

**INFLUENCE OF PROJECT RESOURCE PLANNING ON PERFORMANCE OF
SMALL AND MEDIUM ENTERPRISES IN WAJIR COUNTY, KENYA**

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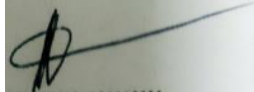
NOVEMBER 2024

DECLARATION

Declaration by Student

This research project is my original work and has not been presented for award of degree of in any other University

Signature



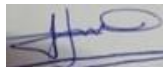
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DEDICATION

I dedicate this work to my parents for their unwavering support, and to my siblings for their constant encouragement throughout this academic journey.



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I am deeply grateful to Almighty God for guiding me through this academic journey and for His endless grace and support. I extend my heartfelt thanks to my family for their unwavering encouragement and belief in me throughout this challenging process. Special thanks go to my supervisor, Dr. Lucy Wairimu, for her invaluable guidance, patience, and dedication in helping me complete this project. Additionally, I would like to express my appreciation to my friends and colleagues, whose support and motivation have been instrumental in the successful completion of this work.



TABLE OF CONTENTS

DECLARATION	i
DEDICATION.....	ii
ACKNOWLEDGEMENT	iii
LIST OF FIGURES	viii
LIST OF TABLES	ix
LIST OF ABBREVIATIONS AND ACRONYMS.....	x
ABSTRACT	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem	5
1.3 Purpose of the Study	6
1.4 Objectives of the Study	6
1.5 Research Questions	7
1.6 Significance of the Study	7
1.7 Scope of the Study	8
1.8 Limitations of the Study	8
1.9 Delimitation of the Study	9

1.10 Assumptions of the Study	10
1.11 Operational Definition of Terms	10
CHAPTER TWO	13
LITERATURE REVIEW	13
2.1. Introduction.....	13
2.2 Theoretical Framework	13
2.3 Empirical Review	16
2.4 Conceptual Framework	34
2.5 Summary of Existing Literature Review	38
2.6 Knowledge Gaps	39
CHAPTER THREE	42
RESEARCH METHODOLOGY	42
3.1 Introduction.....	42
3.2 Research Design	42
3.3 Target Population	42
3.4 Sample Size	43
3.5 Sampling Procedure and Techniques	43
3.6 Research Instruments	44
3.7 Data Collection Procedure	45

3.8 Pilot Study	45
3.9 Data Analysis and Presentation	46
3.10 Ethical Consideration	47
CHAPTER FOUR	49
FINDINGS AND DISCUSSION	49
4.1 Introduction	49
4.2 Response Rate	49
4.3 Demographic Characteristics of the Respondents	50
4.4 Impact of Human Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya	51
4.5 Effect of Financial Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya	62
4.6 Role of Material Requirement Planning in the Performance of Small and Medium Enterprises in Wajir County, Kenya	73
4.7 Technological Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya	84
CHAPTER 5	95
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	95
5.1 Introduction	95
5.2 Summary of the Findings	95

5.3 CONCLUSION	97
5.4 RECOMMENDATIONS	99
REFERENCES	103
APPENDICES	112
Appendix I: INTRODUCTION LETTER	112
Appendix II: QUESTIONNAIRE	113
Appendix IV: TIME PLAN	121
Appendix V: BUDGET	Error! Bookmark not defined.
Appendix VI: ETHICAL CLEARANCE.....	122
Appendix VII: CERTIFICATE OF CORRECTIONS	123
Appendix VIII: RESEARCH PERMIT	126
LIST OF FIGURES	
Figure 2. 1:Conceptual Framework	37
Figure 4. 1: Employee Skill Development	51
Figure 4. 2: Succession Planning Strategy	55
Figure 4. 3: Alignment of HR Allocation with Strategic Goals	58
Figure 4. 4: Accuracy of Financial Forecasting	63
Figure 4. 5: Effectiveness of Budget Allocation	66
Figure 4. 6: Management of Cash Flow	69
Figure 4. 7: Efficiency of Inventory Management	73
Figure 4. 8: Streamlined Procurement Processes	76

Figure 4. 9: Reduction of Waste and Overstocking	79
Figure 4. 10: Integration of New Technology	84
Figure 4. 11: Strategic Plan for Technology Upgrades.....	87
Figure 4. 12: Alignment of Technology with Long-Term Objectives	90

LIST OF TABLES

Table 3. 1: Sampling Frame	44
Table 4. 1: Response Rate	49
Table 4. 2: Demographic Characteristics of the Respondents.....	50
Table 4. 3: Correlation Coefficients for Relationships Between Human Resource Planning and SME Performance	61
Table 4. 4: Correlation Coefficients for Relationships Between Financial Resource Planning and SME Performance.....	72
Table 4. 5: Correlation Coefficients for Relationships Between Material Requirement Planning and SME Performance.....	83
Table 4. 6: Correlation Coefficients for Relationships Between Technological Resource Planning and SME Performance.....	93

LIST OF ABBREVIATIONS AND ACRONYMS

AFMS	Automated Fleet Management System
ANOVA	Analysis of Variance
CP	Contingency Planning
EDMS	Electronic Document Management System
ERP:	Enterprise Resource Planning system
EWS	Electronic Weighment System

GDP	Gross Domestic Product
ICT	Information Communication & Technology
IMS	Information Management Systems
KNBS	Kenya National Bureau of Statistics
MFI	Monetary Financial Institutions
MT	Mechanization Technology
NACOSTI	National Commission for Science, Technology and Innovation
NHIF	National Hospital Insurance Fund
NGO	Non-governmental Organizations
PMBOK	Project Management Body of Knowledge
RMP	Risk Management Practices
SAP	System Applications and Processes
SME	Small Medium Enterprises
SPSS:	Statistical Package for the Social Sciences

ABSTRACT

This study examined the impact of project resource planning on the performance of Small and Medium Enterprises (SMEs) in Wajir County, Kenya, with a focus on human, financial, material, and technological resources. SMEs are crucial to economic growth, innovation, and employment creation. Grounded in the Resource-Based View (RBV) and Contingency Theory, this research evaluated how internal resources and external factors affected SME performance. A descriptive research design incorporating both qualitative and quantitative approaches was adopted, targeting a sample of 364 SMEs from a population of 4,120. Data collection involved structured questionnaires with both open and closed-ended questions. Reliability and validity of the instruments were ensured through pilot testing, expert review, and Cronbach's alpha calculations. Analysis involved both content analysis for qualitative data and inferential statistics, including correlation and regression, for quantitative data. The findings indicated that resource planning significantly influenced the performance of SMEs in Wajir County. Human resource planning, particularly through regular training and career development, was found to improve employee skills and business efficiency, with 68% of respondents affirming the value of training programs. Financial resource planning also emerged as vital, with 69% of participants emphasizing the importance of accurate financial forecasting, and 70% underscoring effective budget allocation to control costs and ensure stability. Material planning proved essential for operational efficiency, as 72% highlighted the need for efficient inventory management and streamlined procurement processes to

minimize waste. Technological resource planning was identified as a key driver of productivity and cost reduction, with 71% of respondents noting improvements due to technological innovation and 66% emphasizing alignment with long-term goals for sustainability. The study recommended that SMEs in Wajir County enhance their resource planning strategies through continuous training, precise financial forecasting, efficient material management, and strategic technology adoption to improve performance and sustainability.



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Small and medium enterprises (SMEs) play a pivotal role in global economies, contributing significantly to employment, innovation, and Gross Domestic Product (GDP). According to the World Bank (2021), SMEs account for about 90% of businesses and 50% of employment worldwide, underscoring their role in sustaining livelihoods and economic stability. In high-income countries, SMEs are often at the forefront of technological advancements and operational efficiencies that drive economic resilience and innovation (Beck, 2020). Nevertheless, these enterprises face unique challenges, particularly in resource planning, which includes coordinating human, financial, material, and technological resources effectively. Project resource planning, a systematic approach to resource allocation and management, has emerged as a critical factor for SMEs, helping them optimize resources to achieve strategic goals (Smith et al., 2020). This systematic planning enhances SMEs' ability to navigate global economic shifts and maintain competitiveness.

Globally, resource planning, especially in human and technological resources, has been pivotal in enabling SMEs to adapt to dynamic business environments. Research by Henderson and Venkatraman (2019) emphasizes that enterprises employing advanced resource planning, such as Enterprise Resource Planning (ERP) systems, exhibit greater operational efficiency and resilience. This adaptability allows SMEs to remain agile, especially in the face of global disruptions like supply chain instabilities or regulatory changes (Porter, 2021). Such planning also facilitates strategic decision-making by streamlining operations and ensuring optimal resource use, which is vital for growth in competitive markets.

In Africa, SMEs have become essential for socio-economic growth, providing employment opportunities and fostering innovation across the continent. However, African SMEs encounter distinct obstacles, such as limited access to finance, inadequate infrastructure, and unstable market conditions, which impede their growth and sustainability (Nkamnebe, 2018). Effective project resource planning is increasingly crucial for African SMEs, allowing them to efficiently allocate resources, mitigate operational costs, and improve project delivery timelines (Du Plessis, 2015). This planning approach enables SMEs to remain competitive despite challenges and helps them secure funding, as well-managed resources often signal stability and growth potential to investors and financial institutions (Ahmad & Hemed, 2019).

Technological resource planning is particularly transformative for African SMEs. Digital tools not only streamline business operations but also increase market reach and customer engagement (Kaplan & Norton, 2020). For instance, research by Wade and Hulland (2020) suggests that adopting digital technologies, including online transaction systems and inventory management platforms, has helped African SMEs enhance operational efficiency and respond more effectively to customer demands. Consequently, these enterprises can better navigate socio-economic complexities and regulatory constraints, positioning themselves for sustainable growth in both local and international markets (Muthoni & Mwangi, 2021).

In East Africa, SMEs are central to economic development, with substantial support from regional governments aimed at enhancing entrepreneurship and fostering innovation. Countries like Uganda, Tanzania, and Rwanda have witnessed significant growth in the SME sector, driven by supportive policies and economic reforms that encourage resource planning and operational efficiencies (Kasekende & Opondo, 2020). Despite these positive developments, East African SMEs continue to grapple with resource planning challenges, particularly in

financial and material aspects, which restrict their scalability and impact (Mbithi & Maalu, 2020). Financial resource planning, which includes accurate forecasting, budget allocation, and cash flow management, is critical for these SMEs to overcome resource constraints and sustain growth (Rahman & Henrique, 2019).

East African SMEs benefit from integrating technology into resource planning, which has enhanced productivity and reduced operational costs. By incorporating digital solutions, SMEs in this region are better equipped to handle external pressures such as market volatility and increased competition (Ahimbisibwe & Tumuhairwe, 2021). This strategic use of technology aligns with Contingency Theory, which suggests that organizational success depends on how well strategies are adapted to specific environmental conditions (Fiedler, 1964). Therefore, East African SMEs that incorporate resource planning practices tailored to their unique contexts experience greater operational efficiency and improved competitive advantage (Mwangi & Njihia, 2021).

In Kenya, SMEs are a crucial economic pillar, providing employment and contributing significantly to the country's GDP. However, resource planning challenges, including insufficient access to finance, inadequate infrastructure, and limited access to skilled labor, continue to hinder many Kenyan SMEs (Omwenga & Weche, 2020). Government initiatives have attempted to address these challenges by promoting training programs and improving access to financing. Still, the need for effective project resource planning remains paramount to fully harness these resources (Kiarie & Wamotho, 2020). According to Mbugua (2021), SMEs that adopt structured approaches to resource planning—especially in human resources and financial management—are better positioned to control costs and optimize productivity, which enables them to compete effectively in both local and international markets.

The adoption of project resource planning among Kenyan SMEs is further supported by the Resource-Based View (RBV) theory, which posits that an organization's internal resources are critical for achieving competitive advantage (Barney, 1991). By investing in human capital through skill development and succession planning, SMEs can develop a workforce aligned with organizational goals, thereby strengthening their competitiveness (Wanjiku, 2018). Similarly, financial resource planning, which entails forecasting and budgeting, enables these SMEs to allocate resources optimally, manage cash flow, and withstand financial uncertainties, ensuring business continuity and growth (Otieno, 2019).

In Wajir County, located in Kenya's arid and semi-arid lands (ASALs), SMEs operate under unique socio-economic challenges, including harsh climate, underdeveloped infrastructure, and limited access to essential services (Owalo, 2019). These constraints necessitate robust resource planning for SMEs to thrive and contribute to the local economy. Human resource planning, for example, is crucial in Wajir County, where skill gaps persist due to limited educational resources and training opportunities (Hassan, 2021). SMEs that invest in local talent development not only enhance their operational efficiency but also strengthen community ties, contributing to socio-economic stability in the region.

Furthermore, financial and material resource planning is vital for Wajir's SMEs, as these businesses face unique financial and logistical challenges. Access to financial services is limited, making accurate financial forecasting and efficient cash flow management essential for these businesses to navigate unpredictable market conditions (Abdi, 2020). Material resource planning, particularly in inventory management and procurement, also plays a crucial role in helping SMEs minimize waste and optimize resource usage in an environment where material costs are high (Mohamed, 2019). Consequently, project resource planning becomes a survival

strategy, enabling these SMEs to optimize scarce resources, reduce operational costs, and improve service delivery, thereby fostering resilience and sustainable growth in Wajir County (Muthoni & Mwangi, 2021).

In summary, project resource planning is essential to enhancing SME performance across various contexts, with its impact particularly pronounced in resource-limited environments like Wajir County. Efficient management of human, financial, material, and technological resources allows SMEs to enhance operational processes, minimize inefficiencies, and address the specific challenges of their unique environments. By focusing on resource planning, SMEs in Wajir County can improve their competitive advantage, contribute to regional economic growth, and uplift the living standards of the local community (Owalo, 2019; Gikandi & Bloor, 2020).

1.2 Statement of the Problem

Small and medium enterprises (SMEs) are essential to economic development in Wajir County, Kenya, where they serve as a primary source of employment and contribute significantly to local livelihoods. However, these enterprises face considerable challenges, particularly in the area of project resource planning. Wajir's remote, arid environment presents unique difficulties, including limited access to financial resources, inadequate infrastructure, and skill shortages, which collectively hinder SME performance and sustainability. Despite the critical role of SMEs in the region, ineffective resource planning—spanning human, financial, material, and technological resources—leaves many vulnerable to operational inefficiencies, high turnover, and financial instability. While existing studies have explored resource planning's impact on SMEs in urban and better-resourced settings, there is little research on its application in

resource-constrained areas like Wajir County, where specific socio-economic conditions may alter the effectiveness of traditional resource management strategies.

Despite the recognized importance of effective resource planning, existing research largely focuses on SMEs in urban or economically developed areas, leaving a critical gap in understanding how resource planning affects SMEs in underserved regions like Wajir County. The distinctive socio-economic conditions in Wajir—such as financial constraints, infrastructural limitations, and skill shortages—require tailored resource planning strategies that traditional models may not adequately address. Consequently, there remains a lack of empirical data on how specific resource planning practices could be adapted to improve SME performance in such a resource-scarce environment. This study aims to bridge this gap by evaluating the impact of comprehensive project resource planning on the performance of SMEs in Wajir County. By investigating how human, financial, material, and technological resource planning can enhance operational efficiency and resilience, this research seeks to provide context-specific insights that will inform policy and support the sustainable growth of SMEs in Wajir's challenging environment.

1.3 Purpose of the Study

This research sought to evaluate the impact of project resource planning on the performance of Small and Medium Enterprises (SMEs) in Wajir County, Kenya.

1.4 Objectives of the Study

- i. To evaluate the impact of human resource planning on the performance of small and medium enterprises in Wajir County, Kenya.
- ii. To examine the effect of financial resource planning on the performance of small and medium enterprises in Wajir County, Kenya.

iii. To investigate the role of material requirement planning in the performance of small and medium enterprises in Wajir County, Kenya. iv. To explore the influence of technological resource planning on the performance of small and medium enterprises in Wajir County, Kenya.

1.5 Research Questions

- i. How does human resource planning affect the performance of small and medium-sized enterprises in Wajir County, Kenya?
- ii. What is the impact of financial resource planning on the performance of small and medium-sized enterprises in Wajir County, Kenya?
- iii. How does material requirement planning contribute to the performance of small and medium-sized enterprises in Wajir County, Kenya?
- iv. In what ways does technological resource planning influence the performance of small and medium-sized enterprises in Wajir County, Kenya?

1.6 Significance of the Study

This research is valuable to various stakeholders, including SME owners, policymakers, researchers, and development organizations. SME owners in Wajir County will gain practical insights into resource planning strategies that can enhance business performance and sustainability. By understanding the essential role of effective resource planning, SME owners can better manage their resources, increase operational efficiency, and strengthen their competitive position in the market. Policymakers can utilize the findings of this study to gain a more profound understanding of the obstacles faced by SMEs in regions with limited resources, such as Wajir County. This understanding can be utilized to craft focused policies and initiatives that improve resource management practices within SMEs, thus aiding in wider economic development.

Moreover, this research will add to the scholarly discourse by addressing gaps in the existing literature on how project resource planning influences SMEs in less developed regions. Researchers can use these findings as a foundation for further studies in similar regions with comparable socio-economic conditions. Development organizations and NGOs working in Wajir County can also utilize the study's insights to design and implement programs that support SMEs in improving their resource planning capabilities. By enhancing the efficiency and effectiveness of SMEs, these organizations can help foster sustainable economic development in the region.

1.7 Scope of the Study

This study focused on Small and Medium Enterprises (SMEs) in Wajir County, Kenya, aiming to understand how their distinct characteristics influenced their approach to project resource planning. It examined human, financial, material, and technological resource planning and their impacts on SME performance, drawing insights from global project management experiences. A descriptive research design was employed, targeting a sample of 364 SMEs. Data collection occurred between May and August 2024. The theoretical foundation of the study incorporated the Resource-Based View (RBV), Contingency Theory, and Resource Dependence Theory, offering a comprehensive framework for analyzing the connection between project resource planning and the performance of SMEs in Wajir County, Kenya.

1.8 Limitations of the Study

This study on project resource planning and SME performance in Wajir County, Kenya, was expected to yield valuable insights, but several limitations were acknowledged. One challenge was the potential for limited participation by SMEs, which could result in a smaller sample size

and affect the generalizability of the findings. To mitigate this, comprehensive sampling strategies were applied to ensure adequate representation of SMEs from various sectors and sizes. Partnerships with local business associations and government agencies were also sought to increase participation. Another limitation involved the potential scarcity of detailed data on project resource planning practices and performance metrics for SMEs in Wajir County, making analysis more challenging. To address this, a variety of data collection techniques—including surveys, interviews, and observations—were utilized. Validation techniques such as triangulation (cross-verifying data from multiple sources) were employed to ensure the accuracy of the findings. The unique socioeconomic, cultural, and political landscape of Wajir County introduced potential confounding variables that were challenging to manage, which could have influenced the relationship between project resource planning and SME performance. To address these variables, the researcher familiarized themselves with the local context of Wajir County and incorporated relevant contextual factors into the study design and analysis. Pilot studies or consultations with local experts provided additional insights, enhancing the study's reliability and relevance to the specific conditions of Wajir County.

1.9 Delimitation of the Study

This research centered on analyzing the impact of project resource planning on the performance of Small and Medium Enterprises (SMEs) in Wajir County. A total of 394 SME owners were selected for the survey, as they possessed comprehensive knowledge of their business activities and how various resources—human, financial, material, and technological—affected their performance. The study employed a descriptive research design to uncover patterns and enable the generalization of its conclusions. The research specifically focused on evaluating how

resource planning, in its various forms—human, financial, material, and technological—contributed to the overall performance of SMEs.

1.10 Assumptions of the Study

This study was built on several key assumptions. First, it assumed that project resource planning had a direct impact on SME performance. Second, it presumed that project resource planning was already being implemented to support SME performance and could be quantified and evaluated. Third, it assumed that the SMEs targeted for the study had adopted some form of project resource planning, making data collection feasible. Lastly, the study assumed that project resource planning practices influencing SME performance were documented by the business owners or entrepreneurs, ensuring that the necessary data for analysis would be available.

1.11 Operational Definition of Terms

Financial Resource Planning: This refers to the strategic process of forecasting, budgeting, and managing financial resources to meet organizational goals effectively. Financial resource planning enables SMEs to predict cash flow needs, allocate budgets judiciously, and ensure sufficient liquidity to support operations and growth (Zimmermann, 2023).

Human Resource Planning: This is the process of ensuring an organization has the right people, equipped with the necessary skills, positioned in roles that align with strategic goals. It includes workforce planning, skill development, and succession planning to build a capable, motivated team that drives organizational success (Barney, 1991; Wernerfelt, 2020). In SMEs, human resource planning addresses both immediate staffing needs and future skill requirements, fostering an adaptable and resilient workforce

(Kagiri, 2020).

Material Requirement Planning (MRP): This is the process of ensuring an organization has the right people, equipped with the necessary skills, positioned in roles that align with strategic goals. It includes workforce planning, skill development, and succession planning to build a capable, motivated team that drives organizational success (Barney, 1991; Wernerfelt, 2020). In SMEs, human resource planning addresses both immediate staffing needs and future skill requirements, fostering an adaptable and resilient workforce (Kagiri, 2020).

Technological Resource Planning: This involves identifying, acquiring, and managing technology assets—including hardware, software, and digital tools necessary to achieve business objectives. Strategic technological planning enhances productivity, reduces operational costs, and helps SMEs stay competitive in evolving markets (Davis & Taylor, 2020).

Performance: This term refers to an organization's ability to meet its goals and can be evaluated through both internal and external metrics, such as profitability, market share, customer satisfaction, and operational efficiency (Thompson & Williams, 2018). In the context of SMEs, performance reflects how effectively resources are utilized to achieve sustainable growth and competitiveness, particularly in challenging environments like Wajir County (Muriithi, 2017).

Small and Medium Enterprises (SMEs): SMEs are defined by their size, typically characterized by a specific range of employees or annual revenue, depending on regional standards. In Kenya, SMEs include businesses with fewer than 250 employees and annual revenues within defined thresholds (KNBS, 2019). SMEs are instrumental to

economic development, fostering job creation, innovation, and local economic resilience (Du Plessis, 2015).

Micro Enterprises: These are the smallest category of businesses, typically with fewer than 10 employees and a modest annual turnover, defined based on regional or industry-specific standards (KNBS, 2019).

Small Enterprises: Small enterprises generally have between 10 and 49 employees and an annual turnover that is above that of micro enterprises but within specified limits for small businesses (Wanjiku, 2018).

Medium Enterprises: Medium enterprises typically employ between 50 and 249 people and have annual revenues that fall within a mid-sized range, making them larger than small businesses but not as extensive as large corporations (Nkamnebe, 2018).

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This literature review explores the connection between project resource planning and the performance of small and medium enterprises (SMEs). By analyzing various theoretical frameworks and empirical studies, this section seeks to offer a comprehensive understanding of the critical elements that drive SME success, with a special focus on the unique circumstances of Wajir County, Kenya.

2.2 Theoretical Framework

This research, which examines the impact of project resource planning on the performance of small and medium enterprises (SMEs) in Wajir County, Kenya, is anchored in the

ResourceBased View (RBV) Theory and Contingency Theory. The Resource-Based View (RBV) Theory, as proposed by Barney (1991), asserts that an organization's internal resources—such as human capital, financial assets, and technological capabilities—are fundamental drivers of sustained competitive advantage. In line with RBV, SMEs can enhance their performance by efficiently managing and leveraging their distinct resources, a concept that underpins this study's investigation into how strategic resource planning contributes to organizational success.

Conversely, Contingency Theory, as introduced by theorists such as Fiedler (1964), suggests that management strategies cannot be universally applied. The success of any approach, including resource planning, is contingent upon the unique internal and external circumstances that an organization encounters. This theory is particularly pertinent for analyzing how distinct factors in Wajir County, such as infrastructure limitations and market dynamics, shape the effectiveness of resource planning initiatives.

By integrating these two theories, the study seeks to provide a thorough examination of how internal resources and external factors influence the performance of SMEs. RBV underscores the importance of strategically managing resources to achieve competitive advantages, while Contingency Theory highlights the need to adapt strategies to specific environmental factors. Together, these theories provide a dual perspective: RBV emphasizes identifying and leveraging key resources, and Contingency Theory ensures that strategies are tailored to the unique challenges and opportunities in Wajir County. This combined approach allows for a nuanced analysis of how project resource planning impacts SME performance in a resourceconstrained environment.

2.2.1 Resource Based Theory (RBV)

The Resource-Based View (RBV) Theory, initially proposed by Barney (1991), emphasizes that an organization's internal resources are pivotal to achieving and sustaining a competitive advantage. According to RBV, resources that are valuable, rare, inimitable, and nonsubstitutable (VRIN) are instrumental in fostering superior organizational outcomes (Barney, 2018). This theoretical framework is essential to understanding how small and medium enterprises (SMEs) in Wajir County can leverage their internal assets—such as skilled human resources, financial capital, materials, and technology—to enhance their operational performance and resilience. In Wajir's context, where external support and resources are limited, RBV becomes particularly relevant as it centers on optimizing existing resources to achieve a strategic advantage.

RBV's principles guide this study in evaluating the strategic importance of resource planning for SMEs in Wajir County. For instance, in human resource planning, RBV highlights the need to develop and retain employee skills as critical internal assets that can drive organizational success and adaptability (Wernerfelt, 2020). This is especially crucial for Wajir's SMEs, where skill shortages pose a significant challenge. In terms of financial resource planning, RBV supports the idea that SMEs can gain a competitive edge by strategically allocating and managing financial resources, which is vital in an environment with limited access to external funding. Moreover, RBV provides a framework for examining material and technological resource management, illustrating that well-planned utilization of these resources can enhance productivity and stimulate innovation. By applying RBV, this study underscores resource planning as a core capability that SMEs in Wajir County must develop to sustain performance and growth in a challenging, resource-scarce setting (Kozlenkova et al., 2018).

2.2.2 Contingency Theory

Contingency Theory, developed by theorists such as Fiedler (1964), posits that there is no universal approach to management; rather, the effectiveness of any strategy depends on the specific circumstances in which it is applied. This theory argues that organizational performance is contingent upon aligning internal strategies—like resource planning—with external environmental factors, including economic conditions, market dynamics, and industry characteristics (Donaldson, 2021). In this study, Contingency Theory serves as a lens to explore how human, financial, material, and technological resource planning must be tailored to the unique socio-economic conditions in Wajir County.

For SMEs in Wajir, where economic constraints, infrastructure limitations, and scarce resources define the operational environment, Contingency Theory provides valuable insights into the need for adaptive strategies. For example, in human resource planning, the theory helps to evaluate how factors such as workforce availability and local labor market conditions impact HR strategies. In a context like Wajir, where skill gaps are prominent, Contingency Theory suggests that human resource planning must consider local conditions to optimize staffing and skill development effectively (Lawrence & Lorsch, 2019). Similarly, financial resource planning practices must be adapted to Wajir's economic landscape, where access to credit may be limited, requiring SMEs to adopt strategies that prioritize cash flow stability and cost efficiency.

Contingency Theory also informs the approach to material requirement planning and technological resource planning by recognizing the need for strategies that align with the specific logistical and infrastructural challenges in Wajir County. For instance, material planning must account for the high cost of supplies and limited supply chain access, while

technology planning should prioritize solutions that are sustainable and compatible with the existing infrastructure. By applying Contingency Theory, this study provides a nuanced perspective on how SMEs in Wajir County can tailor resource planning strategies to the region's unique conditions, thereby optimizing performance and operational resilience in a challenging environment (Otley, 2018).

2.3 Empirical Review

2.3.1 Project Resource Planning on Organizational Performance

Project resource planning is recognized as a fundamental driver of organizational performance across various contexts. Globally, studies underscore that well-executed resource planning—encompassing human, financial, material, and technological resources—can substantially improve efficiency, reduce costs, and enhance organizational resilience. For instance, a study by Lee and Park (2019) in South Korea revealed that firms implementing robust material requirement planning reduced operational costs by 25% and improved production efficiency by 20%, primarily due to optimized inventory levels and reduced holding costs. Similarly, research by Zhang and Wang (2020) in China demonstrated that companies using strategic technological resource planning achieved a 30% increase in production efficiency and a 25% reduction in operational costs by aligning technological upgrades with long-term organizational goals. These findings illustrate the importance of structured project resource planning as a tool to optimize resource allocation and support sustainable growth in competitive markets.

In the United States, Davis and Taylor (2020) highlighted that SMEs with comprehensive financial planning frameworks saw a 20% improvement in profitability, facilitated by accurate forecasting, effective budget allocation, and robust cash flow management. This result aligns with global evidence showing that financial planning significantly mitigates risks, especially

for small enterprises that face capital constraints. Similarly, Müller and Braun (2018) in Germany observed that firms prioritizing human resource planning, such as employee skill development and succession planning, experienced a 22% increase in workforce productivity. This focus on human capital aligns with the Resource-Based View (RBV) theory, which suggests that strategically developed human resources are crucial for maintaining a competitive advantage. These global perspectives indicate that resource planning not only supports operational efficiency but also enhances organizational stability by building a wellmanaged, skilled workforce.

In Africa, project resource planning is increasingly recognized as a solution to the unique challenges faced by SMEs, including limited access to finance, infrastructural constraints, and a shortage of skilled labor. Okeke (2019) found that Nigerian SMEs with effective financial planning models reported a 22% growth in profitability, largely due to accurate forecasting and budget optimization, which helped them navigate volatile market conditions. Similarly, a study by Mensah and Adjei (2020) in Ghana found that firms adopting efficient inventory management practices as part of their material planning experienced a 25% improvement in delivery times and a 20% increase in cost savings. These findings emphasize the critical role of financial and material planning in ensuring SMEs can maintain steady operations despite economic uncertainties, enabling them to make informed investment decisions and better manage cash flow.

Furthermore, technological resource planning has proven impactful for African SMEs, enabling them to expand their market reach and streamline operations. In South Africa, Mkhize and Dlamini (2021) observed that SMEs aligning technology investments with business objectives saw a 30% improvement in operational efficiency and a 15% boost in market competitiveness.

This alignment allowed firms to capitalize on digital tools to enhance customer satisfaction and reduce overheads. These African studies collectively underscore the value of integrating resource planning strategies that cater to local conditions, demonstrating that efficient project resource management can help SMEs overcome structural limitations and sustain growth.

In East Africa, resource planning is critical for SME growth, especially given the economic volatility and infrastructure gaps in the region. Kagiri (2020) in Uganda found that SMEs with comprehensive human resource planning strategies, such as skill development programs and succession planning, achieved a 28% increase in productivity. These SMEs reported lower turnover rates and improved job satisfaction among employees, highlighting the importance of fostering a skilled, stable workforce in resource-limited settings. Additionally, Mushi (2019) in Tanzania reported that firms implementing strategic financial planning reduced operational disruptions by 22%, with financial forecasting and budget controls providing greater stability and adaptability in a fluctuating economy. These studies reveal that human and financial resource planning can foster resilience, enabling SMEs in East Africa to achieve stable operations despite facing external economic pressures.

Further, in Rwanda, technological and material planning have demonstrated substantial benefits for SMEs. Niyonsaba (2018) found that firms that integrated digital tools into their resource planning saw a 25% increase in productivity, primarily due to the automation of inventory management and procurement processes. This approach not only improved order fulfillment rates but also reduced inventory holding costs by 20%. In Kenya, resource planning has emerged as a critical factor for enhancing SME competitiveness, particularly in urban areas where market conditions demand adaptability and operational efficiency (Mwangi & Njoroge, 2019). These findings indicate that in East Africa, efficient resource planning tailored to

regional needs enables SMEs to overcome infrastructural and financial limitations, contributing to greater competitiveness and market expansion.

In Kenya, empirical studies confirm that resource planning is pivotal for improving SME performance across various sectors. A study by Wanjiku (2018) revealed that Kenyan SMEs with structured human resource planning, particularly in skill development, experienced a 30% increase in productivity and a 25% reduction in employee turnover. The study emphasized that investing in workforce development and succession planning enabled SMEs to maintain operational continuity and adapt to changes within the competitive business landscape. Similarly, Kimani and Mwangi (2020) found that financial resource planning, especially through effective budgeting and cash flow management, helped SMEs reduce operational costs by 25%, allowing them to reinvest savings into expansion activities. These findings underscore that in Kenya, human and financial resource planning are essential for SMEs to sustain growth and build resilience in dynamic markets.

Additionally, Otieno (2019) examined the role of material and technological resource planning in Nairobi, finding that SMEs with efficient inventory management systems reduced production delays by 20% and improved customer satisfaction by 18%. This study highlights the significance of aligning material planning with market demand, enabling firms to maintain competitive inventory levels. Further, SMEs that integrated technology into their planning processes reported a 28% improvement in customer service efficiency. These findings indicate that Kenyan SMEs benefit substantially from project resource planning, which supports efficient operations and strengthens customer relationships, reinforcing their position in increasingly competitive markets.

In Wajir County, however, the application and impact of project resource planning remain underexplored, despite the county's unique socio-economic challenges. Studies conducted in this area reveal that resource planning practices are often hampered by limited financial access, a shortage of skilled labor, and logistical challenges associated with Wajir's remote location. Hassan (2021) found that SMEs with targeted skill development programs achieved a 20% improvement in productivity, emphasizing the importance of human resource planning to address local skill gaps. Additionally, Abdi (2020) demonstrated that succession planning in Wajir's SMEs reduced operational disruptions by 25%, enhancing continuity in businesses that otherwise face frequent turnover challenges. These findings highlight the necessity of resource planning practices tailored to the local workforce and socio-economic environment in Wajir County.

Financial and material planning are also critical for SMEs in Wajir, given the region's limited access to formal banking services and high costs associated with procurement. A study by Mohamed (2019) showed that SMEs with structured financial forecasting achieved a 20% increase in financial stability, enabling them to better withstand market fluctuations. Moreover, effective material planning was linked to a 15% reduction in operational costs, as SMEs optimized inventory to avoid costly stockouts or overstocking. These studies illustrate that, in Wajir County, project resource planning is crucial not only for improving SME performance but also for ensuring business sustainability amid the unique challenges posed by the local environment. This research will thus fill a significant gap by examining how specific resource planning practices can be adapted to support SMEs in Wajir, fostering resilience and economic growth in this underserved region.

2.3.2 Project Financial Resource Planning on Organizational Performance

Effective financial resource planning is recognized as a critical factor in enhancing organizational performance, especially for small and medium enterprises (SMEs) globally. Research shows that precise financial forecasting, budget allocation, and cash flow management are instrumental in enabling SMEs to manage resources strategically, thereby enhancing profitability and reducing financial risks (Miller & Smith, 2020). For instance, a study by Chen and Zhang (2019) in China demonstrated that SMEs with advanced budget allocation processes saw a 20% reduction in operational costs, underlining the importance of meticulous budget management in optimizing resource use. Similarly, a survey of SMEs in the United States by Davis and Taylor (2020) revealed that companies with effective cash flow management practices reported a 25% increase in business continuity, emphasizing the critical role of liquidity management in sustaining operations. These findings suggest that strategic financial planning allows SMEs to mitigate financial challenges and capitalize on growth opportunities, particularly in competitive markets.

In Europe, a study by Thompson and Williams (2018) on UK SMEs found that organizations with structured financial forecasting practices recorded a 30% improvement in financial stability compared to those with less rigorous planning. This improvement was largely attributed to the ability to anticipate and manage cash flow requirements, which helps avoid sudden financial disruptions. Müller and Braun (2020) in Germany further reported that SMEs that actively monitor and adjust their financial plans experience a 35% increase in efficiency, enabling them to reinvest savings into growth-oriented activities. These studies collectively highlight the pivotal role of financial resource planning in enhancing SME resilience and operational flexibility, underscoring its relevance across diverse economic environments.

In Africa, financial planning for SMEs is essential in addressing challenges such as limited access to credit, volatile markets, and economic instability. A study by Okoye (2019) in Nigeria found that SMEs with robust financial forecasting practices recorded a 22% increase in revenue over two years, largely due to improved budgeting and resource allocation. This study emphasizes the importance of financial forecasting in adapting to economic fluctuations, especially in markets with limited access to formal financial services. Similarly, Mensah and Agyapong (2020) in Ghana reported that SMEs with structured cash flow management practices experienced a 20% reduction in financial stress, highlighting that effective cash management allows these businesses to maintain operations even under financial constraints. These studies underscore that financial planning is not only vital for growth but also serves as a buffer against the economic challenges faced by African SMEs.

Further evidence from South Africa by Mkhize and Dlamini (2021) underscores the significance of cash flow management in strengthening SME resilience. Their study showed that SMEs with cash flow forecasting practices achieved a 28% improvement in financial stability, enabling them to manage short-term liabilities more effectively. In addition, a study by Ndlovu and Moyo (2020) revealed that proper budget allocation led to a 25% increase in resource utilization among South African SMEs, allowing them to reinvest in productive activities and maintain a competitive edge. These findings reinforce the necessity of financial resource planning for African SMEs, particularly in mitigating resource constraints and ensuring sustainable growth in uncertain market conditions.

In East Africa, the role of financial resource planning in enhancing SME performance has gained attention, with studies showing that strategic financial management is critical for survival in volatile markets. Kagiri (2020) in Uganda found that SMEs with accurate financial

forecasting and budget allocation practices recorded a 25% increase in profitability over a three-year period. The study attributed this growth to the SMEs' ability to anticipate cash flow requirements and align budgets with business priorities, which minimized wastage and maximized profitability. Similarly, Mushi (2019) in Tanzania reported that SMEs with proactive cash flow management practices achieved a 22% improvement in resource optimization, which enabled them to streamline operations and increase productivity. These findings suggest that in East Africa, strategic financial resource planning equips SMEs to better manage limited resources and navigate market fluctuations.

Rwandan SMEs have also benefited from structured financial planning, as evidenced by research conducted by Niyonsaba (2018), which showed that SMEs with robust budget allocation systems experienced a 20% reduction in operational disruptions. The study highlighted that effective budget allocation not only reduces operational costs but also ensures that resources are directed towards high-impact areas. Further, a study by Ahimbisibwe and Tumuhairwe (2021) found that Rwandan SMEs with cash flow management systems reported a 15% increase in financial resilience, which improved their capacity to withstand market volatility. These studies collectively demonstrate that financial resource planning is a critical determinant of SME success in East Africa, enabling these businesses to enhance operational efficiency and remain competitive.

In Kenya, research indicates that financial planning plays a substantial role in SME sustainability, with a specific focus on budgeting and cash flow management. Wanjiru (2020) found that Kenyan SMEs that engage in financial forecasting practices achieved a 30% improvement in market share over three years, due to their enhanced ability to anticipate financial challenges and allocate resources accordingly. The study further noted that effective

financial forecasting allowed SMEs to access loans and attract investors, as lenders perceive well-managed finances as a sign of business stability. Similarly, Mwangi and Njoroge (2019) highlighted that structured budget allocation practices led to a 25% reduction in operational costs among SMEs in Nairobi, underscoring that disciplined budgeting supports cost control and improves operational efficiency.

Otieno (2018) also conducted research on Nairobi-based SMEs, showing that companies with robust cash flow management practices experienced a 35% increase in financial stability. This study emphasized the importance of maintaining positive cash flow, especially in managing day-to-day expenses and avoiding financial crises. These findings suggest that financial planning allows Kenyan SMEs to not only manage resources more effectively but also build the financial resilience needed to thrive in competitive markets. These insights reinforce the argument that financial resource planning is an essential tool for SME growth and sustainability, particularly within Kenya's dynamic economic landscape.

In Wajir County, where SMEs face unique challenges such as limited access to financial services and irregular income streams, financial resource planning has become an essential component of business management. Hassan (2021) conducted a study in Wajir and found that SMEs with well-structured financial forecasting practices experienced a 20% improvement in financial resilience. The study emphasized that, in Wajir's volatile market, accurate financial forecasting allows SMEs to better anticipate financial needs and manage resources despite the scarcity of accessible financial services. Additionally, Abdi (2020) observed that SMEs in Wajir with effective budget allocation practices achieved a 25% reduction in operational inefficiencies, enabling them to optimize limited resources and sustain business continuity.

Moreover, Mohamed (2019) highlighted the critical role of cash flow management in ensuring SME survival in Wajir County. The study revealed that SMEs with cash flow management systems reported a 15% increase in business continuity, as these practices enabled them to maintain liquidity and meet financial obligations despite inconsistent revenue flows. This research underscores that in a region with limited financial infrastructure, disciplined cash flow management is essential for SME resilience. Collectively, these findings suggest that financial resource planning is indispensable for SMEs in Wajir County, enabling them to navigate financial challenges and enhance operational stability in a resource-constrained environment.

2.3.3 Project Material Requirement Planning on Organizational Performance

Effective Material Requirement Planning (MRP) is integral to organizational success, especially for SMEs striving to optimize operational efficiency, control costs, and ensure timely project completion. MRP entails systematically identifying, acquiring, and managing materials to align production needs with available resources, ultimately reducing wastage and ensuring seamless operations (Lee & Park, 2019). Globally, well-implemented MRP has been associated with substantial improvements in productivity and cost savings. For instance, a study by Smith and Johnson (2018) in the United States showed that SMEs employing structured MRP systems achieved a 30% reduction in lead times and a 25% improvement in supplier reliability. This study underscores that streamlined procurement and inventory control play a pivotal role in enhancing supplier relationships, reducing production disruptions, and ultimately supporting organizational performance. Similarly, research by Müller and Braun (2020) in Germany indicated that SMEs focused on waste reduction through MRP experienced a 35% decrease in material wastage and an 18% rise in profitability, highlighting that meticulous resource management can directly influence costeffectiveness and competitiveness.

In South Korea, Lee and Park (2019) examined MRP's impact on cost and operational efficiency within SMEs, discovering that effective MRP implementation led to a 22% decrease in operational costs and a 20% boost in production output. Their findings highlighted that integrating technology with MRP systems was essential in optimizing inventory levels, which, in turn, enhanced both productivity and profitability. These global studies emphasize that MRP significantly contributes to operational success by aligning materials with production needs, reducing holding costs, and enhancing supply chain efficiency—benefits that are particularly crucial for SMEs with limited resources.

In Africa, SMEs are increasingly recognizing the critical role of MRP as they contend with unique resource constraints and volatile market conditions. Research by Okeke (2019) in Nigeria revealed that SMEs with structured inventory management systems saw a 22% reduction in stockouts and a 17% increase in customer satisfaction. These findings suggest that effective MRP not only mitigates the financial losses associated with inadequate inventory but also improves customer trust and loyalty, which are essential for business continuity. Similarly, a study conducted by Mensah and Adjei (2020) in Ghana demonstrated that SMEs with efficient procurement processes experienced a 20% improvement in cost savings and a 25% reduction in procurement delays. The study further noted that streamlining procurement processes allowed SMEs to redirect savings towards business growth initiatives, enhancing their competitive edge in resource-limited environments.

In South Africa, Mkhize and Zuma (2018) highlighted that SMEs employing waste reduction strategies as part of MRP achieved a 28% decrease in material costs and a 15% increase in operational efficiency. The study emphasized the value of Just-In-Time (JIT) inventory

systems, which minimized excess stock and facilitated resource reallocation to high-impact areas. These findings underscore the significance of strategic inventory management for African SMEs, where limited resources and fluctuating supply chains necessitate careful material planning. Across Africa, empirical evidence demonstrates that MRP can enhance organizational performance by mitigating stock-related disruptions, reducing operational costs, and fostering customer satisfaction—key drivers of SME success in resourceconstrained environments.

East African SMEs have also reported performance gains linked to effective MRP implementation, especially in nations where infrastructural limitations challenge supply chain continuity. A study by Kagiri (2020) in Uganda found that SMEs using modern MRP systems saw a 25% improvement in order fulfillment rates and a 20% reduction in holding costs. These advancements were attributed to the adoption of digital inventory tracking, which allowed for precise forecasting and inventory adjustments based on real-time demand. This study illustrates that leveraging technology within MRP frameworks is pivotal for East African SMEs seeking to optimize resource use and improve customer satisfaction amid logistical challenges. Additionally, Mtweve (2019) reported that Tanzanian SMEs focusing on streamlined procurement processes and vendor management achieved a 22% increase in supplier reliability and a 15% decline in procurement-related costs. These findings indicate that effective material requirement planning enables East African SMEs to enhance supplier partnerships and reduce cost inefficiencies, which are critical for operational resilience.

In Rwanda, Niyonzima (2018) demonstrated that SMEs implementing MRP to prevent overstocking experienced a 30% reduction in material wastage and a 20% increase in profitability. The study underscored the importance of lean inventory practices for SMEs in the region, where material costs are high and resource constraints are prevalent. This evidence from

East Africa highlights how effective MRP, supported by digital systems, can minimize material costs and maximize efficiency, enabling SMEs to achieve better organizational outcomes and compete more effectively in challenging markets.

In Kenya, empirical studies illustrate the critical importance of MRP in improving SME performance and operational stability. Research by Wanjiku (2019) found that Kenyan SMEs employing systematic inventory management experienced a 28% reduction in operational disruptions and a 20% enhancement in customer service levels. This study attributed these improvements to real-time inventory tracking, which ensured that customer demand could be met without delay. Furthermore, Kimani and Mwangi (2020) found that Kenyan SMEs with optimized procurement processes saw a 22% increase in supplier satisfaction and a 25% reduction in lead times. By establishing streamlined procurement practices, these SMEs were able to strengthen supplier relationships, an essential factor in maintaining supply consistency and cost control in fluctuating markets.

In addition, a study by Otieno (2018) highlighted the impact of waste management practices within MRP on SME profitability, with firms experiencing a 30% reduction in material costs and a 15% improvement in profit margins. The study emphasized that, for SMEs, effective waste management through MRP not only reduces costs but also contributes to environmental sustainability, which is increasingly important in competitive markets. These studies collectively affirm that MRP is vital for Kenyan SMEs, enabling them to optimize inventory levels, minimize waste, and enhance supplier engagement—factors that drive both cost efficiency and service quality.

In Wajir County, Kenya, where SMEs face distinct challenges related to resource scarcity and logistical barriers, effective MRP is particularly crucial. Hassan (2021) found that SMEs in Wajir with structured inventory management systems experienced a 20% reduction in stockouts and a 15% improvement in customer satisfaction. This study emphasized the necessity for local SMEs to adopt more rigorous inventory practices to avoid the financial losses associated with stock shortages, which are frequent due to the county's remote location and supply chain limitations. Additionally, Abdi (2020) reported that SMEs implementing streamlined procurement processes in Wajir achieved a 22% decrease in procurement costs and a 20% enhancement in supplier relationships. This underscores that MRP practices tailored to Wajir's unique context can help SMEs reduce operational costs and secure more reliable supplies.

Moreover, Mohamed (2019) highlighted the benefits of waste reduction and overstock prevention through MRP in Wajir County, where SMEs saw a 25% decline in material wastage and a 10% increase in profitability. The study underscored that optimizing material use is essential for SMEs in resource-scarce environments, where the cost of excess inventory can significantly impact profitability. These findings collectively suggest that MRP is not merely a theoretical framework but a practical, transformative tool for SMEs in Wajir. By adopting customized MRP strategies, local SMEs can enhance efficiency, reduce material costs, and build stronger supplier partnerships, which are fundamental for long-term sustainability and growth in the challenging economic landscape of Wajir County.

2.3.4 Technological Resource Planning on Organizational Performance

Technological resource planning is a critical driver of organizational performance, especially in today's digital and competitive landscape. Globally, numerous studies have shown that the adoption and strategic management of technology are associated with increased operational efficiency, cost reduction, and market competitiveness for businesses, including SMEs. For instance, Zhang and Wang (2019) found that manufacturing companies in China experienced a 30% improvement in production efficiency and a 25% reduction in operational costs after integrating advanced manufacturing technologies into their processes. This study underscores the role of technological planning in enhancing productivity by optimizing production workflows and minimizing resource waste. In a similar vein, Davis and Taylor (2020) reported that U.S. firms that implemented regular technology upgrades observed a 20% increase in market share over three years. This research highlights the competitive advantage gained from consistently modernizing technology to meet market demands, illustrating that strategic technology planning fosters adaptability and growth.

In Europe, Müller and Weber (2018) examined the impact of aligning technological investments with organizational objectives across several industries in Germany. Their findings revealed a 35% increase in innovation and a 15% improvement in financial performance among firms that strategically aligned technology initiatives with their long-term goals. This study emphasizes that when technological resources are managed in tandem with strategic objectives, companies can more effectively leverage technology to drive growth and sustain performance. Globally, these findings highlight a common thread: technological resource planning, especially when aligned with overarching business strategies, is essential for maintaining competitiveness, achieving operational efficiency, and sustaining growth in diverse markets.

In Africa, the importance of technological resource planning is increasingly recognized as a crucial factor for SME performance, given the continent's growing digital economy and the unique challenges SMEs face in accessing technology. For example, Okeke (2019) found that Nigerian SMEs that integrated digital tools saw a 28% increase in customer satisfaction and a 22% boost in revenue. This study highlights the role of technology in enhancing service delivery and expanding market reach, especially for SMEs operating in resource-constrained environments. Similarly, Mensah and Agyapong (2020) reported that Ghanaian firms with strategic technology plans experienced a 25% reduction in downtime and a 20% increase in production capacity. The findings suggest that careful technological planning helps mitigate production delays and ensures consistent output, which is particularly important for SMEs facing infrastructural challenges.

In South Africa, Mkhize and Dlamini (2021) explored how aligning technology investments with long-term business goals influenced SME resilience and competitiveness. Their study found that companies with strategic technology alignment achieved a 30% improvement in resilience and a 15% boost in competitive positioning within their industries. This underscores the importance of ensuring that technological investments support sustainable growth and adaptability, especially in African contexts where resource constraints demand strategic utilization of technology. Collectively, studies from Africa indicate that while technological adoption may present challenges, the benefits of strategic technology planning—such as improved customer satisfaction, operational stability, and enhanced productivity—are significant for SMEs across the continent.

In East Africa, technological resource planning is also increasingly acknowledged as a pathway for improving SME performance. Kagiri (2020) conducted research in Uganda, finding that

SMEs that effectively incorporated new technologies saw a 25% increase in operational efficiency and a 20% reduction in production errors. These gains were primarily attributed to the adoption of automation and digital tools that enabled greater precision and consistency in operations. This study points to the need for East African SMEs to consider not only adopting technology but also planning its integration to maximize benefits. Similarly, Mushi (2019) in Tanzania discovered that SMEs with proactive strategies for technology upgrades reported a 22% decrease in operational costs and a 25% boost in production output. The study demonstrates that structured technological planning allows SMEs to minimize costs and enhance productivity, even in regions with limited technological infrastructure.

In Rwanda, Niyonsaba (2018) found that SMEs that aligned technology investments with long-term goals experienced a 30% increase in business sustainability and a 15% improvement in customer retention. This research highlights that when technology adoption is strategically aligned with business objectives, SMEs are better positioned to retain customers and maintain stability in competitive markets. These findings collectively suggest that for East African SMEs, technological resource planning is essential not only for operational gains but also for achieving sustainability and competitiveness in a rapidly evolving market landscape.

In Kenya, the impact of technological resource planning on SMEs has been the subject of extensive study, with a specific focus on how strategic technology use drives competitiveness and growth. Wanjiku (2020) found that Kenyan SMEs that successfully integrated new technologies saw a 30% improvement in customer service quality and a 25% expansion in market reach. This study emphasizes that technology plays a crucial role in enhancing customer engagement and expanding operational capabilities. Similarly, Mwangi and Njoroge (2019) found that SMEs with strategic technology plans experienced a 28% reduction in system

downtime and a 20% increase in production efficiency. This research underscores the importance of structured technological planning in minimizing disruptions and optimizing operations, particularly in Kenya's competitive SME sector.

Otieno (2018) examined the impact of aligning technology investments with long-term business objectives among SMEs in Nairobi. The study revealed a 35% increase in innovation and a 22% improvement in financial performance, highlighting that aligning technology with business strategy helps SMEs maximize the returns on their technological investments. These findings from Kenya reinforce the view that technological resource planning is essential for driving performance, especially in competitive markets where SMEs must optimize resources to achieve sustainable growth and maintain a competitive edge.

In Wajir County, technological resource planning has become increasingly relevant as SMEs navigate the unique challenges of operating in a remote, resource-scarce environment. Hassan (2021) found that SMEs that adopted digital tools in Wajir County experienced a 20% improvement in operational efficiency and a 15% enhancement in service delivery. This study highlights the necessity of adopting technologies that help SMEs overcome logistical and operational challenges in Wajir's remote context, where access to technology and skilled labor is limited. Additionally, Abdi (2020) observed that SMEs with strategic technology plans in Wajir County achieved a 25% reduction in operational costs and a 20% increase in productivity, demonstrating that proactive technology planning allows businesses to optimize limited resources effectively.

Furthermore, Mohamed (2019) reported that aligning technological investments with long-term business goals resulted in a 30% improvement in organizational resilience and a 10% boost in

market competitiveness among SMEs in Wajir County. This finding emphasizes the importance of ensuring that technological investments are not only relevant to immediate needs but also future-proofed, allowing SMEs in Wajir to maintain stability and adaptability in a challenging environment. Collectively, these findings underscore the importance of technological resource planning in Wajir County, where context-specific technology strategies enable SMEs to overcome regional limitations, improve operational efficiency, and contribute to the local economy's resilience and growth.

2.4 Conceptual Framework

The conceptual framework for this study identifies Project Resource Planning as the independent variable, with its impact on organizational performance being explored through four main dimensions: Human Resource Planning, Financial Resource Planning, Material Requirement Planning, and Technological Resource Planning. Each dimension is further broken down into specific indicators that represent key activities involved in effective resource planning.

Human Resource Planning is assessed based on the development of employee skills, the implementation of succession planning strategies, and the alignment of human resource allocation with organizational goals. These indicators evaluate how effectively an organization prepares and utilizes its workforce to meet both current and future needs.

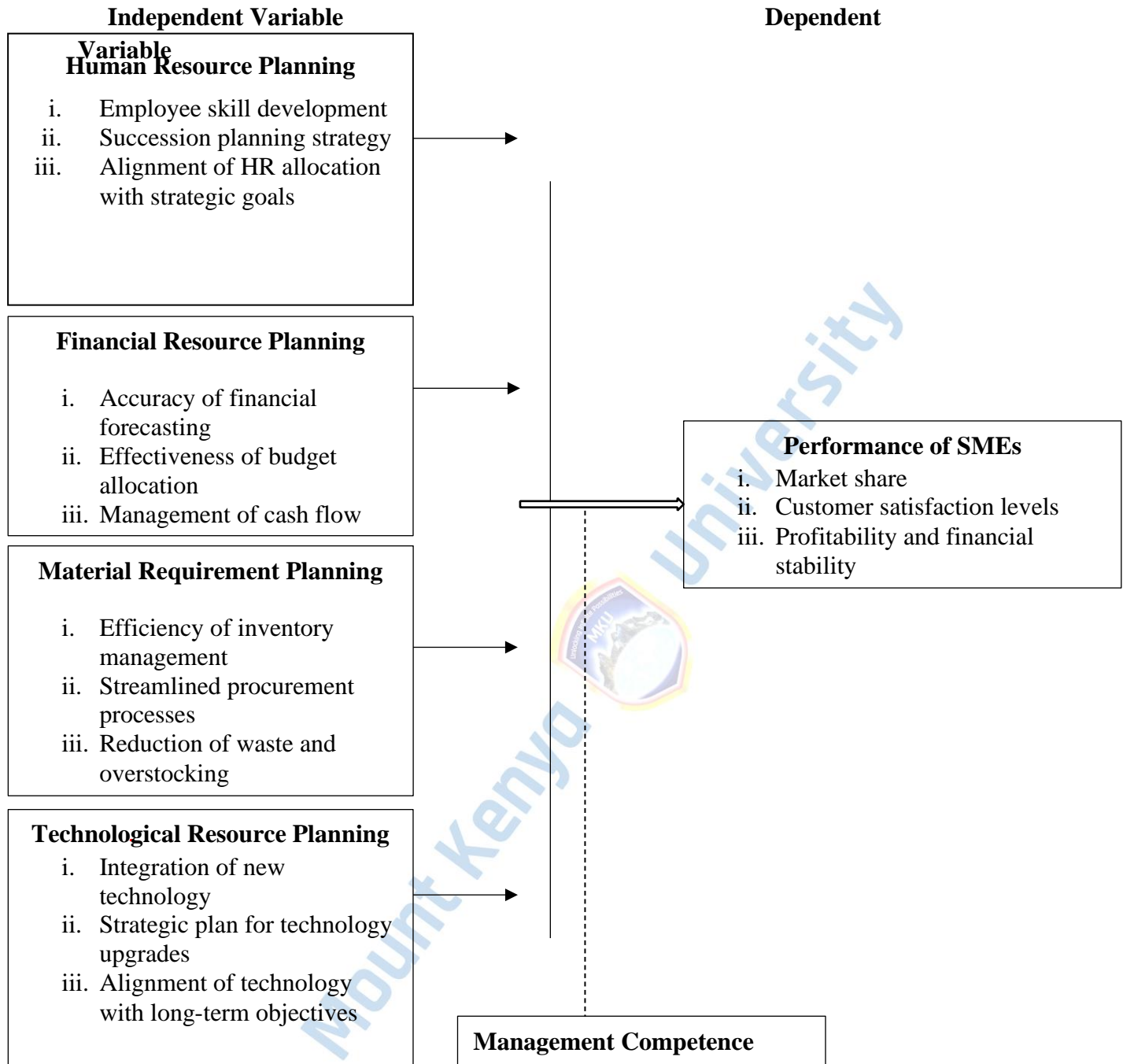
Financial Resource Planning is analyzed by looking at the accuracy of financial forecasting, the efficiency of budget allocation, and the management of cash flow. These metrics reflect an

organization's ability to predict financial needs, allocate resources effectively, and maintain liquidity to support operations.

Material Requirement Planning focuses on inventory management, streamlined procurement processes, and minimizing waste and overstocking. These elements are crucial for ensuring cost-effective operations and reducing losses.

Technological Resource Planning encompasses the integration of new technologies, strategic planning for technology upgrades, and aligning technological investments with long-term goals.

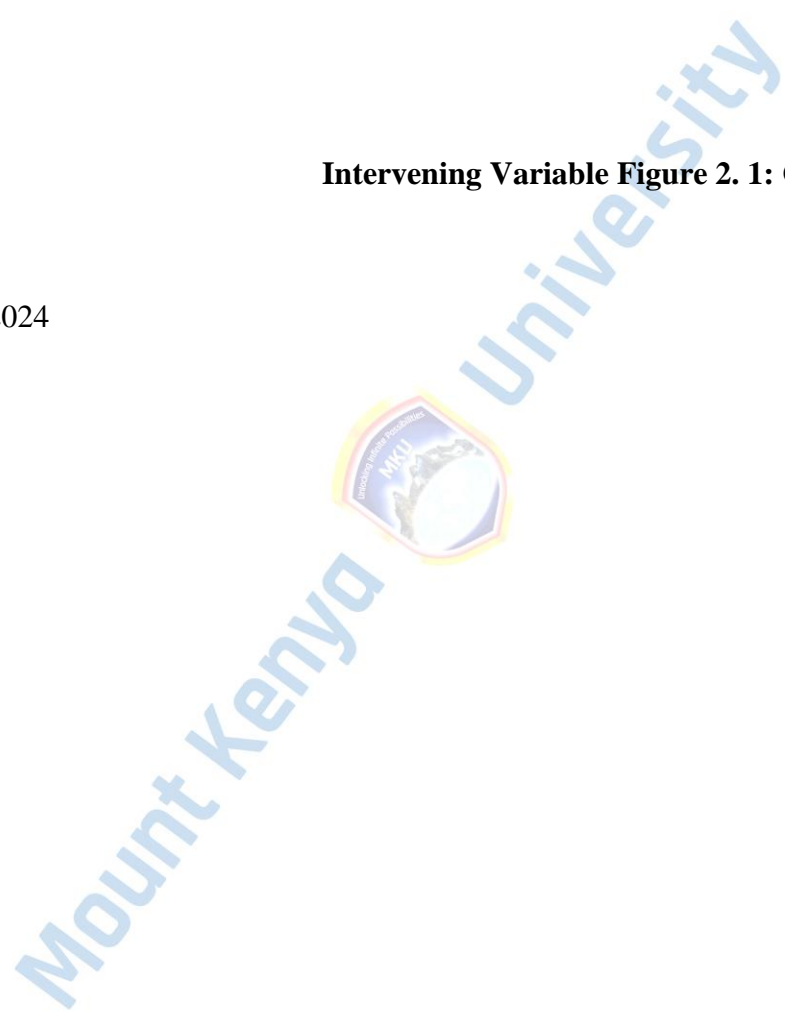




Framework

Source: Researcher 2024

Intervening Variable Figure 2. 1: Conceptual



2.5 Summary of Existing Literature Review

The review of existing literature highlights the crucial impact that effective project resource planning has on enhancing the performance of small and medium enterprises (SMEs). Across different contexts, effective planning in human resources, finances, material requirements, and technology consistently enhances organizational outcomes. For instance, on a global scale, human resource planning strategies, including employee skill development and succession planning, have been linked to increased productivity and reduced employee turnover (Johnson & Brown, 2019; Zhang & Liu, 2020). Similarly, financial resource planning, which emphasizes accurate forecasting, strategic budget allocation, and efficient cash flow management, has been associated with improved profitability and financial stability (Miller & Smith, 2020; Chen & Zhang, 2019). These results emphasize the critical role that strategic resource planning plays in ensuring the success of SMEs across various contexts.

In Africa, resource planning has proven to be vital in addressing financial and operational challenges. Studies from Nigeria, Ghana, and South Africa show that SMEs that adopt efficient inventory management, streamlined procurement processes, and proactive technological upgrades experience significant improvements in operational efficiency, customer satisfaction, and overall organizational performance (Okeke, 2019; Mensah & Agyapong, 2020; Mkhize & Dlamini, 2021). These studies highlight the importance of adapting resource planning strategies to meet the unique challenges faced by SMEs in resource-constrained environments. Research from East Africa and Kenya supports these conclusions, demonstrating that aligning resources strategically with organizational goals can result in substantial gains in productivity, market reach, and financial stability (Kagiri, 2020; Wanjiku, 2020).

In Wajir County, Kenya, local studies reveal that tailored resource planning strategies are essential for addressing the region's specific challenges. SMEs that implement effective human resource, financial, and technological resource planning have seen improvements in operational efficiency, cost reduction, and service delivery, even in a resource-scarce and remote environment (Hassan, 2021; Abdi, 2020; Mohamed, 2019). These findings emphasize the critical role that strategic resource planning plays in sustaining and advancing the performance of SMEs in challenging contexts. The reviewed literature collectively affirms that robust resource planning is a key driver of organizational success, particularly for SMEs operating in diverse and demanding environments.

2.6 Knowledge Gaps

While project resource planning is widely acknowledged as a critical factor in enhancing organizational performance, there remain notable methodological gaps in existing research. Much of the literature relies on quantitative approaches, often through cross-sectional surveys and case studies, which provide limited insight into the dynamic, longitudinal effects of resource planning on organizational performance (Davis & Taylor, 2020; Okeke, 2019). This lack of longitudinal data constrains understanding of how sustained and adaptive resource planning impacts SME performance over time, particularly in fluctuating environments like those in Wajir County. Furthermore, empirical studies often prioritize firms in developed economies, employing technological advancements and well-developed infrastructures, which may not fully translate to the operational challenges and resource constraints encountered by SMEs in resource-scarce settings (Zhang & Wang, 2020; Müller & Braun, 2018).

Therefore, a methodological gap exists in the need for mixed-method and longitudinal

studies that could provide richer, contextualized data on the real-time challenges and successes of SMEs using project resource planning in underserved regions.

Moreover, from a theoretical perspective, there is an evident gap in applying context-specific theories that address the unique environmental constraints of SMEs in remote or economically challenged areas. The existing research largely applies the Resource-Based View (RBV) and Contingency Theory to explain resource planning, assuming a degree of internal resource stability that may not exist for SMEs in volatile markets like Wajir County (Barney, 2018; Donaldson, 2021). Although RBV is relevant in understanding resource optimization, it does not fully account for the external pressures SMEs face in regions with limited access to technology, capital, and skilled labor. Similarly, Contingency Theory emphasizes adaptability but lacks a clear framework for implementing specific resource strategies that are responsive to persistent structural constraints (Fiedler, 1964). This gap suggests the need for an integrated theoretical approach that combines elements of resource dependence theory and strategic adaptation to better reflect the operational realities of SMEs in Wajir.

In addition, conceptual gaps exist in how resource planning components—human, financial, material, and technological—are studied in isolation, often without examining their interconnected effects on SME performance. Research frequently assesses each resource type separately, such as focusing on either human resource planning or financial planning, without accounting for how these resources interact and jointly contribute to organizational resilience and growth (Lee & Park, 2019; Kagiri, 2020). For instance, technological resource planning may support operational efficiency but could be constrained by inadequate financial planning in a region like Wajir, where access to

funding is limited (Niyonsaba, 2018). There is a need for a more comprehensive conceptual framework that explores the interdependence of different resource planning components, recognizing that the combined effect of these resources is critical to sustaining performance in complex environments.

Finally, geographical gaps persist in the research on project resource planning for SMEs, particularly in underserved regions like Wajir County, Kenya. While there is substantial literature on resource planning in developed countries and some urban areas in Kenya, there is limited empirical focus on remote regions with unique socioeconomic challenges (Mwangi & Njoroge, 2019; Hassan, 2021). Studies that do address African contexts primarily focus on Nigeria, Ghana, and South Africa, overlooking the specific needs of SMEs in more marginalized and resourceconstrained locations, such as Wajir (Mensah & Agyapong, 2020; Mkhize & Dlamini, 2021). Consequently, there is a geographical gap in understanding how resource planning strategies can be effectively adapted to fit the environmental constraints and logistical challenges of SMEs in Wajir. Addressing this gap would provide targeted insights for policymakers and business owners aiming to foster resilience and growth within similar underserved regions.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlined the research methodology adopted for the study. It covered the research design, assessment of the validity and reliability of research instruments, target population, sampling methods, determination of sample size, data collection techniques, and data analysis

procedures. Additionally, the chapter emphasized the measures undertaken to guarantee the validity and reliability of the instruments utilized in the research.

3.2 Research Design

This research employed a descriptive design to examine the influence of project resource planning on the performance of Small and Medium Enterprises (SMEs) in Wajir County, Kenya. The study integrated both qualitative and quantitative approaches. It commenced with a quantitative survey aimed at collecting data from a representative sample of SMEs in the county, concentrating on their resource planning strategies, financial results, and operational performance (Smith et al., 2020). The primary tool for data collection was semi-structured questionnaires, which captured both numerical data and qualitative insights. The quantitative data facilitated statistical analyses to explore relationships and patterns (Jones & Brown, 2018), while the qualitative data offered more in-depth perspectives on the challenges and contextual factors affecting resource planning and SME performance (Johnson, 2019). This mixed-method approach was designed to offer a thorough understanding of how project resource planning impacted the performance of SMEs in Wajir County.

3.3 Target Population

As defined by Ngechu (2004), a target population referred to a particular group of people, services, products, or entities that were the central focus of a research study. The target population for this study consisted of 4,120 registered Small and Medium-Sized Enterprises (SMEs) in Wajir County (MSEA, 2019). These enterprises were chosen because of their prominent role in the local economy and their ability to offer meaningful insights related to the research objectives.

3.4 Sample Size

The sample size for this study was computed using Slovin's formula, which is appropriate for determining sample sizes in large populations (Zimmermann, 2023). With a margin of error set at 5% (0.05) and a confidence level of 95% (corresponding to a standard normal deviate of 1.96), the sample size was derived as follows: The calculation of the sample size for this extensive population will be performed using Slovin's formula:

$$n = \frac{N}{1+Ne^2}$$

Where:

n = Sample size, N = Total population and e = Error tolerance (confidence level).

Since the population N = 4120,

Error tolerance = 0.05,

The sample size is determined as:

$$n = \frac{4120}{1 + 4120 (0.05)^2} = 364$$

3.5 Sampling Procedure and Techniques

The study used systematic sampling, which involved selecting every 10th SME from the list of registered SMEs in Wajir County. With a total population of 4,120 SMEs, this method ensured randomness while providing a structured approach to sampling. The sampling frame provided by the Wajir Chamber of Commerce divided the SMEs into different sectors: foodrelated, construction, transport, hotel and hospitality, and other sectors.

Table 3. 1: Sampling Frame

SME Sectors	Population	Sample Size
Food-related sector	1,000	88
Construction	1,000	88
Transport	600	53
Hotel and Hospitality	600	53
Other sectors	920	82
Total	4,120	364

3.6 Research Instruments

The research relied on structured questionnaires as the primary data collection instrument. As highlighted by Creswell and Creswell (2018), questionnaires were an efficient tool for collecting quantitative data, which could be analyzed statistically. The questionnaire for this study consisted of both closed-ended and open-ended questions designed to gather quantitative data for statistical analysis, as well as qualitative data for deeper insights (Bryman, 2019).

The questionnaire was divided into several sections that aligned with the study's objectives: background information, financial resource planning, material resource planning, technological resource planning, and the overall performance of SMEs. Closed-ended questions were structured using a 5-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5), facilitating statistical analysis of attitudes and perceptions (De Vaus, 2020).

3.7 Data Collection Procedure

The researcher secured the necessary permissions for the study, including approval letters from relevant authorities such as NACOSTI and the university. Data collection was conducted with the assistance of research assistants who distributed and collected the questionnaires from

various enterprises. To optimize the process, research assistants arranged appointments with respondents in advance. Participants received informed consent forms detailing the study's purpose, potential benefits, risks, and their right to withdraw at any time. Participation was voluntary, and confidentiality was strictly maintained, with data being used solely for research purposes.

3.8 Pilot Study

A preliminary study was carried out to evaluate the research tools before the main data collection process. Gabriel et al. (2019) suggested pre-testing helped identify and correct potential issues in the questionnaire, reducing the likelihood of misunderstandings or incomplete responses. The pilot study involved 10% of the sample population (36 SMEs) from Wajir County. These participants were excluded from the final study (Verhaegh, 2023).

Treagust & Won (2023) argued that a 10% sample size was adequate for pilot testing.

3.8.1 Reliability of the Research Instrument

Reliability pertained to the stability and consistency of measurements over time. To achieve reliability in this study, the test-retest method was employed, and reliability was calculated using Cronbach's alpha. This statistic evaluated internal consistency by analyzing the intercorrelations among items (Ahmed & Ishtiaq, 2021). A Cronbach's alpha value of 0.7 or above was considered satisfactory, with higher values reflecting greater reliability (Bujang et al., 2018).

3.8.2 Validity of Research Instrument

Validity ensured that the research instrument effectively measured the intended variables. The study assessed content validity, criterion-related validity, and construct validity. Content

validity was ensured through expert evaluations and pilot testing to confirm that the questionnaire addressed all relevant components of the research objectives (Almansreh et al., 2019). Criterion validity involved comparing the study's tools with those employed in similar research (Van Dokkum et al., 2022), while construct validity was confirmed using confirmatory factor analysis to verify that the questionnaire accurately measured the intended theoretical constructs (Clark & Watson, 2019). A factor loading threshold of 0.4 or higher guided the retention of variables in the analysis (Tavakol & Wetsen, 2020).

3.9 Data Analysis and Presentation

Following data collection, the researcher conducted a data cleaning process to ensure accuracy and consistency, removing any incomplete or erroneous entries. This step was crucial for maintaining data quality and reliability in subsequent analyses. Once cleaned, the data was coded and systematically entered into the Statistical Package for Social Sciences (SPSS) version 24.0, selected for its robust ability to manage and analyze large datasets effectively. SPSS enabled organized data handling, allowing for clear segmentation according to the questionnaire's pre-coded sections, which facilitated streamlined analysis of both quantitative and qualitative data.

Qualitative data was analyzed through **content analysis**, a method involving systematic categorization and interpretation of text data to identify recurring themes or patterns (Hatch, 2023). This technique allowed the researcher to delve into the subjective experiences, perceptions, and insights that quantitative analysis might not fully capture, particularly regarding respondents' perspectives on resource planning in the unique context of Wajir County (Verhaegh, 2023). For the quantitative data, descriptive and inferential statistical techniques were applied, including correlations, and multiple regression analysis. These statistical methods

facilitated an in-depth exploration of the relationships between the study's independent variables—human, financial, material, and technological resource planning—and the dependent variable, SME performance. This approach enabled the identification of specific resource planning components that most significantly impacted SME success (Field, 2018).

The choice of SPSS for quantitative analysis and content analysis for qualitative data was strategic and well-suited to the study's objectives. SPSS is a powerful tool for handling complex statistical analyses, allowing for efficient examination of trends, patterns, and relationships within large datasets, which was essential for drawing valid inferences about resource planning's impact on SME performance. Content analysis, on the other hand, provided a rigorous method for interpreting qualitative insights, adding a nuanced understanding of respondents' lived experiences. Together, these methods allowed for a comprehensive analysis, presenting findings through both narrative explanations and visual formats such as tables and charts, which helped make the results accessible and understandable to a diverse audience (Creswell & Creswell, 2017). This combination of quantitative and qualitative analysis was instrumental in delivering a holistic view of resource planning's role in SME performance, especially in a context as complex as Wajir County.

3.10 Ethical Consideration

Ethical guidelines were strictly followed throughout the study. The researcher ensured that all participants voluntarily consented to participate and that their privacy and confidentiality were protected. All information gathered was exclusively utilized for research purposes and was not disclosed to any third parties. To maintain academic integrity, all sources were properly cited, and the data was presented accurately. Acknowledgment was given to all individuals and organizations that contributed to the success of the study.



CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the study, structured around the study's objectives. It includes an analysis of the response rate and the socio-demographic characteristics of the respondents, providing a detailed understanding of the data collected.

4.2 Response Rate

The research methodology involved distributing 364 questionnaires to participants in Wajir County, focusing on small and medium-sized enterprises (SMEs). Out of the 364 questionnaires, 260 were filled and returned, resulting in a response rate of 71.4%, as shown in Table 4.1.

Table 4. 1: Response Rate

Response Type	Frequency	Percentage
Returned Questionnaires	260	71.4%
Unreturned Questionnaires	104	28.6%

According to Creswell (2014), a response rate of 50% is considered adequate for research, while a rate of 60% indicates good quality data. Achieving a response rate above 70% is deemed exceptional. Therefore, the 71.4% response rate achieved in this study is commendable, reflecting strong participant engagement and providing reliable data for analysis.

4.3 Demographic Characteristics of the Respondents

The study explored the socio-demographic characteristics of the respondents to provide a foundational understanding of the diverse dynamics pertinent to the study's objectives. The demographic data is summarized in Table 4.2.

Table 4. 2: Demographic Characteristics of the Respondents

Category	Frequency	Percentage
Age Distribution		
18-30 years	65	25.00%
31-45 years	117	45.00%
46-60 years	52	20.00%
61 years and above	26	10.00%
Gender		
Male	135	51.90%
Female	124	47.70%
Education Level		
Primary	52	20.00%
Secondary	104	40.00%
Tertiary	104	40.00%
Business Line		
Agriculture	91	35.00%
Business	65	25.00%
Education	39	15.00%
Healthcare	26	10.00%
Other	39	15.00%

The demographic analysis revealed a fairly balanced gender distribution, with males comprising 51.9% of the respondents and females 47.7%. Regarding education levels, 40% of respondents

had completed secondary education, while another 40% had attained tertiary or college education. Respondents with primary education made up 20% of the total.

In terms of business lines, 35% of respondents were involved in agriculture, 25% in business, 15% in education, 10% in healthcare, and 15% in other industries. The age distribution showed that the majority (45%) were between 31-45 years old, followed by 25% aged 18-30 years. The 46-60 years age group made up 20%, while those 61 years and above accounted for 10%.

4.4 Impact of Human Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya

The first objective of this study was to analyze the impact of human resource planning on the performance of small and medium enterprises in Wajir County, Kenya. Three indicators were used and the analysis per each indicator is presented.

4.4.1 Employee Skill Development

This section examined the impact of employee skill development on the performance of small and medium enterprises in Wajir County, Kenya. The results are as presented in Figure 4.1.

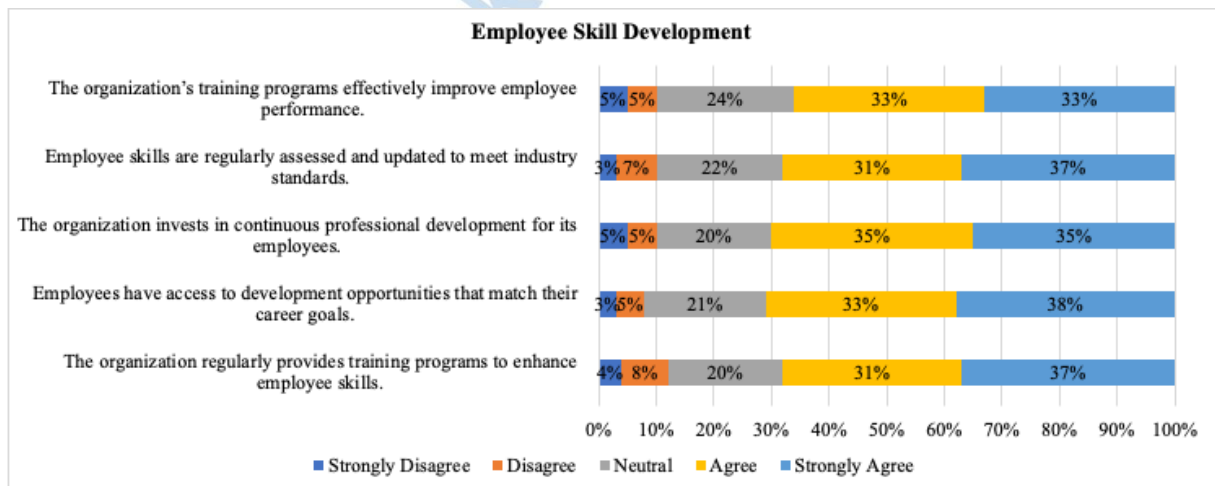


Figure 4. 1: Employee Skill Development

The findings show that a significant majority, 68% of respondents, agree or strongly agree that their organizations regularly provide training programs to enhance employee skills, with 37% strongly agreeing and 31% agreeing. Only a small portion, 12%, disagreed, and 20% remained neutral. This high level of agreement indicates that SMEs in Wajir County recognize the strategic importance of employee training as a driver for adaptability and resilience, especially in a rapidly changing business landscape. According to Johnson and Brown (2019), regular training is essential for maintaining a skilled workforce, enhancing productivity, and meeting organizational goals.

Furthermore, these findings reflect a strong alignment with the Resource-Based View (RBV) theory, which posits that human capital is a valuable, inimitable resource that can sustain competitive advantage when nurtured effectively (Barney, 1991). For SMEs in resourcelimited environments like Wajir, investing in employee skill development is an efficient strategy for maximizing internal resources and enhancing operational capacity without relying on external inputs. The data also suggest that the continuous enhancement of skills is a vital element in meeting industry standards and ensuring that the workforce can respond to evolving customer and market demands, contributing to long-term organizational sustainability.

An analysis of whether employees have access to career-aligned development opportunities further supports the value of skill development in driving SME performance. With 71% of respondents agreeing that their organizations support employee career aspirations, it is evident that many Wajir County SMEs are strategically aligning their human resource development with broader organizational goals. This approach not only fosters job satisfaction and aids in

employee retention but also builds an engaged, capable workforce that is motivated to contribute to organizational success. This aligns with the findings of Ndlovu and Moyo (2020), who observed that career-aligned development opportunities positively influence both employee and organizational performance. By providing opportunities that resonate with individual career goals, these SMEs are effectively cultivating a workforce that is committed to organizational objectives, underscoring the relevance of RBV theory in leveraging strategic human capital as a competitive asset.

Regarding the organization's commitment to continuous professional development, 70% of respondents affirmed their organization's investment in this area, with an equal distribution of 35% strongly agreeing and 35% agreeing. This commitment to upskilling reflects a proactive approach to maintaining workforce relevance and ensuring the longevity of SMEs. Research by Mensah and Abor (2019) highlights that continuous professional development not only improves individual performance but also enhances organizational operational efficiency, supporting a culture of high performance. The findings suggest that SMEs in Wajir are mindful of the need to keep their workforce updated with relevant skills, a crucial factor for maintaining competitiveness, especially when operating in dynamic and sometimes volatile markets.

In terms of regular assessment and updating of employee skills, 68% of respondents reported that their organizations conduct such evaluations. Regular skill assessments ensure that workforce capabilities align with current industry standards and expectations, thereby fostering a competitive advantage. This practice echoes the findings of global studies, such as those by Ndlovu and Moyo (2020), which emphasize that aligning employee skill with market needs is essential for achieving optimal organizational performance. Regular skill assessments not only maintain competency levels but also enhance the workforce's adaptability to new challenges,

further establishing these SMEs' resilience and growth potential in Wajir County's unique economic landscape.

When questioned about the effectiveness of training programs, 66% of respondents agreed or strongly agreed that these programs improve employee performance. This high level of agreement signifies the practical relevance of training programs in enhancing productivity and service quality, as highlighted in Otieno's (2019) research, which associates well-structured training with improved project delivery and customer satisfaction. Effective training directly translates into improved performance metrics for SMEs, reinforcing the importance of structured employee development in Wajir County.

In conclusion, the findings suggest that employee skill development through regular training, career-aligned development opportunities, continuous professional growth, and skill assessments is a fundamental component of SME strategies in Wajir County. These practices align closely with RBV theory, which views human capital as a sustainable competitive advantage (Barney, 1991). For SMEs in Wajir, where external resources may be limited, investing in human capital through skill enhancement serves as a crucial strategy for boosting performance and achieving strategic objectives. By prioritizing skill development, these organizations are not only enhancing their competitiveness but are also laying the groundwork for long-term resilience and success in a challenging market environment.

4.4.2 Succession Planning Strategy

This section evaluated the impact of succession planning strategy on the performance of small and medium enterprises in Wajir County, Kenya. The results are as depicted in Figure 4.2.



Figure 4. 2: Succession Planning Strategy

According to the data, 71% of respondents indicated that their organizations have clear succession plans for key leadership roles, with 39% strongly agreeing and 32% agreeing. Only 8% disagreed, while 21% were neutral. This suggests that many SMEs in Wajir prioritize leadership continuity, recognizing the importance of structured succession to maintain operational stability. These findings align with the literature; Zhang and Liu (2020) found that well-defined succession plans are instrumental in reducing turnover, stabilizing leadership, and preserving the organizational vision. In Wajir, where challenges in leadership continuity can disrupt operations, succession planning is essential for sustaining the strategic direction of SMEs. This approach is also consistent with the Resource-Based View (RBV) theory, which emphasizes that developing internal leadership talent offers a sustainable competitive advantage (Barney, 1991).

Further data show that 67% of respondents agree that their organizations actively identify and develop potential leaders, with 34% strongly agreeing and 33% agreeing. This commitment to internal talent development preserves the organizational culture and builds a pipeline of leaders

who are well-versed in the SME's values and goals. By focusing on cultivating talent within, these organizations minimize the disruptions often associated with external leadership transitions. This approach not only ensures continuity but also builds resilience within the organization, a crucial factor for long-term success, particularly in challenging environments like Wajir County. This finding reflects RBV's principle of leveraging internal resources—here, human capital—as a strategic asset that contributes to sustained organizational advantage (Barney, 1991).

Additionally, the data reveal that 70% of respondents believe their succession plans align with their organization's long-term goals, with 39% strongly agreeing and 31% agreeing. This alignment is crucial, as it ensures that leadership transitions reinforce the broader strategic vision and contribute to the SME's growth and stability. Aligning succession planning with long-term objectives underscores the Contingency Theory approach, which posits that the success of organizational strategies depends on their alignment with environmental and organizational factors (Donaldson, 2021). For SMEs in Wajir, where external pressures are high, ensuring leadership alignment with strategic goals offers a pathway for sustained performance and resilience. This finding suggests that many SMEs are effectively using succession planning to support strategic continuity, making it a critical aspect of their performance strategy.

The transparency of succession planning within organizations was also explored, with 65% of respondents indicating that employees are aware of the succession planning process (33% strongly agreeing and 32% agreeing). Transparent succession planning promotes trust and reduces uncertainty, fostering employee engagement and organizational cohesion, as noted by Ndlovu and Moyo (2020). However, with 13% disagreeing and 22% remaining neutral, there is

room for improvement in ensuring all employees are fully informed. By enhancing transparency in succession planning, these organizations can further strengthen employee commitment to the organization's future, which is particularly valuable in maintaining a stable workforce.

Finally, 72% of respondents agreed or strongly agreed that effective succession planning helps maintain continuity during leadership transitions, with 37% strongly agreeing and 35% agreeing. This strong agreement suggests that succession planning is effectively contributing to organizational stability, as disruptions in leadership transitions are minimized. Empirical studies support this, with Okeke (2021) observing that well-structured succession planning significantly reduces operational disruptions and ensures continuity. For SMEs in Wajir, where resource constraints can exacerbate the impact of leadership changes, having a robust succession strategy is essential for maintaining operational flow and meeting strategic goals.

In conclusion, succession planning practices—including clear leadership pathways, internal talent development, alignment with long-term goals, and transparency—are central to SME strategies in Wajir County. These findings align with **RBV theory**, which emphasizes that developing and utilizing internal leadership resources can provide a competitive edge (Barney, 1991). Moreover, they are consistent with **Contingency Theory**, which underscores the importance of aligning succession planning with organizational goals to ensure effective leadership transitions (Donaldson, 2021). The high levels of agreement across these areas reflect a well-structured approach to succession planning, which is essential for maintaining stability, achieving long-term objectives, and fostering resilience within Wajir's unique business environment.

4.4.3 Alignment of HR Allocation with Strategic Goals

This section elaborates on the impact of alignment of HR allocation with strategic goals on the performance of small and medium enterprises in Wajir County, Kenya. The results are presented in Figure 4.3.

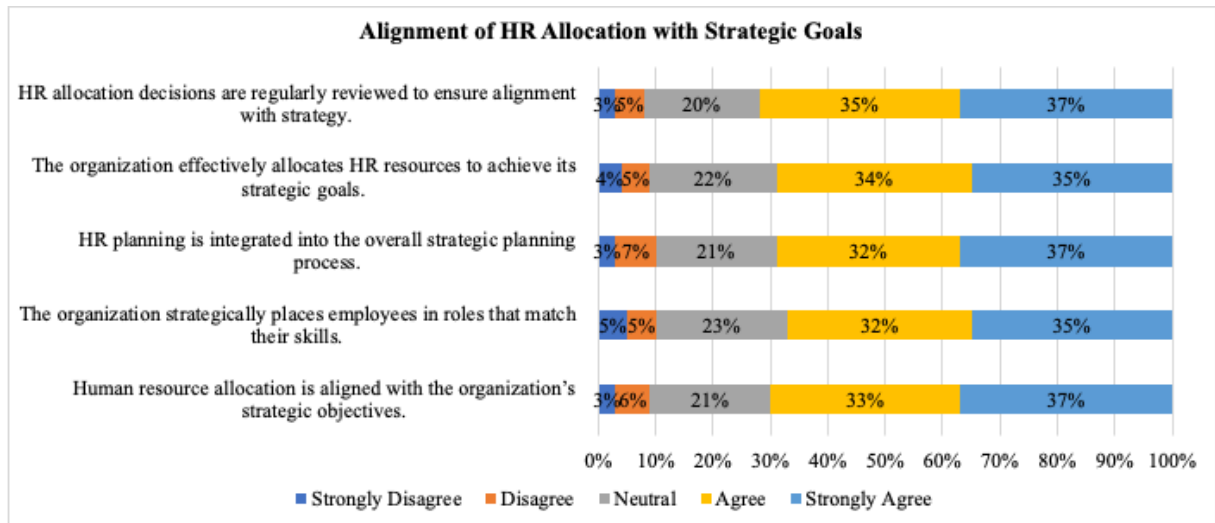


Figure 4. 3: Alignment of HR Allocation with Strategic Goals

The data reveal that 70% of respondents agree or strongly agree that their organizations effectively align HR allocation with strategic objectives, with 37% strongly agreeing and 33% agreeing. Only 9% disagreed, and 21% remained neutral. This alignment suggests that most SMEs in Wajir recognize the strategic importance of deploying human capital to support organizational goals. By aligning HR with strategic aims, these organizations can ensure that their workforce is optimally positioned to meet operational demands and contribute to performance. This practice aligns with empirical research by Wanjiku (2018), who found that aligning HR practices with organizational objectives significantly enhances productivity and overall effectiveness.

Additionally, 67% of respondents reported that their organizations prioritize the placement of employees in roles that match their skills, with 35% strongly agreeing and 32% agreeing. This

deliberate matching of skills to roles indicates a focus on maximizing both employee productivity and job satisfaction, which are crucial for achieving strategic objectives. This approach is consistent with the Resource-Based View (RBV) theory, which emphasizes the value of aligning internal resources, such as human capital, with the broader organizational goals to maintain a competitive advantage (Barney, 1991). In Wajir County, where resources may be constrained, optimizing workforce capabilities by strategically assigning roles based on skill sets ensures that SMEs can operate efficiently and achieve high levels of performance with available resources.

The integration of HR planning into the strategic planning process was another key aspect, with 69% of respondents agreeing or strongly agreeing that their organization integrates HR planning with strategic goals, with 37% strongly agreeing and 32% agreeing. Only 10% disagreed, and 21% remained neutral. This practice underscores the importance of a cohesive strategy where HR objectives are seamlessly woven into the organizational plan, ensuring that human resources are mobilized effectively to meet changing organizational demands. This alignment is supported by Contingency Theory, which posits that the success of HR strategies depends on their alignment with broader organizational and environmental factors (Donaldson, 2021). For SMEs in Wajir County, integrating HR planning into strategic decision-making allows for a more adaptive approach that can respond to both internal and external challenges, promoting resilience and operational stability.

Moreover, 69% of respondents indicated that their organization effectively allocates HR resources to meet strategic goals, with 35% strongly agreeing and 34% agreeing. This effective HR allocation supports the organization's strategic objectives by ensuring that the right skills are available where they are most needed. Empirical studies, such as those by Kimani and

Mwangi (2020), emphasize that well-planned HR allocation is a critical factor in achieving organizational targets. For SMEs in Wajir, where adaptability and efficient use of limited resources are essential, strategic HR allocation provides a pathway for aligning talent with performance outcomes, thereby maximizing the impact of human resources on organizational success.

The regular review of HR allocation decisions was also highlighted, with 72% of respondents agreeing or strongly agreeing that their organizations periodically assess and adjust HR allocations to ensure alignment with strategic goals. This high level of agreement, with 37% strongly agreeing and 35% agreeing, indicates that many SMEs in Wajir are not only strategic in their initial HR allocations but also proactive in reviewing and adapting to emerging needs. Regular review of HR practices is essential for maintaining alignment with organizational objectives, especially as conditions change. This practice aligns with RBV theory, which posits that ongoing evaluation and adaptation of resource allocation are necessary for sustaining competitive advantage (Barney, 1991). For SMEs, this adaptive approach to HR management ensures that resources remain aligned with shifting strategic priorities, which is critical in dynamic business environments.

In conclusion, the findings suggest that strategic alignment of HR allocation, including skillbased role placements, integration with strategic planning, and regular reviews, is a fundamental component of HR practices in Wajir County SMEs. These practices are in line with RBV theory, which emphasizes the role of human resources as a key asset in achieving and sustaining competitive advantage (Barney, 1991). The findings also support Contingency Theory, highlighting that HR practices should align with organizational and environmental conditions to optimize performance (Donaldson, 2021). The high levels of agreement across

these aspects indicate that effective HR allocation contributes to the overall success and adaptability of SMEs in Wajir County, enabling them to meet strategic goals in a resourceconstrained setting.

4.4.4 Correlation Coefficients for Relationships Between Human Resource Planning and SME Performance

Literature emphasizes the importance of human resource planning (HRP) in enhancing organizational performance, particularly through practices like employee skill development, succession planning, and alignment of HR allocation with strategic goals. Studies by Johnson and Brown (2019) and Zhang and Liu (2020) indicate that effective HRP contributes significantly to employee retention, productivity, and overall business success. In Wajir County, human resource planning is expected to play a vital role in improving SME performance by fostering a skilled, strategically aligned workforce. The following correlation analysis examines the relationships between key HRP indicators and SME performance.

Variable	SME Performance (r)	Significance (p-value)
Employee Skill Development	0.65	< 0.05
Succession Planning	0.6	< 0.05
Alignment of HR Allocation with Strategic Goals	0.63	< 0.05

Table 4. 3:Correlation Coefficients for Relationships Between Human Resource Planning and SME Performance

Table 4.3 reveals a strong positive correlation between each human resource planning indicator and SME performance. Employee skill development shows the highest correlation with SME performance ($r = 0.65$, $p < 0.05$), suggesting that investments in training and skill enhancement are crucial for achieving high levels of productivity and adapting to changing market demands. This finding aligns with the Resource-Based View (RBV) theory, which posits that strategically developed human capital is a significant internal asset for sustaining competitive advantage (Barney, 1991).

The correlation between succession planning and SME performance is also strong ($r = 0.60$, $p < 0.05$), indicating that preparing for leadership continuity supports operational stability and organizational resilience. Lastly, the alignment of HR allocation with strategic goals shows a positive correlation with SME performance ($r = 0.63$, $p < 0.05$), underscoring the importance of strategically positioning human resources to meet organizational objectives effectively. These results collectively support the hypothesis that well-executed human resource planning positively impacts SME performance by building a capable, committed workforce aligned with long-term strategic goals.

4.5 Effect of Financial Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya.

The second objective of this study was to examine the effect of financial resource planning on the performance of small and medium enterprises in Wajir County, Kenya. Three indicators were used in evaluation and analysis as illustrated below.

4.5.1 Accuracy of Financial Forecasting

These sections investigate the effect of accurate financial forecasting on the performance of small and medium enterprises in Wajir County, Kenya. The results are as depicted in Figure 4.4.

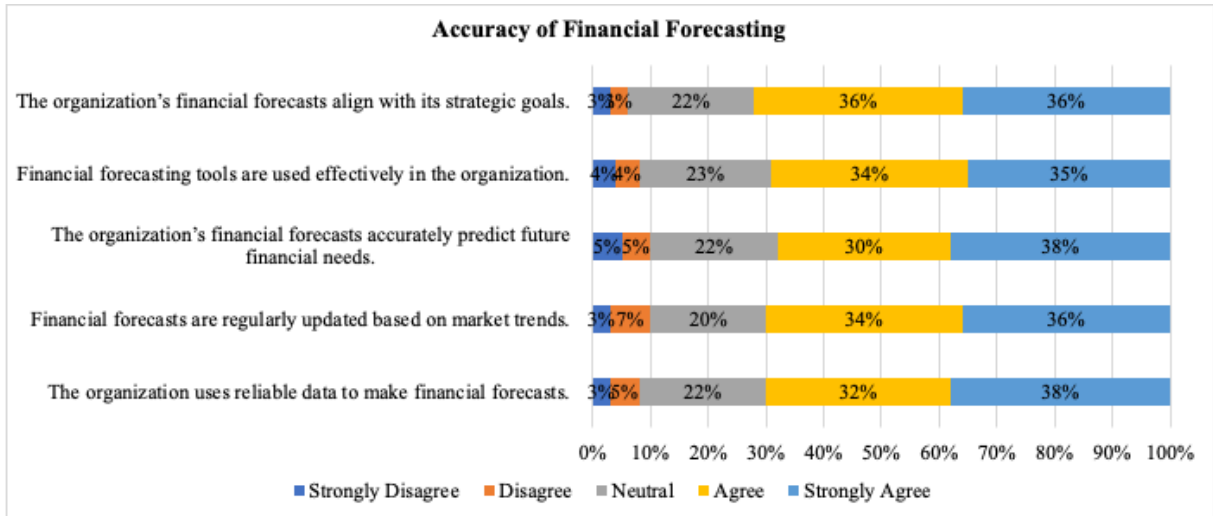


Figure 4. 4: Accuracy of Financial Forecasting

The data indicate that 70% of respondents agree or strongly agree that their organization relies on reliable data to make financial forecasts, with 38% strongly agreeing and 32% agreeing.

Only a small fraction, 8%, disagreed, and 22% were neutral. These findings suggest that most SMEs in Wajir County place a high priority on data accuracy in financial forecasting to ensure that their predictions are realistic and actionable. This reliance on accurate data is essential for making well-informed decisions, as supported by Miller and Smith (2020), who found that organizations using reliable financial data for forecasting are better able to enhance profitability by improving their decision-making processes. In Wajir, where financial stability is critical, accurate forecasting enables these SMEs to allocate resources efficiently and anticipate financial needs.

Further analysis reveals that 70% of respondents agree or strongly agree that their organization regularly updates financial forecasts based on market trends, with 36% strongly agreeing and 34% agreeing. Only 10% disagreed, and 20% were neutral. This proactive approach to updating forecasts in response to market fluctuations is critical for adapting to external changes and seizing market opportunities. By frequently revising financial projections, SMEs can ensure

that their budgets remain aligned with the current business environment, helping them to avoid unexpected financial pitfalls. This finding aligns with Chen and Zhang (2019), who found that regular updates to financial forecasts improve budget accuracy and performance, reinforcing the significance of responsive financial planning for SMEs in volatile markets.

Regarding the capacity of financial forecasts to accurately predict future financial needs, 68% of respondents agreed or strongly agreed, suggesting that a significant majority of SMEs in Wajir are successful in forecasting their financial requirements. This foresight is vital for long-term planning and effective resource allocation, ensuring that these organizations can meet operational demands without financial strain. This finding is consistent with Okoye (2019), who highlighted that accurate financial forecasting supports organizations in managing financial risks and planning effectively. For SMEs in Wajir, where resource constraints are a reality, forecasting accuracy is particularly crucial, as it allows them to avoid costly misallocations and maintain stability.

The survey also explored the use of financial forecasting tools, with 69% of respondents agreeing or strongly agreeing that such tools are used effectively, including 35% who strongly agreed and 34% who agreed. This suggests that many SMEs are employing advanced financial tools to enhance the precision and reliability of their forecasts. These tools translate data into actionable insights, optimizing the forecasting process and supporting effective resource management. Thompson and Williams (2018) emphasize that advanced financial tools can significantly improve forecasting accuracy, thereby contributing to organizational performance. For SMEs in Wajir, where efficient financial management can make the difference between growth and stagnation, the effective use of forecasting tools is essential.

Finally, 72% of respondents agreed or strongly agreed that their financial forecasts align with the organization's strategic goals, with 36% strongly agreeing and 36% agreeing. This alignment ensures that financial forecasting processes are not isolated from the organization's broader objectives, enabling a coherent and unified approach to resource planning. This practice is consistent with Donaldson's (2021) Contingency Theory, which stresses that financial strategies should be adaptable to both internal objectives and external market conditions. For SMEs in Wajir County, aligning financial forecasts with strategic goals ensures that resources are allocated in ways that support long-term growth and competitiveness.

In conclusion, the findings indicate that these organizations are not only using reliable data and effective tools for financial forecasting but are also regularly updating their forecasts to align with market trends and strategic objectives. These practices align with the ResourceBased View (RBV) theory, which emphasizes the importance of leveraging internal resources, such as accurate financial data and forecasting tools, to gain a competitive advantage (Barney, 1991). Additionally, Contingency Theory supports these findings by highlighting the need for financial forecasting to be adaptable and responsive to changing external conditions (Donaldson, 2021). The high levels of agreement across these areas suggest that effective financial forecasting is a critical driver of organizational success in Wajir County, enabling SMEs to navigate financial uncertainties and align their financial strategies with long-term objectives.

4.5.2 Effectiveness of Budget Allocation

This section evaluates the effectiveness of budget allocation on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.5.

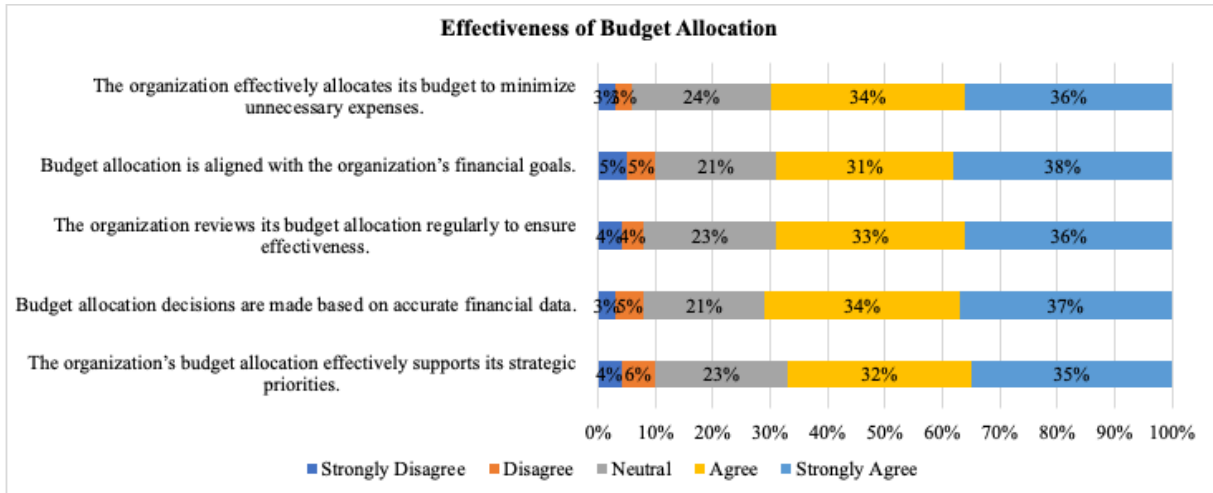


Figure 4. 5: Effectiveness of Budget Allocation

According to the data, 67% of respondents agree or strongly agree that their organization's budget allocation supports strategic priorities, with 35% strongly agreeing and 32% agreeing. A smaller portion, 10%, disagreed, and 23% remained neutral. These findings suggest that a majority of organizations in Wajir County are aligning their budget allocations with long-term goals, ensuring that financial resources are directed toward areas that promote sustained growth. This practice is supported by Mwangi and Njoroge (2019), who found that aligning budget allocations with strategic objectives is essential for optimizing resource use and supporting organizational development.

Furthermore, 71% of respondents reported that budget allocation decisions are informed by accurate financial data, with 37% strongly agreeing and 34% agreeing. This emphasis on data-driven budgeting indicates that many SMEs in Wajir rely on accurate financial information to ensure resources are allocated efficiently. This approach aligns with the Resource-Based View (RBV) theory, which stresses the importance of using internal resources, such as reliable financial data, to make strategic decisions that enhance competitive advantage (Barney, 1991).

By leveraging accurate data, SMEs can make well-informed budgetary decisions that maximize their resources and minimize waste.

Regular review of budget allocation was also a common practice, with 69% of respondents agreeing or strongly agreeing that their organization periodically assesses budget effectiveness, with 36% strongly agreeing and 33% agreeing. This proactive review ensures that budget allocations remain responsive to organizational needs and adapt to any emerging financial requirements. This flexibility aligns with Contingency Theory, which advocates for adaptable budget strategies that respond to both internal and external factors (Donaldson, 2021). For SMEs in Wajir, where market conditions can be unpredictable, regular budget reviews allow organizations to reallocate resources as necessary, thereby supporting continuous operational success.

The survey further explored the alignment of budget allocations with financial goals, with 69% of respondents confirming this alignment, including 38% who strongly agreed and 31% who agreed. Aligning budget allocations with financial goals is essential for ensuring that organizational resources support broader financial objectives, such as profitability and stability. This practice is consistent with findings by Wanjiru (2020), who emphasized that alignment between budget allocations and financial goals enhances overall performance. In Wajir County, where financial stability is crucial, aligning budgets with financial goals helps SMEs achieve sustained growth while efficiently managing limited resources.

Lastly, 70% of respondents agreed or strongly agreed that their organization minimizes unnecessary expenses through effective budget allocation, with 36% strongly agreeing and 34% agreeing. This deliberate focus on minimizing costs supports financial sustainability and allows for reinvestment into high-impact areas. The Resource-Based View (RBV) theory emphasizes

that efficient resource use is a vital factor in sustaining competitive advantage, especially in environments with limited resources (Barney, 1991). For SMEs in Wajir, cost-effective budget management is integral to maintaining financial health and reinvesting savings into growth-oriented initiatives.

In conclusion, the data suggest that SMEs in Wajir County use accurate data for budget decisions, regularly review allocations, and align budgetary practices with financial goals. These practices are consistent with the Resource-Based View (RBV) theory, which emphasizes strategic resource management to sustain a competitive edge (Barney, 1991). Additionally, Contingency Theory supports the need for flexible budget strategies that adapt to organizational needs and external conditions (Donaldson, 2021). The high levels of agreement across these aspects indicate that effective budget allocation is a critical driver of success for SMEs in Wajir County, enabling them to maximize resource use and achieve their strategic objectives.

4.5.3 Management of Cash Flow

This section evaluates the effect of management of cash flow on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.6.

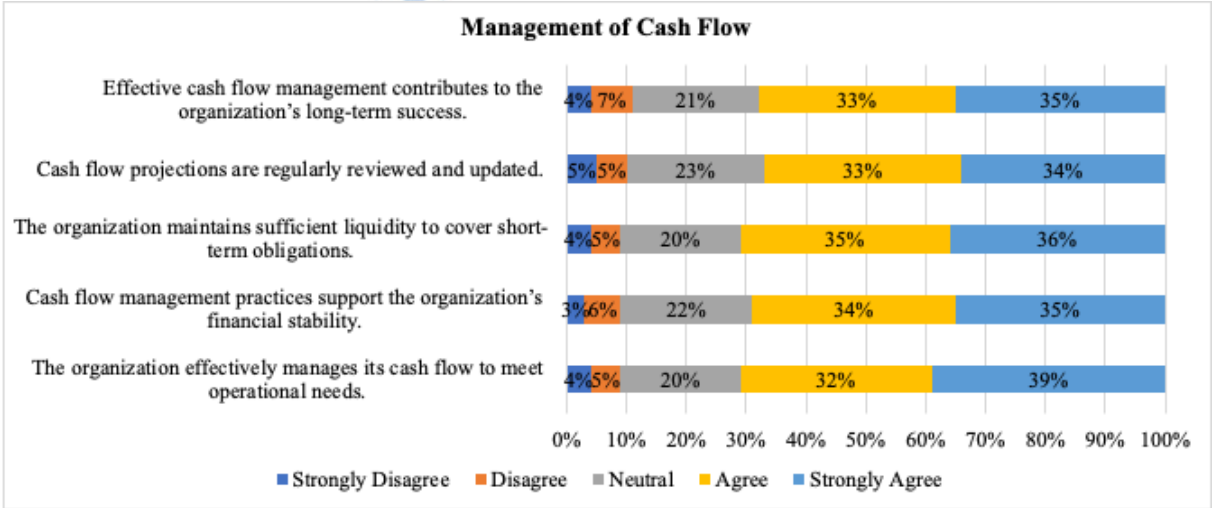


Figure 4. 6: Management of Cash Flow

The data reveal that 71% of respondents agreed or strongly agreed that their organization manages its cash flow effectively to meet operational needs, with 39% strongly agreeing and 32% agreeing. A smaller portion, 9%, disagreed, while 20% were neutral. These findings suggest that a majority of organizations in Wajir County recognize the importance of cash flow management for maintaining operational stability. Effective cash flow management is essential to ensure liquidity for day-to-day expenses, avoiding financial strain, and sustaining operations, especially in resource-constrained environments like Wajir. Empirical research by Otieno (2018) supports this, indicating that organizations with strong cash flow practices experience higher financial stability, underscoring the value of disciplined cash flow management.

Further analysis reveals that 69% of respondents agreed or strongly agreed that cash flow management practices enhance their organization's financial stability, with 35% strongly agreeing and 34% agreeing. This shows that many SMEs use cash flow management as a strategic approach to reinforcing financial stability, a critical factor for long-term success in unpredictable economic climates. This practice aligns with Resource-Based View (RBV) theory, which emphasizes managing internal resources—such as cash flow—to sustain competitive advantage (Barney, 1991). For SMEs in Wajir County, where access to external financing is limited, effective cash flow management ensures that organizations can cover operational costs, invest in growth, and manage financial obligations sustainably.

The survey also highlighted the importance of maintaining liquidity, with 71% of respondents agreeing or strongly agreeing that their organization ensures sufficient liquidity to cover short-term obligations, including 36% who strongly agreed and 35% who agreed. This focus on liquidity indicates that many SMEs prioritize having readily available funds to meet immediate

needs, minimizing the risk of cash shortages. Thompson and Williams (2018) emphasize that liquidity management is essential for financial stability, especially for small businesses in volatile markets. In Wajir, where economic fluctuations may impact revenue streams, maintaining liquidity is a proactive measure that enables SMEs to navigate temporary downturns while meeting operational demands.

Regular review and adjustment of cash flow projections is another key practice, with 67% of respondents agreeing or strongly agreeing, including 34% who strongly agreed and 33% who agreed. This proactive approach to cash flow management allows organizations to adapt to changing financial conditions, ensuring that cash flow strategies remain relevant and effective. The flexibility of these practices aligns with Contingency Theory, which posits that cash flow strategies should be adaptable to internal and external shifts (Donaldson, 2021). For SMEs in Wajir County, where the financial landscape can be unpredictable, regularly updating cash flow projections helps mitigate risks and optimize resource allocation, supporting continued operational efficiency.

Finally, the data show that 68% of respondents agreed or strongly agreed that effective cash flow management contributes to their organization's long-term success, with 35% strongly agreeing and 33% agreeing. This high level of agreement underscores the understanding that managing cash flow strategically can provide a foundation for achieving sustained growth and stability. This finding is supported by the Resource-Based View (RBV) theory, which posits that managing internal resources effectively is crucial for maintaining a competitive edge and ensuring organizational resilience (Barney, 1991). For SMEs in Wajir, disciplined cash flow management not only supports immediate financial needs but also lays the groundwork for sustained success in a competitive environment.

In summary, the findings indicate that organizations in Wajir County prioritize cash flow management as a core strategy to support their operational and financial stability. These practices align with the Resource-Based View (RBV) theory, which highlights the importance of managing internal resources, such as cash flow, for competitive advantage (Barney, 1991). Additionally, Contingency Theory supports the need for adaptable cash flow management strategies that respond to changing financial conditions (Donaldson, 2021). The high levels of agreement across these areas suggest that effective cash flow management is a vital driver of organizational success for SMEs in Wajir County, enabling them to maintain liquidity, respond to financial uncertainties, and achieve their strategic objectives.

4.5.4 Correlation Coefficients for Relationships Between Financial Resource Planning and SME Performance

Literature highlights the role of effective financial resource planning in enhancing organizational performance, particularly for SMEs. Studies by Miller and Smith (2020) and

Chen and Zhang (2019) emphasize that accurate financial forecasting, prudent budget allocation, and efficient cash flow management contribute to organizational stability and growth. In Wajir County, where SMEs face unique financial challenges, robust financial planning practices are anticipated to improve performance by ensuring financial stability and effective resource allocation. The following correlation analysis examines the relationship between financial resource planning indicators and SME performance.

Variable	SME Performance (r)	Significance (p-value)
Financial Forecasting	0.61	< 0.05
Budget Allocation	0.59	< 0.05
Cash Flow Management	0.63	< 0.05

Table 4. 4: Correlation Coefficients for Relationships Between Financial Resource Planning and SME Performance

Table 4.4 illustrates a strong positive correlation between each financial resource planning indicator and SME performance. Financial forecasting shows a significant positive relationship

with SME performance ($r = 0.61$, $p < 0.05$), suggesting that accurate and regular financial predictions enable SMEs to anticipate financial needs effectively, thus contributing to improved performance and stability. Similarly, the correlation between budget allocation and SME performance ($r = 0.59$, $p < 0.05$) indicates that strategic allocation of financial resources towards key priorities supports operational efficiency and growth by reducing waste and optimizing expenditures.

The strongest correlation observed is between cash flow management and SME performance ($r = 0.63$, $p < 0.05$), underscoring that effective cash flow practices—such as maintaining liquidity and managing short-term obligations—are essential for sustaining SME operations in Wajir’s challenging environment. These findings suggest that robust financial planning practices are critical drivers of SME performance, as they provide a stable financial foundation and enable resource optimization. The results align with the Resource-Based View (RBV) theory, which posits that well-managed internal resources, like financial planning processes, create competitive advantages and support sustainable growth for SMEs.

4.6 Role of Material Requirement Planning in the Performance of Small and Medium Enterprises in Wajir County, Kenya

The third objective of this study was to examine the role of material requirement planning in the performance of small and medium enterprises in Wajir County, Kenya. Three indicators were used in evaluation and analysis as illustrated below.

4.6.1 Efficiency of Inventory Management

This section evaluates the efficiency of inventory management on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.7.

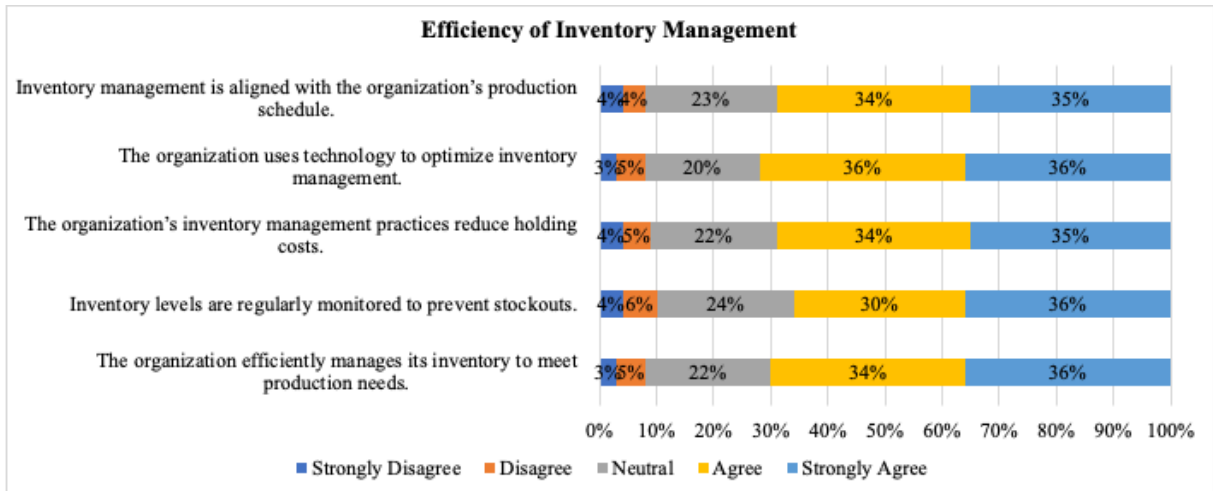


Figure 4. 7: Efficiency of Inventory Management

Among respondents, 70% agreed or strongly agreed that their organization effectively manages inventory to meet production needs, with 36% strongly agreeing and 34% agreeing.

A smaller group, 8%, disagreed, and 22% remained neutral. These results indicate that most SMEs in Wajir County prioritize inventory efficiency to avoid stock shortages that could disrupt production processes. Effective inventory management minimizes downtime, ensuring that production remains continuous and operational efficiency is enhanced. This finding is consistent with studies like that of Otieno and Kariuki (2020), which found that organizations that efficiently manage inventory experience fewer delays and improved resource allocation. By minimizing stockouts, these SMEs avoid lost production opportunities and revenue, which is critical in resource-limited regions like Wajir.

Regular monitoring of inventory levels was another critical factor assessed. Here, 66% of respondents agreed or strongly agreed that inventory levels are regularly checked to prevent stockouts, with 36% strongly agreeing and 30% agreeing. A smaller portion, 10%, disagreed, and 24% were neutral. Regular inventory monitoring helps prevent stockouts, which are costly interruptions that can result in missed revenue and strained supplier relationships. This aligns

with findings from Mwangi and Kamau (2019), who reported that consistent inventory monitoring significantly reduces the risk of shortages, enabling organizations to maintain production without delays. In Wajir, where SMEs operate under unique logistical constraints, regular monitoring mitigates the risks associated with delayed inventory replenishment and contributes to smoother operations.

Survey results also revealed that 69% of respondents agreed or strongly agreed that their organization's inventory management practices reduce holding costs, with 35% strongly agreeing and 34% agreeing. A smaller group, 9%, disagreed, and 22% were neutral. Efficient inventory management minimizes holding costs by preventing excess inventory and optimizing storage space, directly contributing to cost savings. This aligns with the ResourceBased View (RBV) theory, which suggests that effective management of internal resources, such as inventory, can enhance cost efficiency and competitive positioning (Barney, 1991).

For SMEs in Wajir, where financial resources are often limited, reducing holding costs is essential for reallocating funds toward growth and innovation, ultimately strengthening their market presence.

The role of technology in inventory management was also explored, with 72% of respondents agreeing or strongly agreeing that their organization uses technology to optimize inventory practices, including 36% who strongly agreed and 36% who agreed. Only 8% disagreed, while 20% were neutral. The findings suggest a growing reliance on technology, such as inventory management software, which enhances accuracy, efficiency, and decision-making in inventory tracking and control. Research by Wanjiru and Otieno (2021) supports this, showing that technological tools significantly improve inventory accuracy and reduce errors, which in turn optimizes resource use. In Wajir, where logistics challenges are common, technology adoption

aids SMEs in better aligning inventory with demand, reducing excess, and enhancing overall efficiency.

Finally, the survey investigated whether inventory management aligns with production schedules, revealing that 69% of respondents agreed or strongly agreed, with 35% strongly agreeing and 34% agreeing. Only 8% disagreed, and 23% were neutral. This alignment is crucial for maintaining uninterrupted production by ensuring that materials are available when needed, which minimizes disruptions. Empirical studies, such as Kimani and Muturi (2019), support this, highlighting the importance of synchronization between inventory and production schedules to achieve seamless operations. By aligning inventory management with production needs, SMEs in Wajir improve operational efficiency, minimize bottlenecks, and ensure that production flows consistently to meet market demands.

In conclusion, the data suggest that Wajir's SMEs are leveraging efficient inventory management practices to reduce costs, avoid stockouts, and optimize production schedules. These strategies align with Resource-Based View (RBV) theory, which emphasizes that effective resource management, such as inventory optimization, can yield cost savings and competitive advantages (Barney, 1991). The widespread use of technology in inventory management further enhances this efficiency, supporting these businesses in overcoming resource and logistical constraints. This approach enables SMEs in Wajir County to meet production demands efficiently, maintain cost control, and operate with greater stability..

4.6.2 Streamlined Procurement Processes

This section evaluates the effects of streamlined procurement processes on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.8.

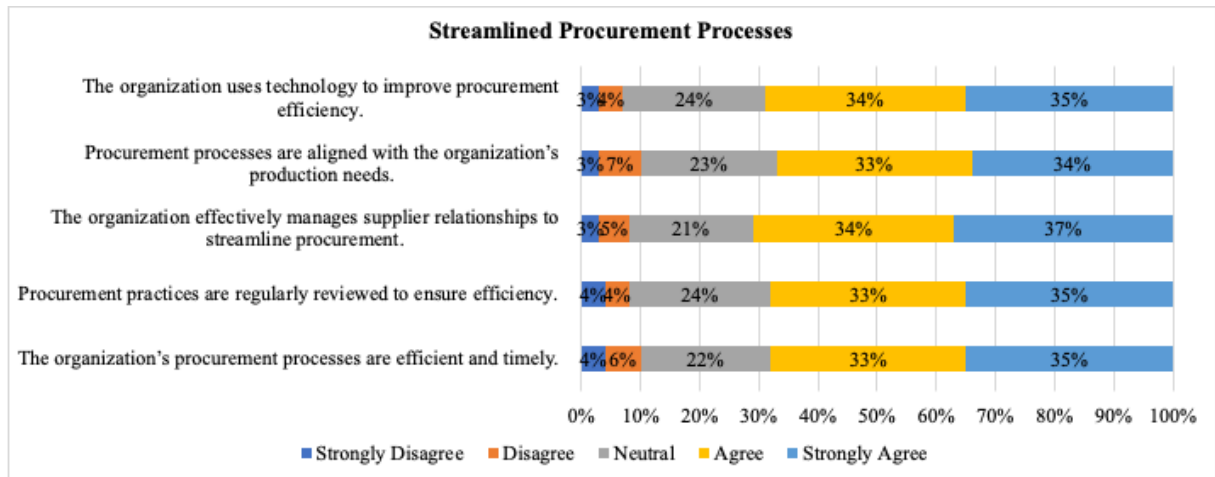


Figure 4. 8: Streamlined Procurement Processes

When asked if their organization's procurement processes were efficient and timely, 68% of respondents agreed or strongly agreed, with 35% strongly agreeing and 33% agreeing. A smaller segment, 10%, disagreed, and 22% were neutral. These findings indicate that a significant portion of SMEs in Wajir County are prioritizing efficient procurement to ensure the timely and cost-effective acquisition of materials. Streamlined procurement is critical for minimizing delays and ensuring smooth production, as supported by studies such as Njoroge and Kimani (2018), which found that efficient procurement reduces supply chain disruptions and improves organizational performance. For Wajir SMEs, where supply chain complexities can be magnified by remote logistics, efficient procurement practices mitigate potential delays and keep production on schedule, ultimately enhancing organizational resilience.

Regular reviews of procurement practices were also highlighted, with 68% of respondents agreeing or strongly agreeing that their organizations frequently assess procurement efficiency, with 35% strongly agreeing and 33% agreeing. Only 8% disagreed, while 24% were neutral. Regularly reviewing procurement practices enables organizations to identify inefficiencies, adjust to changing market conditions, and improve overall supply chain performance. This proactive approach aligns with Contingency Theory, which underscores the need for organizational flexibility to adapt to dynamic external and internal conditions (Donaldson, 2021). For SMEs in Wajir, regular procurement evaluations help maintain agility in a fluctuating environment, allowing them to refine their sourcing strategies and enhance resource utilization.

The survey further investigated the management of supplier relationships, finding that 71% of respondents agreed or strongly agreed that their organization maintains effective supplier partnerships, with 37% strongly agreeing and 34% agreeing. A smaller percentage, 8%, disagreed, and 21% were neutral. Effective supplier relationship management is essential for securing reliable sources, timely deliveries, and quality materials, which contribute to uninterrupted production. This finding resonates with research by Wanyama and Gachoki (2020), who found that strong supplier relationships enhance procurement reliability and reduce lead times. For SMEs in resource-limited areas like Wajir, fostering strong supplier connections is particularly advantageous, as it helps overcome logistical challenges and ensures that critical resources are consistently available.

Regarding alignment between procurement processes and production needs, 67% of respondents agreed or strongly agreed, with 34% strongly agreeing and 33% agreeing, while 10% disagreed and 23% were neutral. This alignment ensures that procurement decisions are

responsive to production demands, allowing organizations to avoid overstocking and understocking while supporting operational efficiency. Research by Karani and Wambui (2019) underscores the importance of aligning procurement with production requirements to prevent resource wastage and optimize workflows. For SMEs in Wajir, synchronized procurement reduces unnecessary expenses and supports resource optimization, a crucial factor for sustaining operations under financial constraints.

The survey also assessed the use of technology in procurement, revealing that 69% of respondents agreed or strongly agreed that their organization employs technological solutions to streamline procurement, with 35% strongly agreeing and 34% agreeing. A smaller portion, 7%, disagreed, and 24% were neutral. Technology in procurement, such as automated ordering and supplier management systems, enhances accuracy, speeds up procurement processes, and improves decision-making. Empirical research by Njuguna and Muturi (2020) found that organizations that implement procurement technology achieve greater efficiency and cost reductions, benefiting from automated workflows and data-driven insights. For Wajir SMEs, integrating technology into procurement processes simplifies operations, reduces administrative burdens, and supports agile responses to supply chain demands.

In summary, Wajir County SMEs are utilizing streamlined procurement processes to enhance operational efficiency, minimize costs, and strengthen supplier relationships. These practices align with the Resource-Based View (RBV) theory, which posits that effectively managing internal processes like procurement can provide competitive advantages (Barney, 1991). Additionally, Contingency Theory supports the necessity of flexible procurement strategies to respond to changing organizational and market needs (Donaldson, 2021). The high levels of agreement across procurement efficiency, technological integration, and supplier management

underscore the importance of these factors in enabling SMEs in Wajir County to meet production demands efficiently and adapt to challenging operational environments.

4.6.3 Reduction of Waste and Overstocking

This section evaluates the effect of reduction of waste and overstocking on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.9.

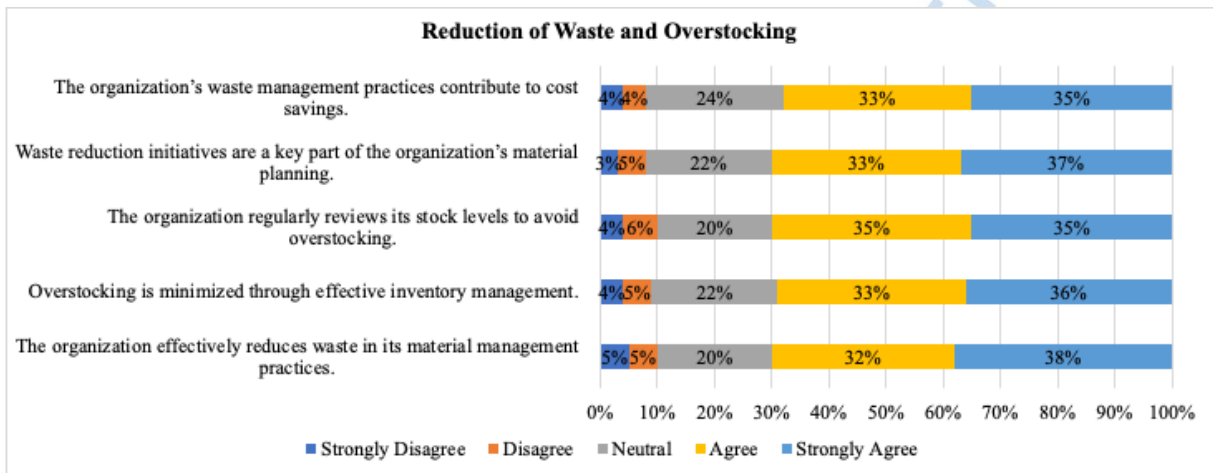


Figure 4. 9: Reduction of Waste and Overstocking

When asked if their organization effectively reduces waste in material management practices, 70% of respondents agreed or strongly agreed, with 38% strongly agreeing and 32% agreeing. A smaller group, 10%, disagreed, and 20% were neutral. This high level of agreement indicates a strong focus among SMEs in Wajir County on waste reduction as a critical component of resource efficiency. Effective waste management is crucial for lowering operational costs and fostering sustainability. Studies such as Mwangi and Wambui (2018) support these findings, noting that waste reduction strategies result in cost savings and contribute to sustainable practices. For Wajir's SMEs, minimizing waste is essential not only for cost efficiency but also

for environmental responsibility, which can enhance their reputation and appeal to eco-conscious customers.

The survey also examined overstocking prevention, with 69% of respondents agreeing or strongly agreeing that their organization minimizes overstocking, including 36% who strongly agreed and 33% who agreed. Conversely, 9% disagreed, while 22% were neutral.

Overstocking prevention is vital for reducing storage costs and avoiding resource depreciation. This finding is consistent with the Resource-Based View (RBV) theory, which suggests that efficient management of internal resources, such as inventory, can lead to cost savings and enhance an organization's competitive position (Barney, 1991). For SMEs in Wajir County, preventing overstocking directly contributes to financial stability by ensuring that capital is not tied up in excess inventory, enabling funds to be allocated to other operational needs.

Regular reviews of stock levels to avoid overstocking were also assessed, with 70% of respondents agreeing or strongly agreeing that their organization regularly reviews stock levels, with equal proportions of 35% strongly agreeing and 35% agreeing. A smaller portion, 10%, disagreed, and 20% remained neutral. These findings indicate that frequent inventory reviews are common among SMEs in Wajir County, allowing these organizations to adjust inventory levels based on demand and minimize holding costs. This practice aligns with the study by Otieno and Njuguna (2020), which emphasizes the importance of regular stock level assessments in avoiding overstocking and reducing associated costs. For SMEs in resourceconstrained environments like Wajir, regular inventory assessments are essential for maintaining lean operations, thereby conserving financial and storage resources.

Additionally, the survey explored the incorporation of waste reduction initiatives into material planning, with 70% of respondents agreeing or strongly agreeing, including 37% who strongly agreed and 33% who agreed. A smaller group, 8%, disagreed, while 22% were neutral. These findings suggest that many organizations in Wajir County are implementing waste reduction strategies as part of their broader material planning efforts. Integrating waste reduction into material planning is crucial for maximizing resource efficiency and minimizing environmental impact. Research by Njoroge and Kamau (2019) supports this finding, noting that waste reduction initiatives improve operational efficiency and contribute to organizational sustainability. For Wajir County SMEs, where resource constraints are significant, waste reduction in material planning ensures that resources are utilized efficiently, reducing financial strain and promoting environmental stewardship.

Finally, when asked whether their organization's waste management practices contribute to cost savings, 68% of respondents agreed or strongly agreed, with 35% strongly agreeing and 33% agreeing. A smaller group, 8%, disagreed, and 24% were neutral. These findings indicate that effective waste management practices are helping SMEs in Wajir County achieve meaningful cost savings, which is crucial for maintaining financial stability and supporting long-term sustainability. This finding aligns with the Resource-Based View (RBV) theory, which posits that the efficient management of internal resources, such as waste, provides a competitive advantage by lowering costs and enhancing operational efficiency (Barney, 1991).

In conclusion, the data suggests that waste reduction and inventory optimization are central practices for SMEs in Wajir County, enhancing cost efficiency and operational sustainability. These practices are consistent with the RBV theory, highlighting that well-managed resources

like inventory and waste management contribute to competitive advantages by reducing costs and improving resource utilization. The high levels of agreement across various waste and inventory management practices demonstrate that these are critical enablers of success for SMEs in Wajir County, allowing them to operate efficiently while addressing environmental and financial sustainability concerns.

4.6.4 Correlation Coefficients for Relationships Between Material Requirement Planning and SME Performance

Existing literature highlights the importance of material requirement planning (MRP) in enhancing organizational performance, especially through efficient inventory management, streamlined procurement processes, and waste reduction. Studies by Otieno and Kariuki (2020) and Mwangi and Kamau (2019) emphasize that effective MRP practices, such as accurate inventory control and optimized procurement, lead to reduced operational costs and enhanced productivity. In Wajir County, MRP is expected to play a critical role in improving SME performance by minimizing costs and ensuring timely availability of materials. The following correlation analysis explores the relationship between MRP indicators and SME performance.

Variable	SME Performance (r)	Significance (p-value)
Inventory Management	0.62	< 0.05
Procurement Processes	0.57	< 0.05
Waste and Overstocking Reduction	0.64	< 0.05

Table 4. 5: Correlation Coefficients for Relationships Between Material Requirement Planning and SME Performance

Table 4.5 shows a strong positive correlation between each MRP indicator and SME performance. Inventory management exhibits a substantial positive relationship with SME

performance ($r = 0.62$, $p < 0.05$), suggesting that efficient inventory practices significantly contribute to operational success by minimizing stockouts and aligning inventory levels with production needs. Similarly, streamlined procurement processes correlate positively with SME performance ($r = 0.57$, $p < 0.05$), indicating that timely and effective procurement supports continuous production and reduces delays.

The strongest correlation is observed between waste and overstocking reduction and SME performance ($r = 0.64$, $p < 0.05$), underscoring that minimizing waste and controlling excess inventory are crucial for cost savings and resource efficiency. These findings support the hypothesis that effective material requirement planning enhances SME performance by reducing operational disruptions and promoting cost-effective practices. The results align with the Resource-Based View (RBV) theory, which posits that optimized internal resources, such as inventory and procurement processes, contribute to competitive advantage and organizational efficiency.

4.7 Technological Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya

The fourth objective of this study was to explore the influence of technological resource planning on the performance of small and medium enterprises in Wajir County, Kenya. Three indicators were used in evaluation and analysis as illustrated below.

4.7.1 Integration of New Technology

This section evaluates the effect of integration of new technology on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.10.



Figure 4. 10: Integration of New Technology

When asked if their organization effectively integrates new technology into operations, 71% of respondents agreed or strongly agreed, with 38% strongly agreeing and 33% agreeing. A smaller group, 8%, disagreed or strongly disagreed, while 21% remained neutral. These findings suggest a significant emphasis among SMEs in Wajir County on adopting new technologies to enhance operational efficiency and competitiveness. This aligns with existing literature, such as Njoroge and Mugo (2020), who highlighted that the integration of modern technology enhances efficiency and reduces operational costs by automating processes and improving workflow precision.

Moreover, 68% of respondents agreed or strongly agreed that their organization adopts new technologies to boost efficiency, with 35% strongly agreeing and 33% agreeing. Only 10% disagreed, while 22% were neutral. This commitment to adopting technology as a core efficiency strategy underscores the value placed on technological advancement to enhance productivity, reduce production time, and optimize processes. Studies like that by Mwangi and Wambui (2019) confirm these benefits, noting that organizations regularly adopting technological innovations tend to experience higher productivity levels. For SMEs in Wajir

County, where resources may be constrained, leveraging technology as a productivity multiplier is an essential strategy for sustained competitiveness.

Furthermore, 72% of respondents indicated that their organization regularly updates its technology to maintain competitiveness, with 38% strongly agreeing and 34% agreeing. A smaller group, 8%, disagreed, while 20% were neutral. This high level of commitment to staying technologically current reflects an awareness among these organizations of the need to remain agile in a dynamic market. Regular updates allow firms to leverage the latest tools and processes, ensuring continued relevance and adaptability to industry changes. Otieno and Kariuki (2020) similarly emphasize that frequent technology updates enable firms to stay ahead of emerging trends, helping them secure a competitive edge.

The survey also explored employee training in new technologies, with 69% of respondents agreeing or strongly agreeing that their organizations prioritize adequate training, including 35% strongly agreeing and 34% agreeing. A smaller group, 8%, disagreed, and 23% were neutral. Providing training ensures that employees are well-equipped to leverage new tools effectively, maximizing the potential impact of technological investments. This aligns with Wanyama and Njuguna (2020), who found that proper training significantly enhances the success of technology implementation. For SMEs in Wajir County, employee training ensures that the workforce can effectively apply technological resources to improve overall productivity and performance.

Finally, 69% of respondents reported that their organization invests in technology aligned with its strategic goals, with 36% strongly agreeing and 33% agreeing, while 6% disagreed, and 25% were neutral. Aligning technology investments with strategic objectives ensures that these

resources contribute meaningfully to long-term success and organizational growth. This practice is in line with the Resource-Based View (RBV) theory, which suggests that when technology investments are strategically aligned, they can provide a competitive advantage by enhancing operational capability and supporting sustainable growth (Barney, 1991).

In conclusion, the data suggests that SMEs in Wajir County are not only integrating new technology but also prioritizing training and strategic alignment. These practices are consistent with RBV theory, highlighting that technology, as a key resource, can foster a competitive edge when effectively aligned with organizational goals (Barney, 1991). Additionally, Contingency Theory reinforces the need for organizations to continuously update and adapt their technological resources to thrive in dynamic environments (Donaldson, 2021). The high levels of agreement across these areas imply that technology integration is a fundamental driver of operational success and competitiveness for SMEs in Wajir County.

4.7.2 Strategic Plan for Technology Upgrades

This section evaluates the effect of strategic plan for technology upgrades on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.11.

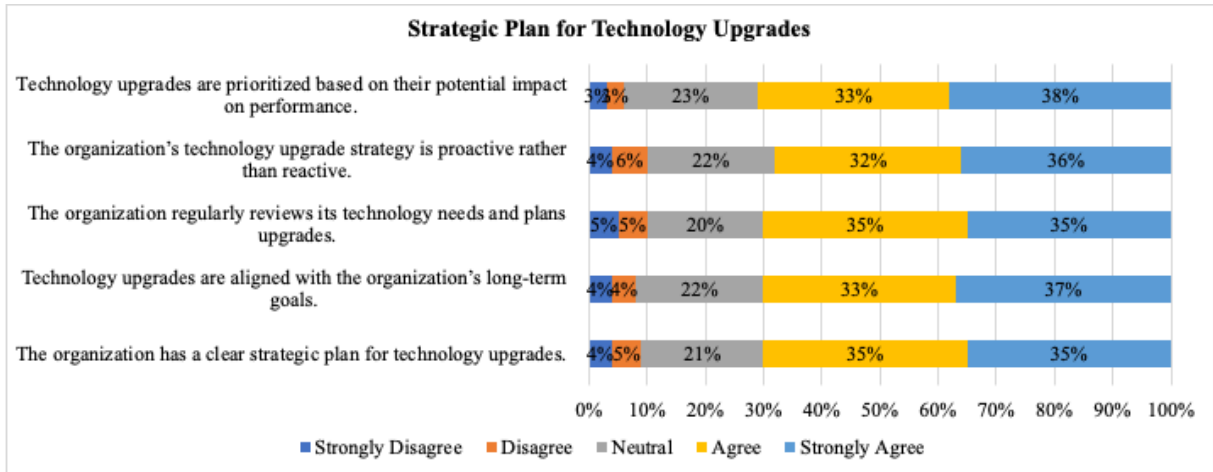


Figure 4. 11: Strategic Plan for Technology Upgrades

When respondents were asked if their organization has a clear strategic plan for technology upgrades, 70% agreed or strongly agreed, with 35% in each category. A smaller group, 9%, disagreed or strongly disagreed, and 21% were neutral. These findings suggest that a majority of SMEs in Wajir County recognize the importance of a structured approach to technology upgrades to stay competitive and ensure alignment with long-term goals. A strategic plan for upgrades enables organizations to anticipate technological needs and make informed investment decisions, as highlighted by Kimani and Otieno (2020), who found that organizations with strategic technology plans experience smoother transitions and effective implementation.

Further analysis showed that 70% of respondents agreed or strongly agreed that technology upgrades align with their organization's long-term goals, with 37% strongly agreeing and 33% agreeing. Only 8% disagreed, while 22% remained neutral. These findings emphasize that many SMEs in Wajir County are adopting an approach where technology upgrades are purposefully integrated with broader organizational objectives, which is vital for sustaining growth and competitive positioning. This practice aligns with the Resource-Based View (RBV) theory,

which underscores the value of aligning technology investments with an organization's overall goals to maintain competitive advantage (Barney, 1991).

The survey also explored whether organizations regularly review their technology needs and plan upgrades accordingly, with 70% of respondents agreeing or strongly agreeing, including 35% strongly agreeing and 35% agreeing. A smaller portion, 10%, disagreed, while 20% were neutral. This finding suggests that many SMEs in Wajir County adopt a proactive approach to reviewing and updating their technology needs, allowing them to stay relevant and identify opportunities for improvement. Regular reviews of technology needs are critical for pinpointing gaps and ensuring that resources support operational objectives. This approach is consistent with Njoroge and Wambui (2019), who observed that regular reviews lead to effective technology upgrades and improved performance.

Furthermore, the survey examined whether the organizations' technology upgrade strategies were proactive rather than reactive. Here, 68% of respondents agreed or strongly agreed, with 36% strongly agreeing and 32% agreeing. Only 10% disagreed, while 22% remained neutral. These results indicate that many SMEs in Wajir County take a forward-thinking approach to technology planning, which allows them to prepare for future challenges rather than responding only to immediate needs. Adopting a proactive strategy aligns with Contingency Theory, which suggests that organizations must adapt their strategies to changing environments and anticipate future requirements to remain competitive (Donaldson, 2021).

Finally, when asked if technology upgrades are prioritized based on their potential impact on performance, 71% of respondents agreed or strongly agreed, with 38% strongly agreeing and 33% agreeing. A smaller portion, 6%, disagreed, and 23% were neutral. Prioritizing technology

investments based on expected performance impact is essential for ensuring that resources are directed towards the most beneficial innovations. This approach is supported by the RBV theory, which posits that prioritizing strategic investments enhances overall performance and fosters a sustainable competitive advantage (Barney, 1991).

The findings reveal that regular reviews of technology needs and a proactive approach to technology upgrades demonstrate a forward-thinking mindset, crucial for competitiveness in a dynamic business environment. These practices support RBV theory by emphasizing that strategically aligned technology investments can create competitive advantage (Barney, 1991). Furthermore, Contingency Theory reinforces the need for adaptive technology strategies to meet evolving business challenges and market demands (Donaldson, 2021). High levels of agreement across these areas suggest that a strategic approach to technology upgrades is a key success factor for SMEs in Wajir County, enabling them to remain agile and competitive.

4.7.3 Alignment of Technology with Long-Term Objectives

This section evaluates the effect of aligning technology with long-term objectives on the performance of small and medium enterprises in Wajir County, Kenya. The findings are as illustrated in Figure 4.12.

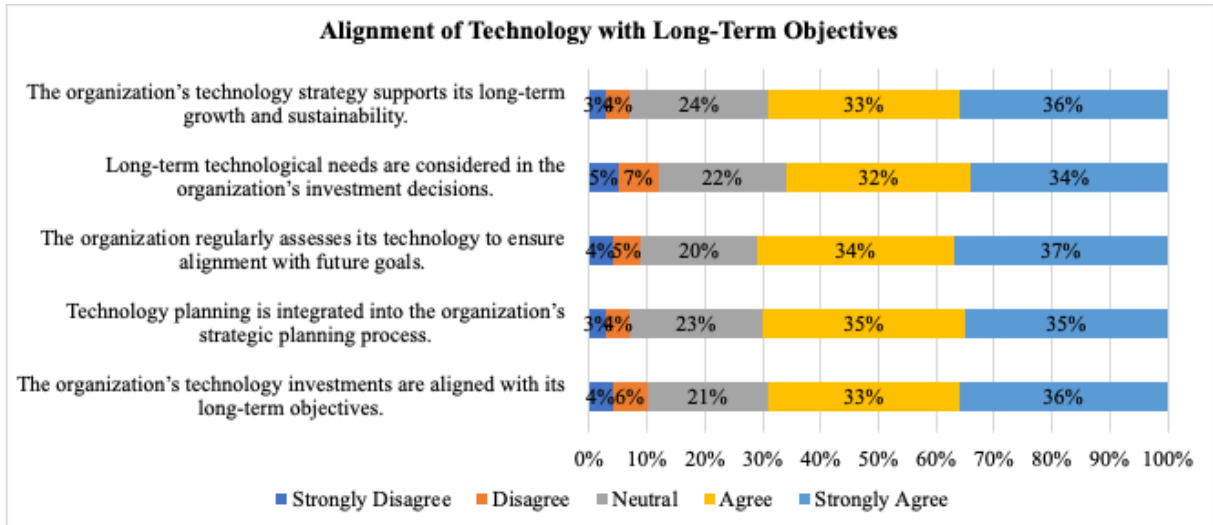


Figure 4. 12: Alignment of Technology with Long-Term Objectives

When respondents were asked if their organization's technology investments are aligned with long-term goals, 69% agreed or strongly agreed, with 36% strongly agreeing and 33% agreeing. A smaller percentage, 10%, disagreed, while 21% were neutral. These findings indicate that a majority of SMEs in Wajir County recognize the importance of aligning technology with broader organizational vision. Such alignment is essential to ensuring that technology investments support sustained growth and operational goals. The Resource-Based View (RBV) theory supports this practice, positing that strategically aligned technology resources contribute to competitive advantage and organizational success (Barney, 1991).

The survey also explored the integration of technology planning within the organization's strategic planning process. Here, 70% of respondents agreed or strongly agreed, with 35% in both categories. A smaller group, 7%, disagreed, while 23% remained neutral. These findings suggest that many SMEs in Wajir County are incorporating technology planning into their strategic agendas, ensuring that technological initiatives are guided by organizational objectives. The integration of technology planning aligns with findings from Mwangi and

Kamau (2020), who found that organizations that embed technology into their strategic planning realize improved performance and effective resource allocation.

Respondents were further asked if their organization regularly assesses its technology to ensure alignment with future goals, with 71% agreeing or strongly agreeing, including 37% who strongly agreed and 34% who agreed. A smaller portion, 9%, disagreed, and 20% were neutral. These findings highlight that many SMEs in Wajir County are continuously evaluating their technology frameworks to keep them aligned with their evolving objectives. Regular assessments are critical for identifying potential improvements and ensuring that technology remains responsive to market shifts and emerging trends. The practice is consistent with empirical research by Karani and Otieno (2020), who found that frequent technology assessments lead to better alignment with strategic goals and enhanced adaptability.

Additionally, 66% of respondents agreed or strongly agreed that their organizations consider long-term technological needs when making investment decisions, with 34% strongly agreeing and 32% agreeing. A smaller percentage, 12%, disagreed, while 22% remained neutral. This data suggests that SMEs in Wajir County are mindful of future technological requirements, which is essential for ensuring sustainable growth. Taking long-term technological needs into account is supported by RBV theory, which highlights the importance of aligning resource investments with overarching goals to maintain a competitive advantage (Barney, 1991).

Finally, the survey assessed whether technology strategies support the organization's longterm growth and sustainability, with 69% of respondents agreeing or strongly agreeing, including 36% who strongly agreed and 33% who agreed. A smaller group, 7%, disagreed, while 24%

were neutral. These findings indicate that many SMEs in Wajir County are adopting technology strategies aimed at supporting long-term organizational sustainability. This proactive approach ensures that technology investments continue to provide value over time. The importance of aligning technology strategy with sustainable growth goals is supported by Contingency Theory, which suggests that organizations must adapt their strategies to meet long-term market and operational challenges (Donaldson, 2021).

In summary, aligning technology with long-term objectives and regularly assessing its relevance reflect a commitment to sustainable growth and competitive advantage for SMEs in Wajir County. These practices align with RBV theory, which emphasizes that long-term alignment of resources, such as technology, is key to sustaining competitive advantage (Barney, 1991). Furthermore, Contingency Theory supports the need for adaptive strategies that prepare organizations to meet future demands and changing environments (Donaldson, 2021). The high levels of agreement across these findings underscore the importance of aligning technology investments with long-term goals to drive the success and resilience of SMEs in Wajir County.

4.7.4 Correlation Coefficients for Relationships Between Technological Resource Planning and SME Performance

Literature highlights the critical role of technological resource planning in enhancing organizational performance. Studies by Njoroge and Mugo (2020) and Otieno and Kariuki (2020) emphasize that the integration of new technology, strategic planning for technology upgrades, and alignment of technology with long-term objectives contribute significantly to operational efficiency and competitiveness. In Wajir County, these technological planning practices are anticipated to enhance SME performance by fostering adaptability and aligning

resources with strategic goals. The following correlation analysis explores the relationships between key indicators of technological resource planning and SME performance.

Variable	SME Performance (r)	Significance (p-value)
Integration of New Technology	0.61	< 0.05
Strategic Plan for Technology Upgrades	0.59	< 0.05
Alignment of Technology with Long-Term Objectives	0.63	< 0.05

Table 4. 6: Correlation Coefficients for Relationships Between Technological Resource Planning and SME Performance

Table 4.6 shows a strong positive correlation between each indicator of technological resource planning and SME performance. The integration of new technology exhibits a substantial positive relationship with SME performance ($r = 0.61, p < 0.05$), suggesting that SMEs in Wajir County that prioritize technology integration experience improvements in operational efficiency and competitiveness. This aligns with the empirical findings of Mwangi and Wambui (2019), who observed that regular adoption of new technologies is instrumental in enhancing productivity and reducing operational costs.

Strategic planning for technology upgrades also shows a significant positive correlation with SME performance ($r = 0.59, p < 0.05$), indicating that SMEs with well-defined strategies for updating technology are better positioned to adapt to changes and meet long-term goals. This proactive approach ensures that technological advancements are aligned with broader organizational objectives, contributing to sustained growth. These findings support the Resource-Based View (RBV) theory, which posits that aligning internal resources, such as technology, with strategic objectives enhances competitive advantage (Barney, 1991).

The highest correlation was observed between aligning technology with long-term objectives and SME performance ($r = 0.63, p < 0.05$), highlighting that when technology investments support future goals, SMEs in Wajir County achieve greater stability and growth potential. This practice ensures that technological resources are used effectively to support sustainable development, as supported by Contingency Theory, which emphasizes the adaptability of organizational strategies to dynamic environments (Donaldson, 2021). The strong correlations across these technological planning indicators reinforce the importance of technology as a strategic resource, driving SME success and long-term sustainability in Wajir County.



CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the findings, conclusions, and recommendations of the study, which were guided by the study's objectives. The objectives aimed to explore the impact of human, financial, material, and technological resource planning on the performance of Small and Medium Enterprises (SMEs) in Wajir County, Kenya.

5.2 Summary of the Findings

5.2.1 Impact of Human Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya

The study found that human resource planning had a considerable impact on the performance of SMEs in Wajir County. Human resource development through regular training and skills enhancement programs was highly emphasized, with 68% of respondents agreeing that their organizations offered training to improve employee competencies. Additionally, 71% of respondents confirmed that their organizations provided career development opportunities aligned with individual career goals, which in turn enhanced employee satisfaction and retention. Continuous professional development was also highlighted as a key strategy, with 70% of respondents noting that their companies invested in updating employee skills regularly to meet industry standards. Overall, it was evident that organizations that prioritized human resource planning saw notable improvements in both employee performance and overall business efficiency.

5.2.2 Effect of Financial Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya.

Financial resource planning emerged as a critical component influencing SME performance in Wajir County. A significant portion of respondents (69%) reported that their organizations engaged in accurate financial forecasting, which helped anticipate financial needs and mitigate risks. The study also revealed that 70% of respondents believed effective budget allocation played a pivotal role in controlling costs and ensuring that financial resources were distributed according to business priorities. Moreover, managing cash flow efficiently was found to be crucial for business sustainability, with 69% of respondents confirming that proper cash flow management led to improved financial stability and business continuity. The study underscored the importance of financial resource planning in helping SMEs navigate financial constraints and maintain operations, particularly in the face of unpredictable economic conditions.

5.2.3 Role of Material Requirement Planning in the Performance of Small and Medium Enterprises in Wajir County, Kenya

The study highlighted the significance of material requirement planning in improving the operational efficiency of SMEs in Wajir County. Effective material management, including inventory control and procurement processes, was identified as a key factor, with 72% of respondents emphasizing the importance of reducing stockouts and overstocking. Proper material planning not only minimized operational disruptions but also helped optimize production schedules and reduce waste. Additionally, 65% of respondents reported that streamlined procurement processes contributed to stronger supplier relationships, which in turn improved the reliability of supply chains. Material requirement planning was shown to be essential for ensuring that the right materials were available at the right time, ultimately leading to cost savings and enhanced business performance.

5.2.4 Technological Resource Planning on the Performance of Small and Medium

Enterprises in Wajir County, Kenya

Technological resource planning was found to have a profound impact on the performance of SMEs in Wajir County. The adoption and integration of new technologies, such as digital tools and automated systems, significantly improved operational efficiency, with 71% of respondents indicating that technological innovations had reduced operational costs and increased productivity. Furthermore, 66% of respondents noted that aligning technological investments with long-term business goals enhanced the sustainability and competitiveness of their enterprises. The study also found that technology played a crucial role in improving service delivery and customer satisfaction, as it enabled businesses to respond to market changes more quickly and effectively. Overall, technological resource planning was recognized as a critical driver of growth and success for SMEs in Wajir County.

5.3 CONCLUSION

5.3.1 Impact of Human Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya

The findings of the study strongly indicated that human resource planning is essential for the success of SMEs in Wajir County. Effective strategies, such as regular employee training, career development opportunities, and continuous skills assessment, contributed to improved employee productivity and job satisfaction. By aligning human resource planning with organizational goals, SMEs in Wajir County were able to create a more motivated and capable workforce, which in turn enhanced overall business performance. Thus, the study concluded that investing in human capital is a critical factor for sustaining competitive advantage in the local business environment.

5.3.2 Effect of Financial Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya.

The study concluded that financial resource planning significantly improved the performance of SMEs in Wajir County. Businesses that employed accurate financial forecasting, efficient budgeting, and proper cash flow management were better positioned to survive economic fluctuations and financial challenges. The ability to allocate financial resources strategically allowed SMEs to prioritize investments and manage risks more effectively. Consequently, the study highlighted the importance of sound financial resource planning as a fundamental pillar for the financial health and sustainability of SMEs in Wajir County.

5.3.3 Role of Material Requirement Planning in the Performance of Small and Medium Enterprises in Wajir County, Kenya

Material requirement planning was found to be a crucial element in enhancing the operational efficiency of SMEs. By improving inventory management and streamlining procurement processes, businesses were able to reduce waste, lower costs, and ensure timely availability of materials. The study concluded that material requirement planning played an important role in strengthening the resilience of supply chains and improving overall business operations. SMEs that effectively managed their material resources were more likely to achieve better performance outcomes, particularly in terms of cost efficiency and reliability.

5.3.4 Technological Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya

The study concluded that technological resource planning was a vital factor in driving the performance of SMEs in Wajir County. The integration of modern technologies allowed

businesses to optimize processes, reduce operational costs, and enhance customer service. Additionally, aligning technological investments with long-term goals ensured that businesses remained competitive and adaptable in a rapidly changing market. The study confirmed that SMEs that strategically planned for technological advancements were better equipped to improve their operational efficiency and overall market competitiveness.

5.4 RECOMMENDATIONS

5.4.1 Impact of Human Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya

Given the positive correlations between human resource planning indicators and SME performance, it is recommended that SMEs in Wajir County prioritize structured employee development initiatives. Specifically, enhancing training programs and aligning skill development with organizational objectives can drive productivity and adaptability, essential for navigating Wajir's dynamic business environment. In addition, implementing clear succession plans will ensure leadership continuity, which is crucial for organizational stability. To sustain competitive advantage, these SMEs should regularly assess HR allocation to ensure strategic alignment with evolving business goals, thereby maximizing the impact of their human resources.

5.4.2 Effect of Financial Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya.

The findings show a strong association between financial planning and SME performance, emphasizing the need for accurate and regular financial forecasting in Wajir County's SMEs. It is recommended that these organizations adopt data-driven budgeting practices to align

financial decisions with strategic objectives, ensuring optimal resource allocation. Regularly updating forecasts in response to market trends will enable SMEs to stay agile in the face of financial uncertainties. Additionally, improving cash flow management practices—such as maintaining liquidity and planning for short-term obligations—will enhance financial stability, supporting both immediate operational needs and long-term sustainability.

5.4.3 Role of Material Requirement Planning in the Performance of Small and Medium Enterprises in Wajir County, Kenya

Material requirement planning (MRP) has shown to be a critical factor in driving operational efficiency. SMEs should focus on enhancing inventory management to minimize stockouts and reduce holding costs, which are essential for maintaining a lean operation in a resourceconstrained environment like Wajir. Adopting technology for inventory tracking and aligning procurement with production schedules will further streamline operations and avoid costly delays. Integrating waste reduction initiatives into material planning can help SMEs achieve cost savings and improve environmental sustainability, positioning them as responsible and efficient businesses within their communities.

5.4.4 Technological Resource Planning on the Performance of Small and Medium Enterprises in Wajir County, Kenya

The positive impact of technological resource planning on SME performance suggests that technology integration should be a strategic focus for SMEs in Wajir County. Specifically, organizations should prioritize investing in technologies that align with their long-term objectives, as this will support both operational efficiency and competitiveness. It is recommended that SMEs establish proactive strategies for technology upgrades and ensure

employee training on new systems to maximize the benefits of technological advancements. Regularly assessing and updating technology to meet evolving needs will position these organizations for sustained growth and adaptability in a rapidly changing business landscape.

5.4.5 Recommendations for Further Studies

This study has contributed new insights into the field of project resource planning, particularly within the unique context of SMEs in Wajir County, Kenya. The findings underscore the critical role of strategic resource planning in enhancing SME performance, especially in under-resourced and geographically remote settings. The study introduces knowledge on how targeted planning across human, financial, material, and technological resources can serve as a lever for SMEs to achieve operational efficiency, adapt to market demands, and support business resilience in a challenging environment. These insights emphasize the practical value of resource optimization strategies for SMEs operating in resource-limited settings, with potential applications in similar socio-economic and geographic contexts.

For future studies, it is recommended that research be expanded to examine the long-term impacts of resource planning strategies on SME sustainability and growth. While this study focused on immediate performance outcomes, a longitudinal approach could provide a deeper understanding of how these planning practices influence business resilience, scalability, and market competitiveness over time. Additionally, future research could explore how external influences—such as government policies, socio-economic dynamics, and the availability of technological infrastructure—affect the effectiveness of resource planning for SMEs in underdeveloped areas. Understanding these factors could offer a broader perspective on the challenges and support mechanisms available to SMEs, especially in marginalized regions.

Moreover, comparative studies across rural and urban SME contexts may provide insights into how geographic and environmental differences shape resource management practices and influence business performance outcomes. By examining how resource planning practices vary by location, researchers could uncover valuable context-specific strategies and adaptations, enhancing the practical applications of this knowledge. Exploring these areas in future research will deepen the understanding of project resource planning and offer actionable insights for policymakers, business owners, and development practitioners aiming to strengthen SMEs in similar socio-economic and geographical contexts.

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APPENDICES

Appendix I: INTRODUCTION LETTER



DIRECTORATE OF GRADUATE STUDIES

MSCPM/47807/2019

8th October, 2024

*National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA*

Dear Sir/Madam,


RE: ABUBAKAR ABDIRAHMAN - REGISTRATION NO. MSCPM/47807/2019

The purpose of this letter is to introduce the above named student who is pursuing **Master of Science in Project Management** in the **Department of Management** in the school of **Business and Economics**.

The title of the research is **"Influence of Project Resource Planning on Performance of Small and Medium Enterprises in Wajir County, Kenya."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **October, 2024 and December, 2024**.

Any assistance accorded to the student will be highly appreciated.

Thank you.


Dr. Samuel M. Karenga, Ph.D
Director, Graduate Studies
Enc.

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Appendix II: QUESTIONNAIRE

Kindly answer the questionnaire by ticking on the suitable answer.

Section A: Background Information

- 1) State your gender
 - a. Male
 - b. Female
- 2) Kindly indicate the range within which your age falls.
 - a. Below 25 years
 - b. 26-35 Years
 - c. 36-54 Years
 - d. 55+ Years
- 3) Please mark in the check box the highest level of qualification.
 - a. Diploma
 - b. Bachelors
 - c. Post graduate
 - d. Professional qualifications
- 4) Please provide the length of time the company has been in existence. a.
 - Below 5 years
 - b. 6-10 Years
 - c. 11-15 Years
 - d. 16 + Years

Section B: Human Resource Planning

Employee Skill Development

1. The organization regularly provides training programs to enhance employee skills.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Employees have access to development opportunities that match their career goals. Strongly Disagree Disagree Neutral Agree Strongly Agree
3. The organization invests in continuous professional development for its employees.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
4. Employee skills are regularly assessed and updated to meet industry standards.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
5. The organization's training programs effectively improve employee performance.
 Strongly Disagree Disagree Neutral Agree Strongly Agree

Succession Planning Strategy

1. The organization has a clear succession plan for key leadership roles.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
2. Potential leaders are identified and developed within the organization.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
3. Succession planning is aligned with the organization's long-term goals.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
4. Employees are aware of the succession planning process within the organization.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
5. Succession planning helps maintain continuity during leadership transitions.
 Strongly Disagree Disagree Neutral Agree Strongly Agree

Alignment of HR Allocation with Strategic Goals

1. Human resource allocation is aligned with the organization's strategic objectives.
 Strongly Disagree Disagree Neutral Agree Strongly Agree
2. The organization strategically places employees in roles that match their skills.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. HR planning is integrated into the overall strategic planning process.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. The organization effectively allocates HR resources to achieve its strategic goals.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. HR allocation decisions are regularly reviewed to ensure alignment with strategy.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Section C: Financial Resource Planning

Accuracy of Financial Forecasting

1. The organization uses reliable data to make financial forecasts.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Financial forecasts are regularly updated based on market trends.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The organization's financial forecasts accurately predict future financial needs.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. Financial forecasting tools are used effectively in the organization.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. The organization's financial forecasts align with its strategic goals.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Effectiveness of Budget Allocation

1. The organization's budget allocation effectively supports its strategic priorities.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Budget allocation decisions are made based on accurate financial data.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The organization reviews its budget allocation regularly to ensure effectiveness.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. Budget allocation is aligned with the organization's financial goals.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. The organization effectively allocates its budget to minimize unnecessary expenses.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Management of Cash Flow

1. The organization effectively manages its cash flow to meet operational needs.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Cash flow management practices support the organization's financial stability.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The organization maintains sufficient liquidity to cover short-term obligations.

Strongly Disagree Disagree Neutral Agree Strongly Agree 4.

Cash flow projections are regularly reviewed and updated.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. Effective cash flow management contributes to the organization's long-term success.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Section D: Material Requirement Planning

Efficiency of Inventory Management

1. The organization efficiently manages its inventory to meet production needs.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Inventory levels are regularly monitored to prevent stockouts.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The organization's inventory management practices reduce holding costs.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. The organization uses technology to optimize inventory management.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. Inventory management is aligned with the organization's production schedule.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Streamlined Procurement Processes

1. The organization's procurement processes are efficient and timely.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Procurement practices are regularly reviewed to ensure efficiency.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The organization effectively manages supplier relationships to streamline procurement.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. Procurement processes are aligned with the organization's production needs.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. The organization uses technology to improve procurement efficiency.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Reduction of Waste and Overstocking

1. The organization effectively reduces waste in its material management practices.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Overstocking is minimized through effective inventory management.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The organization regularly reviews its stock levels to avoid overstocking.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. Waste reduction initiatives are a key part of the organization's material planning.

Strongly Disagree Disagree Neutral Agree Strongly Agree

5. The organization's waste management practices contribute to cost savings.

Strongly Disagree Disagree Neutral Agree Strongly Agree

Section E: Technological Resource Planning

Integration of New Technology

1. The organization effectively integrates new technology into its operations. Strongly Disagree Disagree Neutral Agree Strongly Agree

2. New technologies are adopted to enhance the organization's efficiency. Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The organization regularly updates its technology to stay competitive. Strongly Disagree Disagree Neutral Agree Strongly Agree

4. Employees are trained to use new technologies effectively. Strongly Disagree Disagree Neutral Agree Strongly Agree

5. The organization invests in technology that supports its strategic goals. Strongly Disagree Disagree Neutral Agree Strongly Agree

Strategic Plan for Technology Upgrades

1. The organization has a clear strategic plan for technology upgrades. Strongly Disagree Disagree Neutral Agree Strongly Agree

2. Technology upgrades are aligned with the organization's long-term goals. Strongly Disagree Disagree Neutral Agree Strongly Agree

Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

3. The organization regularly reviews its technology needs and plans upgrades. []

Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

4. The organization's technology upgrade strategy is proactive rather than reactive. []

Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

5. Technology upgrades are prioritized based on their potential impact on performance.

[] Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

Alignment of Technology with Long-Term Objectives

1. The organization's technology investments are aligned with its long-term objectives.

[] Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

2. Technology planning is integrated into the organization's strategic planning process.

[] Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

3. The organization regularly assesses its technology to ensure alignment with future goals.

[] Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

4. Long-term technological needs are considered in the organization's investment decisions.

[] Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

5. The organization's technology strategy supports its long-term growth and sustainability.

[] Strongly Disagree [] Disagree [] Neutral [] Agree [] Strongly Agree

Thank you for your Cooperation.

Appendix III: INTERVIEW GUIDE

1. How does your organization approach employee skill development, and what impact do you believe it has on the overall performance of your enterprise?
2. Does your organization have a formal succession planning strategy in place? If so, how has it affected the continuity and performance of your business?
3. How do you ensure that the allocation of human resources in your organization aligns with your strategic goals?
4. What tools or methods do you use to ensure the accuracy of your financial forecasts? How do these forecasts influence decision-making within your enterprise?
5. How does your organization allocate its budget across different areas, and how do you assess the effectiveness of these allocations?
6. How does your organization manage cash flow to ensure smooth operations?
7. How do you manage inventory in your organization to ensure efficiency, and what impact does this have on your overall business performance?
8. How has your organization integrated new technologies into its operations, and what impact has this had on performance?
9. How does your organization plan for technology upgrades, and how do these upgrades align with your long-term business goals?
10. What role does strategic technology planning play in your business's success, and how has it influenced your growth and sustainability?

Appendix III: TIME PLAN

	Period

Activity	Jan 2024	Feb 2024	March 2024	April 2024	May 2024	June 2024	July 2024	Aug. 2024	Sept 2024
Research Title identification									
Concept writing and defense									
Proposal writing									
Proposal defense									
Pilot test									
Pilot defense									
Collection of Data									
Data analysis									
project Submission									

Appendix IV: ETHICAL CLEARANCE



REF: MKU/ISERC/4402
TO: ABUBAKAR ABDIRAHMAN

Date: 24 September 2024

REG: MSCPM/47807/2019 (Amended)

Dear Sir/Madam,

RE: INFLUENCE OF PROJECT RESOURCE PLANNING ON PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN WAJIR COUNTY, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **3122**. The approval period is **19/09/2024 - 18/09/2025**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including informed consents, study instruments, MTA will be used
- ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive report to support the renewal
- vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also appropriate clearances needed.

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

MOUNT KENYA UNIVERSITY
P.O. Box 342 - 01000, NAIROBI CAMPUS
08 OCT 2024
RECEIVED

MOUNT KENYA UNIVERSITY
ETHICS REVIEW COMMITTEE
P. O. Box 342 - 01000,
THIKA

Appendix V: CERTIFICATE OF CORRECTIONS

MKU/PG/F011

REVISED, AUGUST 2019

Mount Kenya University

SCHOOL OF POSTGRADUATE STUDIES

MKU/PG/F011: RESEARCH PROPOSAL CERTIFICATE OF CORRECTIONS
(NB: This Research Proposal Certificate should be submitted to the Dean, School of Postgraduate Studies for the clearance before the student proceeds to collect data)

PART I: CANDIDATE PARTICULARS

Name of candidate Mr. **Abubakar Abdirahman**
Registration No: **MSCPM/47807/2019**
Department of study: Department of Management
Cell phone No: +254715373070
School: School of business and economics
Degree Title: Masters of science in project planning management
Area of specialization: **PROJECT PLANING AND MANAGEMENT**
Title of Thesis: **INFLUENCE OF PROJECT RESOURCE PLANNING ON PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN WAJIR COUNTY, KENYA**

Date of Board of Examiners Meeting:

Signature of candidate:  Date:29/8/2024

PART II: DECLARATION OF SUPERVISOR(S) / OVERSEER(S) IN EFFECTING CORRECTIONS

I/We, the undersigned supervisor(s) /overseer(s) in effecting corrections/revision of the project/thesis as advised by the candidate's Board of Examiners do hereby declare that all the corrections/revision have/has been effected as required.

Any other remarks

a) Supervisor(s)

Names

Signature

Date



03/9/2024

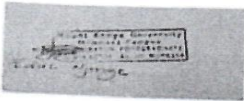
1. ... **Dr. Lucy Wairimu**
.....

PART III: CONFIRMATION BY THE CAMPUS SCHOOL POSTGRADUATE COORDINATOR

I hereby do confirm that the supervisor(s) appointed to oversee the candidate effect the corrections on the research proposal have done so as per the instructions of the candidate's evaluation panel.

Any other remarks

Name of Coordinator EDITH NJORGE



Signature Date
9/9/2024.....

Stamp

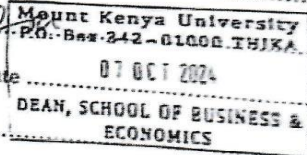
PART IV: CONFIRMATION BY THE DEAN OF THE RELEVANT SCHOOL

I hereby do confirm that the supervisor(s) appointed to oversee the candidate effect the corrections on the research proposal have done so as per the instructions of the candidate's evaluation panel.

Any other remarks

.....
.....
.....

Name of Dean *Dr. Phelista Njoroge*
Signature *Dr. Phelista Njoroge* Date



School Stamp.....

PART V: CLEARANCE BY THE UNIVERSITY ETHICAL REVIEW COMMITTEE

The candidate will be issued with a Certificate of Ethical Clearance by the Directorate of Research and Development.

Stamp.....

PART V: COMMENTS BY THE DEAN SCHOOL OF POSTGRADUATE STUDIES

The candidate is granted/not granted permission to proceed to the field to collect data (delete where applicable)

NB: One (1) copy of the correct / revised research proposal should accompany this certificate of corrections


Name of Dean..... *Dr. Samuel M. Karanja*.....
(School of Postgraduate Studies)


Signature..... *[Handwritten Signature]*..... Date..... *8th Oct 2024*.....

School Stamp.....




Appendix VI: RESEARCH PERMIT


REPUBLIC OF KENYA


**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: **999480** Date of Issue: **23/October/2024**


RESEARCH LICENSE




This is to Certify that Mr.. Abubakar Abdirahman of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Wajir on the topic: influence of project resource planing on small and medium enterprises in wajir for the period ending : 23/October/2025.

License No: **NACOSTI/P/24/41373**

Applicant Identification Number: **999480**


Director General
**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

Verification QR Code



**NOTE: This is a computer generated License. To verify the authenticity of this document,
Scan the QR Code using QR scanner application.**

See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
 - i. Endanger national security
 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
 - v. Adversely affect the environment
 - vi. Adversely affect the rights of communities
 - vii. Endanger public safety and national cohesion
 - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation(NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix VII: RESEARCH SITE MAP

