EFFECT OF BUSINESS PROCESS REENGINEERING ON PERFORMANCE OF OIL MARKETING FIRMS IN KENYA

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A Project Submitted to the Institute of Postgraduate Studies, Kabarak University in Partial Fulfillment for the Requirements for the Award of Master of Business Administration (Strategic Management) Degree

KABARAK UNIVERSITY

NOVEMBER, 2025

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Kiprop Faith Jepchirchir

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The project entitled; **"Effect of Business Process Reengineering on Performance of Oil Marketing Firms in Kenya"** and written by **Kiprop Faith Jepchirchir,** is presented to the Institute of Postgraduate Studies of Kabarak University. I have reviewed the research project and recommend it be accepted in partial fulfillment of the requirement for the degree of Master of Business Administration.

Signed: _____ Date: _____

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DEDICATION

I dedicate this research project to the unwavering support and encouragement of my family; their boundless love has been my steadfast anchor throughout this academic journey. Their sacrifices and belief in my potential fueled my determination to reach this milestone. To my parents, whose sacrifice and tireless efforts paved the way for my education. As well, I dedicate this work to my siblings, whose unwavering encouragement has been a source of inspiration. This work stands as a testament to the collective strength of our family bond.

ABSTRACT

The oil and energy sector is a crucial component of Kenya's economy, playing a pivotal role in powering various industries, transportation, and households. Understanding and enhancing the performance of oil marketing firms is vital for ensuring a stable and efficient energy supply, which is fundamental for economic growth and development. In the face of stiff competition and declining profitability, oil marketing firms are compelled to re-evaluate their operational strategies. Therefore, the purpose of this study was to determine the effect of business process reengineering on performance of oil marketing firms in Kenya. The specific objectives of this research were to analyze the effect of organizational restructuring, process redesign, employee training and development and technology adoption on performance of oil marketing firms in Kenya. This research adopted resource-based view theory, change management theory, organizational learning theory and dynamic capabilities theory. A descriptive research design was used in this research. The target population of the study was the 64 heads of strategy development in all the 64 oil marketing firms in Kenya. Census technique was used where all the 64 heads of strategy or their equivalent were involved in the study. The study collected primary data through questionnaires that were administered through Google forms and analysed using statistical package for social sciences. The relationship between dependent and independent variables was shown using correlation coefficients and a multiple linear regression model. The results were presented in tables followed by pertinent interpretation and discussion. The findings of the study revealed that all four variables organizational restructuring, process redesign, employee training and development, and technology adoption had significant positive effects on the performance of oil marketing firms in Kenya. Organizational restructuring had a significant effect, as did process redesign and employee training and development. Technology adoption had the strongest effect. The four variables combined explained a substantial portion of the variance in performance. Based on these results, the study concludes that strategic initiatives in these areas are crucial for enhancing firm performance. The study recommends that oil marketing firms prioritize organizational restructuring to align structures and processes with evolving business objectives and market conditions. Continuous process redesign should be undertaken to eliminate inefficiencies and optimize operations, supported by investments in relevant technologies. Furthermore, firms should invest in comprehensive employee training and development programs to enhance skills and productivity and strategically adopt new technologies to drive innovation and competitiveness.

Keywords: *Business Process Reengineering, Performance, Organizational, Restructuring, Process Redesign, Employee Training and Development, Technology Adoption, Oil Marketing Firms.*

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LIST OF ABBREVIATIONS AND ACROYNMS

BPR	-	Business Process Reengineering
CRM	-	Customer Relationship Management
EPRA	-	Energy and Petroleum Regulatory Authority
ERP	-	Enterprise Resource Planning
ICT	-	Information and Communication Technology
IT	-	Information Technology
KPI	-	Key Performance Indicators
NACOSTI	-	National Commission of Science, Technology and Innovation
RBV	-	Resource Based View
SACCO	-	Savings and Credit Cooperatives
UK	-	United Kingdom

CONCEPTUAL AND OPERATIONAL DEFINITION OF TERMS

Business Process Reengineering: The fundamental overhaul and redesign of an organization's core business processes, systems, and structures to achieve significant improvements in performance, efficiency, and effectiveness (Al-Shammari, 2023). In this study, the BPR aspects to be considered are organizational restructuring, process redesign, and employee training and development and technology adoption.

Employee Training and Development : Systematic efforts by an organization to enhance the knowledge, skills, and abilities of its workforce (Chethana & Noronha, 2023). In this study, it was presented by training programs, skill development initiatives, and change management strategies.

Organizational Restructuring: Involves making significant changes to the structure, hierarchy, and distribution of roles and responsibilities within an organization (Nweze et al., 2022). In this study, it was presented by reporting relationships, departmental configurations and responsibility changes.

Performance: The overall effectiveness, efficiency, and success of firms (Guan et al., 2023). In the current study, performance was presented by operational efficiency, customer satisfaction, and market competitiveness

Process Redesign: The intentional and strategic modification of existing business processes or the creation of new processes within an organization (Mustansir, Shahzad, & Malik 2022). In this study, it was presented by changes made to existing processes, the introduction of new processes, and the streamlining of workflows.

Technology Adoption: The process of integrating new technologies or tools into an organization's operations (Mishrif & Khan, 2023). In this study, it was presented by implementation of new technologies, automation of processes, and the integration of information systems.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Research Study

Business process reengineering (BPR) is a strategic management approach that involves the radical redesign and rethinking of an organization's core processes to achieve significant improvements in efficiency, effectiveness, and overall performance (Fetais et al., 2022). Unlike incremental improvements, BPR seeks to overhaul workflows, eliminate redundancies, and integrate innovative technologies to align business operations with strategic goals. This transformative methodology has gained prominence as organizations strive to remain competitive in dynamic and evolving markets, making it a vital tool for enhancing organizational outcomes such as productivity, cost efficiency, and service quality (Shahul et al., 2022).

In the current era of globalization, the importance of organizational performance cannot be overstated. As businesses expand their reach across borders, the ability to consistently excel in operational efficiency, financial outcomes, and market positioning becomes a critical determinant of success. Globalization exposes companies to diverse markets, demanding not only a keen understanding of international trends but also an agile and high-performing organizational structure (Wu et al., 2023). High performance is the linchpin for meeting the evolving needs of a global customer base, adapting to varied regulatory environments, and capitalizing on the rapid integration of technologies that transcend geographical boundaries Suherlan & Okombo, 2023). Moreover, in this interconnected world in which information travels instantaneously, a company's reputation for performance can impact its standing not just locally, but on the international stage (Sutrisno et al., 2023).

The expected relationship between business process reengineering and performance is characterized by a positive and transformative impact on organizational outcomes (Shahul et al., 2022). BPR involves a systematic and radical rethinking of core business processes, with the aim of enhancing efficiency, effectiveness, and overall performance. By streamlining workflows, optimizing operational procedures, and often incorporating technological advancements, BPR seeks to eliminate inefficiencies and align business practices with strategic objectives (Fetais et al., 2022). Consequently, the anticipated outcome is an improvement in performance metrics such as increased productivity, cost savings, enhanced product or service quality, and heightened competitiveness in the marketplace (Uchena & Joel, 2021). The strategic restructuring and realignment of processes through BPR are expected to contribute synergistically to organizational success, fostering adaptability and responsiveness to changing environments, thereby creating a more agile and high-performing enterprise (Kipkorir, Mutea & Moguche, 2023).

In the United States, BPR is undergoing a notable evolution as organizations increasingly recognize its pivotal role in adapting to dynamic market demands and technological advancements (Harmon, 2019). Organizational restructuring is a key facet, with companies reshaping hierarchies and roles to enhance agility. Process redesign is being leveraged to optimize workflows, fostering efficiency and responsiveness (Virzi, 2019). Simultaneously, a growing emphasis on employee training and development is evident as organizations invest in upskilling their workforce to navigate complex changes associated with BPR. Technology adoption remains a focal point, with companies integrating cutting-edge tools and systems to enhance operational capabilities (Hicks, 2020).

In the United Kingdom (UK), organizational restructuring is evident as companies adapt to the evolving business landscape, optimizing structures to align with strategic objectives (Weerakkody et al., 2021). Process redesign is a focal point, with a keen emphasis on enhancing operational workflows and adapting to changing market dynamics. Employee training and development initiatives are gaining prominence, reflecting a commitment to nurturing a skilled workforce capable of navigating the complexities introduced by BPR (Elapatha & Jehan, 2020). The UK business landscape also showcases a strong focus on technology adoption, with organizations incorporating advanced digital tools and systems to bolster operational efficiency and maintain a competitive edge (Kasemsap, 2020). The British approach to BPR reflects a dynamic synthesis of organizational restructuring, process optimization, employee development, and technological integration, positioning companies to thrive in the rapidly evolving business environment (Fasna & Gunatilake, 2019).

In China, BPR is undergoing a dynamic transformation in line with the country's rapid economic growth and technological advancement (Shahul et al., 2022). Organizational restructuring is a prominent theme, reflecting efforts to align businesses with global standards and enhance competitiveness. Process redesign is a strategic imperative, with a focus on optimizing operations, improving supply chain efficiency, and embracing innovation (Chang et al., 2019). According to Li and Nazif, (2022), China places significant emphasis on employee training and development, investing in skill-building to harness the full potential of its workforce in the context of BPR. Technology adoption is a central driver, as Chinese companies leverage cutting-edge technologies such as artificial intelligence, automation, and digital platforms to revolutionize their processes and gain a substantial competitive advantage (Song et al., 2022).

In Egypt, BPR has been adopted by some sectors, especially the banking sector, to cope with the challenges of globalization, competition, and technological innovation (Siregar, 2021). However, the implementation of BPR in Egypt faces some barriers and difficulties, such as resistance to change, lack of top management support, inadequate communication, and insufficient resources (Hashem, 2020). The success of BPR in Egypt depends on several organizational factors, such as organizational restructuring, process redesign, employee training and development, and technology adoption (Ismail et al., 2022).

In Nigeria, BPR is gaining traction as organizations seek to enhance efficiency, reduce costs, and improve customer satisfaction. Organizational restructuring efforts involve streamlining hierarchies, flattening organizational structures, and establishing cross-functional teams to foster collaboration and break down silos (Ezeh, 2020). Process redesign initiatives focus on identifying and eliminating redundancies, simplifying workflows, and leveraging technology to automate tasks. Employee training and development programs equip workers with the necessary skills and knowledge to adapt to the new processes and technologies (Uchena & Joel, 2021). Technology adoption plays a crucial role in BPR, with organizations implementing enterprise resource planning (ERP) systems, customer relationship management (CRM) solutions, and data analytics tools to enhance process visibility and decision-making capabilities. As BPR continues to evolve in Nigeria, organizations are recognizing its potential to transform their operations and achieve sustainable competitive advantages (Arise & Adegbie, 2021).

In South Africa, organizations are streamlining their hierarchies, flattening structures, and establishing cross-functional teams to foster collaboration and break down silos (Zondo, 2021). This approach enhances communication, decision-making, and overall

organizational agility. Identifying and eliminating redundancies, simplifying workflows, and leveraging technology to automate tasks are key aspects of process redesign in South African organizations (Kunene, 2021). This streamlines operations, reduces cycle times, and minimizes errors thus leading to improved efficiency and cost savings. Investing in employee training and development is crucial for the success of BPR initiatives in South Africa (Fotso, 2020). By equipping workers with the necessary skills and knowledge to adapt to new processes and technologies, organizations ensure a smooth transition and maximize the benefits of BPR. South African organizations are implementing ERP systems, CRM solutions, and data analytics tools to enhance process visibility and decision-making capabilities (Madonsela, 2020).

In Kenya, BPR has been adopted by some sectors, especially the government sector, to reduce operational bureaucracies and provide fast and convenient services to customers (Kamau, Rotich, & Ogollah, 2022). According to the Kenya Vision 2030, BPR projects have been undertaken at the national, ministry, department/agency and county levels. However, the implementation of BPR in Kenya also faces some challenges and risks, such as lack of stakeholder involvement, inadequate change management, poor project management, and insufficient ICT infrastructure (Kipkorir et al., 2023). As BPR continues to evolve in Kenya, organizations are recognizing its potential to transform their operations and achieve sustainable competitive advantages (Ongeri, Magutu, & Litondo, 2020). Through a holistic approach that encompasses organizational restructuring, process redesign, employee training and development, and technology adoption, Kenyan organizations can reap the rewards of BPR and position themselves for success in the global marketplace (Njuguna & Wanjohi, 2021).

1.1.1 Organizational Performance

Organizational performance encompasses various dimensions, including financial metrics, operational efficiency, productivity, innovation, customer satisfaction, and the ability to adapt to changing environments (Adhikara, MF & Nur Diana, 2022). Organizational performance is a comprehensive measure that evaluates how well an organization utilizes its resources, both human and capital, to deliver value to stakeholders (Marchiori et al., 2022). Successful organizational performance implies the strategic alignment of processes, people, and resources to meet or exceed predetermined benchmarks and objectives, contributing to sustained growth, competitiveness, and long-term viability in the marketplace (Al-Qudah et al., 2020).

Researchers have employed diverse methods to measure organizational performance, recognizing the multifaceted nature of this concept. Quantitative approaches often involve financial indicators such as profitability, return on investment, and market share, providing tangible metrics of economic success. Operational measures, such as efficiency ratios and process cycle times, offer insights into the effectiveness of internal processes (Zhai & Tian, 2020). Additionally, researchers frequently assess customer-related metrics, including satisfaction levels and loyalty, to gauge the organization's external impact (Heydari et al., 2020). Qualitative methods, such as case studies and interviews, delve into nuanced aspects of organizational performance, exploring factors like leadership effectiveness, employee engagement, and innovation. Composite indices, like the Balanced Scorecard, integrate multiple dimensions to offer a holistic view (Beer, Micheli & Besharov, 2022).

The present study strategically narrows its focus to key dimensions of organizational performance, emphasizing operational efficiency, cost reduction, and profitability as central measures. Operational efficiency is a fundamental metric as it evaluates the

organization's ability to utilize its resources effectively, ensuring streamlined processes and optimal utilization of manpower and technology. In the highly competitive oil industry, where operational intricacies and logistical challenges abound, assessing efficiency is critical for maintaining a competitive edge. Cost reduction is equally significant, given the industry's susceptibility to fluctuating global oil prices and intense market competition. By scrutinizing cost-cutting strategies, the study aims to provide insights into the firms' ability to manage expenses judiciously and improve their cost-effectiveness. Lastly, profitability is a comprehensive indicator that encapsulates the financial health and sustainability of oil marketing firms. Profits are not only a bottom-line outcome but also reflect the effectiveness of implemented strategies, making it a key measure to assess the overall success and competitiveness of these companies in the dynamic Kenyan oil market.

1.1.2 Oil Marketing Firms in Kenya

Oil marketing firms in Kenya constitute a vital sector within the country's economy, playing a pivotal role in the distribution, sale, and retail of petroleum products. These firms are engaged in the importation, refining, and distribution of various oil-based products, including gasoline, diesel, and lubricants thus catering to the energy needs of businesses and consumers nationwide. The sector is characterized by a competitive landscape with both local and international players striving to meet the growing demand for energy products (Matinde & Atikiya, 2023). Regulatory frameworks, such as those set by the Energy and Petroleum Regulatory Authority (EPRA), govern the operations of oil marketing firms, ensuring compliance with industry standards and promoting fair competition. These companies contribute significantly to Kenya's energy infrastructure, providing essential fuel for transportation, industrial processes, and domestic use, this

makes them integral to the nation's economic development and daily life (Mairim, 2022).

Business process reengineering in oil marketing firms in Kenya involves a strategic overhaul of operational workflows, organizational structures, and technological systems to enhance efficiency, responsiveness, and overall performance in the rapidly evolving energy sector (Njuguna & Wanjohi, 2021). The firms undertake a systematic analysis of their existing processes, ranging from supply chain management and inventory control to customer service and marketing strategies. Organizational restructuring occurs to align with industry best practices and optimize human resources (Arise & Adegbie, 2021). As per Mustansir Shahzad and Malik (2022), process redesign is employed to streamline and automate workflows, often incorporating advanced technologies for inventory tracking, order processing, and customer relationship management. Additionally, employee training and development initiatives may be implemented to ensure that the workforce is equipped with the necessary skills to adapt to the changes introduced by BPR. Ultimately, technology adoption plays a pivotal role, with oil marketing firms leveraging cutting-edge systems to remain competitive, meet regulatory requirements, and address the dynamic demands of the market (Awolusi & Atiku, 2019).

Performance in oil marketing firms in Kenya encompasses various critical aspects, reflecting their effectiveness and success in the dynamic energy sector. Operational efficiency is a key dimension; gauging how well the firms manage supply chains, distribution networks, and internal processes to ensure a seamless flow of petroleum products. Cost reduction is paramount, as these firms strive to optimize expenditures and enhance financial sustainability, implementing strategies that contribute to overall profitability. Profitability is another crucial measure, evaluating the firms' ability to navigate regulatory landscapes, stay abreast of industry trends, and position themselves

strategically in a competitive marketplace, ultimately ensuring a robust and prosperous financial performance.

1.2 Statement of the Problem

Oil marketing firms in Kenya face significant challenges in a rapidly evolving business environment shaped by globalization and internationalization (Mairim, 2022). The dynamic nature of the oil industry places immense pressure on these firms to adapt swiftly to competitive shifts and market transformations, as noted by Matinde and Atikiya (2023). Recent trends in the Kenyan oil market reveal a troubling decline in firm performance, driven by intensified competition, market saturation, and fluctuating consumer demands (Omai, Njeru & Memba, 2018). This decline is evidenced by specific performance metrics—operational efficiency, cost reduction, and profitability which collectively underscore the urgent need for strategic interventions.

A comprehensive industry analysis by Njuguna and Namusonge (2023) reported a 2% decline in overall profitability for oil marketing firms in Kenya between 2020 and 2022, with average profit margins dropping from 5.8% in 2020 to 3.7% in 2022 across major players. This profitability erosion is compounded by operational inefficiencies, as evidenced by a 15% increase in average operational downtime reported by the Petroleum Institute of East Africa (PIEA) in 2022, reflecting delays in supply chain processes and distribution networks. Furthermore, efforts at cost reduction have faltered, with operating costs rising by approximately 12% over the same period due to escalating fuel importation expenses and regulatory compliance burdens (Energy and Petroleum Regulatory Authority [EPRA], 2023). These statistics highlight a clear performance gap, as firms struggle to maintain efficiency and competitiveness in a challenging market.

In response to these pressures, oil marketing firms are compelled to reassess their operational strategies to regain a competitive edge (Majimbo & Namusonge, 2020).

Business process reengineering (BPR) has emerged as a potential solution to address these issues by streamlining processes, reducing costs, and enhancing profitability. However, the extent to which Kenyan oil marketing firms have adopted BPR and its actual impact on their performance remains underexplored. While studies such as Arise and Adegbie (2021), Awolusi and Atiku (2019), and Zondo (2021) have demonstrated BPR's positive effects on efficiency and effectiveness in marketing firms across various sectors, there is a notable lack of research specific to Kenya's oil marketing industry. This gap is particularly critical given the sector's unique challenges, including volatile global oil prices and stringent regulatory frameworks.

This study sought to address this research deficiency by investigating the effect of business process reengineering on the performance of oil marketing firms in Kenya, with a focus on operational efficiency, cost reduction, and profitability. By providing empirical evidence grounded in these performance indicators, the research aims to clarify how BPR can mitigate the documented declines and contribute to sustainable competitive advantage in this vital sector of Kenya's economy.

1.3 Purpose of the Study

The general objective of this study was to establish the effect of business process reengineering on performance of oil marketing firms in Kenya.

1.3.1 Specific Objectives

i. To establish the effect of organizational restructuring on performance of oil marketing firms in Kenya.

ii. To determine the effect of process redesign on performance of oil marketing firms in Kenya.

iii. To assess the effect of employee training and development on performance of oil marketing firms in Kenya.

iv. To examine the effect of technology adoption on performance of oil marketing firms in Kenya

1.4 Research Hypotheses

H_{01}: There is no statistically significant effect of organizational restructuring on performance of oil marketing firms in Kenya.

H_{02}: There is no statistically significant effect of process design on performance of oil marketing firms in Kenya.

H_{03}: There is no statistically significant effect of employee training and development on performance of oil marketing firms in Kenya.

H_{04}: There is no statistically significant effect of technology adoption on performance of oil marketing firms in Kenya.

1.5 Justification of the Study

This study was motivated by the pressing need to address the challenges faced by oil marketing firms in Kenya amid a rapidly changing business landscape. The combination of increased globalization, market saturation, and shifting consumer preferences has intensified competition within the industry, leading to a decline in overall profitability. In response, firms are turning to BPR as a strategic approach to streamline operations, enhance efficiency, and bolster performance. However, while previous research explored the potential benefits of BPR across various industries, there is a notable gap in understanding its specific impact within the context of oil marketing firms in Kenya. By investigating the effect of BPR on performance in this sector, this study sought to contribute new insights into how BPR practices can be tailored to address the unique

challenges and opportunities faced by oil marketing firms in Kenya. By doing so, it aimed to provide valuable guidance to industry stakeholders and policymakers seeking to enhance the competitiveness and sustainability of the oil marketing sector in Kenya.

1.6 Significance of the Study

This study holds significant implications for policy development, particularly in the energy sector and broader economic landscape of Kenya. Insights gained from examining the impact of business process reengineering on oil marketing firms' performance can inform policymakers about the effectiveness of current regulations and provide guidance on potential policy adjustments.

From a practical perspective, this study offers actionable insights for oil marketing firms in Kenya. The focus on operational efficiency, customer satisfaction, and market competitiveness provides practical guidance for firms seeking to enhance their performance. The findings may serve as a roadmap for managers and executives in these firms, informing strategic decisions related to organizational restructuring, process redesign, employee training, and technology adoption.

This study contributes to the existing body of knowledge in the fields of business process reengineering, organizational performance, and management in the context of the oil and energy sector. The exploration of how sub-variables like organizational restructuring, process redesign, employee training, and technology adoption collectively impact performance enriches theoretical frameworks related to these concepts.

1.7 Scope of the Study

The study sought to establish the effect of business process reengineering on performance of oil marketing firms in Kenya. The independent variables were: organizational restructuring, process redesign, employee training and development and

technology adoption while the dependent variable was performance. The study adopted a descriptive research design; the target population of the study was all the 64 oil marketing firms in Kenya which formed the unit of analysis. The unit of observation was all the 64 heads of strategy development or their equivalent. The study was thus a census of all the 64 oil marketing firms in Kenya. The researcher relied exclusively on primary data collected using questionnaires. The study was conducted between May and August 2024.

1.8 Limitations and Delimitations of the Research Study

This study relied on primary data. To reduce the number of probable outliers, the study adopted a structured questionnaire. However, this can raise the challenge of skewed data collection since the projected respondents are limited about how and the kind of information they are expected to divulge in their response. In this regard, the researcher ensured that the data collection tool facilitated collection of comprehensive data, which addressed study objectives with as little bias as possible.

Moreover, some of the projected respondents were skeptical about being participants in the study. The researcher addressed this shortcoming by seeking the necessary permit, consents and approvals from the relevant authorities including but not limited to the university, the oil marketing firms, and the National Commission of Science, Technology, and Innovation (NACOSTI). Moreover, ethical considerations were considered, and respondents enlightened on the same. Lastly, the researcher indicated the willingness to share the finding of the study with any interested respondents.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the theoretical framework which outlines the theories guiding the study, empirical literature which reviewed various studies done by other scholars and researchers on the area of study, the conceptual framework which is a diagrammatic representation of the independent and dependent variables and the research gap that revealed what was not studied in the field of study. In summary, this chapter covers the following: Theoretical framework, empirical literature, research gap and conceptual framework.

2.2 Theoretical Literature Review

This presents a review of the relevant theories that explains the effect of business process reengineering on performance. The theoretical reviews covered are resource-based view theory, change management theory, organizational learning theory and dynamic capabilities theory.

2.2.1 Resource Based View Theory

The resource-based perspective theory, which asserts that a firm's competitive advantage and performance are significantly impacted by its unique combination of resources and capabilities, is ascribed to Barney (1991). According to RBV, resources can be either tangible or intangible, and capabilities refer to the firm's ability to effectively utilize and deploy these resources. In order to contribute to competitive advantage, resources must be valuable, unusual, challenging to replicate, and non-replaceable. According to Dionysus and Arifin (2020) RBV emphasizes the relevance of company heterogeneity and contends that resources and abilities that are unique to the organization and challenging for competitors to duplicate produce sustainable competitive advantage.

Despite being largely accepted, the RBV theory has several critics. It has been noted that there are no clear guidelines on how to identify and evaluate significant resources (Kruesi & Bazelmans, 2023). Determining precisely how resources contribute to competitive advantage and determining their value can be challenging and subjective. Additionally, some have criticized the theory for being unduly firm-centric and underestimating the influence of external factors, such as market dynamics or pressures from other industries, on competitive advantage (Burt & Soda, 2021). According to Gibson, Gibson and Webster (2021), RBV is criticized for not adequately addressing how industry structure and environmental factors impact company performance.

In the context of this study, BPR represents a strategic intervention that reshapes organizational processes and structures, potentially creating distinct competencies. RBV aids in assessing how these transformed processes, such as organizational restructuring function as valuable internal resources that enhance operational efficiency, customer satisfaction, and market competitiveness. By applying RBV, the study gains a theoretical foundation to explore the role of internally-driven capabilities in shaping the competitive advantage and overall performance of oil marketing firms undergoing BPR in the specific context of Kenya's energy sector.

2.2.2 Change Management Theory

This theory was developed in the early 1950s by psychologist Kurt Lewin. The model, often represented as a three-step process of; "unfreeze, change, refreeze," postulates a structured approach to organizational change. The first stage, "unfreeze," involves preparing the organization for change by breaking down existing structures and facilitating a willingness to change. The second stage, "change," entails implementing the actual change, whether it's through new processes, structures, or behaviors. This stage often involves some degree of discomfort as individuals adjust to the new ways of

operating. The final stage, "refreeze," aims to solidify the changes, making them a permanent part of the organizational culture (Cameron & Green, 2019).

While Lewin's Change Management Model is widely recognized and utilized, it has faced criticism for its simplicity and perceived lack of nuance. Some argue that the three-stage process oversimplifies the complexities of organizational change, particularly in today's rapidly evolving and dynamic business environments (Ratana et al., 2020). Critics suggest that the model doesn't sufficiently address the ongoing nature of change, portraying it as a linear and discrete process rather than an iterative and continuous one (Cone & Unni, 2020). Additionally, the "refreeze" stage implies a static state, which may be unrealistic in the context of modern organizations that often need to adapt continuously. Critics also note that the model doesn't delve deeply into the psychological and emotional aspects of change, potentially overlooking the complexities of individual and group responses to organizational transitions (Mahmud et al., 2022).

The model's three stages; unfreezing, changing, and refreezing offer a structured approach that aligns with the transformative nature of BPR initiatives. Unfreezing corresponds to the recognition of the need for change, which may resonate with the initial stages of BPR implementation involving process redesign. The changing stage aligns with the actual implementation of BPR, reflecting the dynamic alterations to processes and structures. Refreezing, while traditionally considered as stabilization, could be adapted to signify the integration and solidification of the BPR-induced changes. By drawing on Lewin's model, the study gains insights into managing the complexities of organizational change during BPR in the specific context of oil marketing firms in Kenya.

2.2.3 Organizational Learning Theory

Organizational Learning Theory, pioneered by Argyris and Schön (1962), focuses on how organizations acquire, interpret, and apply knowledge to improve performance. Argyris and Schön emphasized the importance of both single-loop and double-loop learning. Single-loop learning involves adjusting within existing frameworks to solve problems, while double-loop learning entails questioning and changing the underlying assumptions and values that guide organizational actions. The theory postulates that organizations that actively engage in learning processes are more adaptable, innovative, and better equipped to respond to environmental changes (Crossan et al., 2021). The theory emphasizes the significance of creating a learning culture where individuals and the organization continuously reflect on experiences, learn from successes and failures, and adjust strategies accordingly. It recognizes that learning is a collective and ongoing process, involving individuals, teams, and the entire organization (Antunes & Pinheiro, 2020).

While organizational learning theory offers valuable insights, it is not without criticism. Some argue that the theory may be difficult to implement in practice, particularly in large and complex organizations where communication channels can be challenging to navigate (Zgrzywa-Ziemak & Walecka-Jankowska, 2021). Additionally, the emphasis on learning may be more straightforward for certain types of organizations or industries compared to others Rose et al., 2020). Critics also highlight the need for a supportive organizational structure and leadership that actively promotes and reinforces learning initiatives (Patky, 2020).

Organizational learning theory was relevant to the specific objective of examining the effect of employee training and development on the performance of oil marketing firms in Kenya. This theory emphasizes the importance of continuous learning and adaptation

within organizations to improve performance and maintain competitiveness. In the context of oil marketing firms, where the industry landscape is characterized by rapid changes in technology, market dynamics, and consumer preferences, fostering a culture of learning and development among employees is essential. Through effective training programs and opportunities for skill enhancement, employees can acquire the knowledge and capabilities needed to respond to market challenges, innovate, and drive organizational growth.

2.2.4 Dynamic Capabilities Theory

Teece, Pisano and Shuen (1997) pioneered the dynamic capabilities theory. The theory posits that an organization's ability to adapt, innovate, and reconfigure its resources over time is crucial for sustaining a competitive advantage in a dynamic and rapidly changing environment. The theory emphasizes the importance of organizational routines and processes that facilitate the identification and exploitation of new opportunities while also allowing the organization to adapt to external threats. It suggests that firms with superior dynamic capabilities are better equipped to sense changes in their environment, seize opportunities, and reconfigure their resources and competencies to stay competitive (Kapoor & Aggarwal, 2020).

Critics of the dynamic capabilities theory argue that it can be somewhat ambiguous and lacks clear operationalization, making it challenging for organizations to translate the concept into actionable strategies (Vu, 2020). Some scholars' express concerns about the difficulty in precisely defining and measuring dynamic capabilities, hindering their practical application in strategic management. Additionally, there is debate over whether dynamic capabilities are truly a source of sustained competitive advantage or merely a temporary advantage, with the effectiveness of these capabilities contingent on various contextual factors (Pitelis, 2022). Critics also highlight the potential tension between

exploitation of existing capabilities and exploration of new ones, questioning the theory's guidance on balancing these activities effectively (Cordeiro, Puig & Ruiz-Fernández, 2023).

In the context of BPR, the study sought to investigate how firms cultivate dynamic capabilities by undertaking technology adoption. This theory allows for an exploration of how these capabilities, once developed through BPR interventions, enable the firms to adapt to market shifts, technological advancements, and regulatory changes, thereby influencing their overall performance, competitiveness, and long-term sustainability in the dynamic oil marketing industry of Kenya.

2.3 Empirical Literature Review

This section reviews the relevant studies relating to business process reengineering and performance. It also provides a framework for establishing the importance of the study as well as benchmark for comparing the result with other findings. It gives an overview of the literature showing the research gap to be filled.

2.3.1 Organizational Restructuring on Performance of Oil Marketing Firms

Ramdani et al. (2021) sought to synthesize findings from multiple studies to provide a comprehensive understanding of the impact of organizational downsizing on firm performance across various industries in Australia. The study aggregated data from a range of empirical studies on organizational downsizing in Australia, encompassing diverse industries and geographical regions. Effect sizes were calculated to determine the overall impact on performance metrics, including financial indicators and market competitiveness. The meta-analysis revealed a nuanced relationship between downsizing and performance in Australia. While downsizing was associated with short-term cost reductions, its impact on long-term performance varied across industries.

Hicks (2020) aimed to investigate the effects of organizational restructuring on the performance of aviation safety in the United States. The primary objective was to assess whether restructuring efforts positively influenced key performance indicators such as productivity, cost efficiency, and overall profitability. The research utilized a longitudinal design, analyzing financial data from a sample of manufacturing firms in the United States over a five-year period. Quantitative measures, including financial ratios and productivity metrics, were employed to evaluate performance. In-depth interviews with top-level executives were also conducted to gather qualitative insights into the restructuring strategies implemented. The study revealed a positive correlation between organizational restructuring and firm performance of the U.S. aviation safety. Companies that strategically restructured experienced improvements in productivity and cost-effectiveness, leading to enhanced overall financial performance.

Kleibert and Mann (2020) purposed to compare different models of organizational restructuring within the Information Technology (IT) industry and assess their varying impacts on organizational performance in India. A mixed-methods approach was employed, involving both quantitative analysis of financial data and qualitative case studies. The quantitative aspect involved analyzing financial statements and performance metrics of IT companies in India that had undergone restructuring. Qualitative data were collected through interviews and organizational case studies to gain a deeper understanding of the restructuring processes implemented. The study identified that the choice of restructuring model significantly influenced performance outcomes in the Indian IT industry. While certain models led to short-term gains in efficiency, others showed long-term benefits in terms of innovation and adaptability.

Foster et al. (2019) aimed to explore the impact of organizational restructuring on employee perceptions and how these perceptions, in turn, influenced organizational

performance in Canada. The study utilized a mixed-methods design, combining surveys to collect quantitative data on employee perceptions and attitudes with qualitative interviews to gather in-depth insights. Organizational performance metrics, such as productivity and employee turnover rates, were also analyzed. The study revealed that employees' perceptions during restructuring played a crucial role in subsequent performance outcomes in Canada. Positive perceptions, such as perceived fairness in the restructuring process and clear communication, were associated with better employee morale and, consequently, improved organizational performance.

Ingow and Opuodho (2019) pursued to evaluate how Sacco's financial performance in Kenya is affected by organization restructuring. Population targeted by the survey included all the licensed Kiambu County SACCOS by the last month of 2015 by Ministry of Trade, industry and Co-operatives as well as the Sacco Societies Regulatory Authority. The study consisted of 35 SACCOS being the total population. Primary and secondary data was collected. Data processing took place and later analysis were conducted through descriptive statistics along with correlation analysis. The findings showed capital restructuring having a substantial and helpful impact on SACCOS' financial performance in Kenya. Additionally, the research showed a negative although significant effect of asset restructuring to financial performance of Kenyan SACCOs.

2.3.2 Process Redesign on Performance of Oil Marketing Firms

Aloini et al. (2023) aimed to investigate the effects of process redesign on the performance of healthcare firms in Germany. The primary objective was to assess whether process redesign positively influenced key performance indicators such as patient satisfaction, operational efficiency, and overall organizational effectiveness. The research utilized a mixed-methods design, incorporating quantitative analysis of patient outcome data and qualitative case studies. Surveys were administered to patients to

gauge satisfaction levels, while internal operational metrics were analyzed to evaluate efficiency improvements resulting from process redesign. The study revealed a positive correlation between process redesign and firm performance in the German healthcare sector. Healthcare organizations that strategically redesigned their processes experienced improvements in patient satisfaction and operational efficiency, contributing to enhanced overall organizational performance.

Shahul et al. (2022) aimed at investigating the impact of business process reengineering on organizational performance during the coronavirus pandemic and assess their varying impacts on organizational performance. A combination of quantitative analysis and qualitative case studies was employed. The quantitative aspect involved analyzing operational data and performance metrics of manufacturing companies in Japan that had undergone process redesign. Qualitative data were collected through interviews and case studies to provide deeper insights into the process redesign strategies implemented. The study discovered business process reengineering significantly influenced performance outcomes. While certain models led to short-term gains in efficiency, others showed long-term benefits in terms of product quality and innovation.

Elapatha and Jehan (2020) aimed to explore the impact of process redesign on employee perceptions and how these perceptions influenced organizational performance in the public services sector in the United States. The study utilized a mixed-methods design, combining surveys to collect quantitative data on employee perceptions and attitudes with qualitative interviews. Operational metrics, such as transaction processing times and customer satisfaction scores, were also analyzed to assess performance outcomes. The study revealed that employee perceptions during process redesign played a crucial role in subsequent performance outcomes in the U.S. public services sector. Positive perceptions, such as involvement in the redesign process and perceived improvements in

work efficiency, were associated with better employee morale and, consequently, improved organizational performance.

Fasna and Gunatilake (2019) sought to synthesize findings from multiple studies to provide a comprehensive understanding of the impact of process redesign on firm performance in the retail industry in the United Kingdom. The study aggregated data from various empirical studies on process redesign in the UK retail industry, encompassing diverse retail segments. Effect sizes were calculated to determine the overall impact on performance metrics, including customer satisfaction, operational efficiency, and financial performance. The meta-analysis revealed a positive overall association between process redesign and firm performance in the UK retail industry. Retail companies that strategically redesigned their processes experienced improvements in customer satisfaction and operational efficiency. However, the impact on financial performance varied across retail segments.

Ongeri et al. (2020) aimed to explore the relationship between strategic process redesign and firm innovation, assessing whether process redesign initiatives contributed to increased innovation within technology firms in Kenya. A cross-sectional survey design was employed, gathering data from a diverse sample of technology firms in Kenya representing various subsectors. The study assessed the level of process redesign, measured by specific strategic initiatives, and correlated these with innovation outcomes, including product development and market differentiation. The research found a positive association between strategic process redesign and firm innovation in the Kenyan technology sector. Companies that strategically redesigned their processes, particularly by investing in research and development and fostering a culture of innovation, demonstrated higher levels of creativity and adaptability.

2.3.3 Employee Training and Development on Performance of Oil Marketing Firms

Arwab et al. (2022) aimed to investigate the effects of employee training and development on the performance of hospitality firms in Jamaica. The primary objective was to assess whether training and development initiatives positively influenced key performance indicators such as customer satisfaction, employee retention, and overall organizational effectiveness. The research utilized a mixed-methods approach, incorporating surveys to measure customer satisfaction and employee retention rates. In-depth interviews and focus group discussions were conducted to gather qualitative insights into the perceived impact of training and development on employee performance and overall organizational success. The study revealed a positive correlation between employee training and development and firm performance in Jamaica the hospitality industry. Hospitality organizations that invested strategically in training and development experienced improvements in customer satisfaction and employee retention, contributing to enhanced overall organizational performance.

Pilz and Wiemann (2021) aimed to compare different models of employee training and development within the manufacturing sector in Germany and assess their varying impacts on organizational performance. A mixed-methods design was employed, involving quantitative analysis of employee performance metrics and qualitative case studies. Surveys were administered to employees to gauge their satisfaction with training programs, while operational data were analyzed to evaluate the impact on productivity and efficiency. The study identified that the choice of employee training and development model significantly influenced performance outcomes in the German manufacturing sector. While certain models led to improved productivity and skill development, others showed long-term benefits in terms of employee morale and engagement.

Hussain et al. (2020) aimed to explore the impact of employee training and development on perceptions and how these perceptions influenced organizational commitment of academicians in Pakistan. The study utilized a mixed-methods design, combining surveys to collect quantitative data on employee perceptions and attitudes with qualitative interviews. Organizational performance metrics, such as customer service ratings and employee productivity, were also analyzed to assess overall performance outcomes. The study revealed that employee perceptions of training and development played a crucial role in subsequent performance outcomes in the commitment of academicians in Pakistan. Positive perceptions, such as opportunities for skill enhancement and career development, were associated with better employee morale and, consequently, improved organizational performance.

Al Aina and Atan (2020) sought to synthesize findings from multiple studies to provide a comprehensive understanding of the impact of employee training and development on firm performance in the real estate industry in the United Kingdom. The study aggregated data from various empirical studies on employee training and development in the UK real estate industry, encompassing diverse retail segments. Effect sizes were calculated to determine the overall impact on performance metrics, including customer satisfaction, employee retention, and financial performance. The meta-analysis revealed a positive overall association between employee training and development and firm performance in the UK real estate industry. Real estate companies that strategically invested in training and development experienced improvements in customer satisfaction, employee retention, and overall financial performance.

Mudanya (2019) aimed to explore the relationship between strategic employee training and development and firm innovation, assessing whether training initiatives contributed to increased innovation within pension scheme providers in Kenya. A cross-sectional

survey design was employed, gathering data from a diverse sample of pension scheme providers in Kenya representing various subsectors. The study assessed the level of employee training and development, measured by specific strategic initiatives, and correlated these with innovation outcomes, including product development and market differentiation. The research found a positive association between strategic employee training and development and firm innovation in the Kenyan pension scheme providers. Companies that strategically invested in employee training and development, particularly by fostering a culture of continuous learning, demonstrated higher levels of creativity and adaptability.

2.3.4 Technology Adoption on Performance of Oil Marketing Firms

Park and Shintaku (2022) aimed to investigate the effects of technology adoption on the performance of automotive firms in Japan. The primary objective was to assess whether adopting new technologies positively influenced key performance indicators such as production efficiency, product innovation, and overall organizational competitiveness. The research employed a mixed-methods approach, combining quantitative analysis of production data and qualitative case studies. Surveys were administered to assess the perceived impact of technology adoption on innovation, while operational metrics were analyzed to evaluate efficiency improvements resulting from the adoption of new technologies. The study revealed a positive correlation between technology adoption and firm performance in the Japanese automotive industry. Companies that strategically adopted new technologies experienced improvements in production efficiency and product innovation, contributing to enhanced overall organizational competitiveness.

Diener and Špaček (2021) aimed to explore the impact of technology adoption on employee perceptions and how these perceptions influenced organizational performance in the banking sector in Germany aimed to explore the impact of technology adoption on

employee perceptions and how these perceptions influenced organizational performance in the banking sector in Germany. The study revealed that employee perceptions during technology adoption played a crucial role in subsequent performance outcomes in the German banking sector. Positive perceptions, such as ease of use and perceived improvements in work efficiency, were associated with better employee morale and, consequently, improved organizational performance.

Perera (2021) sought to synthesize findings from multiple studies to provide a comprehensive understanding of the impact of technology adoption on firm performance in the retail industry in Sri Lanka. The study aggregated data from various empirical studies on technology adoption in Sri Lanka retail industry, encompassing diverse retail segments. Effect sizes were calculated to determine the overall impact on performance metrics, including customer satisfaction, operational efficiency, and financial performance. The meta-analysis revealed a positive overall association between technology adoption and firm performance in Sri Lanka retail industry. Retail companies that strategically adopted new technologies experienced improvements in customer satisfaction, operational efficiency, and overall financial performance.

Lakhwani et al. (2020) aimed to compare different models of technology adoption within the Information Technology (IT) sector in the Peru and assess their varying impacts on organizational performance. A mixed-methods design was employed, involving quantitative analysis of financial data and qualitative case studies. The quantitative aspect involved analyzing financial statements and performance metrics of IT companies in Peru that had adopted new technologies. Qualitative data were collected through interviews and case studies to provide deeper insights into the technology adoption strategies implemented. The study identified that the choice of technology adoption model significantly influenced performance outcomes in the Peru IT sector. While

certain models led to short-term gains in efficiency, others showed long-term benefits in terms of market competitiveness and innovation.

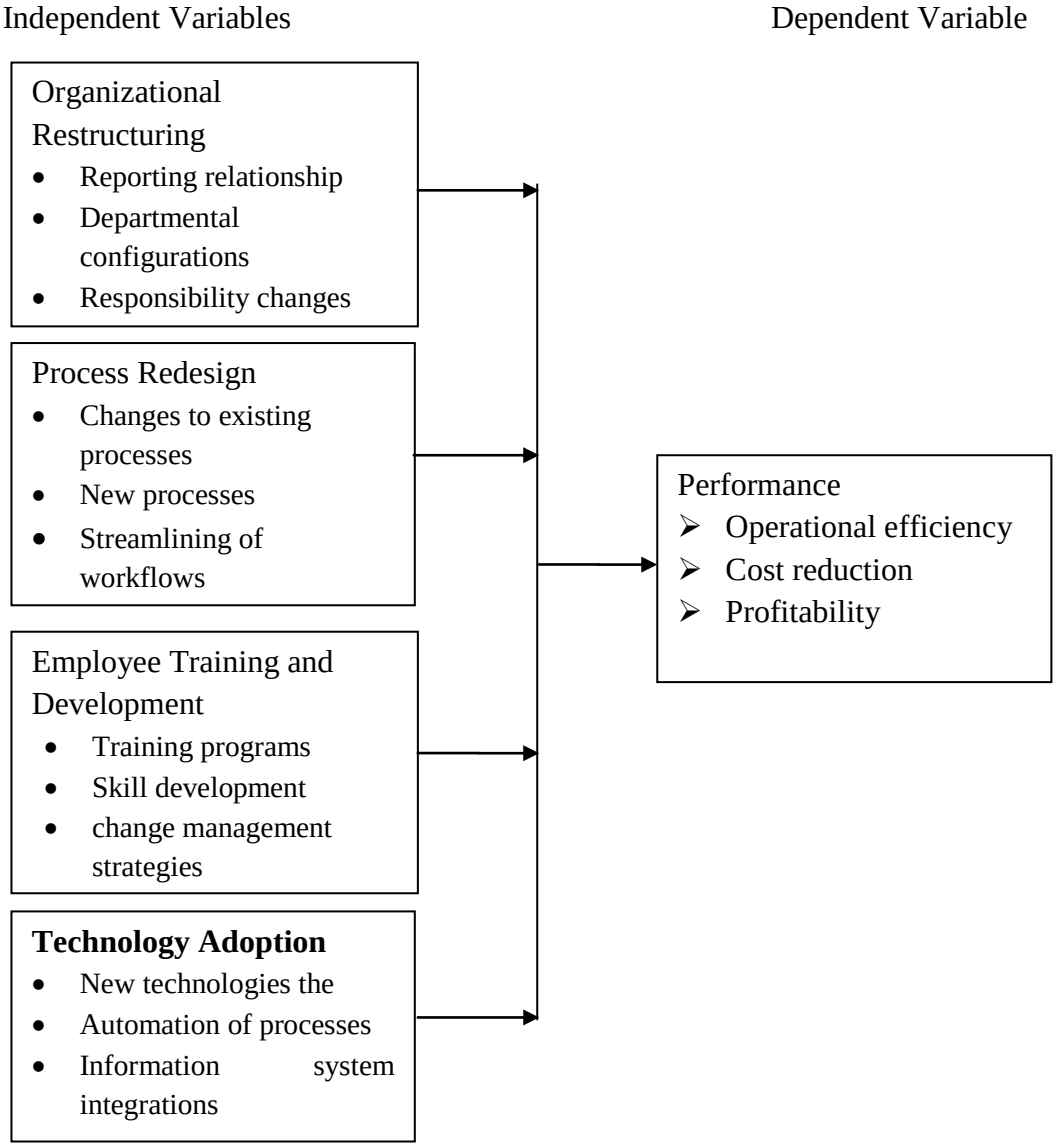
Okoro (2021) aimed to explore the relationship between strategic technology adoption and firm innovation, assessing whether technology adoption initiatives contributed to increased innovation within telecommunication firms in Kenya. A cross-sectional survey design was employed, gathering data from a diverse sample of technology firms in Kenya representing various subsectors. The study assessed the level of technology adoption, measured by specific strategic initiatives, and correlated these with innovation outcomes, including product development and market differentiation. The research found a positive association between strategic technology adoption and firm innovation in the Kenyan Telecommunication sector. Companies that strategically adopted new technologies, particularly by investing in research and development and fostering a culture of innovation, demonstrated higher levels of creativity and adaptability.

2.4 Conceptual Framework of the Research Study

According to Cooper and Schindler (2018), a conceptual framework is a diagrammatic presentation of the hypothesized relationship between the study variables. The conceptual framework of the research study consisted of the independent and dependent variable. In this study, the independent variables comprised of organizational restructuring, process redesign, employee training and development and technology adoption while the dependent variable was performance. Figure 2.1 exhibits the conceptual model for the study.

Figure 1

Conceptual Framework



Source: Researcher, 2024

2.5 Research Gaps

The reviewed empirical literature points to the positive effect of business process reengineering on performance but there exist research gaps. Firstly, the existing literature on BPR in the context of oil marketing firms in Kenya was limited, indicating a need for more focused research in this specific industry. Understanding how BPR is implemented and its impact on performance within the unique operational and regulatory environment

of oil marketing firms in Kenya was crucial for providing targeted insights and recommendations.

In addition, the study explored the role of contextual factors in shaping the outcomes of BPR initiatives. A deeper analysis of these contextual variables could enhance the understanding of why certain BPR initiatives succeed or fail in the oil marketing sector in Kenya. The current study intended to fill these research gaps by investigating the effect of organizational restructuring, process redesign, employee training and development and technology adoption on performance among oil marketing firms in Kenya.

Table 1 provides a summary of the studies done, the methods employed by the researchers, its findings and the research gaps.

Table 1

Summary of Research Gaps

Study	Methodology	Research Findings	Research Gap
Effects of process redesign on the performance of healthcare firms in Germany Aloini et al. (2023)	Descriptive Cross-sectional	The study revealed a positive correlation between process redesign and firm performance in the German healthcare sector.	The study focus was process redesign on the performance of healthcare firms in Germany. The healthcare firms is different from the oil marketing due to the scope of activities involved and the importance of the sector in achieving social economic development of the country.
Effects of employee training and development on the performance of hospitality firms in Jamaica Arwab et al., 2022)	Descriptive cross-sectional	The study revealed a positive correlation between employee training and development and firm performance in Jamaica the hospitality industry.	The study focus was effect of employee training and development on performance thus conceptual gap
Effects of technology adoption on the performance of automotive firms in Japan Park & Shintaku, 2022)	Ordinary least square	Companies that strategically adopted new technologies experienced improvements in production efficiency and product innovation, contributing to enhanced overall organizational competitiveness	Focus on technology adoption depicting a conceptual gap
Investigate impact of business process reengineering on organizational performance during the coronavirus pandemic Shahul et al. 2022)	Descriptive cross-sectional	The study discovered business process reengineering significantly influenced performance outcomes.	The study was done in developed nations indicting the results cannot be generalized in Kenya and thus contextual gap
Impact of technology adoption on employee perceptions and how these perceptions influenced organizational performance in the banking sector in Germany Diener & Špaček, 2021)	Ordinary least square	The study revealed that employee perceptions during technology adoption played a crucial role in subsequent performance outcomes in the German banking sector.	Focus on banking sector depicting contextual gap

compare different models of employee training and development within the manufacturing sector in Germany (Pilz & Wiemann, 2021)	Descriptive cross-sectional	The study identified that the choice of employee training and development model significantly influenced performance outcomes in the German manufacturing sector	The research focus was on models of employee training in within the manufacturing sector in Germany while the current research focus is Oil marketing presenting conceptual and contextual gaps
Explore the relationship between strategic technology adoption and firm innovation by telecommunication firms in Kenya Okoro, 2021)	Ordinary least square	The research found a positive association between strategic technology adoption and firm innovation in the Kenyan Telecommunication sector.	Focus on telecommunication sector depicting contextual gap
Impact of employee training and development on firm performance in the real estate industry in the United Kingdom Al Aina & Atan (2020)	Literature review	The meta-analysis revealed a positive overall association between employee training and development and firm performance in the UK real estate industry.	Focus on real estate industry which is different from Oil marketing sector in Kenya
Influence of training and development on organizational commitment of academicians in Pakistan. Hussain et al. (2020)	Descriptive and correlation analysis	The study revealed that employee perceptions of training and development played a crucial role in subsequent performance outcomes in the commitment of academicians in Pakistan	The focus of the study was Pakistan whose economic setting is diverse from that of Oil marketing sector in Kenya
An analysis of the implementation of business process re-engineering in public services (Elapatha & Jehan (2020)	Ordinary least square	The study revealed that employee perceptions during process redesign played a crucial role in subsequent performance outcomes in the U.S. financial services sector	The study focused on public service while the current study will focus on Oil marketing firms in Kenya.
Compare different models of organizational restructuring within the Information Technology (IT) industry and assess their varying impacts on organizational performance in India (Kleibert & Mann 2020)	Descriptive and inferential analysis	The study identified that the choice of restructuring model significantly influenced performance outcomes in the Indian IT industry.	The focus of the study was India IT industry whose economic setting is diverse from that of Oil marketing sector in Kenya

Impact of technology adoption on organizational productivity Lakhwani et al. (2020)	Ordinary least square	The study identified that the choice of technology adoption model significantly influenced performance outcomes in the Peru IT sector	The study was carried out in Peru whose economic setting is diverse from that of Oil marketing sector in Kenya
Business Process Re-Engineering Strategy: It's Impact on the Performance of Companies Manufacturing Food in Kenya Ongeri et al. (2020)	Descriptive cross-sectional	The research found a positive association between strategic process redesign and firm innovation in the Kenyan technology sector	The research focused on manufacturing firms while the current research focus is Oil marketing sector in Kenya
Sought to evaluate impact of organizational downsizing on firm performance across various industries in Australia (Ramdani et al. (2021)	Literature review	The meta-analysis revealed a nuanced relationship between downsizing and performance in Australia	The study was an literature review and thus methodological gap
Issues in implementing Business Process Reengineering (BPR) projects. Fasna & Gunatilake (2019)	Ordinary least square	Retail companies that strategically redesigned their processes experienced improvements in customer satisfaction and operational efficiency	The study was an literature review and thus methodological gap
Effects of organizational restructuring on the performance of aviation safety in the United States (Hicks, 2020).	Ordinary least square	The study revealed a positive correlation between organizational restructuring and firm performance of the U.S. aviation safety	The research was done in United States whose economic environment is diverse from that of the current study
Effect of corporate restructuring on financial performance of SACCOS in Kenya (Ingow & Opuodho (2019)	Regression analysis	The findings showed capital restructuring having a substantial and helpful impact on SACCOS' financial performance in Kenya.	The study was done in SACCOS in Kenya whose economic environment is diverse from that of the current study

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology elucidates the systematic protocols that are followed to arrive at results that can effectively address the study objectives and the questions the study aims to answer. In this regard, this chapter covered the research design that guided the study. Others included target population, sampling design, data collection instrument and procedure, and lastly the data collection and analysis and presentation of findings.

3.2 Research Design

Research design refers to a detailed outline of how the research will take place. It specifies the methods and procedures that will be used to collect and analyze data (Kothari, 2017). The study adopted a descriptive research design to determine the effect of business process reengineering on performance. A descriptive research design gives way for an in-depth breakdown and understanding of a specific phenomenon as it is in the present condition (Cooper & Schindler, 2018). In descriptive survey research design, organization goals are predetermined giving data gathering relevant and effective to the research problem (Kothari, 2017). Descriptive design was used to describe variables of the study namely organizational restructuring, process redesign, employee training and development and technology adoption as well as performance in terms of their mean and standard deviations.

3.3 Target Population

Population is the total subject sharing common characteristics (Kothari, 2017). In respect of this study, population of the study was the 64 oil marketing firms in Kenya as presented in Appendix II. The unit of analysis was 64 oil marketing firms, and the unit of observation was 64 heads of strategy or their equivalent who were the respondents in the

study. The decision to select heads of strategy as the sole respondents was informed by their pivotal role in overseeing BPR initiatives, as well as their comprehensive understanding of firm performance metrics. Heads of strategy are typically responsible for formulating and implementing strategic initiatives, including BPR, which directly influence operational efficiency, cost reduction, and profitability, the key performance indicators examined in this study.

Their position at the intersection of decision-making and performance evaluation equips them with a holistic view of how BPR affects organizational outcomes, making them uniquely qualified to provide reliable and authoritative insights. While other stakeholders, such as operational managers or finance officers, could offer valuable perspectives on specific aspects of performance (e.g., process execution or financial outcomes), heads of strategy were prioritized due to their ability to integrate these dimensions into a broader strategic context.

3.4 Sampling and Sampling Design

Sampling is the process of selecting enough elements from the population, so that a study of the sample and an understanding of its characteristics would make it possible for us to generalize (Khan 2018). Since the target population was small the study adopted a census technique. Census was adequate enough as it captured all the targeted 64 heads of strategy of the oil marketing firms in Kenya.

3.5 Data Collection Instrument

Data collection instruments refer to the tool utilized in obtaining data (Khan, 2018). Questionnaires were used in collecting primary data. According to Burns and Burns (2018), questionnaires are the most suitable tools for facilitating collection of data in surveys with dispersed populations. The study utilized a semi-structured questionnaire containing both open ended and closed ended questions. Structured questionnaires

enabled collection of numerical data which were measured using interval scale. In addition, the data items were on a 5-point Likert scale and were ensured to be both precise and explicit in order to mitigate probable ambiguity to the projected respondents. The open-ended questions enabled the researcher to obtain more information from the respondents.

3.6 Data Collection Procedure

Data collection procedure is the process of gathering empirical evidence to gain new insights about a situation and answer questions that prompt undertaking of the research (Cooper & Schindler, 2018). Before commencing data collection, the researcher sought approval from Kabarak University and proceeded to obtain approval from the National Commission for Science, Technology, and Innovation (NACOSTI).

Once the necessary approvals were obtained, the researcher contacted the heads of strategy of the 64 oil marketing firms in Kenya. Initial contact was made via email, which included an introductory letter explaining the purpose of the study, the approvals obtained, and a request for participation. Follow-up phone calls were made to ensure that the emails had been received and to address any initial questions or concerns. The data collection process was staged as follows to ensure a seamless procedure: The researcher sent out the questionnaire via Google Forms to the 64 heads of strategy, including detailed instructions on how to complete and submit the form. A two-week window was provided for the respondents to complete the online questionnaire. During the two-week period, the researcher monitored the response rate. Reminder emails and follow-up phone calls were made to encourage participation and address any difficulties in accessing or completing the online form.

3.7 Pilot Study

A pilot study is important in establishing the accuracy and relevance of the research instrument and is also critical in determining the feasibility of conducting the complete study. According to Burns and Burns (2018), extant literature suggests that a pilot study sample should be 10% of the sample projected for the larger parent study, as such, the pilot study involved 6 of the target respondents (10% of the target population) who filled the questionnaires and its accuracy tested. The 6 respondents were not involved in the final study to ensure non-compromise of the research data. The respondents helped to estimate the time needed to fill in the questionnaires and identify errors to be corrected. The pilot study established the strength or weakness of the study. Prior testing was established to assist to determine accuracy, clarity, and suitability of the study tool.

3.7.1 Validity of Research Instruments

Validity of an instrument relates to the ability of the instrument to measure the construct as purported (Cooper & Schindler, 2018). Construct validity was used to measure whether the operational definition of variables actually reflects the true theoretical meaning of a concept. For the purposes of this study, the questionnaire was developed based on similar prior studies with modifications aimed at addressing the study objectives. Content validity was confirmed through the guidance of the expert opinion. This included the supervisors, whose scrutiny and competent opinions ensured that the questionnaire covered all the study variables. They also double checked the document to ensure that the theoretical dimensions emerged as conceptualized.

3.7.2 Reliability of the Research Instruments

Reliability is the extent to which results are free from error or degree to which a research instrument yields consistent results (Cooper & Schindler, 2018). Test of reliability is carried out to check the internal consistency of data measurement instrument. The

Cronbach alpha was used to ascertain the reliability of the research instrument. Cronbach's Alpha is important to a researcher since the researcher is able to know if the instruments will give reliable and consistent responses even if the questions are replaced with similar ones. A variable is stable if it gives similar responses from a similar set of questions. The true score, also referred to as 'Alpha' has values ranging from 0 to 1. It can also be used to express reliability on questions with two possible answers (dichotomous questions) and questionnaires with rating scales. A high score indicates high reliability, while the value of 0.7 has been accepted as an adequate coefficient of reliability or value of Alpha (Khan, 2018). The reliability test results for this study are as shown in Table 2.

Table 2

Reliability Results

Variables	Items	Cronbach Alpha	Remark
Organizational restructuring	12	.859	Reliable
Process redesign	12	.782	Reliable
Employee training and development	12	.807	Reliable
Technology adoption	12	.826	Reliable
Organizational performance	12	.914	Reliable

3.8 Data Analysis and Presentation

Data analysis for this study involved both descriptive and inferential statistical techniques to explore the relationships between the study variables. Descriptive statistics, including the mean and standard deviation, were computed to summarize the characteristics of the variables—organizational restructuring, process redesign, employee training and development, technology adoption, and firm performance. The results were presented using statistical tools such as frequency distribution tables to facilitate clear

interpretation. Qualitative data, where applicable, was analyzed through content analysis to identify recurring themes and patterns.

Inferential statistics were employed to examine the relationships between the independent variables (organizational restructuring, process redesign, employee training and development, and technology adoption) and the dependent variable (firm performance). First, the strength of the relationship between each independent variable and the dependent variable was assessed individually using the coefficient of correlation (Pearson's r). To further explore these relationships, four simple linear regression models were conducted, each testing the effect of one independent variable on firm performance. These models were specified as follows:

Model 1: Organizational Restructuring $Y = \beta_0 + \beta_1 X_1 + \varepsilon$

Where: Y = Performance, X_1 = Organizational Restructuring, β_0 = Constant, β_1 = Regression Coefficient, ε = Error Term

Model 2: Process Redesign $Y = \beta_0 + \beta_2 X_2 + \varepsilon$

Where: Y = Performance, X_2 = Process Redesign, β_0 = Constant, β_2 = Regression Coefficient, ε = Error Term

Model 3: Employee Training and Development $Y = \beta_0 + \beta_3 X_3 + \varepsilon$

Where: Y = Performance, X_3 = Employee Training and Development, β_0 = Constant, β_3 = Regression Coefficient, ε = Error Term

Model 4: Technology Adoption $Y = \beta_0 + \beta_4 X_4 + \varepsilon$

Where: Y = Performance, X_4 = Technology Adoption, β_0 = Constant, β_4 = Regression Coefficient, ε = Error Term

Following the individual analyses, a multiple linear regression model was employed to assess the combined effect of all four independent variables on firm performance. This

comprehensive model allowed for the examination of the relative contributions of each predictor while controlling for the others. The empirical model adopted was:

$$Y=\beta_0 + \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_{4+}\varepsilon$$

Where:

Y represents 'performance'

β_0 represents 'Constant'

X_1 represents 'organizational restructuring'

X_2 represents 'process redesign'

X_3 represents 'employee training and development'

X_4 represents 'Technology adoption'

ε represents 'Error Term'

$\beta_1, \beta 2, \beta_3, \beta_4$ represent 'Regression Coefficients of Predictor Variables

3.8.1 Diagnostic Tests

To ensure the reliability and validity of the regression analyses conducted in this study, diagnostic tests were planned to assess the underlying assumptions of the statistical models. These tests include normality, multicollinearity, and heteroskedasticity assessments, which are critical for confirming that the data and model meet the prerequisites for accurate and unbiased regression results. By conducting these tests, the study aimed to validate the robustness of the findings and ensure that the statistical inferences drawn from the simple and multiple linear regression models were trustworthy. The results of these diagnostic tests were to be analyzed using the Statistical Package for Social Sciences (SPSS) and presented in Chapter 4 to support the integrity of the regression outcomes.

The first diagnostic test focused on normality, which examines whether the data for the study variables organizational restructuring, process redesign, employee training and development, technology adoption, and organizational performance follow a normal distribution. Normality is a key assumption for parametric tests like regression analysis, as significant deviations can affect the accuracy of the results. The Shapiro-Wilk test was selected for this purpose due to its suitability for smaller sample sizes, such as the 64 respondents in this study. This test evaluates the null hypothesis that the data are normally distributed, with a significance value ($p > 0.05$) indicating conformity to normality. The outcomes of this test were intended to confirm whether the use of regression analysis was appropriate for the dataset collected via questionnaires.

The second diagnostic test addressed multicollinearity, which assesses the degree of correlation among the independent variables (organizational restructuring, process redesign, employee training and development, and technology adoption). High multicollinearity can inflate the variance of regression coefficients, leading to unreliable estimates and reduced statistical power. To detect this, the Variance Inflation Factor (VIF) and Tolerance statistics were to be calculated for each independent variable. A VIF value below 10 and a Tolerance value above 0.1 would indicate acceptable levels of multicollinearity, ensuring that the independent variables could be reliably included in the regression models. This test was crucial for validating the independence of the predictors in both the simple and multiple regression analyses.

The third diagnostic test targeted heteroskedasticity, which examines whether the variance of the residuals in the regression model remains constant across all levels of the independent variables. Heteroskedasticity, if present, can lead to inefficient estimates and compromise the validity of statistical inferences. The Breusch-Pagan / Cook-Weisberg test was chosen to evaluate this assumption, testing the null hypothesis of

homoscedasticity (constant variance). A p-value greater than 0.05 would suggest no significant heteroskedasticity, supporting the efficiency of the regression estimates. This test was planned to ensure that the regression models used in the study both simple and multiple produced reliable and interpretable results, thereby strengthening the overall findings on the effect of business process reengineering on firm performance.

3.9 Ethical Considerations

Research ethics involve the application of fundamental ethical principles to research activities which include the design and implementation of research (Khan, 2018). Requisite permits, consents, and approvals were sought before data collection. Authority to do the research study was attained from the school and a research authorization/permit letter from the National Commission for Science, Technology, and Innovation (NACOSTI) was sought. Finally, approval to do the study in the oil marketing firms was sought from the management. Having determined both the reliability and the validity of the study-specific data collection tool, the principal investigator disbursed questionnaires, which were self-administered. Upon collection, the questionnaires were screened, and data analysis done. All identifiable information was removed from the datasets to maintain respondent confidentiality. The de-identified data was stored securely in accordance with institutional policies and regulatory requirements.

There was a risk of a low response rate, which could impact the representativeness and validity of the findings. To address this, the researcher employed a staged data collection approach, including follow-up emails and phone calls, and the distribution of hard copy questionnaires as needed. Further, respondents were hesitant to share information due to concerns about confidentiality and the potential misuse of data. To mitigate this risk, the researcher ensured strict adherence to confidentiality protocols and clearly communicated the measures taken to protect respondent data.

CHAPTER FOUR

DATA ANALYSIS PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter presents the results and findings of the study on the effect of business process reengineering on the performance of oil marketing firms in Kenya. This chapter covers the response rate and demographic data of the respondents, followed by a detailed analysis of descriptive statistics. Additionally, it includes diagnostic tests, correlation analysis, and regression analysis to establish the relationship between the dependent and independent variables.

4.2 Response Rate

Response rate is a crucial metric in survey-based research, indicating the proportion of respondents who completed and returned the questionnaires out of the total number initially distributed. It is a key indicator of the reliability and validity of the data collected, as a higher response rate generally enhances the representativeness of the sample, thereby ensuring that the findings can be generalized to the larger population. As illustrated in Table 3, the response rate is calculated by dividing the number of returned questionnaires by the total distributed and then multiplying by 100 to get a percentage.

Table 3

Response Rate

Response Rate	Frequency	Percent
Returned	48	82.8%
Unreturned	10	17.2%
Total	58	100

In this study, 48 out of 58 questionnaires were returned, resulting in a response rate of 82.8%. The response rate of 82.8% in this study is considered robust and acceptable in

social science research, indicating a high level of engagement from the targeted respondents, which in this case, are the heads of strategy development in oil marketing firms in Kenya. This high response rate reduces the risk of non-response bias, ensuring that the data collected is reflective of the perspectives and experiences of the majority of the population under study. Consequently, the findings derived from this data are likely to be accurate and reliable, providing valuable insights into the effect of business process reengineering on the performance of oil marketing firms in Kenya. The 17.2% of unreturned questionnaires, while not ideal, is within an acceptable range and does not significantly undermine the study's overall validity.

4.3 Demographic Data

This section presents the demographic data of the participating firms, focusing on the number of employees as a key characteristic. Understanding the size of the firms in terms of their workforce is essential, as it can influence various aspects of the business process reengineering and overall performance. Table 4 provides a breakdown of the firm's sizes based on the number of employees, allowing for an analysis of how firm size may relate to the implementation and outcomes of business process reengineering initiatives.

Table 4

Number of Employees in the Firm

Number	Frequency	Percentage
100 employees or less	8	16.7%
101-200 employees	11	22.9%
201-500 employees	23	47.9%
More than 500 employees	6	12.5%
Total	48	100

The results indicate that the majority of the oil marketing firms in the study have a workforce of 201-500 employees, accounting for 47.9% of the respondents. This is

followed by firms with 101-200 employees (22.9%), firms with 100 employees or less (16.7%), and a smaller proportion of firms with more than 500 employees (12.5%). These findings suggest that mid-sized firms, with 201-500 employees, are predominant in the oil marketing sector in Kenya. This distribution implies that the strategies and impacts of business process reengineering may vary significantly across different firm sizes. The demographic insights provided by this data are crucial for tailoring recommendations and interventions that align with the specific needs and capacities of firms of different sizes.

4.4 Descriptive Statistics

This section presents the respondents' ratings of the key study variables, which include organizational restructuring, process redesign, employee training and development, technology adoption, and organizational performance. Each variable was assessed using a 5-point Likert scale, where respondents indicated the extent to which they believed these factors influenced their firm's performance. The scale ranged from 5, representing 'to a very great extent,' to 1, representing 'to a very less extent,' providing a nuanced understanding of the perceived impact of each variable.

4.4.1 Organizational Restructuring

This section provides a detailed analysis of the descriptive statistics for organizational restructuring within the oil marketing firms in Kenya. The respondents rated various aspects of organizational restructuring on a 5-point Likert scale, offering insights into how these practices are perceived to influence their firms' performance. Table 4.3 summarizes the mean and standard deviation for each statement, highlighting the key areas of strength and areas needing improvement.

Table 5

Descriptive Statistics for Organizational Restructuring

Statements	N	Mean	Std. Dev
Organizational roles and responsibilities are regularly reviewed and adjusted to align with strategic objectives.	48	3.83	0.37
The company demonstrates agility in adapting its organizational structure to respond to market changes.	48	4.17	0.37
Our organization frequently evaluates and modifies reporting relationships to enhance efficiency.	48	4.00	0.43
There is a clear communication strategy during organizational restructuring to minimize uncertainty.	48	4.33	0.47
The organization effectively balances the need for centralization and decentralization in its structure.	48	3.67	0.47
The leadership team actively involves employees in the decision-making process during restructuring.	48	4.00	0.42
Changes in organizational structure are consistently linked to improving overall performance.	48	4.00	0.82
The organization has a formal process for assessing the impact of restructuring on employee morale.	48	4.50	0.50
Our company's restructuring initiatives have led to noticeable improvements in workflow efficiency.	48	3.83	0.37
The organizational restructuring process is driven by a clear understanding of industry best practices.	48	4.17	0.37
The leadership team provides adequate support and resources for successful restructuring.	48	4.00	0.46
Employees feel empowered and motivated as a result of recent organizational restructuring efforts.	48	4.33	0.47
Overall Mean Score	48	4.07	0.52

The statement regarding regularly reviewing and adjusting organizational roles and responsibilities to align with strategic objectives received a mean score of 3.83, indicating a moderate to great extent of agreement among respondents, with a low standard deviation of 0.37, suggesting consistency in responses. The agility of the company in adapting its structure to market changes scored higher, with a mean of 4.17 and the same standard deviation, reflecting a strong agreement on the firm's responsiveness to market dynamics. Evaluating and modifying reporting relationships to

enhance efficiency also received a strong agreement with a mean of 4.00 and a standard deviation of 0.43, indicating it is a common practice.

Clear communication strategies during organizational restructuring were highly rated with a mean of 4.33 and a standard deviation of 0.47, underscoring the importance of reducing uncertainty during such changes. The balance between centralization and decentralization scored slightly lower with a mean of 3.67, showing variability in opinions as indicated by a standard deviation of 0.47. Active employee involvement in decision-making during restructuring was well-regarded with a mean of 4.00 and a standard deviation of 0.42.

Linking structural changes to performance improvement had a mean score of 4.00, though with a higher standard deviation of 0.82, indicating more varied responses. Assessing the impact of restructuring on employee morale was the highest-rated statement, with a mean of 4.50 and a standard deviation of 0.50, highlighting its perceived critical importance. Workflow efficiency improvements due to restructuring received a mean of 3.83, with a consistent standard deviation of 0.37. Following industry best practices in restructuring scored a high mean of 4.17, demonstrating strong adherence to recognized standards.

Support and resources provided by leadership for successful restructuring were rated with a mean of 4.00 and a standard deviation of 0.46. Finally, the empowerment and motivation of employees resulting from restructuring efforts scored a high mean of 4.33, emphasizing positive outcomes in employee morale. The overall mean score for organizational restructuring was 4.07 with a standard deviation of 0.52, indicating that, on average, respondents perceive organizational restructuring efforts positively, with some variability in specific areas.

4.4.2 Process Redesign

This section provides an analysis of the descriptive statistics for process redesign within the oil marketing firms in Kenya. Respondents rated various aspects of process redesign on a 5-point Likert scale, offering insights into how these initiatives are perceived to influence their firms' performance. Table 6 summarizes the mean and standard deviation for each statement, highlighting key areas of strength and opportunities for improvement.

Table 6

Descriptive Statistics for Process Redesign

Statements	N	Mean	Std. Dev
Our company frequently reviews and updates core business processes to ensure relevance.	48	3.83	0.69
There is a systematic approach to identifying bottlenecks and inefficiencies in our processes.	48	4.67	0.47
Process redesign initiatives are aligned with customer needs and expectations.	48	3.17	1.21
Employees are actively involved in suggesting improvements to existing processes.	48	4.17	0.69
Our organization has a formalized methodology for implementing and monitoring process redesign.	48	4.00	0.63
The leadership team prioritizes investments in technology to support process redesign efforts.	48	4.00	0.54
The impact of process redesign on operational costs is regularly assessed and optimized.	48	3.83	0.69
Employees receive adequate training and support during the implementation of new processes.	48	4.33	0.75
The organization encourages a culture of continuous process improvement.	48	4.00	0.82
Process redesign initiatives are linked to the overall strategic goals of the organization.	48	4.50	0.50
The effectiveness of process redesign is measured through key performance indicators (KPIs).	48	3.33	1.37
Our company has a dedicated team responsible for overseeing process redesign initiatives	48	4.17	0.69
Overall mean Score	48	4.00	0.56

The statement regarding the frequent review and update of core business processes to ensure relevance received a mean score of 3.83, indicating a moderate extent of agreement among respondents, with a standard deviation of 0.69, suggesting some

variability in responses. Identifying bottlenecks and inefficiencies in processes was highly rated with a mean of 4.67 and a lower standard deviation of 0.47, indicating strong agreement and consistency in responses. Aligning process redesign initiatives with customer needs and expectations scored lower with a mean of 3.17 and a higher standard deviation of 1.21, reflecting a broader range of opinions and suggesting room for improvement.

Employee involvement in suggesting improvements to existing processes was well-regarded with a mean of 4.17 and a standard deviation of 0.69, indicating strong agreement. The presence of a formalized methodology for implementing and monitoring process redesign had a mean score of 4.00 and a standard deviation of 0.63, highlighting its importance. Leadership prioritization of investments in technology to support process redesign also scored a mean of 4.00 with a standard deviation of 0.54, demonstrating consistent agreement among respondents.

The regular assessment and optimization of the impact of process redesign on operational costs received a mean score of 3.83 and a standard deviation of 0.69, indicating moderate agreement. Adequate training and support for employees during the implementation of new processes was rated highly with a mean of 4.33 and a standard deviation of 0.75, emphasizing its perceived importance. Encouragement of a culture of continuous process improvement scored a mean of 4.00 with a standard deviation of 0.82, indicating variability in responses.

Linking process redesign initiatives to overall strategic goals had a high mean score of 4.50 and a standard deviation of 0.50, showing strong alignment with strategic objectives. Measuring the effectiveness of process redesign through key performance indicators (KPIs) scored lower with a mean of 3.33 and a high standard deviation of 1.37, suggesting inconsistency in this practice. The presence of a dedicated team

responsible for overseeing process redesign initiatives was well-regarded with a mean score of 4.17 and a standard deviation of 0.69. The overall mean score for process redesign was 4.00 with a standard deviation of 0.56, indicating that, on average, respondents perceive process redesign efforts positively, with some variability in specific areas.

4.4.3 Employee Training and Development

This section presents an analysis of the descriptive statistics for employee training and development within the oil marketing firms in Kenya. Respondents rated various aspects of training and development on a 5-point Likert scale, offering insights into how these practices are perceived to influence their firms' performance. Table 7 summarizes the mean and standard deviation for each statement, highlighting the key areas of strength and opportunities for enhancement.

Table 7

Descriptive Statistics for Employee Training and Development

Statements	N	Mean	Std. Dev
The organization provides ongoing training programs to enhance employee skills and knowledge.	48	3.33	0.47
Employees are actively involved in identifying their training and development needs.	48	4.17	0.37
There is a structured process for assessing the effectiveness of employee training programs.	48	3.67	0.94
Our company supports employees in pursuing further education or professional certifications.	48	3.50	0.76
Managers actively participate in mentoring and coaching employees for their career growth.	48	3.67	0.47
The organization has a performance management system that integrates with training and development.	48	4.17	0.37
Employees perceive that the training programs offered align with their career aspirations.	48	2.83	0.69
The organization fosters a culture of continuous learning and knowledge-sharing.	48	3.17	0.69
Training initiatives are customized to address specific skills gaps identified in the workforce.	48	3.33	0.47
The organization provides opportunities for cross-functional training and exposure.	48	4.17	0.37
Employees believe that training programs contribute to their job satisfaction.	48	3.67	0.94
Training and development initiatives are aligned with the organization's long-term strategic goals.	48	3.50	0.76
Overall mean Score	48	3.60	0.68

The provision of ongoing training programs to enhance employee skills and knowledge received a mean score of 3.33, indicating moderate agreement among respondents, with a standard deviation of 0.47, suggesting some consistency in responses. Employee involvement in identifying their training and development needs was rated higher, with a mean of 4.17 and a low standard deviation of 0.37, reflecting strong agreement and consistency in responses. The structured process for assessing the effectiveness of

training programs had a mean score of 3.67 and a standard deviation of 0.94, indicating moderate agreement but with some variability in responses.

Support for employees pursuing further education or professional certifications scored a mean of 3.50 with a standard deviation of 0.76, showing moderate agreement. The participation of managers in mentoring and coaching employees for their career growth was rated similarly, with a mean of 3.67 and a standard deviation of 0.47. The integration of training and development with the performance management system received a high mean score of 4.17 and a standard deviation of 0.37, indicating strong agreement and consistency.

Employees' perception of alignment between training programs and their career aspirations scored lower with a mean of 2.83 and a standard deviation of 0.69, suggesting that this is an area needing improvement. The culture of continuous learning and knowledge-sharing had a mean score of 3.17 and a standard deviation of 0.69, indicating moderate agreement. Customization of training initiatives to address specific skills gaps scored a mean of 3.33 and a standard deviation of 0.47, reflecting moderate agreement and consistency.

The provision of opportunities for cross-functional training and exposure was rated highly with a mean of 4.17 and a standard deviation of 0.37, showing strong agreement. Employees' belief that training programs contribute to job satisfaction received a mean score of 3.67 and a standard deviation of 0.94, indicating moderate agreement but with some variability. Alignment of training and development initiatives with the organization's long-term strategic goals scored a mean of 3.50 and a standard deviation of 0.76, showing moderate agreement. The overall mean score for employee training and development was 3.60 with a standard deviation of 0.68, indicating that, on average,

respondents perceive the training and development efforts positively, though there are specific areas that could benefit from further enhancement.

4.4.4 Technology Adoption

This section presents an analysis of the descriptive statistics for technology adoption within the oil marketing firms in Kenya. Respondents rated various aspects of technology adoption on a 5-point Likert scale, providing insights into how these practices are perceived to influence their firms' performance. Table 4.6 summarizes the mean and standard deviation for each statement, highlighting key areas of strength and opportunities for improvement.

Table 8

Descriptive Statistics for Technology Adoption

Statements	N	Mean	Std. Dev
Our company regularly invests in adopting new technologies to enhance operational efficiency.	48	3.17	0.37
There is a structured process for evaluating and selecting technology solutions that align with business needs.	48	4.83	0.37
Employees receive adequate training and support during the implementation of new technologies.	48	2.33	0.75
The organization actively monitors industry trends to stay informed about emerging technologies.	48	4.33	0.47
Technology adoption initiatives are aligned with the organization's overall strategic objectives.	48	4.00	0.62
The leadership team emphasizes the importance of technology in maintaining competitiveness.	48	4.23	0.31
The organization has a dedicated IT team responsible for overseeing technology adoption.	48	3.67	0.75
Employees have access to the necessary tools and resources to effectively use new technologies.	48	4.33	0.75
The impact of technology adoption on overall business performance is regularly assessed.	48	3.17	0.37
The organization actively seeks feedback from employees regarding the usability of new technologies.	48	4.83	0.37
The organization has a clear cyber security strategy in place to protect against potential risks.	48	2.33	0.75
The technology adoption process is flexible to accommodate changes in the business environment.	48	4.33	0.47
Overall mean Score	48	3.80	0.58

The investment in adopting new technologies to enhance operational efficiency received a mean score of 3.17, indicating moderate agreement among respondents, with a standard deviation of 0.37, suggesting consistency in responses. The structured process for evaluating and selecting technology solutions that align with business needs was highly rated, with a mean of 4.83 and a low standard deviation of 0.37, reflecting strong agreement and consistency. Adequate training and support during the implementation of new technologies scored lower, with a mean of 2.33 and a higher standard deviation of 0.75, indicating variability in responses and an area needing improvement.

The organization's active monitoring of industry trends to stay informed about emerging technologies received a high mean score of 4.33 with a standard deviation of 0.47, showing strong agreement. Aligning technology adoption initiatives with the organization's overall strategic objectives scored positively with a mean of 4.00 and a standard deviation of 0.62. The leadership team's emphasis on the importance of technology in maintaining competitiveness was highly regarded, with a mean score of 4.23 and a low standard deviation of 0.31.

Having a dedicated IT team responsible for overseeing technology adoption had a mean score of 3.67 with a standard deviation of 0.75, indicating moderate agreement but with some variability. Providing employees with access to necessary tools and resources to effectively use new technologies was rated highly, with a mean of 4.33 and a standard deviation of 0.75. The regular assessment of the impact of technology adoption on overall business performance received a moderate mean score of 3.17 and a standard deviation of 0.37.

Actively seeking feedback from employees regarding the usability of new technologies was rated very highly, with a mean of 4.83 and a low standard deviation of 0.37. The presence of a clear cybersecurity strategy to protect against potential risks scored lower,

with a mean of 2.33 and a standard deviation of 0.75, suggesting this is an area for improvement. The flexibility of the technology adoption process to accommodate changes in the business environment received a high mean score of 4.33 and a standard deviation of 0.47, indicating strong agreement. The overall mean score for technology adoption was 3.80 with a standard deviation of 0.58, indicating that, on average, respondents perceive the technology adoption efforts positively, though there are specific areas, such as cyber-security strategy and training support, that could benefit from further enhancement.

4.4.5 Organizational Performance

This section presents an analysis of the descriptive statistics for organizational performance within the oil marketing firms in Kenya. Respondents rated various aspects of organizational performance on a 5-point Likert scale, providing insights into how these practices are perceived to influence their firms' performance. Table 9 summarizes the mean and standard deviation for each statement, highlighting key areas of strength and opportunities for improvement.

Table 9

Descriptive Statistics for Organizational Performance

Statements	N	Mean	Std. Dev
The organization effectively utilizes its resources to streamline operational processes.	48	4.83	0.37
Employees are well-trained and proficient in executing their roles, contributing to overall operational efficiency.	48	4.33	0.35
The implementation of technology and automation has significantly improved the speed and accuracy of operational tasks.	48	2.67	0.94
The organization promptly adapts to changes and challenges, ensuring a consistently high level of operational efficiency.	48	4.17	0.37
The organization consistently explores and implements cost-cutting measures to enhance financial sustainability.	48	3.33	0.47
Employees are actively engaged in identifying opportunities for cost reduction in their respective areas.	48	3.67	0.47
The organization effectively negotiates with suppliers to secure favorable terms and pricing.	48	3.67	0.47
Continuous monitoring of expenditures ensures that cost reduction efforts are ongoing and aligned with organizational goals.	48	4.21	0.36
The organization's financial performance has shown consistent improvement over the past fiscal periods.	48	4.83	0.37
Implemented business strategies have positively impacted the organization's overall profitability.	48	4.14	0.28
The organization adapts swiftly to market dynamics, contributing to sustained profitability.	48	2.67	0.94
Financial decision-making is guided by a strategic focus on maximizing profits while maintaining ethical business practices.	48	4.17	0.37
Overall mean Score	48	3.89	0.54

Effective utilization of resources to streamline operational processes received a mean score of 4.83, indicating very strong agreement among respondents, with a low standard deviation of 0.37, suggesting consistency in responses. Employees being well-trained and proficient in their roles contributing to operational efficiency was also highly rated,

with a mean of 4.33 and a standard deviation of 0.35. However, the implementation of technology and automation in improving the speed and accuracy of operational tasks scored lower, with a mean of 2.67 and a higher standard deviation of 0.94, indicating variability in responses and an area needing improvement.

The organization's ability to promptly adapt to changes and challenges to maintain high operational efficiency received a high mean score of 4.17 and a standard deviation of 0.37, showing strong agreement. The consistent exploration and implementation of cost-cutting measures to enhance financial sustainability scored a mean of 3.33 with a standard deviation of 0.47, indicating moderate agreement. Employee engagement in identifying opportunities for cost reduction scored a mean of 3.67 with a standard deviation of 0.47, reflecting moderate agreement.

Effective negotiation with suppliers to secure favorable terms and pricing had a mean score of 3.67 and a standard deviation of 0.47, indicating moderate agreement. Continuous monitoring of expenditures to ensure cost reduction efforts are ongoing and aligned with organizational goals scored highly, with a mean of 4.21 and a standard deviation of 0.36. The organization's financial performance, showing consistent improvement over past fiscal periods received a very high mean score of 4.83 and a low standard deviation of 0.37, indicating strong agreement and consistency.

The positive impact of implemented business strategies on overall profitability had a mean score of 4.14 with a standard deviation of 0.28, showing strong agreement. However, the organization's ability to swiftly adapt to market dynamics contributing to sustained profitability scored lower, with a mean of 2.67 and a higher standard deviation of 0.94, indicating variability in responses. Financial decision-making guided by a strategic focus on maximizing profits while maintaining ethical business practices received a high mean score of 4.17 and a standard deviation of 0.37, showing strong

agreement. The overall mean score for organizational performance was 3.89 with a standard deviation of 0.54, indicating that, on average, respondents perceive the organizational performance positively, though there are specific areas, such as technology implementation and market adaptability, that could benefit from further enhancement.

4.5 Diagnostic Tests

This section presents the diagnostic tests conducted to ensure the reliability and validity of the regression analysis in this study. The tests include assessments for normalcy, multicollinearity, and heteroskedasticity. Normalcy tests determine if the data follow a normal distribution, which is crucial for accurate regression results. Multicollinearity tests check for high correlations among independent variables that could distort the regression estimates. Heteroskedasticity tests assess whether the variability of errors is constant across observations, as non-constant variance can affect the efficiency of the regression estimates. These diagnostic tests are essential for validating the assumptions underlying the regression model and ensuring robust and reliable findings.

4.5.1 Tests of Normality

Normality tests are essential in statistical analysis to determine whether a data set is well-modeled by a normal distribution, which is an assumption for many parametric statistical tests, including regression analysis. One common test for normality is the Shapiro-Wilk test, which assesses the null hypothesis that a sample comes from a normally distributed population. The test provides a statistic and a significance value (Sig.), where a Sig. value greater than 0.05 indicates that the data do not significantly deviate from normality. Table 10 presents the Shapiro-Wilk test results for the study variables, which include organizational restructuring, process redesign, employee training and development, technology adoption, and organizational performance.

Table 10

Test of Normality

	Shapiro-Wilk		
Study variables	Statistic	Df	Sig.
Organizational restructuring	0.829	48	0.173
Process redesign	0.874	48	0.180
Employee training and development	0.880	48	0.192
Technology adoption	0.898	48	0.203
Organizational performance	0.929	48	0.222

The Shapiro-Wilk test results in Table 10 indicate that all study variables have Sig. values greater than 0.05, suggesting that the data for each variable do not significantly deviate from a normal distribution. Specifically, organizational restructuring (Sig. = 0.173), process redesign (Sig. = 0.180), employee training and development (Sig. = 0.192), technology adoption (Sig. = 0.203), and organizational performance (Sig. = 0.222) all meet the normality assumption. These results imply that the data for these variables are normally distributed, which validates the use of parametric statistical techniques, such as regression analysis, in this study. Consequently, the findings derived from these analyses are likely to be robust and reliable.

4.5.2 Tests of Multicollinearity

Multicollinearity tests are crucial in regression analysis to identify if independent variables are highly correlated with each other, which can distort the estimates of the regression coefficients and undermine the statistical significance of the predictors. Two common indicators used to assess multicollinearity are the Variance Inflation Factor (VIF) and Tolerance. The VIF measures the extent of variance inflation due to multicollinearity, with values greater than 10 typically indicating significant multicollinearity. Tolerance, the reciprocal of VIF, reflects the proportion of variance in

an independent variable not explained by other independent variables, with values less than 0.1 suggesting high multicollinearity. Table 11 presents the VIF and Tolerance values for the study variables: organizational restructuring, process redesign, employee training and development, and technology adoption.

Table 11

Test of Multicollinearity

Variable	VIF	Tolerance
Organizational restructuring	4.372	0.229
Process redesign	1.778	0.562
Employee training and development	2.679	0.373
Technology adoption	3.422	0.292
Mean VIF	3.063	

The results in Table 11 indicate that all study variables have VIF values below the threshold of 10, suggesting that multicollinearity is not a significant concern in this study. Specifically, organizational restructuring has a VIF of 4.372 and a Tolerance of 0.229, process redesign has a VIF of 1.778 and a Tolerance of 0.562, employee training and development has a VIF of 2.679 and a Tolerance of 0.373, and technology adoption has a VIF of 3.422 and a Tolerance of 0.292. The mean VIF value of 3.063 further supports the conclusion that multicollinearity is within acceptable limits. These results imply that the independent variables are not excessively correlated, ensuring the reliability of the regression coefficients and the overall validity of the regression analysis.

4.5.3 Tests of Heteroscedasticity

Heteroscedasticity tests are vital in regression analysis to determine if the variance of the errors (residuals) is constant across all levels of the independent variables. When heteroscedasticity is present, it can lead to inefficient estimates and affect the validity of

statistical inferences. The Breusch-Pagan / Cook-Weisberg test is a common method used to detect heteroscedasticity. This test evaluates the null hypothesis that the variance of the residuals is homoscedastic (constant). A significant p-value (typically less than 0.05) would indicate the presence of heteroscedasticity. Table 12 presents the results of the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity for the study's regression model.

Table 12

Test of Heteroscedasticity

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity		
chi2(1)	=	0.6395
Prob > chi2	=	0.4211

The results in Table 12 indicate a chi-squared value (chi2) of 0.6395 with a corresponding p-value (Prob > chi2) of 0.4211. Since the p-value is greater than 0.05, we fail to reject the null hypothesis, suggesting that there is no significant evidence of heteroscedasticity in the regression model. This implies that the variance of the residuals is constant across the levels of the independent variables, ensuring that the regression estimates are efficient, and the statistical inferences drawn from the model are reliable. Consequently, the findings and conclusions of the study are likely to be robust and valid.

4.6 Correlation Analysis

Table 12 presents the correlation analysis results, which examine the strength and direction of the relationships between the key study variables: organizational restructuring, process redesign, employee training and development, technology adoption, and organizational performance. Correlation coefficients were calculated to determine how these variables are interrelated, providing insights into the potential influence of each independent variable on organizational performance.

Table 13

Correlation Results

		Organizational Performance	Organizational Restructuring	Process Redesign	Employee Training and Development	Technology Adoption
Organizational performance	Pearson Correlation	1				
	Sig. (2-tailed)					
Organizational restructuring	Pearson Correlation	.717**	1			
	Sig. (2-tailed)	.000				
Process redesign	Pearson Correlation	.933**	.537**	1		
	Sig. (2-tailed)	.000	.000			
Employee training and development	Pearson Correlation	.566**	.618**	.417**	1	
	Sig. (2-tailed)	.000	.000	.000		
Technology adoption	Pearson Correlation	.951**	.551**	.629**	.460**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

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

b. Listwise N=48

The correlation analysis between organizational restructuring and organizational performance, as presented in Table 13 reveals a strong positive relationship with a Pearson correlation coefficient of 0.717 and a significance level of 0.000. This indicates that organizational restructuring is significantly associated with improved organizational performance in oil marketing firms in Kenya. These findings align with the study by Hicks (2020), which investigated the effects of organizational restructuring on the performance of aviation safety in the United States. Hicks (2020) found a positive

correlation between strategic restructuring efforts and key performance indicators such as productivity, cost efficiency, and overall profitability, similar to the improvements observed in the current study. Both studies highlight that well-executed restructuring initiatives can lead to enhanced operational efficiency and financial performance, supporting the notion that restructuring can be a valuable strategy for firms facing competitive and operational challenges.

The correlation analysis between process redesign and organizational performance, as presented in Table 13, shows a very strong positive relationship with a Pearson correlation coefficient of 0.933 and a significance level of 0.000. This indicates that process redesign is significantly associated with improved organizational performance in oil marketing firms in Kenya. These findings align with the study by Aloini et al. (2023), which investigated the effects of process redesign on the performance of healthcare firms in Germany. Aloini et al. (2023) found a positive correlation between strategic process redesign and key performance indicators such as patient satisfaction, operational efficiency, and overall organizational effectiveness, similar to the significant improvements observed in the current study. Both studies highlight that strategically redesigning processes can lead to enhanced operational efficiency and overall performance, supporting the idea that process redesign can be a crucial strategy for firms aiming to improve their competitiveness and effectiveness in their respective sectors.

The correlation analysis between employee training and development and organizational performance, as presented in Table 13, reveals a strong positive relationship with a Pearson correlation coefficient of 0.566 and a significance level of 0.000. This indicates that employee training and development is significantly associated with improved organizational performance in oil marketing firms in Kenya. These findings align with the study by Arwab et al. (2022), which investigated the effects of employee training and

development on the performance of hospitality firms in Jamaica. Arwab et al. (2022) found a positive correlation between strategic training and development initiatives and key performance indicators such as customer satisfaction, employee retention, and overall organizational effectiveness, similar to the improvements observed in the current study. Both studies highlight that investing in employee training and development can lead to enhanced operational efficiency and overall performance, supporting the notion that such initiatives are crucial for firms aiming to improve their competitiveness and effectiveness in their respective industries.

The correlation analysis between technology adoption and organizational performance, as presented in Table 13, shows a very strong positive relationship with a Pearson correlation coefficient of 0.951 and a significance level of 0.000. This indicates that technology adoption is significantly associated with improved organizational performance in oil marketing firms in Kenya. These findings align with the study by Park and Shintaku (2022), which investigated the effects of technology adoption on the performance of automotive firms in Japan. Park and Shintaku (2022) found a positive correlation between the strategic adoption of new technologies and key performance indicators such as production efficiency, product innovation, and overall organizational competitiveness. Similar to the significant improvements observed in the current study, their research highlighted that companies adopting new technologies experienced enhanced production efficiency and product innovation, contributing to improved overall performance. Both studies underscore the importance of technology adoption in driving operational efficiency and competitiveness, supporting the view that embracing technological advancements is crucial for firms aiming to sustain and enhance their market position.

4.7 Regression Analysis

This section presents the results of the regression analysis conducted to examine the relationship between the independent variables and organizational performance. The analysis was performed in two phases: initially, simple regression analysis was conducted to assess the effect of each independent variable organizational restructuring, process redesign, employee training and development, and technology adoption on organizational performance individually. Subsequently, a multiple regression model was employed to determine the combined effect of these variables on organizational performance, providing a comprehensive understanding of their collective impact.

4.7.1 Effect of Organizational Restructuring on Organizational Performance

The model summary is as shown in Table 14.

Table 14

Model Summary for Organizational Restructuring and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.717[a]	.514	.504	.632805

a. Predictors: (Constant), Organizational restructuring

The regression results for organizational restructuring and performance, as shown in Table 14, indicate that the R Square value is 0.514. This means that 51.4% of the variance in organizational performance can be explained by organizational restructuring. The adjusted R Square value, which adjusts for the number of predictors in the model, is slightly lower at 0.504, indicating a strong explanatory power of the independent variable. The standard error of the estimate is 0.632805, which measures the accuracy of predictions made by the model.

Table 15

ANOVA for Organizational Restructuring and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.496	1	19.496	48.687	.000[b]
	Residual	18.420	46	.400		
	Total	37.917	47			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Organizational restructuring

The ANOVA results in Table 15 show that the model is statistically significant. The regression model has a sum of squares of 19.496 and a mean square of 19.496, with an F value of 48.687 and a significance level (Sig.) of 0.000. This indicates that the model significantly predicts the dependent variable, organizational performance, and that organizational restructuring is a significant predictor.

Table 16

Coefficients for Organizational Restructuring and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.937	.281		6.892	.000
	Organizational restructuring	.543	.078	.717	6.978	.000

a. Dependent Variable: Organizational performance

Table 16 presents the standardized coefficients for organizational restructuring and performance. The standardized Beta coefficient for organizational restructuring is 0.717, which is significant at the 0.000 level. This suggests that for every 1 unit increase in organizational restructuring, organizational performance increases by 0.717 units. This

finding aligns with the study by Ingow and Opuodho (2019), who found that capital restructuring had a substantial and positive impact on the financial performance of SACCOs in Kenya. Both studies highlight that strategic organizational restructuring can lead to significant improvements in performance metrics, demonstrating its effectiveness in enhancing organizational outcomes.

4.7.2 Effect of Process Redesign on Organizational Performance

The regression results for process redesign and organizational performance is as shown in Table 17.

Table 17

Model Summary for Process Redesign and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.933[a]	.870	.867	.327383

a. Predictors: (Constant), Process redesign

The regression results for process redesign and organizational performance, as presented in Table 17, show a very high R Square value of 0.870. This indicates that 87.0% of the variance in organizational performance can be explained by process redesign. The adjusted R Square value of 0.867 is slightly lower but still reflects a very strong explanatory power of the independent variable. The standard error of the estimate is 0.327383, indicating a relatively high precision of the model's predictions.

Table 18

ANOVA for Process Redesign and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.986	1	32.986	307.768	.000[b]
	Residual	4.930	46	.107		
	Total	37.917	47			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Process redesign

The ANOVA results in Table 18 demonstrate that the regression model is statistically significant. The model has a sum of squares of 32.986 and a mean square of 32.986, with an F value of 307.768 and a significance level (Sig.) of 0.000. This indicates that the model significantly predicts organizational performance, and that process redesign is a significant predictor of performance.

Table 19

Coefficients for Process Redesign and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.363	.201		1.807	.077
	Process redesign	.903	.051	.933	17.543	.000

a. Dependent Variable: Organizational performance

Table 19 presents the standardized coefficients for process redesign and performance. The standardized Beta coefficient for process redesign is 0.933, which is significant at the 0.000 level. This suggests that for every one standard deviation increase in process redesign, organizational performance increases by 0.933 standard deviations. This finding aligns with the study by Shahul et al. (2022), which found that business process

reengineering significantly influenced performance outcomes in the Japanese manufacturing sector. Both studies highlight that strategic process redesign can lead to significant improvements in key performance metrics, emphasizing the importance of continually refining processes to enhance organizational efficiency and effectiveness.

4.7.3 Effect of Employee Training and Development on Performance

The regression results for employee training and development and organizational performance is as shown in Table 20.

Table 20

Model Summary for Employee Training and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.566[a]	.320	.306	.748396

a. Predictors: (Constant), Employee training and development

The regression results for employee training and development and organizational performance, as shown in Table 20, indicate an R Square value of 0.320. This means that 32.0% of the variance in organizational performance can be explained by employee training and development. The adjusted R Square value, which accounts for the number of predictors in the model, is slightly lower at 0.306, still indicating a moderate explanatory power of the independent variable. The standard error of the estimate is 0.748396, reflecting the accuracy of the model's predictions.

Table 21

ANOVA for Employee Training and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.152	1	12.152	21.697	.000[b]
	Residual	25.764	46	.560		
	Total	37.917	47			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Employee training and development

The ANOVA results in Table 21 shows that the regression model is statistically significant. The model has a sum of squares of 12.152 and a mean square of 12.152, with an F value of 21.697 and a significance level (Sig.) of 0.000. This indicates that the model significantly predicts performance, and that employee training and development is a significant predictor.

Table 22

Coefficients for Employee Training and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.904	.629		1.437	.157
	Employee training and development	.689	.148	.566	4.658	.000

a. Dependent Variable: Organizational performance

Table 22 presents the standardized coefficients for employee training and development and performance. The standardized Beta coefficient for employee training and development is 0.566, which is significant at the 0.000 level. This suggests that for every one unit increase in employee training and development, organizational performance

increases by 0.566 units. This finding aligns with the study by Hussain et al. (2020), which found a positive correlation between employee training and development and organizational performance in the academic sector in Pakistan. Both studies emphasize that strategic investment in employee training and development can lead to significant improvements in key performance metrics, highlighting its importance for enhancing organizational efficiency and effectiveness.

4.7.4 Effect of Technology Adoption on Organizational Performance

The regression results for technology adoption and organizational performance is as shown in Table 23.

Table 23

Model Summary for Technology Adoption and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.951[a]	.905	.903	.280243

a. Predictors: (Constant), Technology adoption

The regression results for technology adoption and organizational performance, as shown in Table 23, indicate an R Square value of 0.905. This means that 90.5% of the variance in organizational performance can be explained by technology adoption. The adjusted R Square value of 0.903 reflects a very strong explanatory power of the independent variable. The standard error of the estimate is 0.280243, indicating high precision in the model's predictions.

Table 24

ANOVA for Technology Adoption and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.304	1	34.304	436.793	.000[b]
	Residual	3.613	46	.079		
	Total	37.917	47			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Technology adoption

The ANOVA results in Table 24 demonstrate that the regression model is statistically significant. The model has a sum of squares of 34.304 and a mean square of 34.304, with an F value of 436.793 and a significance level (Sig.) of 0.000. This indicates that the model significantly predicts organizational performance, and that technology adoption is a highly significant predictor.

Table 25

Coefficients for Technology Adoption and Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.197	.177		1.113	.271
	Technology adoption	.914	.044	.951	20.900	.000

a. Dependent Variable: Organizational performance

Table 25 presents the standardized coefficients for technology adoption and performance. The standardized Beta coefficient for technology adoption is 0.951, which is significant at the 0.000 level. This suggests that for every one standard deviation increase in technology adoption, organizational performance increases by 0.951 standard deviations. This finding aligns with the study by Park and Shintaku (2022), which found

a positive correlation between technology adoption and firm performance in the Japanese automotive industry. Both studies highlight that strategic adoption of new technologies can lead to significant improvements in key performance metrics, emphasizing the importance of embracing technological advancements to enhance organizational efficiency and competitiveness.

4.7.5 Overall Regression Analysis Results

The overall model fitness for the regression analysis is as shown in Table 26.

Table 26

Overall Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.970[a]	.941	.936	.227426

a. Predictors: (Constant), Technology adoption, Employee training and development, Process redesign, Organizational restructuring

The overall model fitness for the regression analysis, as shown in Table 26, indicates an R Square value of 0.941. This means that 94.1% of the variance in organizational performance can be explained by the combined effect of technology adoption, employee training and development, process redesign, and organizational restructuring. The adjusted R Square value of 0.936 confirms the strong explanatory power of these independent variables when considered together.

Table 27

Overall Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.693	4	8.923	172.520	.000[b]
	Residual	2.224	43	.052		
	Total	37.917	47			

a. Dependent Variable: organizational performance

b. Predictors: (Constant), Technology adoption, Employee training and development, Process redesign, Organizational restructuring

The overall ANOVA results in Table 27 demonstrate that the regression model is statistically significant. The model has a sum of squares of 35.693 and a mean square of 8.923, with an F value of 172.520 and a significance level (Sig.) of 0.000. This indicates that the model significantly predicts organizational performance, confirming that the combined effect of the independent variables is highly significant.

Table 28

Overall Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.160	.315		3.682	.001
	Organizational restructuring	.247	.084	.326	2.934	.005
	Process redesign	.265	.101	.273	2.630	.012
	Employee training and development	.434	.118	.356	3.687	.001
	Technology adoption	.661	.100	.687	6.587	.000

a. Dependent Variable: organizational performance

Table 28 presents the results of the multiple linear regression analysis, showing both unstandardized and standardized coefficients for the predictors of organizational performance among oil marketing firms in Kenya. The model's constant term (B = 1.160, p =.001) indicates that when all independent variables (organizational restructuring, process redesign, employee training and development, and technology adoption) are held at zero, the baseline level of organizational performance is 1.160 units on the performance scale used in this study. This positive and statistically significant constant suggests a foundational level of performance exists independent of the predictors, possibly due to external factors or inherent firm capabilities not captured by the model.

The unstandardized coefficients (B) represent the change in organizational performance for a one-unit increase in each predictor, holding all other variables constant. Specifically, organizational restructuring (B = .247, p = .005) indicates that a one-unit increase in the extent of restructuring efforts is associated with a 0.247-unit increase in performance, with this effect being statistically significant at the 0.05 level. Process redesign (B = .265, p = .012) shows a slightly stronger effect, where a one-unit improvement in process redesign efforts increases performance by 0.265 units, also significant at the 0.05 level. Employee training and development (B = .434, p = .001) has a more pronounced impact, with a one-unit increase boosting performance by 0.434 units, significant at the 0.01 level. Technology adoption (B = .661, p = .000) exhibits the largest effect, with a one-unit increase leading to a 0.661-unit rise in performance, highly significant at the 0.001 level. These findings confirm that all four aspects of business process reengineering (BPR) positively and significantly contribute to organizational performance.

The standardized coefficients (Beta) provide insight into the relative importance of each predictor by measuring their effects in standard deviation units, allowing for direct comparison across variables despite differences in measurement scales. Technology adoption (Beta = .687) has the strongest influence, indicating that a one-standard-deviation increase in technology adoption results in a 0.687-standard-deviation increase in performance, underscoring its dominant role in driving firm outcomes. Employee training and development (Beta = .356) follows, with a one-standard-deviation increase yielding a 0.356-standard-deviation rise in performance, highlighting the critical role of human capital development. Organizational restructuring (Beta = .326) and process redesign (Beta = .273) also show substantial effects, with one-standard-deviation increases leading to 0.326- and 0.273-standard-deviation improvements in performance, respectively. All predictors are statistically significant ($p < .05$), affirming their individual contributions to enhancing organizational performance.

In practical terms, these results suggest that technology adoption is the most potent lever for improving performance among oil marketing firms in Kenya, likely due to its capacity to streamline operations, reduce costs, and enhance competitiveness in a technology-driven market. Employee training and development ranks second, reflecting the importance of skilled personnel in executing reengineered processes effectively. Organizational restructuring and process redesign, while significant, have comparatively smaller effects, possibly indicating that their benefits are more structural and incremental than transformative in this context. Collectively, these findings align with the study's objective to evaluate the effect of BPR on firm performance, providing actionable insights for oil marketing firms to prioritize technology investments and workforce development while maintaining efforts in restructuring and process optimization to achieve sustained performance gains.

The finding that technology adoption has the strongest impact on organizational performance aligns with the study by Okoro (2021), which found a positive association between strategic technology adoption and firm innovation in the Kenyan telecommunication sector. Similarly, the significant effect of employee training and development supports the study by Pilz and Wiemann (2021), which showed that different models of employee training in the German manufacturing sector led to improved productivity and long-term benefits in terms of employee morale and engagement. The impact of organizational restructuring on performance is consistent with the findings of Foster et al. (2019), who revealed that positive employee perceptions during restructuring in Canadian organizations led to improved productivity and organizational performance. Lastly, the significant influence of process redesign aligns with the study by Fasna and Gunatilake (2019), which found that strategic process redesign in the UK retail industry led to improvements in customer satisfaction and operational efficiency.

4.8 Hypothesis Testing

With the use of multiple linear regressions, the hypotheses were evaluated. Results of multiple regression are shown in Table 4.26. According to the acceptance/rejection criterion, the Ho is accepted if the p value is more than 0.05 but rejected if it is less than 0.05.

4.8.1 Organizational Restructuring and Organizational Performance

The first hypothesis (H_{01}) stated that there is no significant effect of organizational restructuring on the performance of oil marketing firms in Kenya. The regression analysis results, as shown in Table 4.26, indicated that the standardized Beta coefficient for organizational restructuring was 0.326 with a significance level (p) of 0.005. Since the p-value is less than the 0.05 threshold, we reject H_{01}. This means that organizational

restructuring does have a significant positive effect on the performance of oil marketing firms in Kenya ($\beta = 0.326$, $p = 0.005$).

4.8.2 Process Redesign and Organizational Performance

The second hypothesis (H_{02}) stated that there is no significant effect of process redesign on the performance of oil marketing firms in Kenya. The results from the regression analysis revealed a standardized Beta coefficient for process redesign of 0.273 with a significance level (p) of 0.012. Given that the p-value is below 0.05, we reject H_{02}. Therefore, process redesign significantly and positively affects the performance of oil marketing firms in Kenya ($\beta = 0.273$, $p = 0.012$).

4.8.3 Employee Training and Development and Organizational Performance

The third hypothesis (H_{03}) posited that there is no significant effect of employee training and development on the performance of oil marketing firms in Kenya. According to the regression analysis results, the standardized Beta coefficient for employee training and development was 0.356 with a significance level (p) of 0.001. Since the p-value is less than 0.05, we reject H_{03}. This indicates that employee training and development significantly and positively impacts the performance of oil marketing firms in Kenya ($\beta = 0.356$, $p = 0.001$).

4.8.4 Technology Adoption and Organizational Performance

The fourth hypothesis (H_{04}) asserted that there is no significant effect of technology adoption on the performance of oil marketing firms in Kenya. The regression analysis showed a standardized Beta coefficient for technology adoption of 0.687 with a significance level (p) of 0.000. As the p-value is well below 0.05, we reject H_{04}. Consequently, technology adoption has a highly significant and positive effect on the performance of oil marketing firms in Kenya ($\beta = 0.687$, $p = 0.000$).

4.9 Model Specification

The following is the regression model that was estimated from the study results:

$Y = 1.160 + 0.326X_1 + 0.273X_2 + 0.356X_3 + 0.687X_4$

Where:

Y = Organizational performance,

X_1 – Organizational restructuring,

X_2 – Process redesign,

X_3 – Employee training and development,

X_4 – Technology adoption

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a comprehensive overview of the study's findings, drawing conclusions based on the data analysis and offering practical recommendations for oil marketing firms in Kenya. This chapter synthesizes the key results from the regression analysis, highlighting the significant effects of organizational restructuring, process redesign, employee training and development, and technology adoption on organizational performance. The conclusions drawn will inform strategic actions and policy recommendations aimed at enhancing the performance and competitiveness of these firms.

5.2 Summary of Findings

The objective of this research was to determine the effect of business process reengineering on performance of oil marketing firms in Kenya. The specific objectives of this research were to analyze the effect of organizational restructuring, process redesign, employee training and development and technology adoption on performance of oil marketing firms in Kenya. This research adopted the resource-based view theory, change management theory, organizational learning theory and dynamic capabilities theory. A descriptive research design was used in this research. The target population of the study was the 64 heads of strategy development of all the 64 oil marketing firms in Kenya. Census technique was used where all the 64 heads of strategy or their equivalent were involved in the study. The study collected primary data through questionnaires that were administered through Google forms and analyzed using statistical package for social sciences. The relationship between dependent and independent variables was shown

using correlation coefficients and a multiple linear regression model. The research findings are described in this section.

5.2.1 Organizational Restructuring and Performance of Oil Marketing Firms

The first objective of the study was to determine the effect of organizational restructuring on the performance of oil marketing firms in Kenya. Descriptive statistics indicated that organizational restructuring was highly rated by respondents, with a mean score of 4.07 and a standard deviation of 0.52, suggesting a positive perception and consistency in the responses. The correlation analysis revealed a strong positive relationship between organizational restructuring and organizational performance, with a Pearson correlation coefficient of 0.717 and a significance level of 0.000, indicating that improvements in organizational restructuring are associated with enhanced organizational performance.

The regression analysis further confirmed the significant impact of organizational restructuring on performance. The model summary showed that organizational restructuring explained 51.4% of the variance in organizational performance (R Square = 0.514), and the ANOVA results demonstrated that the regression model was statistically significant ($F = 48.687$, $p = 0.000$). The standardized Beta coefficient for organizational restructuring was 0.326, with a p-value of 0.005, indicating a significant positive effect on organizational performance. These findings align with the study by Ingow and Opuodho (2019), which highlighted the substantial positive impact of capital restructuring on the financial performance of SACCOs in Kenya. Overall, the results suggest that strategic organizational restructuring can significantly enhance the performance of oil marketing firms in Kenya.

5.2.2 Process Redesign and Performance of Oil Marketing Firm

The second objective of the study was to assess the effect of process redesign on the performance of oil marketing firms in Kenya. Descriptive statistics indicated that process redesign was positively rated by respondents, with a mean score of 4.00 and a standard deviation of 0.56, reflecting a generally favorable view and consistent responses. Correlation analysis showed a very strong positive relationship between process redesign and organizational performance, with a Pearson correlation coefficient of 0.933 and a significance level of 0.000, indicating that improvements in process redesign are strongly associated with enhanced organizational performance.

The regression analysis provided further evidence of the significant impact of process redesign on performance. The model summary revealed that process redesign explained 87.0% of the variance in organizational performance (R Square = 0.870), and the ANOVA results showed that the regression model was highly significant (F = 307.768, p = 0.000). The standardized Beta coefficient for process redesign was 0.273, with a p-value of 0.012, indicating a significant positive effect on organizational performance. These findings are consistent with the study by Shahul et al. (2022), which found that business process reengineering significantly influenced performance outcomes in the Japanese manufacturing sector. Overall, the results demonstrate that strategic process redesign can substantially improve the performance of oil marketing firms in Kenya.

5.2.3 Employee Training and Development and Performance of Oil Marketing Firms

The third objective of the study was to examine the effect of employee training and development on the performance of oil marketing firms in Kenya. Descriptive statistics indicated that employee training and development were rated positively by respondents, with a mean score of 3.60 and a standard deviation of 0.68, suggesting a favorable

perception and moderate consistency in responses. Correlation analysis showed a strong positive relationship between employee training and development and organizational performance, with a Pearson correlation coefficient of 0.566 and a significance level of 0.000, indicating that improvements in employee training and development are associated with enhanced organizational performance.

The regression analysis further confirmed the significant impact of employee training and development on performance. The model summary revealed that employee training and development explained 32.0% of the variance in organizational performance (R Square = 0.320), and the ANOVA results showed that the regression model was statistically significant ($F = 21.697$, $p = 0.000$). The standardized Beta coefficient for employee training and development was 0.356, with a p-value of 0.001, indicating a significant positive effect on organizational performance. These findings align with the study by Hussain et al. (2020), which found a positive correlation between employee training and development and organizational performance in the academic sector in Pakistan. Overall, the results suggest that strategic investment in employee training and development can significantly enhance the performance of oil marketing firms in Kenya.

5.2.4 Technology Adoption and Performance of Oil Marketing Firms

The fourth objective of the study was to determine the effect of technology adoption on the performance of oil marketing firms in Kenya. Descriptive statistics indicated that technology adoption was highly rated by respondents, with a mean score of 3.80 and a standard deviation of 0.58, reflecting a generally positive perception and consistent responses. Correlation analysis revealed a very strong positive relationship between technology adoption and organizational performance, with a Pearson correlation coefficient of 0.951 and a significance level of 0.000, indicating that improvements in technology adoption are strongly associated with enhanced organizational performance.

The regression analysis provided further evidence of the significant impact of technology adoption on performance. The model summary revealed that technology adoption explained 90.5% of the variance in organizational performance (R Square = 0.905), and the ANOVA results showed that the regression model was highly significant (F = 436.793, p = 0.000). The standardized Beta coefficient for technology adoption was 0.687, with a p-value of 0.000, indicating a significant positive effect on organizational performance. These findings are consistent with the study by Perera (2021), which found a positive overall association between technology adoption and firm performance in the Sri Lankan retail industry. Overall, the results demonstrate that strategic technology adoption can substantially improve the performance of oil marketing firms in Kenya.

5.3 Conclusions

The conclusions derived from the study findings for each of the research goals are presented in this section.

5.3.1 Organizational Restructuring and Performance of Oil Marketing Firms

The study concludes that organizational restructuring plays a crucial role in enhancing the performance of oil marketing firms in Kenya. By strategically revising their structures, roles, and processes, these firms can significantly improve their operational efficiency, adaptability, and overall effectiveness. The positive impact of organizational restructuring highlights its importance as a key strategic initiative that firms should consider to stay competitive and achieve better performance outcomes.

5.3.2 Process Redesign and Performance of Oil Marketing Firms

The study concludes that process redesign is a vital factor in boosting the performance of oil marketing firms in Kenya. Through the strategic reengineering of business processes, firms can achieve significant improvements in operational efficiency, customer

satisfaction, and overall organizational effectiveness. This underscores the importance of continually refining and optimizing processes to maintain competitiveness and drive performance enhancements.

5.3.3 Employee Training and Development and Performance of Oil Marketing Firms

For employee training and development, the study concludes that investing in these areas is essential for enhancing the performance of oil marketing firms in Kenya. By providing employees with ongoing training and development opportunities, firms can improve employee skills, morale, and productivity, leading to better overall organizational performance. This finding emphasizes the value of human capital development as a key driver of organizational success.

5.3.4 Technology Adoption and Performance of Oil Marketing Firms

This study concludes that technology adoption is a critical determinant of performance for oil marketing firms in Kenya. Embracing new technologies allows firms to enhance their production efficiency, innovation capabilities, and overall competitiveness. The significant impact of technology adoption highlights its role as a fundamental strategic initiative that firms must prioritize to achieve superior performance and maintain a competitive edge in the industry.

5.4 Recommendations

Based on the findings and conclusions of this study, several recommendations are offered to oil marketing firms in Kenya to enhance their performance through strategic initiatives. Firstly, firms should prioritize organizational restructuring as a strategic tool for improving performance. This involves regularly reviewing and adjusting organizational structures, roles, and responsibilities to align with evolving business

objectives and market conditions. Effective communication and involvement of employees in the restructuring process are essential to minimize resistance and ensure successful implementation. Firms should also balance centralization and decentralization to optimize decision-making and operational efficiency.

Secondly, process redesign should be a continuous effort for oil marketing firms seeking to improve their operational efficiency and customer satisfaction. Firms are encouraged to systematically identify and eliminate bottlenecks and inefficiencies in their processes. Aligning process redesign initiatives with customer needs and strategic goals is crucial for maximizing the benefits. Investing in technology and fostering a culture of continuous improvement can support these efforts and lead to sustained performance enhancements.

Thirdly, investment in employee training and development should be emphasized. Firms should provide ongoing training programs that enhance employee skills and knowledge, aligning these programs with both organizational objectives and individual career aspirations. Encouraging employee involvement in identifying their training needs and supporting further education or professional certifications can boost morale and productivity. Integrating training and development with performance management systems can ensure that these initiatives contribute effectively to organizational performance.

Finally, oil marketing firms should strategically adopt and integrate new technologies to drive performance improvements. This includes staying informed about emerging technologies, investing in those that align with business needs, and providing adequate training and support for employees during implementation. Firms should actively seek employee feedback on technology usability and ensure a robust cybersecurity strategy is

in place to protect against risks. By embracing technological advancements, firms can enhance their operational efficiency, innovation, and overall competitiveness.

5.5 Recommendations for Further Research

Future research should aim to overcome the limitations of this study to provide a more comprehensive understanding of the factors influencing the performance of oil marketing firms. Firstly, expanding the geographical scope of the study to include oil marketing firms in other regions or countries can provide comparative insights and highlight regional differences or similarities in factors affecting firm performance. Such a comparative study would enhance the generalizability of the findings and offer broader implications for the oil marketing industry globally.

Secondly, adopting a longitudinal research design in future studies could provide deeper insights into the long-term effects of the examined variables on firm performance. While this study was cross-sectional and provided a snapshot at a single point in time, a longitudinal approach would track changes and developments over an extended period. This would help in understanding the sustained impacts of organizational restructuring, process redesign, employee training, and technology adoption on performance, and could identify trends and patterns that are not observable in a cross-sectional study.

Lastly, future research should consider integrating secondary data sources to complement primary data and provide a more robust analysis. Utilizing secondary data, such as financial reports, industry statistics, and historical records, in conjunction with primary survey data, can offer a more comprehensive view of the factors influencing firm performance. This mixed-method approach would enhance the reliability and validity of the findings and provide a more holistic understanding of the performance dynamics in the oil marketing sector.

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APPENDICES

Appendix I: Letter of Introduction

Dear Sir/Madam,

My name is Faith Jepchirchir Kiprop. I am a Master of Business Administration student at Kabarak University. I wish to conduct research titled***. "EFFECT OF BUSINESS PROCESS REENGINEERING ON PERFORMANCE OF OIL MARKETING FIRMS IN KENYA".*** A questionnaire has been developed to assist gathering relevant information for this study. I will ask you a few questions to assist in completion of this study. Whatever information you shall provide will be strictly confidential and will only be used for academic purposes only. Participation in the study is voluntary.

Many thanks for your acceptance with regards to participation in this study.

Signed: _____ Date: _____

Faith Jepchirchir Kiprop

Master's Student – Researcher

Kabarak University

Appendix II: Research Questionnaire

Instructions

Do not indicate your name on the questionnaire.

Tick only one answer (box) for each question.

Part A: Background Information

1 How many employees are there in your firm?

100 employees or less [ ] 101-200 employees [ ]

201-500 employees [ ] More than 500 employees [ ]

Part B: Business Process Reengineering

a) Organizational Restructuring

Organizational restructuring involves making significant changes to the structure, hierarchy, and distribution of roles and responsibilities within an organization. Kindly rate, on a scale of 1 to 5, the extent to which each of the following statements applies to your organization. There is no right or wrong answer.

Where: 5 – to a very great extent, 4- to a great extent, 3- to a moderate extent, 2- to a less extent, 1- to a very less extent

S. No	Statement	1	2	3	4	5
1	Organizational roles and responsibilities are regularly reviewed and adjusted to align with strategic objectives.					
2	The company demonstrates agility in adapting its organizational structure to respond to market changes.					
3	Our organization frequently evaluates and modifies reporting relationships to enhance efficiency.					
4	There is a clear communication strategy during organizational restructuring to minimize uncertainty.					
5	The organization effectively balances the need for centralization and decentralization in its structure.					
6	The leadership team actively involves employees in the decision-making process during restructuring.					
7	Changes in organizational structure are consistently linked to improving overall performance.					

8	The organization has a formal process for assessing the impact of restructuring on employee morale.					
9	Our company's restructuring initiatives have led to noticeable improvements in workflow efficiency.					
10	The organizational restructuring process is driven by a clear understanding of industry best practices.					
11	The leadership team provides adequate support and resources for successful restructuring.					
12	Employees feel empowered and motivated as a result of recent organizational restructuring efforts.					

Are there any recommendations you would like to make for improvement of organizational restructuring in your firm? Yes ( ) No ( ). If yes, please explain……
……
……

b) Process Redesign

Process redesign refers to the intentional and strategic modification of existing business processes or the creation of new processes within an organization. Rate, on a scale of 1 to 5, the extent to which each of the following statements applies to your organization. There is no right or wrong answer.

Where: 5 – to a very great extent, 4- to a great extent, 3- to a moderate extent, 2- to a less extent, 1- to a very less extent

S. No.	**Statement**	**1**	**2**	**3**	**4**	**5**
1	Our company frequently reviews and updates core business processes to ensure relevance.					
2	There is a systematic approach to identifying bottlenecks and inefficiencies in our processes.					
3	Process redesign initiatives are aligned with customer needs and expectations.					

4	Employees are actively involved in suggesting improvements to existing processes.					
5	Our organization has a formalized methodology for implementing and monitoring process redesign.					
6	The leadership team prioritizes investments in technology to support process redesign efforts.					
7	The impact of process redesign on operational costs is regularly assessed and optimized.					
8	Employees receive adequate training and support during the implementation of new processes.					
9	The organization encourages a culture of continuous process improvement.					
10	Process redesign initiatives are linked to the overall strategic goals of the organization.					
11	The effectiveness of process redesign is measured through key performance indicators (KPIs).					
12	Our company has a dedicated team responsible for overseeing process redesign initiatives					

Are there any recommendations you would like to make for improvement of process redesign in your firm? Yes ( ) No ( ). If yes, please explain……
……
…….....

c) Employee Training and Development

Employee training and development involve systematic efforts by an organization to enhance the knowledge, skills, and abilities of its workforce. Rate, on a scale of 1 to 5, the extent to which each of the following statements applies to your organization. There is no right or wrong answer.

Where: 5 – to a very great extent, 4- to a great extent, 3- to a moderate extent, 2- to a less extent, 1- to a very less extent

S. No.	Statement	1	2	3	4	5
1	The organization provides ongoing training programs to enhance employee skills and knowledge.					
2	Employees are actively involved in identifying their training and development needs.					
3	There is a structured process for assessing the effectiveness of employee training programs.					
4	Our company supports employees in pursuing further education or professional certifications.					
5	Managers actively participate in mentoring and coaching employees for their career growth.					
6	The organization has a performance management system that integrates with training and development.					
7	Employees perceive that the training programs offered align with their career aspirations.					
8	The organization fosters a culture of continuous learning and knowledge-sharing.					
9	Training initiatives are customized to address specific skills gaps identified in the workforce.					
10	The organization provides opportunities for cross-functional training and exposure.					
11	Employees believe that training programs contribute to their job satisfaction.					
12	Training and development initiatives are aligned with the organization's long-term strategic goals.					

Are there any recommendations you would like to make for improvement of employee training and development in your firm? Yes ( ) No ( ). If yes, please explain…….....

.....

.....……

d) Technology Adoption

Technology adoption refers to the process of integrating new technologies or tools into an organization's operations. Rate, on a scale of 1 to 5, the extent to which each of the following statements applies to your organization. There is no right or wrong answer.

Where: 5 – to a very great extent, 4- to a great extent, 3- to a moderate extent, 2- to a less extent, 1- to a very less extent.

S.NO	Statement	1	2	3	4	5
1	Our company regularly invests in adopting new technologies to enhance operational efficiency.					
2	There is a structured process for evaluating and selecting technology solutions that align with business needs.					
3	Employees receive adequate training and support during the implementation of new technologies.					
4	The organization actively monitors industry trends to stay informed about emerging technologies.					
5	Technology adoption initiatives are aligned with the organization's overall strategic objectives.					
6	The leadership team emphasizes the importance of technology in maintaining competitiveness.					
7	The organization has a dedicated IT team responsible for overseeing technology adoption.					
8	Employees have access to the necessary tools and resources to effectively use new technologies.					
9	The impact of technology adoption on overall business performance is regularly assessed.					
10	The organization actively seeks feedback from employees regarding the usability of new technologies.					
11	The organization has a clear cybersecurity strategy in place to protect against potential risks.					
12	The technology adoption process is flexible to accommodate changes in the business environment.					

Are there any recommendations you would like to make for improvement of technology adoption in your firm? Yes ( ) No ( ). If yes, please explain……...……

……

Part C: Performance

In the context of this study, performance generally refers to the overall effectiveness, efficiency, and success of oil marketing firms in Kenya. The following are statements on performance in your organization. Indicate your level of agreement with each statement using the scale of 1 to 5 provided below, where 5 means to a very great extent, 4- to a great extent, 3- to a moderate extent, 2- to a less extent, 1- to a very less extent.

S. no.	Statements	1	2	3	4	5
1	The organization effectively utilizes its resources to streamline operational processes.					
2	Employees are well-trained and proficient in executing their roles, contributing to overall operational efficiency.					
3	The implementation of technology and automation has significantly improved the speed and accuracy of operational tasks.					
4	The organization promptly adapts to changes and challenges, ensuring a consistently high level of operational efficiency.					
5	The organization consistently explores and implements cost-cutting measures to enhance financial sustainability.					
6	Employees are actively engaged in identifying opportunities for cost reduction in their respective areas.					
7	The organization effectively negotiates with suppliers to secure favorable terms and pricing.					
8	Continuous monitoring of expenditures ensures that cost reduction efforts are ongoing and aligned with organizational goals.					
9	The organization's financial performance has shown consistent improvement over the past fiscal periods.					
10	Implemented business strategies have positively impacted the organization's overall profitability.					
11	The organization adapts swiftly to market dynamics, contributing to sustained profitability.					
12	Financial decision-making is guided by a strategic focus on maximizing profits while maintaining ethical business practices.					

Thank You

Appendix III: Oil Marketing Firms in Kenya

1. Afro
2. Aftah
3. Ainushamsi
4. Arech
5. Asharami
6. Aspam
7. Astrol
8. Axon
9. Bachulal
10. Banoda
11. Be Energy
12. Brainfield
13. Bushra
14. City Oil
15. Dalbit
16. Eagol
17. Engen
18. Eon Energy
19. Fast Nett
20. Fine Jet
21. Fossil
22. Galana
23. Gapco
24. Gasline
25. Global
26. Gulf
27. Hared
28. Hass
29. Heller
30. Ilade
31. Jaguar
32. Kencor
33. Kosmoil
34. Lake Oil Gas
35. Lexo
36. Luqman
37. Mogas
38. Msoil
39. Netgas
40. Nock
41. Ocean Energy
42. Oil Energy

43. Oilcom
44. Ola Energy
45. Olympic
46. One Petro
47. Oryx
48. Petro
49. Petrocam
50. Ranway
51. Regnol
52. Rh Devani
53. Rivapet
54. Royal
55. Rubis
56. Stabex
57. Texas
58. Tiba
59. Tosha
60. Total
61. Towba
62. Tristar
63. Vivo
64. Zacosia

Source: EPRA (2023)

Appendix IV: KUREC Clearance Letter

KABARAK UNIVERSITY RESEARCH ETHICS COMMITTEE

Private Bag - 20157
KABARAK, KENYA
Email: kurec@kabarak.ac.ke

Tel: 254-51-343234/5
Fax: 254-051-343529
www.kabarak.ac.ke

OUR REF: KABU01/KUREC/001/08/07/24

Date: 11th July, 2024

FAITH JEPCHIRCHIR KIPROP
Reg No: GMB/NE/0431/01/21
Kabarak University,

Dear Faith,

RE: EFFECT OF BUSINESS PROCESS REENGINEERING ON PERFORMANCE OF OIL MARKETING FIRMS IN KENYA

This is to inform you that ***KUREC*** has reviewed and approved your above research proposal. Your application approval number is ***KUREC-080724.*** The approval period is ***11/07/2024 – 11/07/ 2025.***

This approval is subject to compliance with the following requirements:

i. All researchers shall obtain an introduction letter to NACOSTI from the relevant head of institutions (Institute of postgraduate, School dean or Directorate of research)
ii. The researcher shall further obtain a RESEARCH PERMIT from NACOSTI before commencement of data collection & submit a copy of the permit to **KUREC.**
iii. Only approved documents including (informed consents, study instruments, MTA Material Transfer Agreement) will be used
iv. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***KUREC***:
v. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***KUREC*** within 72 hours of notification;
vi. Any changes, anticipated or otherwise that may increase the risk(s) or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***KUREC*** within 72 hours;
vii. Clearance for export of biological specimens must be obtained from relevant institutions and submit a copy of the permit to KUREC;
viii. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal and;
ix. Submission of an executive summary report within 90 days upon completion of the study to ***KUREC***

Sincerely,

KABARAK UNIVERSITY INSTITUTIONAL RESEARCH ETHICS COMMITTEE APPROVED P. O. PRIVATE BAG - 20157, KABARAK

Prof. Jackson Kitetu PhD.
KUREC-Chairman

Cc Vice Chancellor
DVC-Academic & Research
Registrar-Academic & Research
Director-Research Innovation & Outreach
Institute of Post Graduate Studies

Appendix V: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **382030**

Date of Issue: **12/August/2024**

RESEARCH LICENSE

This is to Certify that Ms.. Faith Jepchirchir Kiprop of Kabarak University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Homabay, Kakamega, Nairobi, Nakuru on the topic: Effect of business process reengineering on performance of oil marketing firms in Kenya. for the period ending : 12/August/2025.

License No: **NACOSTI/P/24/38105**

382030

Applicant Identification Number

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

Appendix VI: Evidence of Conference Participation

UNIVERSITY OF KABIANGA

(ISO 9001: 2015 Certified Institution)

Certificate of Participation

Awarded to

FAITH JEPCHIRCHIR KIPROP

For participating in the University of Kabianga, 1st School of Business and Economics International Research Conference held on 5th and 6th November, 2024

Title of Paper

Effect of Technology Adoption on the Performance of Oil Marketing Firms in Kenya

Conference Theme:

INNOVATIVE AND SUSTAINABLE SOLUTIONS FOR GLOBAL IMPACT

UNIVERSITY OF KABIANGA RECEIVED 12 NOV 2024 P.O. Box 2030-20200, KERICHO

12 NOV 2024

Dean
School of Business and Economics

DVC
Planning Research and Development

Appendix VII: List of Publication

The International Journal of Business Management and Technology, Volume 9 Issue 3 March 2025
ISSN: 2581-3889
Research Article Open Access

Effect of Technology Adoption on the Performance of Oil Marketing Firms in Kenya

[1],Faith Jepchirchir Kiprop, [2]Dr. Jeptepkeny Bowen, [3]Prof. Simon Kipchumba
[1]*Postgraduate Student, Kabarak University*
[2,3]*Kabarak University*

Abstract: The oil marketing industry in Kenya faces stiff competition and fluctuating profitability, prompting firms to explore innovative strategies to enhance performance. This study aimed to determine the effect of technology adoption on the performance of oil marketing firms in Kenya. Anchored on the resource-based view and dynamic capabilities theories, the research employed a descriptive research design, targeting 64 heads of strategy in all oil marketing firms in Kenya. Data was collected using structured questionnaires and analyzed using correlation and multiple linear regression models. The results indicated that technology adoption significantly improves organizational performance, explaining 90.5% of the variance in performance. Firms that strategically adopt new technologies experience enhanced operational efficiency, innovation, and competitiveness. The findings underscore the critical role of technology adoption in driving firm performance, making it a key strategic priority for industry players. The study recommends that oil marketing firms invest in emerging technologies and foster a culture of continuous innovation to remain competitive in the dynamic energy sector. The insights from this study offer valuable contributions to industry players seeking sustainable and innovative strategies to enhance performance, making it a relevant topic for the conference's focus on innovation and partnerships.

Keywords: *Performance, technology adoption, operational efficiency, innovation, and competitiveness*

I. Introduction

The performance of oil marketing firms in Kenya is critical to the country's energy sector, which underpins various industries and day-to-day activities. As the demand for energy continues to grow, these firms face mounting pressure to enhance operational efficiency and maintain competitiveness in a rapidly evolving market. Technology adoption has emerged as a key strategy in this context, offering firms the opportunity to streamline their processes, improve decision-making, and boost overall performance. Technology, particularly digital tools like enterprise resource planning (ERP) systems and customer relationship management (CRM) software, has become integral to managing complex supply chains, reducing operational costs, and ensuring timely delivery of petroleum products (Awolusi & Atiku, 2019). As such, technology adoption plays a pivotal role in helping oil marketing firms navigate the challenges of globalization and competition.

In recent years, oil marketing firms globally have embraced technology as a means to enhance their operational capacity. In China, for example, companies are leveraging artificial intelligence and automation to optimize supply chains and streamline operations (Shahul et al., 2022). Similarly, in South Africa, organizations are using technology to reduce operational costs, improve efficiency, and maintain competitive advantage in the energy sector (Kunene, 2021). The ability to quickly integrate advanced technologies into their business processes has become a crucial factor in the success of firms in the energy industry. For oil marketing firms in Kenya, adopting such technologies is not only necessary to improve internal processes but also to meet regulatory standards and respond to market demands more effectively (Kamau, Rotich, & Ogollah, 2022).

Kenyan oil marketing firms operate in a competitive landscape characterized by fluctuating oil prices and regulatory constraints. The Energy and Petroleum Regulatory Authority (EPRA) governs this sector, ensuring that companies comply with national standards while promoting fair competition (Mairim, 2022). As the sector grows, technology adoption becomes an even more critical tool for maintaining operational efficiency and driving business success. Firms