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SCHOOL OF ENGINEERING

ASSESSING THE IMPACT OF A MANAGED SERVICES MODEL ON
ORGANISATIONAL PERFORMANCE IN THE ZAMBIAN TELECOMMUNICATIONS
INDUSTRY.

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A report submitted to the University of Zambia in partial fulfilment of the
requirements for the award of the Master of Engineering degree in
Engineering Management

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DECLARATION

I declare that this research is my own work. Where collaboration with other people has taken place or material generated by other researchers is included, the parties and/ or materials are explicitly stated with references as appropriate.

This work is being submitted for the Master of Engineering degree in Engineering Management at the University of Zambia. It has not been submitted to any other university for any other degree or examination.

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CERTIFICATE OF APPROVAL

This dissertation by **JEREMIAH NJOBVU** entitled ‘**ASSESSING THE IMPACT OF A MANAGED SERVICES MODEL ON ORGANISATIONAL PERFORMANCE IN THE ZAMBIAN TELECOMMUNICATIONS**’ is approved as partially fulfilling the requirements for the award of the degree of Master of Engineering in Engineering Management of the University Zambia.

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DEDICATION

To my wife Chisala Chikopyo and our sons Kondwani, Tokozani and Chisala, this report is a testament to the unwavering love, encouragement, and understanding you have provided me with throughout this challenging academic endeavor. Your presence in my life has been the anchor that kept me grounded, motivated and focused during the countless hours of research, writing and contemplation.

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ABSTRACT

The telecommunications industry in Zambia has experienced rapid growth, leading to increased competition and operational complexities for telecommunication companies. In response, many firms have adopted the Managed Services Model (MSM) as a strategic approach to enhance their organizational performance. This study aims to assess the impact of the MSM on organizational performance in the Zambian telecommunications industry, focusing on four key variables: cost efficiency, improved focus on core competencies, access to human resources, and access to modern technologies. A descriptive research design with a quantitative research approach was employed for this study. A sample size of 224 participants from various telecommunication companies in Zambia was surveyed, and data was collected using structured questionnaires. The study investigated the relationships between the aforementioned variables and organizational performance. The results of the study revealed a positive and significant correlation between the four variables (cost efficiency, improved focus on core competencies, access to human resources, and access to modern technologies) and organizational performance in the Zambian telecommunications industry ($p < 0.05$). This study demonstrates that the Managed Services Model has a significant positive impact on organizational performance in the Zambian telecommunications industry. The variables of cost efficiency, improved focus on core competencies, access to human resources, and access to modern technologies were all found to be positively and significantly related to organizational performance. These findings suggest that adopting the MSM is a viable strategy for telecommunication companies seeking to enhance their overall performance, improve financial outcomes, and maintain competitiveness in a dynamic industry landscape. The implications of this research are valuable for telecommunication industry stakeholders, including company executives, policymakers, and investors, as it provides insights into the benefits of implementing the MSM. Furthermore, the study highlights the importance of strategic outsourcing in optimizing resources and leveraging external expertise to achieve superior organizational performance.

Key Words: Managed Service Model, Cost Efficiency, Access to Human Resources, Access to Modern Technology, Organisational Performance, Telecommunications

TABLE OF CONTENTS

COPYRIGHT.....	i
DECLARATION.....	ii
CERTIFICATE OF APPROVAL	iii
ACKNOWLEDGEMENT	iv
DEDICATION	v
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xii
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv
CHAPTER 1: INTRODUCTION	1
1.1 Introduction to the Study	1
1.2 Background	3
1.2.1 Telecommunication Industry in Zambia	3
1.2.2 TowerCo Services Market	5
1.2.3 Data Centre Services Market.....	6
1.3 Research Problem.....	6
1.4 Research Objectives	7
1.5 Research Questions	8

1.6 Significance of the Study	8
1.6.1 Academic Significance:	8
1.6.2 Policy Makers/Government:.....	9
1.6.3 Telecommunication Industry:.....	9
1.7 Scope of the Study.....	10
1.8 Assumptions of the Study.....	10
1.9 Organisation of the Research	10
1.10 Chapter Summary.....	11
CHAPTER 2: LITERATURE REVIEW	12
2.1 Introduction	12
2.2 Outsourcing in Organizations	12
2.3 Organizational Performance	13
2.3.1 The Balanced Score Card.....	14
2.4 Outsourced Services Model	19
2.5 Managed Services Business Model Options	25
2.5.1 Staff Augmentation Model.....	25
2.5.2 Out-Tasking	25
2.5.3 Project Based Outsourcing.....	26
2.5.4 Managed Services	26
2.6 Outsourcing and Organizational Performance.....	26
2.7 Conceptual Framework on Factors Influencing Implementation of Outsourcing	28
2.7.1 Cost Efficiency	29
2.7.2 Access to Human Resource.....	31
2.7.3 Improved Focus on Core Competencies	31
2.7.4 Access to Modern Technology and Expertise.....	32

2.8 Empirical Studies	33
2.9 Literature Gap.....	35
2.10 Chapter Summary.....	35
CHAPTER 3: RESEARCH METHODOLOGY.....	36
3.1 Introduction	36
3.2 Research Philosophy.....	36
3.2.1 Epistemological assumptions	36
3.2.2 Ontological Assumptions.....	37
3.2.3 Phenomenological Assumptions	37
3.2.4 Axiological Assumptions.....	38
3.3 Research Design.....	38
3.4 Target Population	39
3.5 The Sample Size	39
3.6 Sampling Technique	40
3.7 Data Collection	40
3.7.1 Primary Data	40
3.8 Reliability and Validity	41
3.9 Data Analysis.....	41
3.10 Ethical Considerations	42
3.11 Summary of the Chapter	42
CHAPTER 4: DATA ANALYSIS, RESULTS AND DISCUSSION	43
4.1 Introduction	43
4.2 Response Rate.....	43
4.3 Demographic Results.....	43

4.4 Preliminary Statistical Checks	44
4.4.1 Tests for Normality, Outliers, and Missing Values	44
4.4.2 Factor Analysis Results	45
4.4.3 Assessment of Collinearity	48
4.5 Descriptive Analysis.....	48
4.6 Correlation Analysis	49
4.7 Regression Analysis	50
4.7.1 Model Summary	51
4.7.2 Regression Coefficients.....	51
4.8 Discussion of Findings.....	52
4.8.1 Cost Efficiency	53
4.8.2 Improved Focus on Core Competencies	56
4.8.3 Access to Human Resources	58
4.8.4 Access to Modern Technology and Expertise.....	61
4.9 Chapter Summary.....	66
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS	67
5.1 Introduction	67
5.2 Results Summary	67
5.3 Conclusions of the Study.....	69
5.4 Findings Implications	70
5.4.1 Cost Efficiency	70
5.4.2 Access to Human Resources	70
5.4.3 Improved Focus on Core Competencies	71
5.4.4 Leveraging Modern Technology.....	72
5.4.5 Overall Organizational Performance	72

5.5 Recommendations of the Findings.....	73
5.6 Areas for Future Studies.....	74
5.7 Chapter Summary.....	Error! Bookmark not defined.
REFERENCES.....	77
APPENDICES	88
Appendix 1: Research Questionnaire	88
Appendix 2: Normality Test, Missing Values, Descriptive Statistics	91
Appendix 3: Communalities.....	92
Appendix 4: Reliability Tests – Cronbach’s Alpha	94
Appendix 5: Multicollinearity Analysis	98
Appendix 6: Ethical Clearance.....	99

LIST OF TABLES

<i>Table 4. 1: Demographic Profile</i>	<i>44</i>
<i>Table 4. 2: KMO and Bartlett's Test of Sphericity.....</i>	<i>45</i>
<i>Table 4. 3: Factor Loading.....</i>	<i>47</i>
<i>Table 4. 4: Reliability Test Results.....</i>	<i>48</i>
<i>Table 4. 5: Description Analysis.....</i>	<i>49</i>
<i>Table 4. 6: Correlation Analysis Results.....</i>	<i>50</i>
<i>Table 4. 7: Model Summary</i>	<i>51</i>
<i>Table 4. 8: Regression Coefficient.....</i>	<i>52</i>

LIST OF FIGURES

<i>Figure 1. 1 TowerCo Sector Players by Q2-2022: (Source- ZICTA 2022 Mid-year Report)</i>	<i>6</i>
<i>Figure 2. 1: The Balanced Scorecard Model: (Source: Kaplan and Norton 1992)</i>	<i>16</i>
<i>Figure 2. 2: Drivers of Managed Services Model: (Source: (Ericsson, 2007).....</i>	<i>23</i>
<i>Figure 2. 3: Summary of Outsourcing Models: (Source: Manish and Rohini 2007).....</i>	<i>26</i>
<i>Figure 2.4: Conceptual Framework.....</i>	<i>28</i>

LIST OF ABBREVIATIONS

5G	Fifth Generation
ABC	Activity-Based Costing
AI	Artificial Intelligence
APIs	Application Programming Interfaces
BSM	Balanced Scorecard Model
BST	Bartlett's Test of Sphericity
CAPEX	Capital Expenditure
CAR	Cost Affected Reductions
CMMI	Capability Maturity Model Integration
DSP	Digital Services Providers
EPS	Earnings Per Share
EVA	Economic Value Added
HR	Human Resources
HTG	Helios Towers Ghana
IBM	International Business Machines
ICT	Information and Communication Technology
IT	Information Technology
ITO	Information Technology Outsourcing
KMO	Kaiser-Meyer-Olkin
KPI	Key Performance Indicators
MNO	Mobile Network Operator
MSM	Managed Services Model
OLA	Operational Level Agreement
PTC	Post and Telecommunication Corporation
OPEX	Operating Expenditure

QoS	Quality of Service
ROI	Return On Investment
SLA	Service Level Agreement
SPSS	Statistical Package for Social Sciences
TQM	Total Quality Management
VIF	Variance Inflation Factors
ZAMTEL	Zambia Telecommunications Company
ZICTA	Zambia Information and Communication Technology Authority

CHAPTER 1: INTRODUCTION

1.1 Introduction to the Study

Transferring value chain activities to an expert service provider. This is not a new phenomenon as companies have been outsourcing services such as facilities maintenance, provision of catered food to employees, sanitary services and so on, for decades. The trend has continued in all industry verticals, and telecommunication industry has been no exception (Patil & Patil, 2014).

Telecom operators have outsourced IT management in addition to various other parts of networks and operations. The market pressure on the Telecom operators to improve bottom line, network performance, competence needs, and rapid changing business environment has led the operators to adopt managed services at different levels in their operation (Ismail & Islam, 2021).

However, successful outsourcing requires a holistic and comprehensive strategy toward managing outsourced operations, which includes contract management, vendor governance, and risk management (Wiengarten, Pagell, & Fyness, 2013). Business leaders who outsource may reap benefits, such as reduce costs; improve productivity; and gain new capabilities, innovation, and flexibility (Marchewka & Oruganti, 2013). Wiengarten et al. (2013) argued that business leaders commonly applied both cost and quality performance metrics to measure outsourcing success. Moreover, the cost metrics were easier to measure because quality parameters were highly subjective in nature (Hopwood, 2018).

There have been some studies carried out on the impact of outsourcing on the quality of service and operations of Telecommunication industry worldwide. These include the study by Esonwune, (2010) which explored the pros and cons that exist in the adoption of Managed Services Model by the mobile telecommunication operators in sub-Saharan Africa. The study assessed managed services implementations in Nigeria, assessed the arguments in favour and against it and drew conclusions regarding the best practice in that part of the world. The outcome of the study indicated that the reason behind the adoption of managed services is cost reduction, access to skilled manpower, better focus on core business, quality improvements, and competitive advantage. The study also established that increasing unemployment rate, diminished local competence and expertise, and security concern were among the top reasons for the call against the adoption of Managed Services Model.

Magede, (2012) analysed the current outsourcing approach to suggest the best form of outsourcing for Liquid Telecom Zimbabwe to achieve competitive advantage. The primary focus of the study was to recommend good outsourcing strategy and highlight issues to consider in coming up with a workable outsourcing strategy for a telecommunications organisation in Zimbabwe. The study did not find sufficient evidence to support the hypothesis that the outsourcing approach at Liquid Telecom was a source of sustainable competitive advantage. The outsourcing approach did not improve Liquid Telecom service delivery, and this was heavily impacted by the lack of expertise amongst the crop of contractors engaged by Liquid Telecom.

Al-Debei & Avison, (2011) researched on the business model requirements and challenges in the mobile telecommunication sector. The study concluded that business models need to be flexible in this turbulent and highly competitive industry. It is significant that services are delivered in a flexible and dynamic manner to the diverse customers of Mobile Network Operators (MNOs) while achieving quality of service (QoS) measures. The QoS parameters, such as transmission speed of services, their availability, usability, precision, coverage and reliability, along with security and privacy, are crucial to any MNO.

Kalondu, (2013) looked at outsourcing customer service as a strategy in managing telecommunication company in Kenya. The study concluded that reduction of operational costs influences a company's decision to outsource customer services. When outsourcing, telecommunication companies need to consider the following factors: work force management, sound management, special knowledge, outsourced employee motivation, outsourced customer partner capabilities, customer satisfaction and outsourced partner relationship.

Patil & Patil, (2014) study provided a detailed review on outsourcing IT management and explored the relevance to the telecom operations. It was observed that the basic set of parameters influencing the decision of outsourcing was the same as the rest of the industry.

Hopwood (2018) study focussed on effective strategies for managing the outsourcing of Information Technology. The study revealed that vendor governance and oversight, collaboration, and risk management strategies, contributed to effective management of the Information Technology Outsourcing (ITO) process, leading to reduced cost and improved performance for an organization. Business leaders, managers, and analysts must understand the roles they play regarding managing the ITO process to yield a favourable business outcome.

When business leaders identify and execute appropriate outsourcing strategies to manage the ITO process, the bottom line is positively impacted.

Ndungu, (2015) research was aimed at determining the effect of outsourcing practices on performance of Airtel and Orange Companies of Kenya. The results of the study showed that outsourcing brought many benefits to the performance of the companies as compared to the challenges. Product knowledge, cost reduction and skill availability were the key drivers for many outsourcing decisions which as well apply to outsourcing in the Telecommunication sector. The findings of the study were relevant to management as it would enable the management of Airtel and Orange to know the influence that outsourcing had on the overall company performance. The research recommended that before outsourcing is implemented, the entire organizational strategy should be considered. Once organizational strategy is aligned, then suitable measures and objectives can be bound into the contract, or the Service Level Agreement (SLA) entered between the client and the service provider.

Ahmed, Vveinhardt, & Ahmad, (2014) researched on the impact of outsourcing in Telecommunication businesses in Pakistan. The report, revealed that “core competencies, together with outsourcing practices, were found to vary according to the size of the manufacturing firm. It must be admitted, however, that more comprehensive research on outsourcing, in the field of telecommunication of Pakistan in particular, had not been adequate which partly limited the business and cooperation development in both domestic and international markets.

From the available literature on managed services model, no studies have been done on the Zambian telecommunication industry. Therefore, there is no information on how the model is impacting the Zambian telecommunication industry.

The popularity and growth of outsourcing in terms of its importance to organizations need further studies and analysis. To assume that outsourcing leads to long-term benefits with respect to increasing competitiveness and capabilities of subcontracting companies, is probably valid for certain business organizations, but others may experience the opposite.

1.2 Background

1.2.1 Telecommunication Industry in Zambia

From independence, the telecoms industry in Zambia had been dominated by the state-owned company Zambia Post and Telecommunication Corporation (PTC). In 1991 the new

government embarked on liberalisation ideologies in which it assumed the role of facilitator in most sectors of the economy, including the telecommunication sector.

As such, the enactment of the Telecommunications Act (“Telecommunications Act,” 1994) in 1994 led to the splitting up of PTC into two separate companies: the Zambia Postal Services Corporation (Zampost), and the Zambia Telecommunications Company (Zamtel). Zamtel, a product of liberalisation, remained the sole entity responsible for transmitting outbound and inbound international data traffic as well as being in control of the country's international gateway (Zimba, Mbale, Chishimba, & Chibuluma, 2020). Zimba, et al (2020) stressed that this meant that all data traffic to the Internet had to go through Zamtel. This inherently gave Zamtel a monopolized competitive advantage. Although the international gateway had not yet been liberalized, it was in this same year that Zambia became the first sub-Saharan African country to have Internet connectivity after South Africa.

In 1994, Zamtel was the first Zambian telecoms company to provide mobile phone services. Traditionally, Zamtel (PTC) had been offering landline phone services. The year 1995 saw the entry of a private player (TELECEL, now MTN) into the telecoms industry. This entry was a result of the continued economic reforms commenced in 1991, the first since the famous “Mulungushi Reforms” of 1968 which had centred on nationalisation of various industries, telecoms industry included (Kaira, 2011).

Airtel Zambia, formerly Zamcell (and later CELTEL), finally entered the Zambian market as a third mobile cellular service provider in 1997.

Operators in the telecom industry are digitally transforming to become Digital Services Providers (DSP) and are therefore stepping out from owning tower infrastructure. DSPs are focusing more on driving innovation that brings convenience to the customer through smart digital services orchestrated in partnership with other players in the industry ecosystem. In 2015, the cell towers owned by the private mobile firms MTN Zambia and Airtel Zambia were sold to a third-party tower company called IHS Towers, while Zambia Telecommunication Ltd (Zamtel) and Zambia Information and Communications Technology Authority (ZICTA) retained ownership of theirs (Chihana, 2018). According to Chihana, (2018), the tower company is an independent telecommunication player, not a mobile operator, and provides services consequently allowing MNOs to focus on core businesses such as improving quality of service and market penetration rather than managing infrastructure. This becomes an advantage for the operator because it provides an opportunity to increase coverage and capacity

quickly without bearing additional operational risk or long-term capital requirements and cost at first roll-out.

1.2.2 TowerCo Services Market

TowerCos provides shared telecommunications infrastructure services to MNOs and other customers, who in turn provide wireless voice, data and fibre access services to their end users and subscribers. They offer a wide range of infrastructure solutions to meet customers' requirements, from building new towers to leasing space on existing structures.

The Tower Infrastructure market in Zambia was dominated by one player IHS Holdings Limited until the year 2019 when INFRATEL was operationalised. IHS as at the end of quarter 2 of 2022, reportedly owned about 1800 towers in Zambia for provision of Tower colocation services by the ZICTA Mid-Year ICT Sector Performance Report 2022. Its anchor tenants are MTN and Airtel, the top two MNOs in Zambia. INFRATEL owns and operates over 1200 towers across the country.

IHS enjoyed dominance in the Tower Infrastructure market since 2014 when the two MNOs offloaded majority of their towers to the company to focus on their core businesses. IHS has a competitive advantage over other Operators in the sector because of first entry into the market and ownership of a total complement of towers offloaded by the two Mobile Operators.

Some Government institutions such as ZESCO, the Ministry of Defence and the Ministry of Home Affairs own tower infrastructure for their operations. ZICTA also owns tower infrastructure which is offered to MNOs for free as the towers were constructed using Universal Access and Service Fund which exists to promote access to communication for all in the unserved and underserved areas of Zambia.

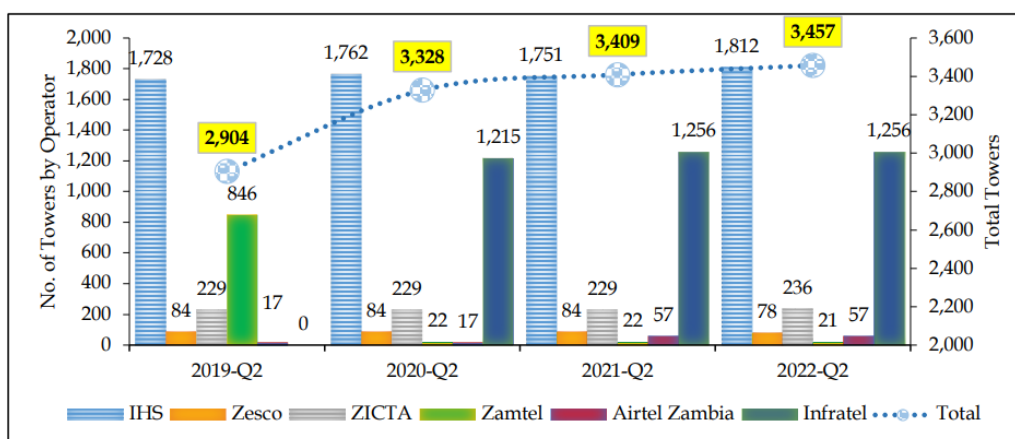


Figure 1. 1 TowerCo Sector Players by Q2-2022: (Source- ZICTA 2022 Mid-year Report)

1.2.3 Data Centre Services Market

According to ZICTA's 2022 mid-year report, INFRATEL and NetOne are co-dominant data centre players in Zambia, however, multinational entities have penetrated the market to provide services to retail and enterprise customer verticals. The multinational entities include Amazon Web Services, Microsoft Azure Public Cloud Service, Alibaba Cloud, VMware, Google Cloud, Rackspace, Digital Ocean and Africa Data Centers.

INFRATEL provides colocation, virtual machine and storage, physical server renting and other enterprise data centre services. The Data Centre market in the country is relatively small, however, the growing digital transformation among private and public institutions provides great potential for growth. Emerging data centre services such as data analytics through open Application Programming Interfaces (APIs) are also showing an upward trend in uptake.

1.3 Research Problem

In recent years, the telecommunications industry has witnessed a paradigm shift towards adopting managed services model as a strategic approach to managing and enhancing operational efficiency. This transition is particularly pronounced in emerging economies like Zambia, where the telecommunications sector plays a pivotal role in facilitating economic growth and technological advancement. The telecommunications industry in Zambia has witnessed significant growth and development in recent years, driven by technological advancements and increasing consumer demand for reliable and efficient communication services. As part of this growth, telecommunication companies have been exploring various

business models to enhance their service offerings and operational efficiency. One such model is the Managed Service Model (MSM).

The MSM involves outsourcing certain operational functions, such as network maintenance, Telecommunication Tower maintenance, customer support, and IT management, to specialized third-party service providers. While this approach offers potential benefits, its implications for the organizational performance of telecommunications companies in Zambia remain inadequately explored. A number of telecommunication companies have adopted MSM to improve their operations in Zambia, however, no study has ever been conducted within the Zambian context to determine the specific effects of managed services on company performance.

The research problem at hand centres around understanding and assessing the impact of the managed services model on the organizational performance of telecommunication companies operating in Zambia. The managed services model presents a shift from traditional in-house management practices, and its effects on key performance indicators such as operational efficiency, cost management, customer satisfaction, innovation, and overall competitive positioning require rigorous investigation. As Zambia strives to expand its telecommunication infrastructure to support socio-economic development, it is essential to comprehensively comprehend whether the adoption of managed services positively or negatively influences these critical performance dimensions.

Failure to conduct a comprehensive study on the impact of the managed services model in Zambia's telecommunications sector may result in negative outcomes. Without proper investigation, companies may adopt the model blindly, leading to inefficient resource allocation, reduced operational efficiency, and potential harm to customer satisfaction. Additionally, the lack of understanding could hinder innovation and competitiveness, ultimately impeding the sector's ability to support socio-economic growth and technological advancement. Therefore, conducting necessary research is crucial to inform decision-making and ensure sustainable development in Zambia's telecommunication infrastructure.

1.4 Research Objectives

The objectives of the study include:

1. To identify the factors that influence the implementation managed service model in the telecommunication industry in Zambia.

2. To determine the impact of managed service model on the organization performance in the telecommunication industry.
3. To proffer recommendations on the successful implementation of managed service model.

1.5 Research Questions

In line with the objectives, the study attempts to answer the following questions:

1. What are the factors that influence the implementation managed service model in the telecommunication industry in Zambia?
2. What is the impact of managed service model on the organization performance in the telecommunication industry?
3. What are recommendations on the successful implementation of managed service model?

1.6 Significance of the Study

The research on the impact of outsourcing on organizational performance in the telecommunication industry in Zambia holds significance for academia, policy makers, government entities, and telecommunication companies. It fills a research gap, contributes to theoretical development, informs policy formulation, promotes economic development, facilitates strategic decision making, drives performance improvement, and supports risk management efforts within the industry. In details, the following sections highlight the respective significance:

1.6.1 Academic Significance:

1. Filling the Research Gap: There is a limited body of literature specifically focusing on the impact of outsourcing on organizational performance in the telecommunication industry in Zambia. By addressing this research gap, the study contributes to the existing knowledge base and enhances our understanding of outsourcing dynamics in the context of the Zambian telecommunication sector.
2. Advancing Theory: The findings of this research can contribute to the theoretical development of outsourcing and organizational performance literature. It can help refine existing theories and propose new frameworks or models that capture the unique challenges and opportunities faced by telecommunication companies in Zambia when implementing outsourcing strategies.

1.6.2 Policy Makers/Government:

1. **Policy Formulation:** The findings of this study can assist policy makers in formulating effective policies and regulations that govern outsourcing practices in the telecommunication industry. It can provide insights into the potential benefits, risks, and challenges associated with outsourcing, enabling the government to develop guidelines that promote sustainable outsourcing practices and protect the interests of all stakeholders involved.
2. **Economic Development:** Understanding the impact of outsourcing on organizational performance can contribute to the economic development of Zambia. By identifying the factors that enhance or hinder organizational performance through outsourcing, policy makers can create an enabling environment that attracts foreign investments and encourages domestic companies to engage in outsourcing partnerships, thereby fostering growth and competitiveness in the telecommunication sector.

1.6.3 Telecommunication Industry:

1. **Strategic Decision Making:** The findings of this study can assist telecommunication companies in Zambia in making informed strategic decisions regarding their outsourcing initiatives. It can help them assess the potential benefits and risks associated with outsourcing and develop effective strategies for selecting and managing outsourcing partners to enhance their overall performance.
2. **Performance Improvement:** Understanding the relationship between outsourcing and organizational performance can help telecommunication companies identify areas for improvement. By gaining insights into the factors that influence performance outcomes, companies can optimize their outsourcing processes, enhance operational efficiency, improve service quality, and ultimately achieve better financial performance and competitiveness in the market.
3. **Risk Management:** The research can provide valuable insights into the risks and challenges associated with outsourcing in the telecommunication industry. By understanding these risks, companies can develop risk management strategies to mitigate potential negative impacts on organizational performance, ensuring the smooth execution of outsourcing arrangements and maintaining control over critical business processes.

1.7 Scope of the Study

The study focused on the telecommunication industry in Zambia. The primary target for this research was the 270 relevant employees' industry. The population will cover both the management and non-managerial staff. The study has been limited to the period 2019 to 2022.

1.8 Assumptions of the Study

The study assumes that:

- Respondents are going to be co-operative and sincere in responding to the needs and requirements of the study.
- No changes will be made to the current outsourcing practices in the Telecommunication industry in Zambia until the end of study.
- The tools and instruments used were valid and reliable.
- The sample is representative of the population.

1.9 Organisation of the Research

The dissertation comprises five (5) chapters, each serving a specific purpose within the research.

Chapter one (1) serves as the introduction, providing an overview of the topic. It includes the background information, problem statement, research justification, objectives, and the significance of the study. Additionally, this chapter outlines the structure of the research.

Chapter two (2) involves a comprehensive literature review, which aims to identify previous research conducted on the topic. This chapter also presents the theoretical and conceptual framework and identifies gaps in the theories and literature.

Chapter three (3) focuses on the research methods employed in this study. It covers aspects such as research design, approach, paradigm, or philosophical lens. It also discusses the sampling strategy, data collection and analysis tools, generalizability of research findings, reliability and validity considerations, as well as ethical considerations when involving human subjects.

Chapter four (4) analyses and interprets the research findings, engaging in a detailed discussion of the results obtained from the study.

Chapter five (5) summarizes the findings, addresses the research objectives, and presents the conclusions and recommendations derived from the research. Additionally, this chapter proposes areas for future research.

1.10 Chapter Summary

The Chapter discusses the introductory aspects of the research, covering the background of study, statement of the problem that the research seeks to address, the associated objectives in operationalizing the research problem, the importance and significance of the research in terms of the benefits and additions to the existing body of knowledge and the general structure of the dissertation.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Following on from the introduction of the study in which the research sought to assess the impact of the managed services model in the telecommunication industry in Zambia. This chapter critically reviews literature from Global, African and local sources without re-inventing the wheel or replicating what has been done before. This review includes the identification of gaps in the literature as a means of adding to the existing body of knowledge.

2.2 Outsourcing in Organizations

Outsourcing refers to the process of obtaining goods or services from external sources rather than handling them internally within an organization (Rundquist, 2017). In the context of this study, outsourcing specifically entails the delegation of in-house operations, processes, or services to a third party. The study defines organizational performance in terms of cost efficiency, productivity, and sustainable funding. Efficiency judgments, as described by Chaffey (2018), are based on the concept of minimizing wastage, which is the main focus of this study. Productivity, borrowing Houseman's (2016) definition, refers to the level of output produced by a firm relative to the input required and the value created within a given time frame.

According to Rundquist (2017), outsourcing was not formally recognized as a business strategy for improving organizational performance until 1989, although it gained momentum during the second industrial revolution in the late 19th century due to the development of specialized services and the emphasis on cost-saving measures by organizations (Rundquist, 2017; Slack, 2013; Piore & Sabel, 2010). In recent years, outsourcing as a business strategy has expanded to encompass intangible or knowledge-intensive activities such as information technology, product development, and research and development (R&D) (Quinn, 2010). It has become an integral part of organizational strategies aimed at enhancing performance (Behara et al., 2015). Typically, companies engage in outsourcing with the aim of improving efficiency and reducing costs. As described by Houthoofd (2016), outsourcing can range from simple tasks like hiring a freelancer to edit a company newsletter to large-scale initiatives such as contracting an outsourcing company to handle accounting and payroll functions. Outsourcing can involve directly hiring independent contractors or engaging outsourcing companies that employ or contract workers to provide the required services (Handfield & Nichols 2019). The outsourcing

company may either send its workers to the client's workplace or provide a dedicated workspace. In some cases, outsourcing companies adopt practices like home shoring, which involves hiring home-based workers, or offshoring, which entails contracting services from outside the client's country.

2.3 Organizational Performance

There are several models, methods, and theories that can be used to measure organizational performance. Some of them include:

Key Performance Indicators (KPIs): This approach involves identifying and measuring specific metrics that are critical to achieving organizational goals. KPIs can be financial (e.g., revenue, profit), operational (e.g., productivity, efficiency), or related to customer satisfaction, employee performance, and other areas.

Total Quality Management (TQM): TQM is a management approach that focuses on continuous improvement, customer satisfaction, and involvement of all employees. It emphasizes the importance of quality in all aspects of the organization and uses various tools and techniques to measure and improve performance.

Six Sigma: Six Sigma is a data-driven methodology that aims to reduce defects and improve quality in processes. It involves defining, measuring, analyzing, improving, and controlling processes to achieve desired performance levels.

Economic Value Added (EVA): EVA is a financial performance metric that measures the value created by a company. It takes into account the cost of capital and determines whether a company's operations are generating returns above or below the required rate.

Benchmarking: Benchmarking involves comparing an organization's performance against industry peers or best-in-class companies to identify areas of improvement and set performance targets. It helps in understanding where an organization stands in relation to others and drives performance improvement.

Performance Prism: The Performance Prism framework considers a broader perspective of organizational performance beyond financial measures. It focuses on stakeholders' needs and expectations, including customers, employees, suppliers, regulators, and communities, to assess performance in a more holistic manner.

Activity-Based Costing (ABC): ABC is a method of allocating costs to specific activities or products based on their actual consumption of resources. It helps in understanding the cost

structure of different activities and provides insights into the profitability of products or services.

Organizational Maturity Models: Maturity models, such as the Capability Maturity Model Integration (CMMI), assess the maturity level of an organization in terms of its processes and practices. These models provide a roadmap for improvement and help organizations measure their performance against industry standards.

Organizational performance can be defined as the level of achievement attained by an enterprise based on certain criteria (Machuki and Aosa, 2011). According to Richard et al. (2009), organizational performance encompasses three specific areas: financial performance, product market performance, and shareholder return performance. Machuki and Aosa (2011) note that organizational performance provides an indication of an organization's effectiveness.

Several scholars, including Machuki and Aosa (2011) and Richard et al. (2009), have highlighted the challenges associated with measuring organizational performance. It is a multidimensional construct that cannot be adequately characterized by a single operational measure. Common measures used to assess organizational performance include financial market measures, mixed accounting/financial market measures (such as shareholder value analysis, cash flow per share, market value added), survival rates, and subjective measures. Kaplan and Norton (1996) propose the use of balanced scorecards as a comprehensive approach to measuring organizational performance. The balanced scorecard method takes into account various aspects of performance.

2.3.1 The Balanced Score Card

The Balanced Scorecard (BSM) model has proven to be beneficial as it aligns an organization's activities with its vision and strategy, enhances internal and external communication, and monitors business performance in relation to strategic goals. It also facilitates the translation of an organization's mission and vision into tangible operational actions, which are initially established with measurable indicators to aid in understanding and adjusting the chosen strategy. Additionally, the BSM helps provide both financial and nonfinancial performance information related to the selected strategy, manages feedback and learning processes, and determines targeted performance levels (Prahalad and Hamel, 1990 cited in Jensen, 2016).

What sets the BSM apart in measuring organizational performance is its ability to assess and evaluate employee performance using a range of quantitative factors or metrics based on both financial and nonfinancial information. Financial information focuses on past results derived

from an organization's financial reports, while nonfinancial measures concentrate on present performance outcomes to evaluate activities that can influence future financial performance. By employing financial and nonfinancial information to measure employee performance, along with short-term and long-term performance measurements, the BSM acts as a source of motivation for employees while providing a clear framework for understanding how individuals contribute to the organization's strategic plan (Prahalad and Hamel, 1990 cited in Jensen, 2016).

This is why the BSM places significant emphasis on ethical decision-making. Balanced Scorecards can be tailored for any type of business, with the starting point always being the strategic plan or performance goals that are then adapted to different levels within the organization. For instance, a Balanced Scorecard for the organization as a whole would have broader and more general goals and measures compared to one designed for a divisional manager or individual employee (Jensen, 2016).

According to the BSM, there is an ongoing effort by management and employees to create and operate in an ethical environment. Therefore, it is crucial for employees to be aware of the organization's ethical standards and values, as well as have a deep understanding of the applicable laws and regulations. Employees can only gauge the ethics of their behaviour when they understand the standards by which their actions will be assessed. Hence, a Balanced Scorecard enables employees to comprehend their organization's obligations and evaluate their own responsibilities within the workplace. For this reason, proponents of this model emphasize the importance of strategy review meetings, where indicators and initiatives from the unit's Balanced Scorecard are discussed, actual progress is assessed, and barriers to strategy execution are identified. In these meetings, metrics analysed should include, but are not limited to, the availability of a hotline, staff participation in ethics training and conduct, customer satisfaction, employee turnover rate, regulatory and safety compliance, community involvement, environmental awareness, diversity, legal expenses, efficient asset usage, asset condition, and corporate social responsibility (Horvath et al., 2014).

Thus, performance measures must be useful and informative, providing a clear basis for comparison against either the organization's standards or individual targets. All the metrics in a balanced scorecard ultimately aim to improve the organization's financial performance, which is of primary interest to shareholders, and its emphasis on ethical business conduct links to good organisational performance (Jensen, 2016).

The diagram below illustrates organizational performance viewed through the lens of the Balanced Scorecard model. The perspectives depicted in the diagram are designed to encompass all of the organization's activities, both internal and external, addressing both current operations and future aspiration

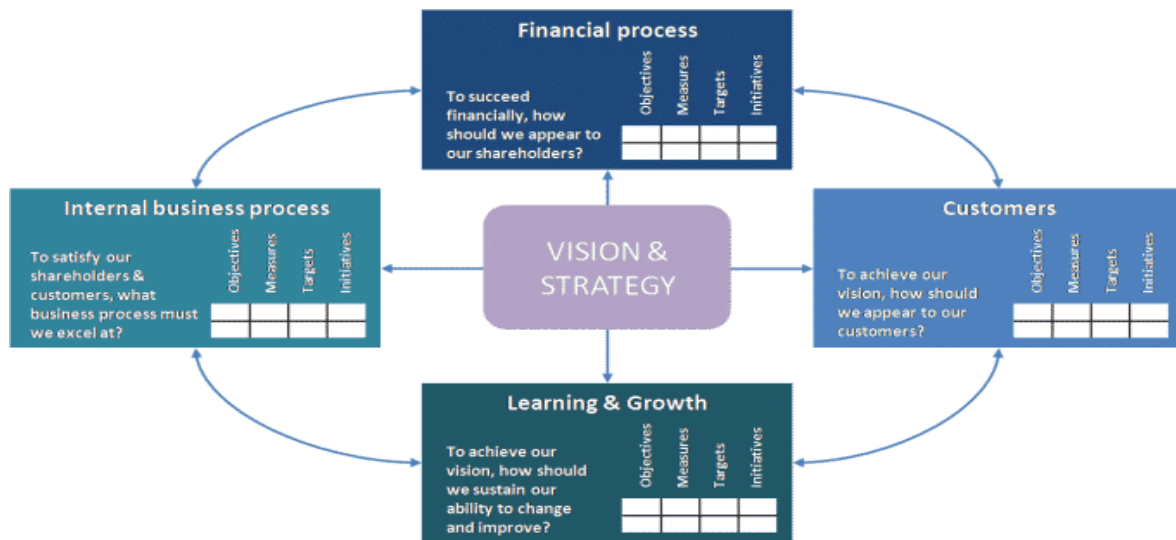


Figure 2. 1: The Balanced Scorecard Model: (Source: Kaplan and Norton 1992)

1) The Financial Quadrant

The utilization of a balanced portfolio comprising both financial and non-financial measures does not diminish the significance of financial outcomes. Financial results convey their own important message. Kaplan and Norton (1996) cited in Horvath et al., (2014) regard the financial quadrant as the central point or culmination of all the objectives and measures in the other three quadrants of the Scorecard. The financial performance section of a balanced scorecard considers metrics that an organization sets historically to evaluate its performance, which can vary depending on the organization's type. These measures may encompass return on investment (ROI), earnings per share (EPS), revenue growth, sales growth, inventory turnover, and product cost. According to the Balanced Scorecard model, the selection of financial measures should encompass the elements that are relevant to the decision-making responsibilities of the individual being evaluated. The BSM places particular emphasis on generating shareholder satisfaction through the financial quadrant (Jensen, 2016).

2) The Customer Quadrant

The existence of a business relies on its clients or customers, making it crucial for a company to assess its performance in satisfying and ensuring customer happiness. In today's competitive markets, organizations must prioritize customer satisfaction by identifying customer needs and

reshaping their business capabilities based on the customer interface (Jensen, 2016). The objectives outlined within the customer quadrant of the Balanced Scorecard can encompass both present and future considerations. They may pertain to existing customers as well as potential customers and markets. Metrics related to customer satisfaction gauge the organization's success in meeting the needs of its current customer base with its products and services. These metrics can be gathered through appropriate customer surveys. Therefore, according to the BSM, the customer perspective should include measures such as customer satisfaction, repeat customer rate, acquisition of new customers, industry rankings by customers, and market share size (Prahalad and Hamel, 1990 cited in Horvath et al., 2014). Metrics tracking customer loyalty and retention provide management with insights into longer-term trends in their relationship with these customers. Measures of attitudes towards the organization and levels of recognition within specific segments of the public can aid in identifying future market opportunities.

Numerous mission statements crafted by organizations highlight their commitment to delighting customers at every touchpoint. However, for these goals to be achieved in a profitable manner, organizations need to monitor and manage their interactions with their targeted customer base. In the public sector, there is a growing emphasis on customer focus, as outlined in contemporary government policies. Many public sector organizations may be hesitant to use the term "customer" and prefer to think in terms of service recipients, citizens, or stakeholders (Kreitner, 2007 cited in Jensen, 2016).

3) The Internal Business Processes Quadrant

The perspective of internal business processes in the Balanced Scorecard model revolves around the aspect of "doing." The objectives and measures within this quadrant focus on the operational aspects of an organization's activities. A successful organization must function like a well-coordinated machine (Jensen, 2016). This entails monitoring and evaluating internal operations to align with the strategic goals of the organization. Therefore, measures of internal business processes can include analysing the number of defective goods produced, machine downtime, transaction efficiency, products produced per day per employee, time from production to sale, product quality, production time, and output volumes per week. When combined with activity-based costing systems, such measures provide a mechanism for controlling and improving an organization's processes (Prahalad and Hamel, 1990 cited in Jensen, 2016). It is within this quadrant that public sector organizations are likely to incorporate measures related to service delivery.

Commercial organizations view enhanced operational processes as a necessity but not a sufficient condition for achieving competitive success. In his article "What is Strategy?" published in the Harvard Business Review in 1996, Michael Porter draws a clear distinction between the need for operational effectiveness and strategic positioning. He highlights that:

"The quest for productivity, quality, and speed has spawned a remarkable number of management tools and techniques: total quality management, benchmarking, time-based competition, outsourcing, partnering, reengineering, and change management. Although the operational improvements have often been dramatic, many companies have been frustrated by their inability to translate those gains into sustainable profitability. A company can outperform rivals only if it can establish a difference that can be preserved."

In a commercial business's balanced scorecard, the objectives and measures for internal business processes should not solely focus on process enhancement but also on the capabilities that provide a competitive advantage. These objectives and measures should encompass areas such as introducing new products to the market, production operations, logistics, and delivery channels. For instance, companies in the computer industry strive for competitive advantage through rapid development of new products that render existing ones obsolete. Other manufacturing organizations may differentiate their products based on durability and reliability, requiring a focus on measures and objectives related to low-defect production quality (Jensen, 2016). Conversely, Stalk, Evans, and Shulman (2012) emphasize how supply chain logistics capabilities can become the core of competitive strategy in the retail industry.

4) The Learning and Growth Quadrant

Due to the continuous process of globalization, the business environment has become highly dynamic, necessitating organizations to constantly evolve in order to survive. To achieve set targets such as increased market share, management must focus on strategies for company growth. Measures related to learning and growth serve as a means to assess how employees and management collaborate to foster company growth and support the development of employees within the organization (Jensen, 2016).

The objectives within this perspective revolve around establishing an infrastructure for future development and organizational learning, which requires strategic investments in people, processes, information systems, and organizational culture. Identifying key strategic measures for this quadrant presents a challenge for management. While most organizations recognize the importance of investing in skills training and efficient information systems, it is not always

clear how to assess the strategic significance of "soft" issues such as team motivation, fostering a culture of creativity, and knowledge management (Kreitner, 2007).

Kaplan and Norton (1996) cited in Jensen, (2016) suggest that learning and growth measures should address employee skills, motivation, organizational alignment, and information system capabilities. However, their research on US corporations revealed that the Learning and Growth quadrant was the most underutilized. In 1996, they concluded that "when it comes to specific measures concerning employee skills, strategic information availability, and organizational alignment, companies have devoted virtually no effort to measuring either the outcomes or the drivers of these capabilities".

With topics such as human capital (Stewart, 2022), employee empowerment (Simons, 2015), and the strategic contribution of individuals (Hamel, 2016) increasingly on the management agenda, the learning and growth quadrant plays a crucial role in modern business control. In their bestselling book "Competing for the Future," business professors Gary et al, (1996 cited in Jensen, 2016) offer another perspective on the concept of an enabling infrastructure. They suggest that "the key to competitive success over time is to cultivate the ability to replicate core competencies that can make a significant contribution to customer-perceived value." Core competencies are defined as bundles of skills and technologies that exist throughout the entire organization. A core competence represents the collective learning across individual skill sets and organizational units (Hamel and Prahalad, 1996 cited in Jensen, 2016).

Therefore, the Learning and Growth perspective can be applied to monitor the acquisition, development, and utilization of core competencies (Aisthorpe et al., 2018). Once the enabling infrastructure is in place, the organization needs to leverage this potential to develop the key internal processes in which it must excel in order to meet its customer objectives or service delivery agreements.

2.4 Outsourced Services Model

A Managed Services model also known as a fully outsourced model is a type of business relationship in which a service provider takes on responsibility for the management and maintenance of a customer's infrastructure and end-user systems.

According to Subramanian & Williams (2017), in a managed service model, the service provider takes complete ownership for the delivery of services. Generally, the service provider enters a Service Level Agreement (SLA) for the outsourced work and usually, providers are involved in drawing up SLAs with the client, or Operational Level Agreement (OLA) within

other service providers in a multi-vendor environment. The main reason for adopting any outsourcing option is due largely to the need to reduce cost arising from increasing capital expenditure (CAPEX) and operating expenditure (OPEX) budgets (caused by competition and globalization), access to skilled manpower, and the opportunity for the company to focus on their core competence.

Some studies on the telecommunication industry in general show that the results of the studies conducted on outsourcing are relevant to management as it enables managements to know the influence of outsourcing (managed service provision) on the overall performance of the organisation. For instance, Ndungu (2015) conducted a comparative study of Airtel and Orange Telkom companies in Kenya whereby the results showed that the two companies indicated that outsourcing brought in more benefits to the performance of the company as compared to the challenges.

Esonwune (2010) suggests that the Telecommunications sector in a developing country like Nigeria and other sub-Saharan African countries are increasingly embracing the Managed Services Model, a kind of outsourcing, primarily due to the need to cut operational cost, for rapid expansion, to gain market share and to focus on core competence. However, despite the benefits associated with this model and its successful adoption the world over by many telecommunications companies, many sub-Saharan African countries are showing a deviation from this trend. The study concludes that the outcome of the analysis of the data gathered indicate that the reason behind the adoption of managed services is cost reduction, access to skilled manpower, better focus on core business, quality improvements, and competitive advantage. The study also establishes that increasing unemployment rate, diminished local competence and expertise, and security concern are among the top reasons for the call against the adoption of Managed Services Model.

The trends of global telecommunications industry show an orientation towards reduction of costs as well as an increasing need for being more competitive on an international market. Competitive advantages related to inventions, innovation and globalization growth have resulted in possibilities for the rise of doing business. This is of relevance both to countries that are economically well developed and to developing countries, paying attention to the fact that the trends of outsourcing in telecommunication businesses have not been widely analysed (Vveinhardt, et al., 2014).

According to Patil & Patil (2014), outsourcing is not a recent phenomenon in the industry. Companies have been outsourcing non-core services or functions for many years. Outsourcing of IT management picked up in the late 80's and since then it has mushroomed into a multi-billion-dollar industry. Initially the key driver for outsourcing was controlling operational expenses but over the period, several other factors have been prominent such as flexibility in control of investments and resources, risk sharing, acquisition of special skills and competencies, revenue sharing, establishing long term strategic relationship, etc. The discussion in outsourcing usually is about outsourcing non-core services while retaining core services inhouse. Outsourcing in telecom continues to evolve. In most telecommunications companies worldwide, Towers (active and passive components) constituted almost 70% of the networks. This infrastructure used to be managed by the staff of the operators but in recent years this has been outsourced to independent tower management companies. There have been tower management companies providing these services for years in the North American and European markets. In the Indian market, operators like Bharti Airtel created a company Bharti Infratel for providing Tower management services. In Zambia, IHS and the recently formed Infratel Corporation Zambia Limited provide these services.

Osei-Owusu (2015) suggested that a sure sign of maturity in the telecom sector is the rush to outsource tower management and ownership to third parties as a means of diversifying revenue and focusing on core activities. In January 2010, Millicom Ghana (Tigo Ghana) agreed to sell 750 base towers in Helios Towers Ghana (HTG). The deal was the first major sales/leaseback to be completed by the major African telecom's operator and an independent tower company on the continent. Vodafone Ghana also signed a ten-year deal with Eaton Towers to take over the operations and co-location management of its existing tower infrastructure. In the same year, 2010, MTN rounded off a joint venture deal with American Towers. By September 2014, a press release officially announcing an agreement for the divestment of over 3500 telecoms towers from Airtel (across 6 countries in Africa) to Eaton Towers (an independent tower operator), of which Airtel Ghana was part; bringing every major network operator on-board.

Kannisto (2014) discussed that the change of outsourcing business had transformed from the outsourcing of generic IT services to the outsourcing of specific IT services. The basic need of the customer was to find an adaptable and comprehensive Information and Communication Technology (ICT) management solution. Customer's needs are normally not limited only in traditional IT area, but also mobile devices and connections should be included in the Managed Service solution. In an outsourcing scenario, the quality of day-to-day operations and

management of communications services depend entirely on the service provider. Service Provider must ensure end-to-end service is protected: all the elements must be included. These are physical protection to the core communications infrastructure, including network equipment, routers, switches, servers and so on and back-up power sources located in bunkers, virtually defence-level protection which must be available to ensure uninterrupted network operation.

Business models describe the rationale of how organizations create, deliver and capture value. Evolving consumption patterns, advent of social media and emerging opportunities in new sectors fuelled by 5G Technologies, will render the current Business Models unviable and would create a need to innovate new Business Models. It is important for Telecom Operators to keep their business model innovation under continuous review (Rao & Prasad, 2018).

There are also some white papers published by some leading service provider organizations such as Ericson, Alcatel-Lucent, Nokia Siemens and Motorola.

White paper by (Ericsson, 2007) states that while other industries have tried, tested and enjoyed the benefits that Managed Services offer for a number of years, most telecom operators have traditionally viewed network operation as part of their core business – a view closely linked to the strong technology drive within the telecom industry. This is changing. As shown in Figure 2.2, because of faster technology development, changing consumer demands and aggressive competition, and the resulting price pressure, operators are increasingly adopting Managed Services as a change agent to implement new business models where they outsource network and services related activities, such as operations and maintenance.

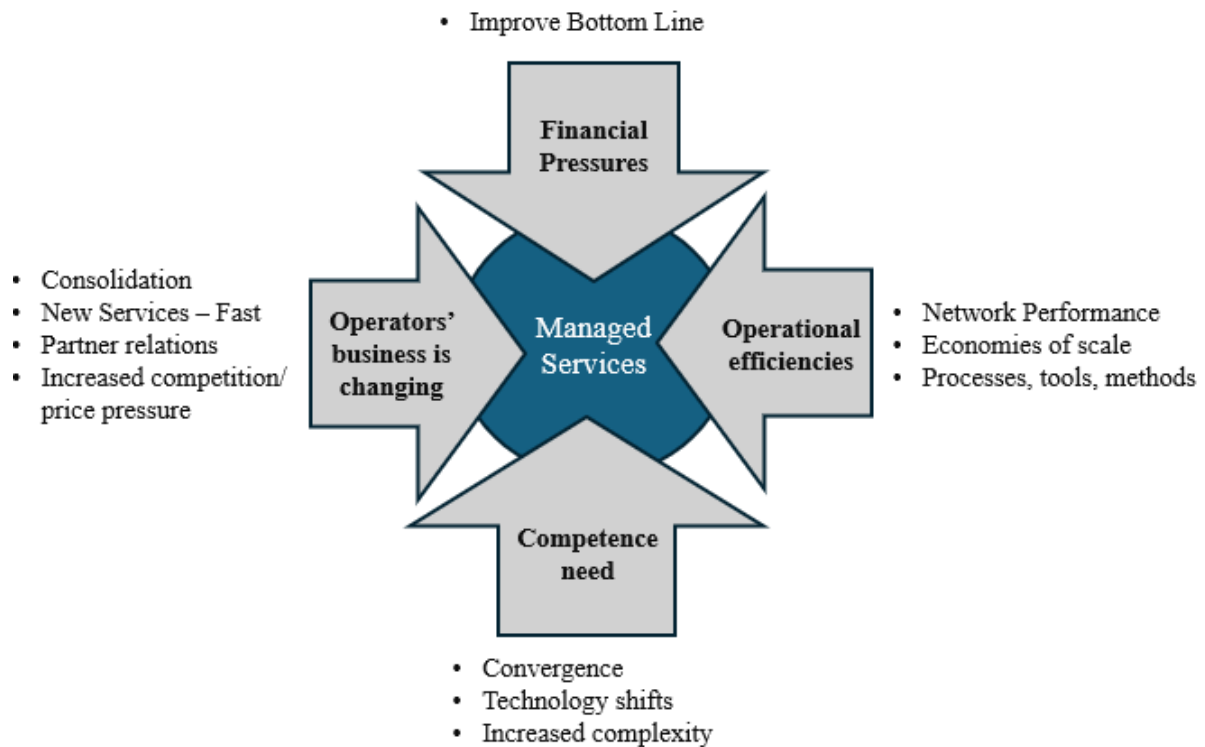


Figure 2. 2: Drivers of Managed Services Model: (Source: (Ericsson, 2007))

The strategic white paper by (Ramirez, 2008) from Acatel-Lucent states that an effective outsourcing business model provides solutions tailored to organization's needs and environment. Outsourcing can bring tremendous benefits if the right partner is chosen. The following factors are considered when evaluating potential partners:

People and Experience – Your prospective partner's staff should include a large complement of managed service experts with years of end-to-end solution experience. They should be certified engineers and technicians who are familiar with a wide range of multivendor systems and have an extensive track record of designing and building service provider networks quickly and efficiently. Look for professional change management capabilities and a proven methodology for network transformation. A managed services provider with these qualifications can provide you with world class network quality based on aggressive SLAs that drive customer satisfaction and retention.

Knowledge Assets – Managed services partner should be backed by research and development capabilities that provide the latest in business modelling and analysis tools to speed up successful implementation. Also essential are global network operating centres to provide a wide range of services.

Proven Methodology – The managed services provider should work with proven outsourcing methodology and governance models, and use best in class tools, processes and metrics. Progress and process implementation should be measurable. A superior methodology spans all dimensions of next generation network planning, design, implementation and management. Also, by leveraging a shared capital model you optimize your return on investment and minimize risk. This type of proven outsourcing approach goes beyond contract management and focuses on driving value from the strategic relationship and enhancing overall business contributions.

Of particular importance, a strategic outsourcing model must have a clearly defined governance structure. A high-performance governance process can transform a typical outsourcing agreement into a strategic relationship that is focused squarely on adding value (Ramirez, 2008).

According to Magede (2012) and Subramanian & Williams (2007) the appropriate sourcing model for an organization is determined by its existing sourcing maturity level and its willingness to improve on it. The research further argues that there is no one perfect sourcing maturity level, it depends on the business dynamics and strategic thrust of the organization as far as sourcing is concerned. Critical to the success of any model adopted is the willingness of the organization to actually support the partnership structures required at a given level of outsourcing.

Patil & Patil (2014) state that it is extremely important to identify a set of relevant metrics while reviewing vast amount of literature that is published by researchers across the world in the domain of outsourcing. Although cost reduction was the key driver in early stages, over a period, factors such as risk sharing, revenue sharing, flexibility in control, nurturing innovations, acquiring required competencies, and maintaining competitive edge, have assumed high level of importance in the decision of outsourcing services. The following parameters (list of concepts) are selected for analysing the impact of outsourcing:

1. Savings in Operating Expenses (Opex)
2. Access to skilled resource/core competence
3. Non-Core Service
4. Flexibility in Contract and resource management
5. Management Control

6. Impact on SLAs/QoS
7. Maintain competitive position/Gain competitive advantage
8. Innovations
9. Catalyst (Agent for change)
10. Risk and Returns sharing
11. Investments required in infrastructure
12. Hidden Cost
13. Strategic partnership.

2.5 Managed Services Business Model Options

Outsourcing refers to an outside firm hired to perform work that is normally performed by internal staff. Managed services or outsourcing can be placed in one or four of the following major categories.

- Staff Augmentation
- Out-Tasking
- Project Based Outsourcing
- Managed Services

2.5.1 Staff Augmentation Model

In this model, the outsourcing service providers, usually called the vendors, agrees to provide the specific skilled resources to supplement the local work force. Here the activities performed by vendors are as instructed by the client, and they do not take on any risks or accountability. According to (Magede, 2012), with this model, companies take on contract employees to meet temporary or short-term increase in demand for their products or services. This model provides cost saving due to the low-cost resources and is usually acquired by companies just beginning to outsource.

2.5.2 Out-Tasking

The vendors in this model are responsible for specific functions in the company. The client controls, manages and oversees in-house while the vendor or service provider performs specific activities as identified by the client. The vendors do not have ownership of any project as they

only perform certain tasks from the project and are responsible for their activities (Esonwune, 2010).

2.5.3 Project Based Outsourcing

In this model, the company delegates the completion of an entire project to a third party. The client hands over overall project control and management to the vendor, but constantly monitors progress against specific deliverables and benchmarks. The outsourcing company will be largely responsible for the development of the entire project from start to finish.

2.5.4 Managed Services

According to Manish and Rohini (2007), in a managed service model, the service provider takes complete ownership for the delivery of services. Their responsibilities including design, building, operating, improving processes, applications, and infrastructure. Generally, the service provider enters a business level SLAs for the outsourced work and usually, providers are involved in drawing up SLAs with the client, or Operational Level Agreement within other service providers in a multi-vendor environment.

1. Ad-Hoc Staff Augmentation	• Arrangement wherein the vendor agrees to provide specific skilled resources to supplement personnel from the client's side • The vendors do not take on any accountability or risk and work as instructed by the client on activities outlined in the agreement
2. "Strategic" Out-Tasking	• Out-Tasking is where the client keeps control, management, oversight and control in-house while asking vendors to perform certain functions • Vendors are held responsible for the functions (eg programming/testing) that was provided to them and do not take on end to end SLAs
3. Project Based Outsourcing	• Here companies give away close operational control of IT to vendor partners while keeping control over business outcomes dependent on IT • SLAs and/or metrics are determined upfront – before projects are outsourced. Vendors are held accountable to these service levels
4. Managed Services	• In a Managed Services model, one vendor will either (a) take on all aspects of the outsourced work or (b) enter into SLAs with other vendors • Consequently, the client gains the benefit of having one of the following: • An integrated outsourcing solution provided by 1 vendor or • Operational Level Agreements which are signed on by all vendors on how they will collaborate with each other

Figure 2. 3: Summary of Outsourcing Models: (Source: Manish and Rohini 2007)

2.6 Outsourcing and Organizational Performance

Essentially, outsourcing deals with the question of whether a company should produce intermediate inputs internally or purchase them externally. This issue has a long history in economics, dating back to Coase's seminal work on firm boundaries (as cited in Görg & Hanley,

2014). Numerous studies have focused on analysing the determinants of the "make-or-buy decision," emphasizing the role of incomplete contracts, specific assets, and transaction costs (Bolton & Whinston, 2013). In simple terms, companies prefer to "buy" rather than "make" if the cost of outsourcing is lower than in-house production. Therefore, outsourcing can help reduce production costs, particularly labour costs, by replacing in-house production with the procurement of components (Abraham & Taylor, 2016).

Supporters argue that outsourcing is primarily about cost reduction in response to competition, enabling firms to remain competitive (Kane, Schaefer & Fraser as cited in DeMaiolo, 2019). Furthermore, outsourcing-induced competition among firms ensures that lower costs are passed on to consumers in the form of lower prices, similar to the impact of technological changes that reduce production costs (Hubbard & O'Brien, 2006).

From a business perspective, outsourcing allows firms to offer competitive rates and improve efficiency. Nitin Joglekar, a professor at Boston University, found that less than 20% of workers affected by outsourcing lose their jobs, as the majority are repositioned within the firm, implying increased efficiency. Minimizing business costs is often cited as the primary reason for choosing outsourcing, as studies have shown that companies can save up to sixty percent of their costs by outsourcing. This is made possible because outsourcing service providers have the necessary resources and personnel to conduct specific business functions, and they may operate in regions or countries with lower input costs compared to the company's home country. For example, Asian countries offering call centre services often charge lower fees due to cheaper labour, and these cost savings can be passed on to consumers in the Western world.

However, recent evidence from practitioners has raised some doubts about the benefits of outsourcing. A UK survey by Manpower revealed that 68% of firms outsource some services, mainly driven by cost reduction. In a study comparing cost-efficiency, Chong, Dolley, Houghton, and Monroe (2009) found that outsourced financial audits in the public sector were generally more costly than in-house audits, although the result varied depending on the type and size of the public agency. For small statutory authority audits, outsourced audits were more expensive, while for specialist audits (e.g., hospitals) and large, complex statutory authority audits, in-house audits were equally efficient as outsourced ones.

Regarding productivity, firms assess the productivity of their in-house production and compare it to external suppliers. If external suppliers can provide comparable services at a lower cost, often due to economies of scale and specialized expertise, certain tasks may be subcontracted.

Amiti and Wei (2006) suggest that outsourcing can increase productivity by allowing firms to shed relatively inefficient parts of the production process and focus on areas where they have a comparative advantage.

Outsourcing is also viewed as a viable option because it allows companies to concentrate on their core business functions while other aspects are handled by external entities. This focus on core objectives can improve business functions and potentially lead to business expansion. Additionally, outsourcing can save valuable time, enabling faster deliveries and satisfying consumer needs. Prompt delivery is highly valued by clients and can contribute to customer loyalty and repeat business.

In summary, outsourcing offers potential benefits such as cost reduction, increased efficiency, expansion opportunities, and improved customer satisfaction. However, there are also instances where outsourcing may not result in the expected gains, and careful consideration of factors such as cost-efficiency and productivity is necessary.

2.7 Conceptual Framework on Factors Influencing Implementation of Outsourcing

The conceptual framework guiding this study is based on the premise that the adoption of a managed services model influences various aspects of organizational performance in the telecommunications industry. Drawing from existing literature and theoretical foundations, the framework considers independent variables that are hypothesized to have an impact on organizational performance.

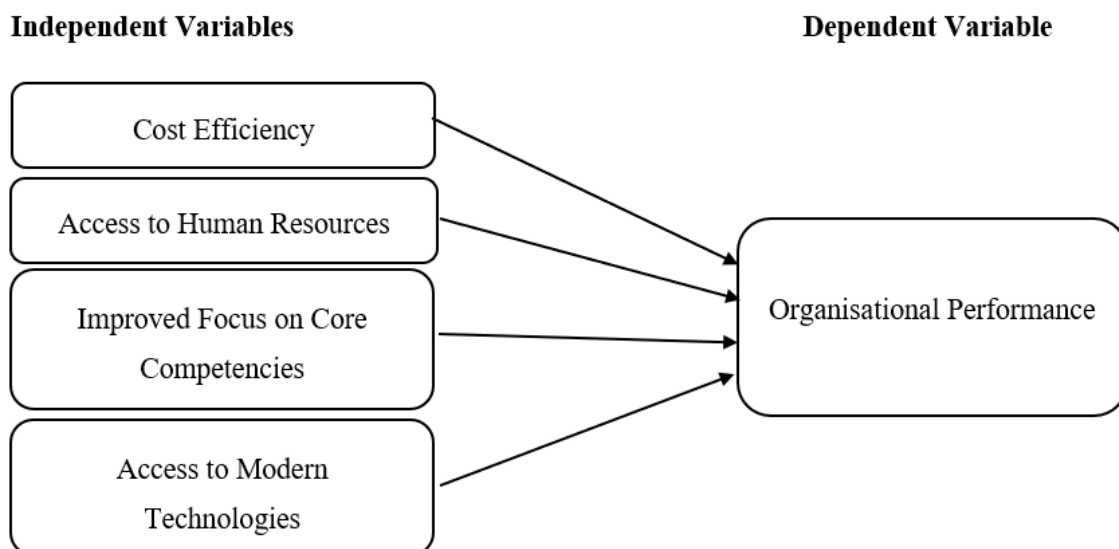


Figure 2.4: Conceptual Framework

By examining the relationships between key independent variables (cost efficiency, access to human resources, improved focus on core competencies, and access to modern technologies) and the dependent variable (organisational performance), this study aims to provide valuable insights into the effectiveness of managed services arrangements in driving business outcomes and competitiveness within the telecommunications sector. This section highlights in detail the independent and dependent variables for this study.

2.7.1 Cost Efficiency

Outsourcing leads to cost reduction. According to Lange et al. (2005), cost reduction can be achieved through economies of scale and scope. Scale economies occur when specialized large-scale providers are utilized for activities that the outsourcing organization lacks the necessary volume to support with current technology. Scope economies are realized by accessing a wide range of services provided by niche specialists. Tecce (1986) suggests that outsourcing can provide complimentary assets, resulting in scope economies as well.

Successful implementation of outsourcing strategies has been attributed to cost cutting by Bowersox (2010). Outsourcing can improve an organization's effectiveness as an organizational strategy. Companies often choose to outsource with the objective of improving financial performance. They are aware that outsourcing companies can offer cost-saving opportunities through efficient technology and economies of scale.

Outsourcing can release assets and reduce costs in the immediate financial period. Organizations that outsource parts of their in-house operations report significant savings in operational costs, as stated by Rimmer (2018). Laugen et al. (2005) found a correlation between outsourcing best practices and high-performing companies. Many companies decide to outsource in order to reduce costs such as labour, regulatory, and training expenses. Outsourcing to foreign countries, where workers are willing to work for lower wages than their American counterparts, is a common practice that further encourages cost savings.

By reducing costs, outsourcing helps organizations generate higher profits. Vendors can purchase products at lower rates and continue to sell them at reasonable prices, resulting in increased profitability. Additionally, outsourcing eliminates the need for payroll tax deductions and other benefits associated with in-house workers, further reducing expenses and increasing overall profitability. Moreover, outsourcing reduces the need for infrastructure, including furniture, IT equipment, expensive machinery, and vehicles. This also reduces the requirement for large property rentals or ownership.

A study conducted by Jiang, Frazier, and Prater (2006) observes that outsourcing arrangements can convert fixed costs and operating expenses into variable usage charges by transferring the outsourcing firm's assets to a vendor. By outsourcing, firms can reduce their commitment to fixed-cost, full-time human resource expenses and other overhead costs through contracts that provide development skills on an as-needed basis. This leads to improved cost efficiency for the firms. Jiang et al. (2006) further note that the act of outsourcing significantly impacts the cost efficiency metrics of outsourcing firms. Some researchers argue that one of the key sources of cost reduction is the access to economies of scale and unique expertise provided by large outsourcing vendors (Roodhooft & Warlop, 1999). Cost efficiency metrics evaluate the ratio of outputs to inputs, with outputs measured through total revenue or sales, and inputs measured through total costs and overhead costs incurred to generate those outputs. In this study, two measures of cost efficiency are used: overhead expense (selling, general, and administrative expenses) and operating expense (cost of goods sold + selling, general, and administrative expenses), both expressed as a percentage of sales to facilitate comparison among firms of different sizes.

Several studies have focused on the cost-saving aspect of outsourcing various activities to external experts. Banerjee and Williams (2013) found evidence linking outsourcing activities to cost savings, indicating that firms implementing outsourcing have a significant advantage in terms of cost efficiency compared to those without any outsourcing approach. Jiang (2016) conducted a study among 51 publicly traded firms in the US from 1990 to 2002 and found that outsourcing can improve a firm's cost efficiency. Furthermore, the existing literature indicates that outsourcing can improve productivity and profitability. Previous research has shown that outsourcing activities to third parties can generate increased productivity in businesses (Lindsay, 2011).

The objectives of outsourcing are to reduce costs, enhance productivity, and save time. According to Gilley (2017), outsourcing is needed to provide cost reduction for firms, especially when the cost of upgrading and maintaining in-house capabilities is higher compared to outsourcing activities and hiring third-party expertise. For example, Malhotra (2015) found that factors influencing outsourcing decisions include sharing risks related to technology investment, reducing operating costs, accessing specialized expertise, managing fixed costs through contracts, and perceptions of efficiency. Additionally, Bardhan et al. (2016) examined the reasons why firms adopt outsourcing, including increased capacity, higher product and service quality, and reduced costs.

2.7.2 Access to Human Resource

Many companies have realized that they simply don't have the required set of skills among their present employees or they don't have luxury of time to train employees to acquire new skills in which case, and according to Frayer et al (2011), working with a vendor who could provide required skill sets becomes a preferred option for outsourcing the talent. As much as most of the previous employees do become part of the new outsourced team, technology has evolved and the training cost have increased. The vendors usually have a pool of resource worldwide to simply tap into the ready existing resource and has been able to provide the desired resource, Li et al. (2016). The only negative aspect to this access to skilled resource has been that, employment can affected the locals in the sense that most of the recruitments are not local but from the vendor pool which has proved to be cheaper for the vendor. This invariably brings about some animosity and division in the team as the locals are looking at their new colleagues as people taking way their jobs.

2.7.3 Improved Focus on Core Competencies

Various scholars hold different perspectives on the definition of core competency. Some view core competencies as the fundamental skills required to compete in an industry. According to Hamel and Prahalad (1996), core competencies are the collective skills that create a competitive advantage. In other words, a core competency is not the advantage itself, but rather the source of that advantage. Core competencies should provide a company with a real or perceived advantage. For example, advertising may serve as a source of competitive advantage for a firm and therefore be considered a core competency.

Greaver (1999) defines core competencies as innovative combinations of knowledge, specialized skills, proprietary technologies, information, and unique operating methods that organizations utilize to produce valued products or services desired by customers. Wario Guyo (2012) suggests that the core capabilities of an organization include critical employee skills, management systems, norms, and values. Skinner (1969) identifies the benefits of focusing on a small, manageable number of tasks in which the operation excels. Maina (2011) conducted research on the promotion of SMEs growth through linkages to large enterprises and found that business linkages allowed small businesses to specialize in their core competencies while relying on others to handle tasks for which they had less competence.

By focusing on a smaller number of core activities, organizations can reduce costs and complexity in their operations. This enables better customer focus and the ability to adapt

offerings and processes to meet changing customer demands. Outsourcing is a viable option for companies as it allows them to shift attention away from non-core aspects of the business. Companies can concentrate on areas that align with their business objectives and improve overall business function (Kakabadse and Kakabadse, 2013).

Many companies perceive outsourcing as a means to hire best-in-class companies for routine business functions, allowing them to focus corporate resources on key activities within the value chain that have the greatest impact on customers. The strategy often involves concentrating resources on activities where clear differentiation can be developed, while outsourcing other tasks. This approach has proven successful for many companies, with a key factor being the identification of main value drivers to concentrate on, such as customer intimacy, product leadership, or operational excellence.

Outsourcing also enables organizations to grow without increasing in size, known as "scaling without mass." It offers the opportunity for growth without a corresponding expansion in organizational size or bureaucracy (Leavy, 2000). According to Fisher (2011), outsourcing promotes a more customer-centric strategy by outsourcing production while establishing in-house supply chain management teams for major customers. Outsourcing is believed to help firms excel in their core competencies and address skill shortages in areas where outsourcing is employed.

Maina (2019) conducted a study on outsourcing services in the mobile phone industry in Kenya and found that the major reasons for outsourcing included the search for local expertise, market knowledge, language issues, cost-effectiveness, effective coverage, special expertise, and a focus on core competence. Outsourcing saves valuable time, allowing companies to make faster deliveries to customers. This results in customer satisfaction, as prompt delivery is considered a positive attribute that encourages repeat services. Outsourcing also enhances consumer satisfaction by improving quality and business practices, ultimately increasing business competitiveness.

2.7.4 Access to Modern Technology and Expertise

As noted by Lamming (2013), outsourcing allows organizations to leverage the more advanced technologies of their suppliers, who may be significantly ahead in this aspect. Crane (2017) attributes successful outsourcing implementation to improvements in quality, increased capacity and productivity, reduced innovation costs, and risks. Mowery (2018) emphasizes that

outsourcing enables organizations to benefit from complementary assets by partnering with organizations whose resource bases complement their own.

Greaver (2018) highlights the potential benefits of improving credibility and image by associating with superior providers. Byham (2016) indicates that companies of all sizes outsource certain parts of their services to enhance efficiency. Outsourcing provides organizations with exposure to specialized systems that lead to greater efficiency, quicker turnaround times, and higher levels of quality. Outsourcing partners are bound to specific service levels and quality standards. Since these partners have more dedicated time to focus on the service, they exercise greater caution in their provision, resulting in improved quality.

Furthermore, outsourcing prevents organizations from being locked into specific assets and technologies. It allows access to expertise that may not be available in-house, especially in the realm of information technology. Bakas (1996) points out that certain services require scarce experts, and outsourcing provides access to companies with the latest technology, enhancing the organization's competitive edge. By outsourcing, organizations can tap into vendors with more advanced and specialized processors, who possess the necessary resources for proper training facilities and inspection capabilities that may be lacking internally. Additionally, when a company is experiencing rapid growth, outsourcing can be a time-saving solution for acquiring the necessary labour without the need for extensive recruitment processes.

2.8 Empirical Studies

Maku and Iravo (2013) conducted a study that examined the impact of outsourcing on organizational performance at Delmonte Kenya Limited. The study had several objectives, including investigating the outsourced activities/services/products at the company, assessing the contribution of outsourcing to focusing on core competencies, exploring the link between outsourcing and accessibility to modern technology and expertise, examining cost savings resulting from outsourcing, and investigating the effects of outsourcing on organizational flexibility. The target population consisted of 250 employees in management positions, and a sample size of 70 employees was selected using random and systematic sampling methods. Descriptive data analysis using the Statistical Package for Social Sciences (SPSS) was used to analyse the collected data.

The study findings indicated that outsourcing allowed the company to access modern technology and expertise, enabling increased production capacity. The company also benefited from specialized skills and technologies not available internally, resulting in an improved

organizational image through associations with niche service providers. The main statistical findings highlighted the positive effects of outsourcing on core competencies, access to confidential information, and the mitigation of internal staff negativity. However, the study also identified potential risks, such as the "spill over" of problems from outsourcing service providers, such as labour strikes.

Based on these findings, the researchers recommended that organizations consider outsourcing non-core activities as a major competitive strategy. They emphasized the importance of supervision and assigning specific management functions to oversee outsourced activities, as the ultimate responsibility remains with the firm. Additionally, companies were advised to evaluate the capabilities and integrity of service providers to safeguard against the disclosure of confidential information to competitors.

In a similar vein, Nyameboame and Haddud (2017) investigated the influence of outsourced activities on the organizational performance of locally owned oil and gas companies in Ghana. The study, which surveyed 80 participants from different oil and gas companies, revealed that outsourced activities primarily included transport services, IT consulting, business consulting, system infrastructure provision, management, and logistical services. The key reasons for outsourcing identified were cost reduction, avoiding major technology investments, improving service delivery, accessing current technology and expert knowledge, and focusing on core business activities. While outsourcing was found to enhance company performance, the study also highlighted potential challenges such as cultural conflicts with outsourced vendors, inefficient management, and loss of innovative capacity.

Elmuti (2013) defined outsourcing as the strategic utilization of external resources to handle activities typically performed by internal staff and resources. The study aimed to explore the motives behind outsourcing projects and identify factors that could facilitate or hinder their implementation. It also examined the relationship between outsourcing strategies and organizational performance. The results indicated that organizations perceived themselves as successful in outsourcing; however, the magnitude of performance improvement attributed to outsourcing was not fully realized.

Bolat and Yilmaz (2019) conducted a study in the hotel industry, investigating the impacts of outsourcing on organizational performance. Questionnaires were distributed to 80 hotels in Antalya, Turkey, and the data was analysed using paired-sample t-tests, as well as correlation and regression analyses. The findings strongly supported the positive impacts of outsourcing

on various aspects of organizational performance, including effectiveness, productivity, profitability, quality, continuous improvement, quality of work life, and social responsibility.

Yaboah (2013) focused on outsourcing and organizational performance in the services sector, specifically in banking and insurance firms in Ghana. The study population consisted of 50 companies, and purposive sampling was employed to select the respondents. Statistical analysis using SPSS was conducted on the collected questionnaire data. The findings revealed that there was no statistically significant correlation between outsourcing and organizational productivity, but there were statistically significant correlations between outsourcing and quality as well as competitive advantage. The study recommended thorough background checks before outsourcing and the implementation of backup systems to prevent data loss.

2.9 Literature Gap

While outsourcing and managed services have gained significant attention in the global business landscape, there is a research gap regarding their specific impact on organizational performance in the telecommunication industry in Zambia. Despite the increasing adoption of outsourcing practices by telecommunication companies in Zambia, there is a lack of comprehensive research that explores the outcomes and implications of outsourcing managed services in this specific context.

Existing studies on outsourcing and managed services have mostly focused on developed countries or broader industry sectors, and there is limited research specifically addressing the telecommunication industry in Zambia. Therefore, a research gap exists in understanding the effects of outsourcing managed services on organizational performance within this particular industry context in Zambia.

2.10 Chapter Summary

The Chapter covers the critical review of outsourcing or managed services from a variety of sources, the review of prior research conducted in understanding the adoption of managed services. The next Chapter will cover the research methods employed to design, approach, gathering and analysis of data, the generalizability of results, reliability and validity and ethical considerations.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology enables critical evaluation of a study's overall validity and reliability. Therefore, this chapter will outline the approach that was used to conduct the study as well as the research strategy, target audience, instruments and strategies for collecting data, data analysis method, and presentation. This research technique aims to facilitate data collection, analysis, and comprehension for this study.

3.2 Research Philosophy

The importance of research philosophy cannot be overstated, whether it pertains to natural sciences or social sciences. According to Easterby-Smith et al. (2012), neglecting philosophical considerations in research can have a detrimental impact on the overall quality of the study. Therefore, it is crucial to give careful thought to the underlying philosophy before embarking on any research, as philosophy plays a central role in shaping the research design. In the realm of social science, research philosophy revolves around the generation of knowledge and the nature of that knowledge within the social world. It encompasses fundamental assumptions about how one perceives and interprets the social world. This section aims to shed light on the four primary research philosophies along with their respective assumptions.

3.2.1 Epistemological assumptions

All research methods involve various underlying beliefs about how knowledge is acquired and what is considered valid knowledge within a specific field. Bryman (2014) defines epistemology as a theory of knowledge, focusing on what is deemed acceptable knowledge within a particular discipline. Similarly, Saunders et al. (2013: 102) describe epistemology as a branch of philosophy that examines the nature of knowledge and what is considered acceptable knowledge in a specific field of study. Epistemological assumptions revolve around determining what should be accepted as valid knowledge in a given discipline. In the realm of social science, a key question in epistemology is whether the principles and procedures used in studying the natural sciences can and should be applied to studying the social world. The answer to this question determines the acceptability of the knowledge derived from the research process (Easterby-Smith et al. 2012). Consequently, epistemological assumptions are associated with the nature of knowledge and the methods used to acquire that knowledge.

3.2.2 Ontological Assumptions

Another aspect of research that researchers should grasp is ontology. Ontology can be defined as a theory that explores the nature of social entities (Bryman, 2014). According to Saunders et al. (2013), ontology refers to a theory that delves into the nature of social phenomena as entities to be included in a knowledge system. Easterby-Smith et al. (2012) explain that ontology encompasses the assumptions we make about the nature of reality. It involves understanding what constitutes the world, the entities that exist within it, and how they relate to each other (Staiton-Rogers, 2016). In essence, ontological assumptions pertain to the nature of the phenomena being investigated, and different ontologies adopt different assumptions. When conducting qualitative research, researchers acknowledge the concept of multiple realities instead of a single reality (Cresswell, 2007). Reality is subjective and can be perceived differently by the participants in the study. Burrell and Morgan (2019), as cited in Morgan and Smircich (2010), suggest that assumptions about the nature of reality (ontology) can be viewed in terms of a subjective-objective continuum.

3.2.3 Phenomenological Assumptions

Phenomenology is a philosophical perspective that focuses on how individuals comprehend and make sense of the world around them, emphasizing the need for philosophers to set aside preconceived notions when trying to understand that world (Saunders et al., 2013; Bryman, 2014). The concept of phenomenology revolves around how researchers perceive social phenomena as socially constructed and primarily involves the creation of meanings and gaining insights into those phenomena. Some researchers argue that an interpretivist approach is highly suitable for business and management research, particularly in areas like marketing and human resource management (Saunders et al., 2013). This is because phenomenologists contend that human behaviours must be examined in their entirety and must be experienced first-hand to be truly understood. As Ritchie and Lewis (2003) assert, the methods used in natural sciences are not suitable because the social world of business and management is not governed by predictable patterns but is shaped by meanings and human agency. Additionally, causal, mechanistic models of explanation are inadequate for comprehending human behaviour. Therefore, researchers in the field of social science should seek to understand meanings by incorporating the perspectives of both participants and researchers.

3.2.4 Axiological Assumptions

Every researcher holds personal values that influence their study, but qualitative researchers explicitly acknowledge and disclose their values within their research. This axiological assumption characterizes qualitative research. How does a researcher put this assumption into practice? In qualitative studies, researchers recognize and openly acknowledge the presence of values in their work. They actively disclose their own values and biases, as well as the inherent value-laden nature of the data collected from the field. This process is often referred to as the researcher "positioning themselves" within the study. For instance, in an interpretive biography, the researcher's presence becomes evident in the written text, and the author openly acknowledges that the stories presented reflect their interpretation and portrayal as much as they do the subject of the study (Saunders et al., 2013).

3.3 Research Design

According to Kerlinger and Lee (2011), research design refers to a strategic plan crafted to closely address the original research questions. In this study, an epistemological philosophy was adopted as the blueprint for the research. The research strategy employed was a descriptive research design, chosen for its ability to statistically characterize the traits, trends, and relationships between independent factors and the dependent variable. Mugenda and Mugenda (2009) state that a descriptive design primarily focuses on characterizing the characteristics of respondents.

A quantitative approach was utilized to conduct this study. This approach allows for statistical analysis of the results and enables extrapolation to a broader context beyond the specific study (Bryman, 2014). The quantitative research method is grounded in a positivist worldview, which allows for generalization without taking the context into account (Newman & Benz, 2014). Neuman and Neuman (2014) further suggest that authors employing a quantitative research methodology often utilize a logical structure to justify their research, presenting it in a formal, orderly, and idealistic manner.

Quantitative research is commonly employed to investigate how individuals feel, think, and behave in specific situations. Its aim is to organize and standardize statistical analysis and data quantification. Large samples, typically consisting of 50 or more participants, are often used to collect data for quantitative studies (Creswell & Clark, 2017). A systematic questionnaire with predetermined answers and closed-ended questions is frequently employed in this type of

research. The quantitative method is considered concise and capable of providing a representative sample of a large population (Creswell & Clark, 2017).

3.4 Target Population

Diamantopoulos (2014) explains that a population refers to a collection of elements from which a sample will be selected. On the other hand, a sample refers to a subset of individuals or organizations chosen from a recognized population to generalize the findings to the entire population. The use of a sample is necessary due to practical constraints that make it difficult to include the entire research population (Leedy and Ormord, 2015). In the context of this study, the target population encompassed all relevant players in the telecommunication industry in Zambia.

3.5 The Sample Size

Cooper and Schindler (2014) define sample size as a statistical concept that involves determining the appropriate number of observations or replicates to be included in a statistical sample. It is a crucial factor in empirical studies where inferences about a population need to be drawn based on a sample. Sample sizes are used to represent specific portions of a population that are selected for a particular survey or experiment. In cases where the population is very large or its size is unknown, it is recommended to employ a secondary formula provided below.

$$n = \frac{Z^2 p(1 - p)}{(e)^2} \quad (\text{Eq 3.1})$$

Where:

z = z-score

e = margin of error

p = standard of deviation

To perform this calculation, establish the margin of error, ϵ , which represents the maximum acceptable difference between the sample estimate and the true value. Utilize the given confidence interval equation but equate the expression on the right side of the $\pm$ sign to the margin of error. Solve this equation for the sample size, n .

Subsequently, convert your confidence level into a Z-score. In this study, a confidence level of 90% was used, corresponding to a Z-score of 1.645. The following calculations demonstrate

the determination of sample size with a 90% confidence level, a standard deviation of 0.5, and a margin of error (confidence interval) of $\pm 5\%$.

$$n = \frac{1.645^2 \times 0.5(1 - 0.5)}{(0.05)^2} = 270 \quad (\text{Eq 3.2})$$

A sample of 270 respondents was used for this study.

3.6 Sampling Technique

This study employed a simple random sampling method. Simple random sampling was chosen for several reasons in this investigation. Firstly, it only requires a basic knowledge of the population under study beforehand. Secondly, it avoids classification errors, making it suitable for data analysis using inferential statistics. Thirdly, simple random selection is free from bias and prejudice and provides a representative sample of the population. Lastly, this method facilitates the evaluation of sampling error. In simple random sampling, every member of the target population has an equal chance of being selected for the sample (Saunders et al., 2013).

3.7 Data Collection

Data collection techniques are the tools with which the researcher collects data for a specific study. The study utilized the primary sources of data.

3.7.1 Primary Data

The survey method was utilized for data collection. Questionnaires were distributed to the relevant employees in the Telecommunication Industry in Zambia. The questionnaire consisted of closed-ended items, providing predefined answer options for respondents to choose from. According to Chaawla and Sondhi (2011), primary data is considered original and specific to the problem or project, collected to meet the specific needs and objectives outlined in the study.

The survey questionnaire was employed to gather data. Survey research strategies are typically suitable for quantitative research. Some key advantages of the survey method include its ability to accommodate large sample sizes, the potential for generalizing results, the ability to detect small differences between different sampled groups, and the relative ease of administering and recording questions and answers (Hair et al., 2010). Collecting data from participants with diverse backgrounds and experiences helps prevent information bias and enhances the credibility of the data (Parahoo, 2017).

3.8 Reliability and Validity

Reliability refers to the ability of an object, instrument, concept, etc., to consistently perform its intended function. It is characterized by the extent to which measurements can be repeated by different individuals, at different times, under varying conditions, using alternative instruments that measure the same construct (Drost, 2011). According to Saunders et al. (2009), reliability primarily concerns the consistency and stability of individual measurements and results. In this study, the reliability of the instruments will be assessed using Cronbach's coefficient/alpha. The internal consistency of the scales used to measure the variables will be examined. An alpha coefficient above 0.7 for individual test variables is considered satisfactory (Hair et al., 2006).

Validity assesses how well a research outcome reflects reality or the intended measurement. It determines whether a study truly measures what it was intended to measure or how well the research results align with the research objectives (Joppe, 2000). It also refers to the extent to which the research outcome addresses or fulfils the research objective. Researchers typically evaluate the validity of their work by asking a number of questions and seeking answers in the work of other researchers.

There are three types of validity: internal validity, content validity, and criterion-related validity. Internal validity aims to "measure what the researcher intends to measure" (Saunders et al., 2009). Content validity focuses on the relationship between the measuring instrument and the coverage of questions. Criterion-related validity examines the ability of the research to make meaningful predictions for the future. In this study, the components of factors will be identified based on the adopted theory and the reviewed literature.

3.9 Data Analysis

Cooper and Schneider (2010) noted that data analysis serves as a research strategy to communicate and present the findings of a study. In this particular study, a quantitative approach using correlational research design was adopted for data analysis. The data was then analyzed using both descriptive and inferential statistics. The descriptive analysis provided an overview of the characteristics of the study's variables, including frequency, means, standard deviation, and percentages. These measures are crucial in data analysis as they reveal the structure, normality, and features of the data. In the inferential analysis, the researcher employed correlation and multiple regression analysis to quantify the relationship between the independent and dependent variables in the study. These analytical tools were also utilized to

test the hypotheses formulated for this study. The Statistical Package for Social Sciences (SPSS) VERSION 25 was used as the software for data analysis.

3.10 Ethical Considerations

According to De Vos et al. (2015), ethics refers to personal beliefs that influence behavior. Ethics concerns the issues of right and wrong within organizations, institutions, and communities, often being mistakenly associated with morality. Therefore, it is crucial for individuals involved in research, whether conducting or collaborating, to be mindful of ethical challenges (Babbie 2015). Several authors have identified the following ethical considerations as essential to address in any study, although this list is not exhaustive: respecting human dignity, which entails providing full disclosure, debriefing participants, and appropriately presenting and interpreting data; obtaining informed consent; avoiding harm; ensuring privacy violation is minimized; and maintaining anonymity and confidentiality (Polit & Beck 2014).

3.11 Summary of the Chapter

In this chapter, the focus was on the sample, sampling technique, and study design. The researcher assessed the validity and reliability of the tools used for data collection, as well as the data gathering process and the pre-testing of data collection tools. Furthermore, the chapter addressed important aspects such as obtaining research permission, conducting pilot testing, and taking ethical considerations into account.

CHAPTER 4: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The objective of this chapter is to present and analyse the empirical findings of the study. It comprises various sections, including the demographic profile of respondents, which provides information on their educational level and tenure in their respective organizations. The reliability and validity of the data are assessed using Cronbach's alpha coefficient and factor analysis to ensure the appropriateness of the study variables. Descriptive statistics are presented to enhance understanding of the study variables and to prepare for inferential statistics. Correlation analysis results are presented to explore the relationships among the study variables. Regression analysis results are provided to establish the regression model and test the hypotheses.

4.2 Response Rate

For this study, a total of 270 questionnaires were distributed to employees in the telecommunication industry in Zambia. From this number, the study realised a response rate of 82.9%, which is considered high and sufficient based on the recommended threshold of 30%-40% (Saunders and Thornhill 2017).

4.3 Demographic Results

Regarding gender, the study findings indicated that the majority of respondents were male, accounting for 62% of the total sample (224 individuals), while the remaining 38% were female. The study revealed that the age group of 18 – 25 years was the least represented in this study accounting for 8% of the total sample size. The age group of 31 – 40 years accounted for the highest representation of the sample with 34%.

When examining the highest level of education achieved by respondents, the results presented in Table 4.1 revealed that 37% had obtained a master's degree, 50.4% held a bachelor's degree, 0.4% possessed a PHD, and only 13% had a diploma certification. The level of education was deemed important as it provided the targeted audience with a comprehensive understanding of outsourcing in the telecommunication industry in Zambia. By involving well-educated respondents, researchers can expect more informed and articulate answers, leading to a comprehensive understanding of the factors influencing outsourcing decisions in the Zambian telecommunication sector. These respondents are likely to have experience in outsourcing

practices, enabling them to offer deeper insights into its benefits, challenges, and overall impact on the industry.

Table 4. 1: Demographic Profile

Description		Frequency	Percent
Gender	Male	139	62
	Female	85	38
Age	18 - 25 years	19	8
	26 - 30 years	72	32
	31 - 40 years	77	34
	Over 40 years	56	25
Education	Diploma	28	13
	Undergraduate degree	113	50.4
	Master's Degree	82	37
	PHD	1	0.4
Experience	1-5 years	52	23
	6-10 years	92	41
	Above 10 years	80	36

Regarding the duration of employment or their experience within their respective organizations, the results from Table 4.1 indicated that 41% of the respondents had worked for their companies for a period of 6 to 10 years, 36% had worked for over 10 years, and only 23% had worked for less than 5 years. A significant majority (over 77%) had worked for more than 6 years, demonstrating an adequate duration of employment. The number of years that respondents had spent working in their organizations was considered important, as it indicated that the respondents possessed substantial working experience, knowledge, information, and institutional memory that were deemed valuable for this study.

4.4 Preliminary Statistical Checks

Before delving into the main analysis, it is important to perform preliminary statistical checks to ensure the quality and suitability of the data. These checks include assessing normality, examining for outliers, and identifying any missing values. These initial steps lay the foundation for robust and reliable analysis by ensuring the integrity of the dataset.

4.4.1 Tests for Normality, Outliers, and Missing Values

Before conducting descriptive and inferential analysis, the data underwent checks for normality using kurtosis and skewness values. Kurtosis indicates the peakedness of the data distribution,

while skewness measures the symmetry of the dataset. All normality tests yielded significant results, with kurtosis and skewness values falling within the range of -2 to +2, as suggested by George and Mallery (2019). The results are provided in Appendix 2. No outliers or missing values were detected, indicating that the data was suitable for analysis.

4.4.2 Factor Analysis Results

Factor analysis is a statistical technique used in research to identify underlying patterns and relationships among observed variables. It helps to simplify and organize complex data by grouping variables that share common variance into factors. These factors represent latent constructs or underlying dimensions that are not directly measured but can be inferred from the observed variables (Hair et al., 2019). According to Hair et al. (2010), factor analysis is crucial for testing construct validity, highlighting variability among observed variables, and reducing data redundancy by identifying correlated variables. Before conducting factor analysis, it is essential to examine the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy.

The KMO measure assesses the sampling adequacy, with a recommended threshold of 0.5 for satisfactory factor analysis. If any variable pair falls below this value, one of them is eliminated from the analysis. The KMO measure and the Bartlett's Test of Sphericity (BST) were evaluated for the variables in this study. The results indicated that the KMO value exceeded the recommended threshold of 0.5, and the BST was significant at $p < 0.05$, following the guidelines of Hutcheson and Sofroniou (2009). Specifically, the KMO value was 0.746, as shown in Table 4.2, which is considered good and indicates that the sample size was sufficient for factor analysis (Hutcheson, 2009). The Bartlett's measure tests the null hypothesis that the original correlation matrix is an identity matrix.

Table 4. 2: KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.746
Bartlett's Test of Sphericity	Approx. Chi-Square	8294.604
	Df	741
	Sig.	0.000

Another aspect of factor analysis is the concept of communalities. Communalities represent the proportion of variance in each observed variable (indicator) that is accounted for by the underlying factors. In other words, communalities reflect the common variance shared between the observed variables and the extracted factors. High communalities suggest that the factors

explain a substantial amount of variance in the indicators, indicating that the observed variables are well-represented by the underlying factors. A high communality (close to 1) indicates that the observed variable shares a substantial amount of variance with the underlying factors. This suggests that the indicator is a good representation of the latent construct it is supposed to measure. A low communality (close to 0) implies that the observed variable has little in common with the extracted factors and may not be adequately capturing the underlying construct. In this study all the communalities were above 0.4. See the attached appendix 3.

In factor analysis, assessing indicator reliability is a crucial step to ensure the validity of the underlying constructs or factors. Indicator reliability refers to the consistency and accuracy of individual observed variables (indicators) in representing their respective latent constructs. High indicator reliability indicates that the observed variables are consistently and accurately measuring the underlying factors they are supposed to represent (Hair et al., 2019). The reliability of indicators were assessed to ensure that they accurately represent the underlying construct. Results indicated that all the items under each variable were within the recommended threshold of over 0.4 outer loading (Hair et al., 2019). The outer loadings of the different constructs have been shown in Table 4.3.

Table 4. 3: Factor Loading

Variables	Items	1	2	3	4	5	6	7	8
Cost Efficiency	CE1								0.702
	CE2								0.747
	CE3								0.627
	CE4								0.746
	CE5								0.643
Access to Human Resources	AHR1				0.729				
	AHR2				0.761				
	AHR3				0.814				
	AHR4				0.729				
	AHR5				0.795				
Improved Focus on Core Competencies	IFCC1		0.821						
	IFCC2		0.841						
	IFCC3		0.722						
	IFCC4		0.781						
	IFCC5		0.810						
Access to Modern Technologies	AMTE1					0.733			
	AMTE2					0.636			
	AMTE3					0.766			
	AMTE4					0.696			
	AMTE5					0.624			
Financial Perspective	FP1	0.892							
	FP2	0.842							
	FP3	0.875							
	FP4	0.849							
	FP5	0.878							
	FP6	0.843							
	FP7	0.874							
Customer Perspective	CP1							0.783	
	CP2							0.739	
	CP3							0.857	
	CP4							0.870	
Internal Business Processes	IBP1			0.844					
	IBP2			0.944					
	IBP3			0.875					
	IBP4			0.947					
Learning and Growth	LGP1						0.716		
	LGP2						0.867		
	LGP3						0.885		
	LGP4						0.852		

To determine the reliability of the research instrument, Cronbach's test of reliability was conducted on the questionnaire. Items with an overall Cronbach's alpha score greater than 0.7 were retained in the questionnaire. During the reliability analysis, some items in the main study were identified as having unusually low inter-item correlations and were subsequently removed. The remaining items and their corresponding reliability scores for each variable are presented in Table 4.4, indicating the number of items retained for further analysis.

Table 4. 4: Reliability Test Results

Variables	No of items	Cronbach's Alpha	Comment
Cost Efficiency	5	0.802	Acceptable
Access to Human Resources	5	0.846	Acceptable
Improved Focus on Core Competencies	5	0.913	Acceptable
Access to Modern Technologies	5	0.813	Acceptable
Financial Perspective	7	0.970	Acceptable
Customer Perspective	4	0.840	Acceptable
Internal Business Processes	4	0.942	Acceptable
Learning and Growth	4	0.852	Acceptable

4.4.3 Assessment of Collinearity

To identify any issues of collinearity, the variation inflation factors (VIFs) were analysed. A VIF value of 1.0 indicates that a variable is independent of all other independent variables, suggesting the absence of multicollinearity. However, a general guideline suggests that a VIF value of 10 or higher may indicate the presence of multicollinearity (Pallant, 2012). The results presented in the Collinearity diagnostic appendix 5 revealed that there was no evidence of multicollinearity, as all variance inflation factors (VIFs) fell within an acceptable range. Therefore, regression analysis was deemed appropriate for testing the study hypotheses without significantly violating the necessary assumptions in linear regression.

4.5 Descriptive Analysis

In this section, the focus is on presenting the mean and standard deviations of the responses. The results can be found in Table 4.5 under the descriptive statistics section. The mean values and associated standard deviations are based on the Likert scale scores, where 5 represents "strongly agree" and 1 represents "strongly disagree". Therefore, mean values that are significantly higher than 3.5 indicate that, on average, the respondents agree or strongly agree with the statement of the item. Conversely, mean values that are significantly lower than 2.5

indicate that, on average, the respondents disagree or strongly disagree with the statement of the item. Mean values falling between 2.5 and 3.5 indicate that, on average, the respondents are neutral towards the statement of the item.

Table 4. 5: Description Analysis

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Cost Efficiency	224	1	5	3.54	0.651
Access to Human Resources	224	1	5	3.64	0.746
Improved Focus on Core Competencies	224	1	5	3.80	0.757
Access to Modern Technologies	224	1	5	3.69	0.846
Organisation Performance	224	1	5	3.60	0.595
Valid N (listwise)	224				

The survey findings indicate that the majority of respondents agreed with the items related to cost efficiency with mean value of 3.54 and standard deviations of 0.651. Respondents also expressed agreement with items concerning Access to Human Resources, Improved Focus on Core Competencies, and Access to Modern Technology. The mean values and standard deviations for these variables were as follows: Access to Human Resources (mean = 3.64, standard deviation = 0.746), Improved Focus on Core Competencies (mean = 3.80, standard deviation = 0.846), Access to Modern Technology (mean = 3.69, standard deviation = 0.846), respectively. Additionally, respondents agreed with the aspects related to organizational performance Organisation Performance (mean = 3.60, standard deviation = 0.595).

4.6 Correlation Analysis

Correlation analysis is a statistical method used to determine the strength and nature of the association between two or more variables. It helps identify the relationship that exists between one variable and others. In conjunction with regression analysis, it measures how well the regression line explains the variations in the dependent variable based on the independent variable. In this study, correlation analysis was conducted to explore the relationship between outsourcing factors and organizational performance (Hair et al, 2019). The study hypothesized a relationship between these two sets of variables. The correlation matrix, presented in Table 4.6, displays the correlation coefficients between independent variables and their corresponding significance levels. This procedure was essential to assess the nature of relationships among the variables.

Table 4. 6: Correlation Analysis Results

Variables		1	2	3	4	5	6	7
1	Education	1						
2	Experience	0.079	1					
3	Cost Efficiency	-0.031	0.008	1				
4	Access to Human Resources	0.004	-.160*	.279**	1			
5	Improved Focus on Core Competencies	-0.106	-0.112	.337**	.276**	1		
6	Access to Modern Technologies	-0.094	-0.130	.279**	.140*	.492**	1	
7	Organisation Performance	0.036	0.004	.557**	.343**	.430**	.400**	1

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

Education and experience were used in this study as control variables. The correlation analysis results indicated that there was no significant relationship between education and organizational performance in the telecommunication industry (correlation coefficient, $p > 0.05$). Similarly, the correlation between experience and organizational performance was also found to be non-significant (correlation coefficient, $p > 0.05$).

The findings of the study also revealed that there were significant correlations between various independent variables and organizational performance in telecommunication industry in Zambia. Cost efficiency exhibited a moderate positive correlation with organizational performance ($r=0.557$, $p<0.05$). Access to Human Resources, Improved Focus on Core Competencies, and Access to Modern Technologies all showed moderate positive and significant correlations with organizational performance, with $r=0.343$, $r=0.430$, and $r=0.400$ respectively at $p<0.05$ level of significance.

It is noteworthy that Access to Human Resources had the weakest moderate relationship with organizational performance ($r=0.343$, $p<0.05$), while Cost efficiency had the strongest strong relationship with organizational performance ($r=0.557$, $p<0.05$).

These results indicate that the independent variables were positively and significantly correlated with each other and with the dependent variable, implying that they moved in the same direction. An increase in one variable was associated with an increase in the other variable and vice versa.

4.7 Regression Analysis

Regression analysis is a statistical technique used to examine the relationship between a dependent variable and one or more independent variables. It helps determine how changes in

the independent variables are associated with changes in the dependent variable. The analysis aims to establish a regression model that can predict or explain the value of the dependent variable based on the values of the independent variables (Pallant 2010).

4.7.1 Model Summary

The table presented as Table 4.7 provides the model summary for each variable, including the R value, R Square, and Adjusted R Square. The R Square value, known as the coefficient of determination, indicates the proportion of variation in the dependent variable, which in this case is organizational performance that can be explained by the independent variables.

Table 4. 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.036 ^a	0.001	-0.008	0.597
2	.654 ^b	0.428	0.412	0.456

For the independent variables in managed service model, the R Square value was found to be 0.428. This suggests that these independent variables accounted for 42.8% of the variations observed in organizational performance within the Telecommunication industry in Zambia. The remaining 57.2% of the variation can be attributed to other factors that were not considered in this study such as risk management, improved quality and service levels, global presence and market reach, regulatory compliance etc.

4.7.2 Regression Coefficients

The standardized regression coefficients for the predictors, along with their significance values, are displayed in Table 4.8. Within telecommunication companies, the unstandardized coefficients indicate that cost efficiency had the strongest impact on the model ($\beta=0.366$, $p<0.05$), followed by access to modern technologies ($\beta=0.136$, $p<0.05$), Access to Human Resources ($\beta=0.135$, $p<0.05$), and the least weight was observed for Improved Focus on Core Competencies ($\beta=0.126$, $p>0.05$).

Table 4. 8: Regression Coefficient

Model	Variables	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.671	0.173		21.216	0.000
	Education	-0.032	0.060	-0.036	-0.540	0.590
	Experience	-0.001	0.053	-0.001	-0.013	0.989
2	(Constant)	0.709	0.275		2.577	0.011
	Education	0.005	0.046	0.005	0.105	0.916
	Experience	0.049	0.041	0.063	1.196	0.233
	Cost Efficiency	0.366	0.052	0.401	7.097	0.000
	Access to Human Resources	0.135	0.044	0.170	3.066	0.002
	Improved Focus on Core Competencies	0.126	0.049	0.160	2.583	0.010
	Access to Modern Technologies	0.136	0.042	0.194	3.236	0.001

These results imply that, while holding other factors constant, a unit increase in cost efficiency would result in a 0.366 increase in organizational performance. Similarly, a unit increase in Access to Human Resources would lead to a 0.135 increase in organisation performance, while a unit increase in Improved Focus on Core Competencies and Access to Modern Technologies would lead to a 0.126 and 0.136-unit increase, respectively, in organizational performance within the Telecommunication Companies in Zambia.

The study revealed that all the variables that influence outsourcing significantly and positively affect the organisation performance in Telecommunication industry in Zambia. This is seen in the fact that all the variables have a significant p values of Cost Efficiency: $P = 0.000$, Access to Human Resources: $p = 0.002$, Improved Focus on Core Competencies: $p = 0.010$, and Access to Modern Technologies $p = 0.001$.

4.8 Discussion of Findings.

The following section presents the discussion of findings from the study "Assessing the Impact of a Managed Services Model on Organisational Performance in the Zambian Telecommunications Industry." Through an examination of various factors, including the effect of improved focus on core competencies, access to modern technologies, and other relevant variables, this discussion aims to provide insights into the relationship between adopting a managed services model and organizational performance within Zambia's telecommunications sector. Drawing upon the balanced scorecard framework and relevant theories such as staff

augmentation, out-tasking, project-based outsourcing, and managed services, the findings shed light on the key drivers and outcomes of organizational performance in the context of strategic outsourcing.

4.8.1 Cost Efficiency

The findings revealed a significant and positive relationship between cost efficiency as a factor in outsourcing decision and organisation performance in the telecommunication industry in Zambia. In assessing the impact of a managed services model on organizational performance in the Zambian telecommunications industry, one critical aspect to consider is the effect of cost efficiency on overall performance. Cost efficiency, as an independent variable, plays a significant role in determining the financial health and operational effectiveness of telecommunication companies operating within this model. Theoretical frameworks such as the staff augmentation model, out-tasking, project-based outsourcing, and managed services offer valuable insights into the relationship between cost efficiency and organizational performance.

The staff augmentation model posits that by outsourcing certain functions to external service providers, telecommunications companies can augment their existing workforce with specialized skills and expertise as needed. In the context of cost efficiency, this model suggests that outsourcing specific tasks or projects to external providers can help reduce labour costs associated with maintaining a full-time in-house workforce. By leveraging the capabilities of external resources on a temporary basis, telecommunication companies can achieve cost savings while still meeting their operational needs.

Out-tasking, on the other hand, involves outsourcing individual tasks or functions to specialized service providers on a contract basis. This approach allows telecommunication companies to focus on their core competencies while delegating non-core tasks to external experts. From a cost efficiency perspective, out-tasking can lead to significant savings by eliminating the need to hire and train internal staff for tasks that can be more effectively and economically handled by external providers.

Project-based outsourcing entails contracting out specific projects or initiatives to external vendors, who assume responsibility for project delivery and management. This model allows telecommunication companies to access specialized skills and resources for project execution without incurring the long-term overhead costs associated with maintaining in-house capabilities. Cost efficiency in this context is achieved through the ability to budget and allocate

resources more effectively, thereby optimizing project costs and improving overall financial performance.

Finally, the managed services model involves outsourcing entire operational functions, such as network maintenance, customer support, and IT management, to specialized third-party providers. Under this model, telecommunication companies pay a fixed fee for the services provided, allowing for predictable costs and greater budget control. Managed services providers leverage economies of scale and specialized expertise to deliver services more cost-effectively than could be achieved internally. Thus, cost efficiency in the managed services model is achieved through economies of scale, resource optimization, and the ability to access best-in-class services at a lower cost.

Studies from the Resource Based View perspective suggest that firms base their decisions on whether outsourcing reduces costs or builds strategic advantages (Sharpe, 2007). This has generated much research on how using outsourcing to cut costs or gain strategic advantages affects firm performance. A review of the literature reveals that most empirical research and discussion examine cost cutting and strategic advantages as mutually exclusive motives for outsourcing (Quinn, Doorley, and Pacquette, 2000). Moreover, news releases and the business press often cite both motives as influencing a firm's decision to outsource. In fact, 27.5% of the outsourcing announcements in the study by Sharpe (2007) sample explicitly cite both motives for outsourcing. For example, Unilever announced outsourcing its data network operations to cut overhead and increase efficiency in the short run, while enhancing product development and marketing in the long run (Keller, 1992). Similarly, Kodak announced that it anticipated immediate cost reduction and long-term gain in market share by outsourcing certain components in digital camera manufacturing (McWilliams, 2005).

Further, firms cite specific reasons for how outsourcing motivated by cost reduction can improve short-term performance. As a baseline for assessing advantages, firms equate the cost of outsourcing to the cost of acquiring additional resources to do work internally (Kavan, Saunders, and Nelson, 1999). Leveraging a vendor's ability to reduce clients' operating costs provides a comparable level of service at lower cost. Vendors' relative cost advantages may arise from scale and scope economies, which they achieve, respectively, by aggregating expertise and capacity across a large number of clients and by simultaneously undertaking a variety of projects across which they share or transfer capabilities (Loh and Venkata-man, 2001; McCarthy and Anagnostou, 2004).

Outsourcing can also generate needed cash when firms sell assets or transfer employees to vendors (Juma'h and Wood, 2003). Cost advantages may come from reducing or eliminating new investments or investment renewals (Gilley and Rasheed, 2000; Kakabadse and Kakabadse, 2005). This occurs, for instance, when vendors offer services using technologies that are more efficient than the client's or skills that are unjustifiably costly for client development in house (Abraham and Taylor, 2016). In addition, outsourcing may reduce internal cost inefficiencies associated with administration, bureaucratic procedures, and politics (Gilley and Rasheed, 2000).

Empirical studies on the relationship between outsourcing to cut costs and its expected impact on a firm's value show mixed results. Farag and Krishnan (2003) tested the anticipated performance effect of outsourcing in which firms announced attempts to cut costs by automating an existing business function. Their findings showed significant negative CARs (Cost Affected Reductions). In another study, Gallivan, and Kim (2006) found a marginally significant positive relationship between outsourcing motivated by cost cutting and CARs. Outsourcing is never a fix for poor internal systems, Wright (2001) stressed. You have to fix your own processes within the company first, before outsourcing, or you will have a bigger headache on your hands than when you started.

Dissatisfaction with surprise additional costs were a powerful negative in an outsourcing review of large companies by Deloitte Consulting's (www.deloitte.com) "Calling a Change in the Outsourcing Market Report, 2005". The study looked at both business process and information technology outsourcing: 70% of the companies said they have had significant negative experiences with outsourcing projects – and were dissatisfied with its costs and complexity. Also reported was the need for more senior management attention and skills than anticipated. Additional costs came from unexpected complexity of the outsourcing process and lack of transparency in vendor pricing or cost structures. 57% said they absorbed costs for services they believed were included in contracts with vendors or outsource providers. Many indicated there were "hidden" costs in managing outsourcing projects, as well.

One reason for the results, according to Ken Landis, a senior strategy principal at Deloitte, may be that vendors and the companies that hire them have "conflicting Objectives." Another observation: "The structural advantages envisioned do not always translate into cheaper, better, or faster services." As a result of the findings, he observed, "outsourcing will become less appealing for large companies because it is not delivering the value as promised."

In summary, cost efficiency plays a crucial role in determining the success of telecommunication companies operating within a managed services model. Theoretical frameworks such as staff augmentation, out-tasking, project-based outsourcing, and managed services offer valuable perspectives on how outsourcing strategies can contribute to cost savings and improved organizational performance. By effectively managing costs through strategic outsourcing, telecommunication companies in Zambia can enhance their financial sustainability, operational efficiency, and overall competitiveness in the telecommunications industry.

4.8.2 Improved Focus on Core Competencies

The study also indicated a significant and positive relationship between improved focus on core competencies as a factor in outsourcing decision and organisation performance in the telecommunication industry in Zambia. The variables revealed a beta factor of 0.126 and a p value less than 0.05. In the context of assessing the impact of a managed services model on organisational performance in the Zambian telecommunications industry, the concept of improved focus on core competencies emerges as a critical determinant of success. As telecommunications companies navigate the complexities of the industry, maintaining a clear focus on core competencies becomes essential for achieving sustainable competitive advantage and driving overall organisational performance. The balanced scorecard framework offers a comprehensive approach to evaluating organisational performance across multiple dimensions, including financial, customer, internal processes, and learning and growth perspectives.

Improved focus on core competencies, as an independent variable within the study, aligns closely with several theoretical models of outsourcing and managed services, namely the staff augmented model, out-tasking, project-based outsourcing, and managed services. In the staff augmented model, telecommunications companies strategically augment their existing workforce with specialized talent to enhance their core capabilities and address specific operational needs. For instance, a telecommunication company may outsource network maintenance tasks to a third-party provider with expertise in this area, allowing the company to focus on its core competencies such as product development and customer service.

Similarly, out-tasking involves outsourcing specific tasks or functions that are outside the company's core competencies to external service providers. For example, a telecommunication company may out-task customer support services to a managed services provider, enabling the

company to concentrate on its core business activities while ensuring high-quality customer service delivery.

Project-based outsourcing involves contracting external vendors to execute specific projects or initiatives that align with the company's strategic objectives. For instance, a telecommunication company may engage a managed services provider to implement a new network infrastructure project, leveraging the provider's expertise and resources to achieve project goals efficiently.

Lastly, managed services encompass a broader outsourcing approach where telecommunications companies entrust third-party providers with the management and delivery of entire operational functions or processes. This model allows companies to focus on their core competencies while benefiting from the specialized skills and resources of managed services providers.

In practice, improved focus on core competencies can manifest in various ways within telecommunications companies operating in Zambia. For example, by outsourcing non-core functions such as network maintenance, customer support, and IT management to specialized managed services providers, companies can reallocate resources and attention towards core competencies such as product innovation, market expansion, and strategic partnerships. This strategic realignment enhances operational efficiency, fosters innovation, and ultimately contributes to improved organisational performance.

More recently the main drivers for outsourcing appear to be shifting from cost to strategic issues such as core competence and flexibility (Wright, 2001). In general, the literature supports outsourcing as a strategy, which may offer improved business performance on numerous dimensions (Dekkers, 2000). Perhaps the most often cited strategic reason for outsourcing is to allow the organization to better focus on its core competencies (Quinn, 2010). Because of intense competition, organizations are forced to reassess and redirect scarce resources (Quinn, 2010; Razzaque and Chen, 2008).

Resources are typically redirected to where they make the greatest positive impact, namely the organization's core functions. In addition to refocusing resources onto core competencies, other strategy issues which encourage the consideration of outsourcing are restructuring, rapid organizational growth, changing technology and the need for greater flexibility to manage demand swings (Kakabadse and Kakabadse, 2005). Flexibility appears to be an important driver not just from a scale perspective but also regarding the scope of product or service. Organizations need to react quicker to customer requirements and outsourcing is seen as a

vehicle to accomplish this. Outsourcing may also be perceived as a way to reduce the organization's risk by sharing it with suppliers and at the same time acquire the positive attributes of those suppliers. The partnerships that result from outsourcing may enable an organization to be a world-class performer for a whole suite of products and services where it could only be an average performer by itself. This strategy results in a so-called "virtual organization" where functions are outsourced to multiple vendors under one agreement.

Together the suppliers perform an integrated set of services. There are, however, potential pitfalls when outsourcing for strategic reasons. Organizations may "give away the crown jewels" if they are not careful. IBM is used as a frequent example of a company that outsourced the "wrong" things (the operating system). If organizations outsource the wrong functions they may develop gaps in their learning or knowledge base which may preclude them from future opportunities (Prahalad and Hamel, 1990). Specifically, in highly integrated and evolutionary technologies, applying the traditional core competence tests may result in outsourcing too many or the wrong functions. Literature also indicates that in industries with complex technologies and systems, internal synergies may be lost when some functions are outsourced. This could result in less productivity or efficiency among the remaining functions (Quinn and Hilmer, 2004).

Looking ahead, the future of the telecommunications industry in Zambia hinges on the effective integration of managed services models and the continual refinement of core competencies to meet evolving market demands and technological advancements. As telecommunications companies embrace digital transformation and pursue new growth opportunities, maintaining a sharp focus on core competencies will remain paramount. Furthermore, ongoing evaluation and adaptation of outsourcing strategies in alignment with organisational goals and industry trends will be essential for sustaining competitive advantage and driving long-term success in the dynamic telecommunications landscape of Zambia.

4.8.3 Access to Human Resources

The study further indicated a significant and positive relationship between access to human resources as a factor in outsourcing decision and organisation performance in the telecommunication industry in Zambia. The variables revealed a beta factor of 0.135 and a p value less than 0.05. Outsourcing, as a strategic business practice, has garnered significant popularity in the telecommunication industry owing to its manifold benefits, with one crucial advantage being "access to human resources." In the fiercely competitive landscape of today, attracting and retaining top talent poses a substantial challenge for telecommunication

companies. However, by selectively outsourcing certain functions to specialized service providers, organizations can gain access to a diverse pool of skilled professionals with expertise in specific domains. This access to human resources brings about several important benefits, implications, and impacts on organizational performance, encompassing cost savings, enhanced innovation, and improved agility.

The effect of access to human resources on organisational performance, particularly within the context of the managed services model in the Zambian telecommunications industry, plays a crucial role in shaping business outcomes and competitiveness. Access to skilled human resources is essential for telecommunication companies to effectively implement and manage outsourced functions under the managed services model. This discussion will delve into the relationship between access to human resources and organisational performance, drawing insights from relevant theories such as the staff augmentation model, out-tasking, project-based outsourcing, and managed services.

The staff augmentation model involves supplementing existing internal resources with external personnel to address specific skill gaps or capacity constraints. In the context of the Zambian telecommunications industry, access to human resources through staff augmentation can enhance organisational performance by providing specialised expertise in areas such as network maintenance, IT management, and customer support. For example, telecommunication companies may engage external professionals with expertise in emerging technologies or regulatory compliance to support strategic initiatives and improve overall operational efficiency.

Similarly, out-tasking refers to the outsourcing of specific tasks or functions to external service providers on a short-term basis. This approach allows telecommunication companies to access specialised skills or resources for discrete projects or activities without committing to long-term contracts. In the Zambian context, out-tasking can contribute to organisational performance by enabling telecommunication companies to efficiently manage workload fluctuations, address temporary skill shortages, and expedite project delivery. For instance, a telecommunication company may out-task the deployment of new network infrastructure to a third-party vendor with expertise in rapid deployment and installation services.

Project-based outsourcing involves the delegation of entire projects or initiatives to external service providers, who assume responsibility for project delivery and management. In the Zambian telecommunications industry, project-based outsourcing can enhance organisational

performance by leveraging the capabilities and resources of specialised vendors to execute complex projects more effectively and efficiently. For example, a telecommunication company may outsource the development of a new customer relationship management (CRM) system to a vendor with proven expertise in software development and implementation, thereby accelerating time-to-market and improving customer service.

Finally, managed services encompass the outsourcing of entire business functions or processes to external service providers, who assume responsibility for ongoing management and delivery. Access to human resources under the managed services model is critical for organisational performance as it allows telecommunication companies to access specialised skills, expertise, and resources without the burden of day-to-day management. For instance, a telecommunication company may engage a managed services provider to handle network maintenance and monitoring, ensuring optimal performance and reliability while freeing up internal resources to focus on core business activities.

The findings from the study conducted by Olannye and Okoro (2017) reinforce the positive outcomes of outsourcing certain human resource (HR) activities on overall company performance. In the modern-day economy, the necessity for operational flexibility to respond swiftly to market changes has prompted organizations to adopt dynamic and strategic approaches, ensuring a competitive edge and delivering desirable services to customers. By entrusting non-core or peripheral activities to external providers, organizations can focus on their core HR functions, optimizing resource allocation and efficiency. Activities deemed non-core or secondary, where the firm lacks competence or incurs excessive costs, are strategically outsourced to relieve the organization of burdens, thereby enabling greater focus on specific human resource (HR) activities and contributing to improved organizational performance.

Organizations that embark on the mission to outsource certain HR functions gain a competitive advantage. The desire to achieve a more advantageous position within the industry and maintain strategic market positioning becomes attainable through outsourcing. With access to specialized services, knowledge proficiency, new technologies, and innovative methods of application, the client firm acquires a competitive edge in the industry (Olannye and Okoro, 2017).

The processes involved in making outsourcing decisions enable organizations to analyse their resources, uncover areas of strengths and capabilities, and further strengthen them, while simultaneously identifying areas of weaknesses to improve on through outsourcing. Enhanced

efficiencies and cost reductions are other significant organizational outcomes achieved as a result of outsourcing. Leveraging the extensive experience of outsourcing providers, firms gain access to best practices and streamlined processes, which significantly reduce transaction times and enhance the ability to deliver cost-effective services (Bettis et al, 2014). Additionally, outsourcing empowers firms to curtail future costs by selecting the right vendor through competitive bidding (Domberger, 2018). HR outsourcing further provides companies with superior flexibility and enhances productivity by using third-party service providers to cover variable demands for labour (Cooke, 2018), resulting in high service quality and enhanced customer satisfaction.

In a nut shell, the strategic practice of outsourcing in the telecommunication industry yields various advantages, with "access to human resources" being a pivotal one. By leveraging specialized external expertise, telecommunication companies can enhance their performance, competitiveness, and capacity for innovation, ultimately positioning themselves for sustained growth in the dynamic and rapidly evolving telecommunications landscape.

The findings of this study can inform strategic decision-making within the Zambian telecommunications industry, highlighting the significance of adopting a managed services model and enhancing access to human resources. By embracing outsourcing and leveraging external expertise, telecom firms can optimize their operations, drive innovation, and maintain a competitive edge in a rapidly evolving market landscape. Moreover, as technological advancements and market dynamics continue to shape the industry, ongoing research and analysis will be essential to identify emerging trends and opportunities for further improvement in organizational performance.

4.8.4 Access to Modern Technology and Expertise

The study also indicated a significant and positive relationship between Access to Modern as a factor in outsourcing decision and organisation performance in the telecommunication industry in Zambia. The variables revealed a beta factor of 0.136 and a p value less than 0.05. The effect of access to modern technologies on organizational performance, particularly within the framework of a balanced scorecard, is a critical aspect of assessing the impact of a managed services model in the Zambian telecommunications industry. As organizations in this sector increasingly adopt managed services models to streamline operations and improve efficiency, the role of modern technologies becomes pivotal in driving organizational success. This discussion delves into how access to modern technologies influences organizational

performance within the context of staff augmentation, out-tasking, project-based outsourcing, and managed services, drawing upon relevant theories and examples.

The staff augmentation model involves supplementing existing internal resources with external expertise to fulfil specific skill gaps or project requirements. In the Zambian telecommunications industry, access to modern technologies through staff augmentation can enhance organizational performance by providing specialized knowledge and skills necessary for deploying and managing advanced telecommunications infrastructure. For example, by hiring external experts proficient in emerging technologies such as 5G networks or cloud computing, telecommunications companies can accelerate the implementation of innovative solutions, leading to improved service delivery and customer satisfaction.

Out-tasking, on the other hand, involves outsourcing specific tasks or functions to external vendors while retaining overall control and management. In the Zambian telecommunications industry, organizations may out-task functions such as network maintenance or cybersecurity to specialized service providers equipped with modern technologies and expertise. This enables organizations to leverage cutting-edge tools and resources without the burden of full outsourcing, thereby enhancing operational efficiency and performance. For instance, outsourcing network monitoring and management to a third-party provider with advanced monitoring tools can help improve network uptime and reliability, consequently enhancing organizational performance metrics related to network performance and reliability on the balanced scorecard.

Similarly, project-based outsourcing entails outsourcing specific projects or initiatives to external vendors on a contractual basis. In the Zambian telecommunications industry, access to modern technologies through project-based outsourcing can facilitate the successful execution of strategic initiatives such as network expansion or digital transformation projects. For instance, outsourcing the deployment of fiber optic infrastructure to a vendor equipped with state-of-the-art equipment and expertise can accelerate project timelines and minimize deployment costs, ultimately contributing to improved performance indicators such as project completion time and cost-effectiveness on the balanced scorecard.

Furthermore, the managed services model involves outsourcing the management and operation of entire business functions or processes to external vendors. In the Zambian telecommunications industry, adopting a managed services approach allows organizations to access a comprehensive suite of modern technologies and expertise without the need for

significant capital investment. For example, partnering with a managed services provider for end-to-end network management and operations can lead to enhanced performance across various dimensions, including network availability, scalability, and cost efficiency. By leveraging advanced technologies such as AI-driven predictive maintenance and network optimization tools, telecommunications companies can achieve higher levels of operational excellence and performance on the balanced scorecard.

The study's findings are in line with the study by Byham (2016). In his study, he highlighted the fact that outsourcing has become a prevalent strategy in the telecommunication industry due to the numerous advantages it offers, and one of the most significant benefits is "access to modern technologies." In today's fast-paced and technologically driven landscape, staying at the forefront of innovation is critical for telecommunications organizations to remain competitive and meet the evolving demands of customers. By outsourcing certain functions to specialized technology providers, telecommunication companies can tap into cutting-edge solutions and state-of-the-art tools that they might not be able to develop or maintain in-house. This access to modern technologies has a profound impact on organizational performance, influencing various aspects of the business, from cost efficiency to customer experience.

According to Greaver (2018), one of the primary advantages of outsourcing for access to modern technologies is the cost savings it brings. Acquiring and maintaining the latest technologies can be a substantial financial burden for telecommunication companies. By outsourcing technology-related tasks, organizations can avoid hefty upfront investments and ongoing maintenance expenses. Technology providers often take on the responsibility of updating and upgrading their systems, relieving telecom companies of these costs. This cost efficiency allows organizations to allocate their financial resources more strategically and invest in other critical areas that directly contribute to their growth and profitability.

Furthermore, the expertise and specialization of technology outsourcing companies play a pivotal role in enhancing organizational performance. Technology providers invest heavily in research and development to offer cutting-edge solutions tailored to the specific needs of telecommunication companies. Leveraging the expertise of these specialized providers ensures that telecom organizations are utilizing the most suitable and advanced technologies in their operations. The in-depth knowledge and experience of technology experts can lead to more efficient processes, better system integration, and improved overall performance (Greaver 2018)

Lamming (2013) also had similar findings as the current study. In his study, he breaks down means by which access to technologies impact organisation performance. The highlights that a significant way outsourcing for access to modern technologies affects organizational performance is through the acceleration of time-to-market. In a highly competitive telecommunication market, speed is of the essence. By outsourcing technology services, telecom companies can take advantage of ready-made solutions that can be seamlessly integrated into their existing infrastructure. This agility allows organizations to respond quickly to market demands and launch new products and services at a faster pace. Being able to roll out innovative offerings ahead of competitors can give telecommunication companies a significant advantage in capturing market share and securing customer loyalty.

Outsourcing enables telecommunication organizations to focus on their core competencies, which further contributes to improved performance. Technology-related tasks can be complex and time-consuming, diverting valuable resources and attention away from core business functions. By outsourcing these tasks to specialized providers, telecom companies can concentrate on areas that directly impact their growth and customer satisfaction. This focus on core competencies allows organizations to streamline their operations, make more informed strategic decisions, and foster a culture of innovation (Lamming 2013).

Scalability and flexibility are essential factors in the telecommunications industry, given the dynamic nature of market demand. Modern technologies often offer these capabilities, allowing organizations to adjust their services based on fluctuating needs. Through outsourcing, telecom companies gain access to scalable solutions that can adapt to changing business requirements. Whether it's expanding to cater to increased demand or downsizing during lean periods, outsourcing technology services enables organizations to remain nimble and responsive in a rapidly evolving market (Lamming 2013).

Furthermore, outsourcing technology components can be a valuable risk mitigation strategy for telecommunication companies. Technology is prone to disruptions, whether due to security breaches, system failures, or compatibility issues. By outsourcing technology tasks to specialized providers, some of these risks can be transferred to the technology experts who are better equipped to manage and mitigate potential problems. This approach enhances the overall risk management strategy of the organization, safeguarding against unexpected setbacks that could otherwise impact performance (Lamming 2013)

The access to modern technologies through outsourcing can also have a profound impact on customer experience, a critical driver of organizational success. Innovative technologies such as artificial intelligence, big data analytics, and 5G networks can revolutionize how telecom companies interact with their customers. For instance, AI-powered chatbots can enhance customer support services, providing prompt and personalized assistance to users. Big data analytics can help telecom companies gain insights into customer preferences and behaviors, enabling them to tailor their services accordingly. Meanwhile, the implementation of 5G networks ensures faster and more reliable connections, delivering seamless experiences to customers.

A positive customer experience leads to increased customer loyalty and satisfaction, resulting in higher retention rates and positive word-of-mouth referrals. Satisfied customers are more likely to become brand advocates and recommend the services to others. As a result, outsourcing for access to modern technologies indirectly boosts the organization's reputation, brand equity, and revenue.

In conclusion, outsourcing for access to modern technologies has numerous benefits for the telecommunication industry, significantly impacting organizational performance. It allows companies to tap into cutting-edge solutions and expertise that may otherwise be unattainable in-house. The cost savings achieved through outsourcing can be reinvested strategically to fuel growth and innovation. By leveraging specialized technology providers, telecom organizations can accelerate time-to-market, focus on core competencies, and achieve scalability and flexibility. Outsourcing also acts as a risk mitigation strategy, safeguarding against potential technology-related disruptions. Most importantly, the access to modern technologies elevates customer experience, leading to higher customer satisfaction and loyalty. Ultimately, the combination of these advantages positions telecommunication companies for sustained success and competitiveness in a rapidly evolving industry.

The continued evolution of modern technologies will play a crucial role in shaping the organizational performance landscape in the Zambian telecommunications industry. As technologies such as artificial intelligence, machine learning, and Internet of Things continue to advance, organizations must embrace these innovations to stay competitive and drive sustainable growth. Future research should focus on exploring novel approaches to integrating emerging technologies into managed services models and evaluating their impact on organizational performance from a balanced scorecard perspective. Additionally, examining the role of organizational culture, leadership, and change management in facilitating the

adoption and utilization of modern technologies will be essential for ensuring successful outcomes in the dynamic telecommunications landscape of Zambia.

This research contributes new insights into the relationship between access to modern technologies and organizational performance within the Zambian telecommunications industry, specifically through the lens of a managed services model. By examining the impact across the balanced scorecard perspectives and integrating theories such as staff augmentation, out-tasking, project-based outsourcing, and managed services, this study provides a comprehensive understanding of how organizations can leverage modern technologies to enhance their competitiveness, efficiency, and agility in a rapidly evolving digital landscape. The findings offer valuable implications for industry practitioners, policymakers, and researchers seeking to optimize organizational performance through strategic technology adoption and outsourcing strategies.

4.9 Chapter Summary

The analysis of the results on the assessing the impact of managed service model on organisational performance in the telecommunication industry in Zambia were provided in this chapter. The demographic features of the study's respondents were reported in this chapter. This chapter also presents and interprets other required statistical tests such as factor analysis, internal consistency assessments, and multiple regression analysis.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The previous chapter was dedicated to presenting a detailed analysis of the study and examining its findings concerning the impact of the managed service model on organizational performance in the telecommunication industry. In this chapter, we will provide a concise summary of the results, discuss their implications, and draw conclusions. Furthermore, we will discuss the practical implications of the findings, offer recommendations, and suggest potential areas of study that future scholars may consider exploring.

5.2 Results Summary

To identify factors that influence the implementation managed service model in the telecommunication industry in Zambia.

The study's literature review revealed cost efficiency, access to human resources, improved focus on core competencies, and access to modern technologies as major drivers as variables in managed service model. Under the descriptive results, the study indicated that all the variables were above the mean value of 3.5. This simply means that the respondents agreed to the assertions in the questionnaire under each variable. The descriptive results indicated that the majority of respondents showed agreement with several aspects of the managed service model. These findings include cost efficiency, with a mean value of 3.54 and a standard deviation of 0.651. Additionally, respondents expressed agreement with items related to Access to Human Resources (mean = 3.64, standard deviation = 0.746), Improved Focus on Core Competencies (mean = 3.80, standard deviation = 0.846), and Access to Modern Technology (mean = 3.69, standard deviation = 0.846).

To determine the impact of managed service model on the organization performance in the telecommunication industry.

The study adopted a regression method to underscore the impact each variable had on organisation performance in the telecommunication companies in Zambia. The unstandardized coefficients indicated that cost efficiency had the strongest impact on organisation performance ($\beta=0.366$, $p<0.05$), followed by access to modern technologies ($\beta=0.136$, $p<0.05$), access to human resources ($\beta=0.135$, $p<0.05$), and the least weight was observed for Improved Focus on Core Competencies ($\beta=0.126$, $p>0.05$). The study revealed that all the variables that influence outsourcing significantly and positively affect the organisation performance in

Telecommunication industry in Zambia. This is seen in the fact that all the variables have a significant p values of Cost Efficiency: $P = 0.000$, Access to Human Resources: $p = 0.003$, Improved Focus on Core Competencies: $p = 0.010$, and Access to Modern Technologies $p = 0.001$.

Firstly, cost efficiency emerged as a critical factor positively affecting organizational performance. By outsourcing specific services to managed service providers, telecommunication companies were able to reduce operational costs, leading to improved financial performance and increased competitiveness. Cost optimization enabled these firms to allocate resources more strategically and invest in other growth-oriented initiatives.

Secondly, the adoption of the MSM allowed telecommunication companies to focus on their core competencies. By entrusting the management and operation of certain functions to specialized service providers, firms were able to concentrate on delivering high-quality services to customers and develop innovative products. This heightened focus on core competencies led to enhanced customer satisfaction and loyalty, ultimately contributing to improved organizational performance.

Thirdly, access to human resources was found to be positively related to organizational performance. Through the MSM, telecommunication companies gained access to skilled and experienced professionals provided by the managed service providers. This access to a diverse talent pool enabled companies to fill skill gaps, enhance service delivery, and promote innovation, thereby strengthening their competitive advantage.

Lastly, access to modern technologies was identified as a crucial factor influencing organizational performance. By partnering with managed service providers who possessed advanced technological capabilities, telecommunication companies were able to deploy cutting-edge infrastructure and services. The integration of modern technologies resulted in improved network performance, increased service reliability, and enhanced customer experiences, positively impacting overall organizational performance.

To proffer recommendations on the successful implementation of managed service model.

Based on the findings of the results, the study proffers various recommendations highlighted in section 5.5 of this chapter. In summation, the study's positive and significant findings highlight the potential benefits of the managed service model for enhancing organizational performance in the telecommunication industry in Zambia. By adopting a strategic approach to outsourcing, setting relevant KPIs, fostering strong partnerships, investing in employee

development, and ensuring continuous monitoring, telecommunication companies can make the most of this model. Embracing the recommendations outlined above will position organizations for success in a highly competitive and dynamic industry, ultimately driving growth and profitability.

5.3 Conclusions of the Study

In conclusion, this study aimed to assess the impact of the managed service model on organizational performance within the telecommunication industry in Zambia. The variables under investigation were cost efficiency, access to human resources, improved focus on core competencies, and access to modern technology. By adopting a descriptive research design with a quantitative study approach, we were able to gain valuable insights into the relationship between these variables and organizational performance.

The survey findings provided compelling evidence of the positive impact of the managed service model on the telecommunication industry in Zambia. The majority of respondents demonstrated agreement with the items related to cost efficiency, indicating that this model has been effective in optimizing costs within the organizations. This is crucial in the competitive and cost-sensitive telecommunication industry, as it allows companies to allocate resources more efficiently and enhance their overall financial performance.

Moreover, respondents expressed agreement with items concerning access to human resources, improved focus on core competencies, and access to modern technology. These aspects are essential contributors to organizational effectiveness and growth. By outsourcing certain services through the managed service model, telecommunications companies can tap into specialized expertise, access cutting-edge technology, and concentrate their efforts on their core competencies. This streamlined approach improves the overall efficiency and effectiveness of the organizations, leading to enhanced performance and competitiveness in the industry.

Furthermore, the study revealed a significant and positive relationship between all the variables and organizational performance. This correlation highlights the importance of adopting the managed service model to achieve better performance outcomes in the telecommunication industry in Zambia. Companies that embrace this model can harness its benefits to achieve higher levels of productivity, innovation, and customer satisfaction, ultimately contributing to their overall success.

The findings of this study provide valuable empirical evidence supporting the positive impact of the managed service model on organization performance in the telecommunication industry in Zambia. By enhancing cost efficiency, facilitating access to crucial resources, and enabling a sharper focus on core competencies, the managed service model emerges as a strategic and practical approach for telecommunications companies to thrive in a competitive market. Organizations seeking to improve their performance should consider adopting this model and leveraging its benefits to propel their growth and success.

5.4 Findings Implications

The implications of the findings from the study assessing the impact of the managed service model on organizational performance in the telecommunication industry in Zambia are far-reaching and hold valuable insights for businesses, industry stakeholders, policymakers, and researchers. Let's delve into the implications of the study's results for each variable:

5.4.1 Cost Efficiency

The significant and positive relationship between the managed service model and cost efficiency has substantial implications for telecommunication companies in Zambia. By outsourcing certain non-core functions to specialized service providers, organizations can reduce operational costs, achieve economies of scale, and optimize resource allocation. This finding suggests that adopting the managed service model can be an effective strategy for companies seeking to improve their financial performance and maintain competitiveness in the market. The potential cost savings could free up financial resources that can be redirected towards innovation, customer experience, or other strategic initiatives.

5.4.2 Access to Human Resources

Access to skilled and specialized human resources is crucial for any industry, including telecommunications. Outsourcing certain functions to expert service providers allows organizations to tap into a broader pool of skilled professionals and specialized expertise, which might otherwise be challenging to acquire internally. This implies that by leveraging the managed service model, telecommunication companies in Zambia can enhance their workforce capabilities, gain access to top talent, and ensure a more efficient allocation of human resources. Outsourcing human resources allows organizations to access specialized talent that may not be available in-house. Service providers often have a vast network of professionals with expertise in different domains, enabling organizations to fill skill gaps and meet specific project requirements. With HR functions outsourced, organizations can place a greater focus

on employee development and retention. Efforts can be directed towards training, upskilling, and creating a positive work culture to enhance employee satisfaction and loyalty. Outsourcing human resources can result in cost savings compared to hiring full-time employees. Organizations can avoid expenses related to recruitment, onboarding, training, and providing employee benefits, leading to reduced operational costs.

This research contributes new insights into the relationship between access to human resources and organizational performance within the Zambian telecommunications industry, specifically through the lens of a managed services model. By examining the impact across the balanced scorecard perspectives and integrating theories such as staff augmentation, out-tasking, project-based outsourcing, and managed services, this study provides a comprehensive understanding of how organizations can leverage human capital to enhance their competitiveness, efficiency, and agility in a rapidly evolving digital landscape. The findings offer valuable implications for industry practitioners, policymakers, and researchers seeking to optimize organizational performance through strategic HR management and outsourcing strategies.

5.4.3 Improved Focus on Core Competencies

The study findings support the notion that by outsourcing non-core functions, telecommunications companies can concentrate their efforts and resources on their core competencies. This strategic shift allows organizations to develop their competitive advantage, innovate more efficiently, and excel in their areas of expertise. As a result, companies can differentiate themselves in the market and gain a stronger market position. Outsourcing non-core functions allows organizations to focus their resources, time, and expertise on what they do best – their core competencies. This leads to improved efficiency in core areas, as employees can dedicate their efforts to tasks aligned with their expertise, resulting in higher productivity and streamlined processes. By concentrating on core competencies, organizations can accelerate their speed to market. They can focus on developing and refining their core products or services, which can lead to faster innovation and responsiveness to changing market demands.

This research contributes new insights into the relationship between improved focus on core competencies and organizational performance within the Zambian telecommunications industry, specifically through the lens of a managed services model. By examining the impact across the balanced scorecard perspectives and integrating theories such as staff augmentation, out-tasking, project-based outsourcing, and managed services, this study provides a

comprehensive understanding of how organizations can leverage their core strengths to drive strategic growth and competitive advantage. The findings offer valuable implications for industry practitioners, policymakers, and researchers seeking to optimize organizational performance through effective resource allocation, talent management, and outsourcing strategies.

5.4.4 Leveraging Modern Technology

The managed service model enables organizations to leverage modern technology and infrastructure provided by specialized service providers. This finding suggests that telecommunication companies can stay up to date with the latest technological advancements without having to invest heavily in their own infrastructure. By harnessing cutting-edge technology, companies can offer improved services, better customer experiences, and greater operational efficiency. Outsourcing modern technologies enables organizations to stay at the forefront of technological advancements without making significant capital investments in acquiring and maintaining the latest hardware and software. This access to advanced technologies empowers companies to remain competitive and meet evolving customer demands. By collaborating with technology-focused service providers, organizations can tap into their expertise and innovative capabilities. This can lead to accelerated innovation in product development, service delivery, and overall business processes, driving continuous improvement and growth. Utilizing modern technologies through outsourcing can streamline product development and service delivery processes, resulting in a reduced time-to-market for new offerings. This enables organizations to respond quickly to market changes and seize new opportunities ahead of competitors.

5.4.5 Overall Organizational Performance

The most significant implication of the study's findings is the positive impact on overall organizational performance. The combination of cost efficiency, access to human resources, focus on core competencies, and modern technology enhances an organization's ability to deliver value to customers, respond to market changes, and achieve its strategic objectives. The study's results highlight the managed service model as a valuable tool to drive growth, profitability, and long-term success in the telecommunications industry in Zambia. By adopting the managed service model and realizing the benefits associated with it, companies in the telecommunications sector can gain a competitive edge over their rivals. Those that integrate managed services effectively can offer better services at competitive prices, respond swiftly to

market changes, and adapt to technological advancements more readily. This competitive advantage can be a game-changer in a highly dynamic and competitive industry.

5.5 Recommendations of the Findings

Based on the findings of the study assessing the impact of the managed service model on organizational performance in the telecommunication industry in Zambia, several key recommendations can be made to guide telecommunication companies in leveraging this model effectively and optimizing their performance:

Strategic Outsourcing Decisions: Organizations should approach the adoption of the managed service model as a strategic decision rather than a reactive one. Careful consideration should be given to which functions to outsource and which service providers to partner with. Conducting a thorough assessment of core competencies and identifying areas where outsourcing can add the most value is essential. Strategic alignment between outsourcing decisions and overall business objectives will be critical in maximizing the benefits of the managed service model.

Identify Key Performance Indicators (KPIs): To measure the impact of the managed service model on organizational performance, companies should establish relevant and measurable Key Performance Indicators (KPIs). These KPIs can include metrics related to cost savings, service quality, customer satisfaction, response times, and revenue growth. Regularly tracking and analysing these KPIs will enable organizations to assess the effectiveness of the managed service model implementation and make data-driven decisions for continuous improvement.

Strengthen Partnership with Service Providers: Building strong and collaborative relationships with service providers is crucial for success. Companies should focus on selecting reputable and experienced managed service providers with a proven record of accomplishment in the telecommunication industry. Regular communication, mutual goal setting, and performance evaluations will foster a productive partnership and ensure that the outsourced functions align with the organization's objectives.

Invest in Employee Development: While outsourcing certain functions, organizations should also invest in developing their internal workforce. Upskilling and reskilling employees in areas of strategic importance can empower them to contribute effectively to the core competencies of the organization. A well-trained and motivated workforce can work in synergy with the managed service model to drive organizational success.

Continuous Monitoring and Evaluation: Organizations should establish a systematic process of monitoring and evaluating the performance of the managed service model. Regular audits and reviews will help identify any areas for improvement and ensure that the model continues to deliver the expected benefits. Flexibility and adaptability in response to changing business dynamics and customer needs will be crucial for sustained success.

Risk Management and Security: The study's positive findings should not overshadow the importance of risk management and security considerations when adopting the managed service model. Organizations must assess the potential risks associated with outsourcing certain functions and put in place robust security measures to safeguard sensitive data and information. This may involve contractual agreements with service providers regarding data protection and compliance with industry regulations.

Benchmarking and Best Practices: Telecommunication companies should engage in benchmarking exercises to compare their performance with industry peers and identify best practices. Learning from successful implementations of the managed service model in other companies can provide valuable insights and guidance for optimizing their own approach.

Balancing Flexibility and Long-term Commitments: Companies should strike a balance between short-term flexibility and long-term commitments when engaging in managed service agreements. Flexibility allows for scaling services as needed, while long-term commitments can lead to more favourable terms and better partnerships. A well-balanced approach will ensure that the organization can adapt to changing market conditions while maintaining stability and consistency in service delivery.

5.6 Areas for Future Studies

The study assessing the impact of the managed service model on organizational performance in the telecommunication industry in Zambia has opened up several areas for future research. While the current study provided valuable insights into the positive relationship between the variables (cost efficiency, access to human resources, improved focus on core competencies, and access to modern technology) and organizational performance, further investigations can delve deeper into specific aspects and explore new dimensions. Here are some potential areas of future research:

Long-term Impact: The current study focused on the immediate impact of the managed service model on organizational performance. Future studies could examine the long-term effects of adopting this model. Tracking performance indicators over an extended period, such as several

years, would provide a more comprehensive understanding of the sustained benefits and challenges associated with the managed service model in the telecommunication industry.

Comparative Studies: Conducting comparative studies between companies that have adopted the managed service model and those that have not could offer valuable insights. Analysing the performance differences and factors influencing decision-making could shed light on the model's effectiveness compared to traditional in-house approaches.

Case Studies: In-depth case studies of individual telecommunication companies that have successfully implemented the managed service model could offer a nuanced understanding of the factors contributing to their success. Examining specific strategies, challenges faced, and lessons learned would provide practical guidance for other companies considering similar implementations.

Impact on Innovation: Investigating the impact of the managed service model on innovation within telecommunication companies would be beneficial. Understanding how outsourcing certain functions affects the organization's ability to innovate and develop new technologies and services can provide valuable insights for strategic decision-making.

Customer Satisfaction and Experience: Future research could explore the relationship between the managed service model and customer satisfaction and experience. Understanding how the model impacts customer service, response times, and overall customer perceptions can be crucial for organizations in a service-oriented industry.

Market-specific Factors: Telecommunication industries in different countries or regions may have unique characteristics and market-specific factors that influence the impact of the managed service model. Future studies focusing on specific regions or comparing the impact across different markets could help identify contextual factors influencing performance outcomes.

Integration Challenges: Examining the challenges and best practices associated with integrating outsourced services into the existing organizational structure would be valuable. Understanding the hurdles faced during implementation and how successful companies overcame them can guide future adopters.

Cost-Benefit Analysis: Conducting a comprehensive cost-benefit analysis of the managed service model would help organizations in making informed decisions. Comparing the financial implications of outsourcing versus in-house operations can provide a clearer picture of the model's overall feasibility.

Employee Perspectives: Future studies could explore the perspectives and experiences of employees affected by the managed service model. Understanding how the model impacts the workforce, including job roles, job security, and employee satisfaction, is essential for maintaining a positive organizational culture.

Effect on Industry Dynamics: Research could investigate how the widespread adoption of the managed service model impacts the overall dynamics of the telecommunication industry in Zambia. This may involve examining market competition, industry innovation, and the emergence of new service providers in response to the changing landscape.

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APPENDICES

Appendix 1: Research Questionnaire



THE UNIVERSITY OF ZAMBIA

LUSAKA

SCHOOL OF ENGINEERING

Dear respondent,

I am a student at the University of Zambia pursuing a Master of Engineering degree in Engineering Management. I am undertaking research on **“THE IMPACT OF A MANAGED SERVICES MODEL ON ORGANISATIONAL PERFORMANCE IN THE ZAMBIAN TELECOMMUNICATIONS INDUSTRY”** I wish to request for your input in the following questionnaire to enable me to achieve the research objectives. The information that will be obtained from this study will be used strictly for academic purposes and will be handled with strictest confidentiality. Finally, I wish to thank you in advance for taking much of your precious time to answer this questionnaire.

Instructions: Answer questions by ticking in the space provided.

Section A

1. Gender of the respondent

Male

☐

Female

☐

2. What is your age group?

18 - 25

☐

26 – 30

☐

31 - 40

☐

Above 40

☐

3. Highest level of education

Diploma

☐

Undergraduate degree

☐

Master's Degree

☐

PhD

☐

4. For how long have you been working in the telecommunication industry?

1-5 years

6-10 years

Over 10 years

Section B

In this section, kindly indicate how much you agree with the following statements by using a scale of 1-5, where 1- strongly disagree, 2- disagree, 3- neutral, 4- agree, 5- strongly agree

Outsourcing

	Cost Efficiency	1	2	3	4	5
1	Outsourcing has led to significant cost savings for our organization.					
2	Our organization has experienced improved financial performance as a result of outsourcing.					
3	Outsourcing has helped us allocate resources more effectively, resulting in cost-efficiency.					
4	We have seen a reduction in operational expenses due to outsourcing					
5	Outsourcing has contributed to improved profitability for our organization					

	Access to Human Resource	1	2	3	4	5
1	Outsourcing has provided our organization with access to a wider pool of skilled human resources.					
2	We have experienced improved recruitment and selection outcomes through outsourcing.					
3	Outsourcing has allowed our organization to quickly adapt to changing staffing needs.					
4	We have seen an increase in workforce productivity and efficiency as a result of outsourcing.					
5	Outsourcing has provided access to specialized expertise and knowledge that we lacked internally.					

	Improved Focus on Core Competencies	1	2	3	4	5
1	Outsourcing non-core activities has allowed our organization to allocate more resources to core competencies.					
2	Our organization has seen an improvement in the quality of our core products/services due to outsourcing.					
3	Outsourcing has helped us streamline our operations and focus on what we do best.					
4	We have experienced increased innovation and creativity in our core business functions through outsourcing.					
5	Outsourcing has allowed our organization to stay ahead of competitors in terms of our core offerings					
1	Outsourcing non-core activities has allowed our organization to allocate more resources to core competencies.					

	Access to modern technology and Expertise	1	2	3	4	5
1	Outsourcing has provided our organization with access to advanced technologies that we wouldn't have had otherwise.					
2	The expertise and knowledge brought by outsourced partners have significantly enhanced our organization's performance.					
3	Outsourcing has allowed our organization to tap into specialized skills and capabilities that we lack internally.					
4	Our organization has witnessed an improvement in the efficiency and effectiveness of operations through outsourcing technology.					

5	Outsourcing has enabled us to keep up with the rapid advancements in technology and stay competitive in the industry					
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Organisational Performance

Financial Performance	1	2	3	4	5
Relative to our previous years, during last year we had larger market share.					
We were larger in size.					
Our profit growth has been substantially better.					
Our sales growth has been substantially better.					
Our return on assets has been substantially better.					
Our return on investment has been substantially better.					
Regarding our overall performance, during last year we performed poorly relative to our other previous years					

Customer Perspective	1	2	3	4	5
We have over the years gained a competitive market share					
Our customers have had a great customer satisfaction from the quality of goods and services that we offer.					
Customer acquisition from target group has been good					
We have been experiencing Customer retention over years					

Internal Process Perspective	1	2	3	4	5
Time to Market for Next Generation of Products					
Production Defect Rates of goods and services has reduced					
We have reinvented and improved our value creation system					
We have improved and competitive Volumes of Transactions Conducted Through Each of Our Delivery Channels					

Learning and Growth Perspective	1	2	3	4	5
Employee Retention Index has improved					
We have had maximum productivity; Output per Head					
The company has seen an improved Number of Training Hours completed per head					
Information Availability has improved					

THANK YOU

Appendix 2: Normality Test, Missing Values, Descriptive Statistics

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CE1	224	1	5	3.56	0.726	-0.421	0.163	0.223	0.324
CE2	224	1	5	3.62	0.885	-0.64	0.163	0.326	0.324
CE3	224	1	5	3.52	0.948	-0.49	0.163	-0.054	0.324
CE4	224	1	5	3.56	0.745	-0.436	0.163	0.152	0.324
CE5	224	1	5	3.42	1.017	-0.554	0.163	0.043	0.324
AHR1	224	1	5	3.48	1.071	-0.726	0.163	0.049	0.324
AHR2	224	1	5	3.68	0.991	-0.491	0.163	-0.667	0.324
AHR3	224	1	5	3.63	0.89	-0.345	0.163	-0.407	0.324
AHR4	224	1	5	3.72	0.963	-0.545	0.163	-0.36	0.324
AHR5	224	2	5	3.7	0.801	-0.253	0.163	-0.327	0.324
IFCC1	224	2	5	3.89	0.776	-0.211	0.163	-0.482	0.324
IFCC2	224	1	5	3.84	0.815	-0.598	0.163	0.597	0.324
IFCC3	224	1	5	3.76	0.958	-0.499	0.163	-0.104	0.324
IFCC4	224	1	5	3.75	0.953	-0.882	0.163	0.857	0.324
IFCC5	224	1	5	3.76	0.879	-0.756	0.163	0.894	0.324
AMTE1	224	1	5	3.45	1.208	-0.466	0.163	-0.711	0.324
AMTE2	224	1	5	3.79	1.054	-0.883	0.163	0.384	0.324
AMTE3	224	1	5	3.58	1.206	-0.781	0.163	-0.25	0.324
AMTE4	224	1	5	3.79	1.136	-0.978	0.163	0.332	0.324
AMTE5	224	1	5	3.87	0.973	-0.532	0.163	-0.548	0.324
FP1	224	1	5	3.88	1.338	-0.807	0.163	-0.894	0.324
FP2	224	1	5	3.83	1.248	-0.847	0.163	-0.585	0.324
FP3	224	1	5	3.68	1.314	-0.49	0.163	-1.192	0.324
FP4	224	1	5	3.71	1.322	-0.612	0.163	-0.974	0.324
FP5	224	1	5	3.84	1.267	-0.734	0.163	-0.856	0.324
FP6	224	1	5	3.79	1.252	-0.666	0.163	-0.899	0.324
FP7	224	1	5	3.73	1.249	-0.567	0.163	-0.998	0.324
CP1	224	1	5	3.78	1.724	-0.921	0.163	-1.026	0.324
CP2	224	1	5	3.64	1.578	-0.735	0.163	-1.055	0.324
CP3	224	1	5	3.92	1.504	-1.027	0.163	-0.559	0.324
CP4	224	1	5	3.98	1.503	-1.216	0.163	-0.134	0.324
IPP1	224	1	5	3.28	1.286	-0.121	0.163	-1.036	0.324
IPP2	224	1	5	3.46	1.567	-0.589	0.163	-1.269	0.324
IPP3	224	1	5	3.21	1.602	-0.326	0.163	-1.509	0.324
IPP4	224	1	5	3.48	1.579	-0.608	0.163	-1.279	0.324
LGP1	224	1	5	3.12	0.925	-0.37	0.163	0.38	0.324
LGP2	224	1	5	3.3	0.877	-0.231	0.163	0.088	0.324
LGP3	224	1	5	3.46	0.887	0.059	0.163	-0.354	0.324
LGP4	224	1	4	3.24	0.699	-0.529	0.163	-0.229	0.324
Valid N (listwise)	224								

Appendix 3: Communalities

Communalities		
	Initial	Extraction
CE1: Outsourcing has led to significant cost savings for our organization.	1.000	.769
CE2: Our organization has experienced improved financial performance as a result of outsourcing.	1.000	.681
CE3: Outsourcing has helped us allocate resources more effectively, resulting in cost-efficiency.	1.000	.525
CE4: We have seen a reduction in operational expenses due to outsourcing	1.000	.785
CE5: Outsourcing has contributed to improved profitability for our organization	1.000	.494
AHR1: Outsourcing has provided our organization with access to a wider pool of skilled human resources.	1.000	.619
AHR2: We have experienced improved recruitment and selection outcomes through outsourcing.	1.000	.649
AHR3: Outsourcing has allowed our organization to quickly adapt to changing staffing needs.	1.000	.692
AHR4: We have seen an increase in workforce productivity and efficiency as a result of outsourcing.	1.000	.609
AHR5: Outsourcing has provided access to specialized expertise and knowledge that we lacked internally.	1.000	.727
IFCC1: Outsourcing non-core activities has allowed our organization to allocate more resources to core competencies.	1.000	.794
IFCC2: Our organization has seen an improvement in the quality of our core products/services due to outsourcing.	1.000	.840
IFCC3: Outsourcing has helped us streamline our operations and focus on what we do best.	1.000	.637
IFCC4: We have experienced increased innovation and creativity in our core business functions through outsourcing.	1.000	.763
IFCC5: Outsourcing has allowed our organization to stay ahead of competitors in terms of our core offerings	1.000	.804
AMTE1: Outsourcing has provided our organization with access to advanced technologies that we wouldn't have had otherwise.	1.000	.608
AMTE2: The expertise and knowledge brought by outsourced partners have significantly enhanced our organization's performance.	1.000	.525
AMTE3: Outsourcing has allowed our organization to tap into specialized skills and capabilities that we lack internally.	1.000	.645

AMTE4: Our organization has witnessed an improvement in the efficiency and effectiveness of operations through outsourcing technology.	1.000	.576
AMTE5: Outsourcing has enabled us to keep up with the rapid advancements in technology and stay competitive in the industry	1.000	.690
FP1: Relative to our previous years, during last year we had larger market share.	1.000	.852
FP2: We were larger in size.	1.000	.821
FP3: Our profit growth has been substantially better.	1.000	.918
FP4: Our sales growth has been substantially better.	1.000	.853
FP5: Our return on assets has been substantially better.	1.000	.825
FP6: Our return on investment has been substantially better.	1.000	.830
FP7: Regarding our overall performance, during last year we performed poorly relative to our other previous years	1.000	.899
CP1: We have over the years gained a competitive market share	1.000	.694
CP2: Our customers have had a great customer satisfaction from the quality of goods and services that we offer.	1.000	.618
CP3: Customer acquisition from target group has been good	1.000	.790
CP4: We have been experiencing Customer retention over years	1.000	.804
IPP1: Time to Market for Next Generation of Products	1.000	.759
IPP2: Production Defect Rates of goods and services has reduced	1.000	.921
IPP3: We have reinvented and improved our value creation system	1.000	.805
IPP4: We have improved and competitive Volumes of Transactions Conducted Through Each of Our Delivery Channels	1.000	.928
LGP1: Employee Retention Index has improved	1.000	.571
LGP2: We have had maximum productivity; Output per Head	1.000	.768
LGP3: The company has seen an improved Number of Training Hours completed per head	1.000	.805
LGP4: Information Availability has improved	1.000	.742

Extraction Method: Principal Component Analysis.

Appendix 4: Reliability Tests – Cronbach’s Alpha

Cost Efficiency

Reliability Statistics	
Cronbach's Alpha	N of Items
.802	5

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
CE1: Outsourcing has led to significant cost savings for our organization.	14.13	7.186	.738	.727
CE2: Our organization has experienced improved financial performance as a result of outsourcing.	14.07	7.494	.477	.797
CE3: Outsourcing has helped us allocate resources more effectively, resulting in cost-efficiency.	14.17	7.008	.534	.782
CE4: We have seen a reduction in operational expenses due to outsourcing	14.13	7.034	.760	.719
CE5: Outsourcing has contributed to improved profitability for our organization	14.27	6.842	.510	.795

Access to Human Resources

Reliability Statistics	
Cronbach's Alpha	N of Items
.846	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
AHR1: Outsourcing has provided our organization with access to a wider pool of skilled human resources.	14.73	8.881	.606	.832
AHR2: We have experienced improved recruitment and selection outcomes through outsourcing.	14.53	8.959	.667	.811
AHR3: Outsourcing has allowed our organization to quickly adapt to changing staffing needs.	14.58	9.410	.677	.809
AHR4: We have seen an increase in workforce productivity and efficiency as a result of outsourcing.	14.49	9.246	.636	.820
AHR5: Outsourcing has provided access to specialized expertise and knowledge that we lacked internally.	14.51	9.686	.716	.804

Improved Focus on Core Competencies

Reliability Statistics

Cronbach's Alpha	N of Items
.913	5

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
IFCC1: Outsourcing non-core activities has allowed our organization to allocate more resources to core competencies.	15.11	9.884	.787	.893
IFCC2: Our organization has seen an improvement in the quality of our core products/services due to outsourcing.	15.16	9.382	.856	.879
IFCC3: Outsourcing has helped us streamline our operations and focus on what we do best.	15.24	9.473	.667	.918
IFCC4: We have experienced increased innovation and creativity in our core business functions through outsourcing.	15.25	8.890	.796	.890
IFCC5: Outsourcing has allowed our organization to stay ahead of competitors in terms of our core offerings	15.24	9.204	.814	.885

Access to Modern Technologies

Reliability Statistics	
Cronbach's Alpha	N of Items
.813	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
AMTE1: Outsourcing has provided our organization with access to advanced technologies that we wouldn't have had otherwise.	15.03	11.838	.555	.792
AMTE2: The expertise and knowledge brought by outsourced partners have significantly enhanced our organization's performance.	14.69	12.575	.565	.787
AMTE3: Outsourcing has allowed our organization to tap into specialized skills and capabilities that we lack internally.	14.89	11.373	.625	.770
AMTE4: Our organization has witnessed an improvement in the efficiency and effectiveness of operations through outsourcing technology.	14.69	11.696	.634	.767
AMTE5: Outsourcing has enabled us to keep up with the rapid advancements in technology and stay competitive in the industry	14.60	12.510	.647	.767

Appendix 5: Multicollinearity Analysis

		Coefficients ^a					Collinearity Statistics	
Model		Unstandardized Coefficients		Standardized Coefficients				
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.671	.173		21.216	.000		
	Education	-.032	.060	-.036	-.540	.590	.994	1.006
	Experience	-.001	.053	-.001	-.013	.989	.994	1.006
2	(Constant)	.709	.275		2.577	.011		
	Education	.005	.046	.005	.105	.916	.980	1.020
	Experience	.049	.041	.063	1.196	.233	.949	1.053
	Cost Efficiency	.366	.052	.401	7.097	.000	.825	1.212
	Access to Human Resources	.135	.044	.170	3.066	.002	.863	1.159
	IFCC	.126	.049	.160	2.583	.010	.684	1.462
	Access to Modern Technologies	.136	.042	.194	3.236	.001	.735	1.361

a. Dependent Variable: Organisation Performance

Appendix 6: Ethical Clearance



THE UNIVERSITY OF ZAMBIA DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

Great East Road Campus | P.O. Box 32379 | Lusaka10101 | Tel: +260-211-290 258/291 777
Fax: (+260)-211-290 258/253 952 | E-mail: director.drgs@unza.zm | Website: www.unza.zm

APPROVAL OF STUDY

IORG No. 0005376

NASRECREC IRB No. 00006465

27th June, 2023

REF NO. NASREC-2023- JUN – 008

Mr. Jeremiah Njobvu
The University of Zambia,
School of Engineering,
P.O. Box 32379,
LUSAKA.

Dear, Mr. Njobvu,

RE: “ASSESSING THE IMPACT OF A MANAGED SERVICES MODEL ON ORGANISATIONAL PERFORMANCE IN THE ZAMBIAN TELECOMMUNICATIONS INDUSTRY”

Reference is made to your protocol dated as captioned above. NASREC resolved to approve this study and your participation as Principal Investigator for a period of one year.

REVIEW TYPE	ORDINARY REVIEW	APPROVAL NO. NASREC-2023 JUN - 008
Approval and Expiry Date	Approval Date: 27 th June , 2023	Expiry Date: 26 th June, 2024
Protocol Version and Date	Version - Nil.	26 th June , 2024
Information Sheet, Consent Forms and Dates	English.	To be provided
Consent form ID and Date	Version - Nil	To be provided
Recruitment Materials	Nil	Nil
Other Study Documents	Questionnaire.	

Specific conditions will apply to this approval. As Principal Investigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

CONDITIONS OF APPROVAL

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.
- All unanticipated or Serious Adverse Events (SAEs) must be reported to NASREC within 5 days.
- All protocol modifications must be approved by NASREC prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.

- All protocol deviations must be reported to NASREC within 5 working days.
- All recruitment materials must be approved by NASREC prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. NASREC will only approve a study for a period of 12 months.
- It is the responsibility of the PI to renew his/her ethics approval through a renewal application to NASREC.
- Where the PI desires to extend the study after expiry of the study period, documents for study extension must be received by NASREC at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Documents received within 30 days after expiry will be labelled “late submissions” and will incur a penalty fee of K500.00. No study shall be renewed whose documents are submitted for renewal 30 days after expiry of the certificate.
- Every 6 (six) months a progress report form supplied by The University of Zambia Natural and Applied Sciences Research Ethics Committee as an IRB must be filled in and submitted to us. There is a penalty of K500.00 for failure to submit the report.
- When closing a project, the PI is responsible for notifying, in writing or using the Research Ethics and Management Online (REMO), both NASREC
- and the National Health Research Authority (NHRA) when ethics certification is no longer required for a project.
- In order to close an approved study, a Closing Report must be submitted in writing or through the REMO system. A Closing Report should be filed when data collection has ended and the study team will no longer be using human participants or animals or secondary data or have any direct or indirect contact with the research participants or animals for the study.
- Filing a closing report (rather than just letting your approval lapse) is important as it assists NASREC in efficiently tracking and reporting on projects. Note that some funding agencies and sponsors require a notice of closure from the IRB which had approved the study and can only be generated after the Closing Report has been filed.
- A reprint of this letter shall be done at a fee.
- All protocol modifications must be approved by NASREC by way of an application for an amendment prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address or methodology and methods. Many modifications entail minimal risk adjustments to a protocol and/or consent form and can be made on an

Expedited basis (via the IRB Chair). Some examples are: format changes, correcting spelling errors, adding key personnel, minor changes to questionnaires, recruiting and changes, and so forth. Other, more substantive changes, especially those that may alter the risk-benefit ratio, may require Full Board review. In all cases, except where noted above regarding subject safety, any changes to any protocol document or procedure must first be approved by NASREC before they can be implemented.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

On behalf of NASREC, we would like to wish you all the success as you carry out your study.

Yours faithfully,



Dr. Mususu Kaonda

VICE-CHAIRPERSON

**THE UNIVERSITY OF ZAMBIA NATURAL AND APPLIED SCIENCES RESEARCH
ETHICS COMMITTEE - IRB**

CC: Director, Directorate of Research and Graduate Studies
Assistant Director (Research), Directorate of Research and Graduate Studies
Assistant Registrar (Research), Directorate of Research and Graduate Studies

Appendix 7: Journal