatory challenges and market competition. Addressing these barriers through improved financing mechanisms, policy reforms and strategic innovation is essential for enhancing the growth of SMMEs in the telecom sector. The next chapter will provide recommendations and conclusions based on these insights.

This chapter has discussed the research findings in relation to the study's primary objectives and research questions. The findings addressed the first research question by identifying key financial, operational and market factors influencing the profitability of SMMEs—namely, effective time management, timely payments, cash flow stability and the impact of operational costs. The second research question, concerning long-term sustainability, was explored through themes such as workforce development, compliance with regulations and adaptation to technological change. These insights also directly aligned with the study's objectives: to assess the profitability of SMMEs, examine their sustainability challenges and to derive strategic recommendations. The study reveals that while SMMEs hold strategic importance in the telecom sector, they face significant constraints such as funding limitations, regulatory hurdles and market entry barriers. Addressing these through targeted policy support, improved access to capital and upskilling will be vital for strengthening their role in the telecommunications industry.

6. CONCLUSIONS & RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the key findings from the study on the profitability and sustainability of South African SMMEs in the rollout of telecommunications transmission networks. It also provides conclusions based on the research objectives and highlights recommendations for policymakers, industry stakeholders and SMMEs.

6.2 Key Conclusions

In conclusion SMMEs in the South African telecommunication transmission rollout projects play a critical role in economic development of the country and also plays a major role in job creation. It is however evident that their sustainability and profitability within this sector is influenced by various external and internal factors. The cost-plus pricing strategy that is normally applied by SMMEs within this sector has its own challenges due to fluctuating operational cost and competition, this plays a role in the profitability and sustainability of SMMEs.

SMMEs also face various challenges within the industry, this includes limited access to markets, financial constraints, technological barriers and regulatory complexities. The issue of access to finance due to stringent lending requirements and delayed payments from the clients contribute to the cash flow challenges, this makes it difficult to keep the operations running or grow the business.

The market and industry challenges faced by SMMEs which include competition from large corporations, changes in technology, unreliable power supply and security threats also contribute to their failure to compete effectively and grow the business.

The regulatory environment which includes licensing and health and safety compliance are also a challenge that SMMEs need to navigate through and ensure that they avoid legal challenges, penalties or project terminations.

The porters five forces model and the resource-based view theoretical frameworks gave an insight into how SMMEs can improve their competitiveness. Being able to have a full understanding of the competitive forces within the industry, adoption of innovative strategies and leveraging on their unique capabilities can help them have a sustainable and profitable business. The ability of SMMEs adjusting to changes in market conditions, implementing effective operational and financial strategies can almost guarantee them of success in the industry.

6.3 Recommendations

- Diversification of revenue streams for SMMEs is key, they need to strengthen their partnerships with their clients to ensure financial stability.

- Government should ensure that government- backed financial support programs are more accessible to telecom SMMEs.
- Transparency and simplification of regulatory processes can improve compliance rates among SMMEs.
- Procurement policies should be inclusive to help improve opportunities for SMMEs.
- Rules that promote fair competition and make it easier for new businesses to enter the market can boost diversity and innovation in the industry.
- Business incubators and mentorship programs can guide small businesses in overcoming challenges.
- Encouraging the use of alternative energy sources can help reduce problems caused by power shortages.
- The telcos should have regular meetings with SMMEs to better understand their challenges and together come up with solutions that will be mutually beneficial.

6.4 Limitations of the study

Even though this study provides valuable insights into the profitability, sustainability and risk management of SMMEs in the South African telecommunications sector, it is subject to certain limitations:

Sample size and scope was one limitation that this study had, because only eleven participants were interviewed. The focus was on a specific group of SMMEs who are within the telecommunications industry, this narrow focus does not cover the entire or majority view of the industry which in turn makes it impossible to generalise the data collected from the 11 participants.

To navigate the limitation of a small sample size, the study made use of a purposeful sampling method to ensure that only participants with relevant experience in the telecommunications sector were selected. Semi-structured interviews were conducted to allow for in-depth insights to be gathered from each participant. Although only eleven individuals were interviewed, data saturation was reached, meaning that no new information was emerging, which indicated that the responses were sufficient for the purpose of the study. The focus on black-owned SMMEs further allowed for targeted analysis within a defined context, the findings were compared with existing literature to support the credibility of the study.

The second limitation was that the study utilised the qualitative approach in a form of interviews to collect the data, this type of approach tends to have a subjective biasness because the data provided is based on individual experiences.

The third limitation was the time constraints given for collection and analysis of the data, this meant that the data collected was restricted. The period also when the interviews were conducted also presented availability challenges on the side of the SMMEs as they were preparing to close off the year.

The fourth limitation was lack of detailed financial data of the SMMEs, this was due to confidentiality concerns. This meant that an in-depth financial analysis could not be performed, denying an opportunity for the research to go deeper into the profitability and cash flow management of the SMMEs.

Lastly, the fifth limitation was the limited racial representation as the study only had black owned SMMEs. Even though the participants provided insights into the black entrepreneur experiences it however lacked representation and experiences of other racial SMME groups.

Despite these limitations, the study provides a strong foundation for future research to expand on emerging risks, regulatory dynamics and quantitative financial performance metrics of SMMEs in the industry.

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Appendix 1 - Interview Guide - SMMEs operating within the telecommunication transmission rollout projects

1. General Background

- Can you provide an overview of your business and its role in the telecommunications transmission network rollout?
- How long have you been operating in this sector and what inspired you to enter this market?

2. Financial Aspects and Profitability

- What challenges do you face in maintaining consistent cash flow?
- How do you measure profitability and what have been your recent financial trends?
- What is the impact of operational costs (e.g., labour, training, equipment and materials) on your profit margins?

3. Market and Industry Challenges

- What are the primary challenges facing SMMEs in the telecommunications industry?
- What role does technological advancement play in your ability to remain competitive?
- Are you experiencing any barriers to market entry or expansion?

4. Access to Resources

- How easy or difficult is it to secure financing for your projects?
- Do you receive any support (financial, technical, or regulatory) from the government or private sector?
- How do you approach talent acquisition and retention for skilled labour in telecommunications?

5. Risk Management

- What risks do you perceive in the rollout of the telecommunications transmission network?
- How do you mitigate financial and operational risks?
- How has load shedding or unreliable electricity impacted your business operations?

6. Future Outlook

- What is your vision for the future of your business in the telecommunications industry?

7. Recommendations and Feedback

- In your opinion, what can policymakers or industry leaders do to better support SMMEs in the telecommunications sector?
- What advice would you offer to new SMMEs looking to enter the telecommunications network rollout?