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Effect of innovative practices on operational performance of the National Hospital Insurance Fund, Kenya.

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EFFECT OF INNOVATIVE PRACTICES ON OPERATIONAL PERFORMANCE OF THE NATIONAL HOSPITAL INSURANCE FUND, KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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ABSTRACT

Many developing economies lack a driving force for innovation and research and development spending. The driving force towards innovation is further hampered by the fact that many companies encounter internal and external barriers or inhibitors that get in the way of developing the right practices to support the innovation process. One of the key mandates of National Hospital Insurance Fund is attaining the operational targets on performance and for this to be achieved, the National Hospital Insurance Fund must embrace innovative practices service delivery, to reduce in operational cost, to increase scope of health coverage and to promote quality health care offered to the Kenyan population. The general objective of this study was to establish the effect of innovative practices on performance of the National Hospital Insurance Fund in Kenya. The study focused on product, process, market, and technology innovations. A quantitative descriptive research design was adopted. The population of interest comprised 148 employees from NHIF headquarters in Upper hill Nairobi from the ICT department, operations, finance, and marketing department. Stratified random sampling technique was used and primary data which was collected through close ended questionnaires. Descriptive and inferential statistics were used in analysing the data and a multiple regression model was applied to establish the relationship amongst the studied factors. There existed a moderate positive relationship (p-0.031) between product innovation and operational performance of the National Hospital Insurance Fund in Kenya, between process innovation and operational performance(p-0.001), between market innovation and operational performance (p-0.013) and between technological innovation and operational performance (p-0.014).Consequently, in terms of recommendation, the government may consider implementing policies that enable the NHIF to develop and innovate it products concurrently protecting the interests of the members. The government should also provide marketing regulations and policies to ensure that the NHIF products are fully marketed to reach the entire population since it is the primary health insurance provider in Kenya. Finally, the management of NHIF should ensure the use of the technological innovations as it has been found useful in promoting the fund performance.

Key Words: *product innovation, process innovation, market innovation, technological innovation on operational performance*

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LIST OF ABBREVIATIONS

GOK: Government of Kenya

GSGDA: Ghana's Shared Growth and Development Agenda

HOD: Head of Department

ICT: Information Communication and Technology

LOU: Letter of Undertaking

MOH: Ministry of Health

NACOSTI: National Commission for Science, Technology & Innovation

NHIF: National Hospital Insurance Fund

NS&T: National Science and Technology

OECD: Organisation for Economic Co-operation and Development

R&D: Research and Development

ROA: Return on Assets

ROE: Return on Equity

SPSS: Statistical Package for Social Sciences

STI: Science, Technology and Innovation

UHC: Universal Health Coverage

UK: United Kingdom

DEFINITION OF KEY WORDS

Innovation: Innovation is defined as the process of the adoption of internally or externally generated devices, systems, policies, programs, processes, products, or services that are new to the adopting organization (Damanpour & Gopalakrishnan, 2011).

Market Innovation: Market innovation is defined in the OECD (2009) as the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

National Hospital Insurance Fund: This is Kenya's largest, reliable, accessible and affordable medical insurance cover that enables one cover his/her family to enjoy an unparalleled benefit package (National Hospital Insurance Fund, 2020).

National Scheme: This is a system of health insurance that insures a national population against the costs of health care either by the public sector, the private sector, or a combination of both (Mack, 2011).

Operational Performance: This includes the results of an association as compared to its intended outputs (Armstrong, 2010).

Process Innovation: It is the implementation of a new or significantly improved production or delivery method, including significant changes in techniques, equipment and/or software (OECD, 2009).

Product Innovation: This refers to the introduction of a good or service that is new or significantly improved regarding its characteristics or intended uses; including significant improvements in technical specifications, components and materials (Morone & Testa, 2014).

Technological Innovation: Technological innovation encompasses an enhancement to something that already present (Walker & Craig 2012).

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Health care has always been a problem area for many nations with large populations and a substantial portion living below the poverty line (Kullberg, Blomqvist & Winblad, 2019). Innovation is one of the top priorities of an enterprise' management in enhancing sustainability and promoting superior performance (Jonash & Sommerlatte, 2018). According to Essmann and du Preez (2017) organizations develop innovation practices that include product innovations, process innovations, market innovations and technological innovations to improve performance. This paper seeks to establish the effect of innovative practices on the operational performance of the National Health Insurance Fund in Kenya.

Most countries around the world, especially developing countries have recently switched towards a health insurance model in attempts to achieve universal health coverage and access (Hogan et al., 2018). Universal health coverage (UHC), a major focus of the Sustainable Development Goals, seeks to ensure people obtain the health services whenever they need and devoid of risk catastrophic health spending. For example, in the United Kingdom (UK), the National Health Service (NHS) is a comprehensive public-health service under government administration, established by the National Health Service Act of 1946 and subsequent legislation (Gorsky & Millward, 2018).

Virtually the entire population is covered, and health services are free except for certain minor charges. The NHS provides primary healthcare for everyone, regardless of residential status. The NHS is different from many healthcare systems elsewhere as it is funded through taxation rather than health insurance (Allsop, 2018). The service has managed to provide generally high levels of health care while keeping costs relatively low and the coverage is universal (Kullberg, Blomqvist & Winblad, 2019).

In Africa, South Africa has an NHI that is designed to pool resources to provide access to quality, affordable healthcare regardless of one's socioeconomic status while in Ghana they have a National Health Insurance (NHI) law governing their health system (Etuaful, 2016). Ghana in 2003, introduced the National Health Insurance Scheme (NHIS) with the idea of reducing the negative impact of the user fee, improving low coverage of Community Based Health Insurance (CBHI) and enhancing the essential role of public funding to achieve universal health care (Abiiro & McIntyre, 2013). The National Health Insurance Act

(NHIA) was formed officially to take responsibility to make sure that all citizens of Ghana would have access to basic healthcare (Abiiro & McIntyre, 2013). The NHIS is Ghana's fundamental policy strategy for attaining universal health coverage where everyone irrespective of income levels can equally access basic health care (Etuaful, 2016).

Locally in Kenya, health insurance has been provided by both private and public systems. Kenya is one of the few African countries that has had a national hospital insurance scheme in existence since the 1960s (Mbau et al., 2020). Membership to the National Hospital Insurance Fund (NHIF) is mandatory for all Kenyans in formal employment and voluntary for those in the informal sector. The NHIF has however been criticized for poor quality of care in accredited facilities, a cumbersome claiming process and location of offices in urban areas where the minority of the population live. To address some of these concerns, the country is currently considering introducing a National Health Insurance Scheme (NHIS), which will include transforming the NHIF to cover all Kenyans, for both outpatient and inpatient services irrespective of their ability to pay (National Hospital Insurance Fund, 2020).

Kenya has a mixed health financing system that is financed by revenues collected by the government (national and county) through taxes and donor funding, the National Hospital Insurance Fund (NHIF) through member contributions, private health insurance companies through member contributions, and out-of-pocket spending by citizens at points of care (Abuya, Maina & Chuma, 2015). Purchasing of health care services is carried out through supply-side subsidies to public facilities by national and county governments for instance, the county departments of health provide line budgets to county hospitals to finance service delivery to citizens within the county. The NHIF also contracts public and private health care facilities in Kenya and pays them for services provided to its enrolled members and private health insurance companies that contract private health care facilities and pay them for services provided to their enrolled members (Mbau et al., 2020).

Kenya has made a commitment to achieve UHC and to enhance the NHIF's capacity to deliver the promise of UHC to Kenyans, the Kenyan government has introduced several reforms with the aim of increasing population coverage with the NHIF to enhance access to quality health care services while offering protection from the adverse effects of out-of-pocket payments. In 2012, the NHIF introduced an insurance scheme for formal sector government workers and their dependents (civil servants, parastatals and now some county governments) known as the Enhanced Medical Schemes (EMS). Under the EMS, the

Kenyan government remits the medical allowances, previously paid directly to civil servants, to the NHIF as premium contributions to offer a comprehensive cover. (National Hospital Insurance Fund, 2020).

1.1.1 Innovative Practices and Operational Performance in Healthcare

Innovation is said to be the use of internally or externally developed programs, systems, services, devices, policies, processes, or products that are newly introduced to the firm (Damanpour, 2017). The concept of innovation involves the use of a new idea to enhance the performance of a firm. At its core, the term innovation captures the newness of an idea that attempts to enhance the productivity of the firm (Jayani & Yan, 2018). Thus, this is a concept that allows organizations to grow by increasing their market share, entering new markets and by providing the firm with a sustainable competitive advantage. Therefore, innovativeness provides the firm with an indispensable strategy that can be used to increase the productivity of the firm, increase the levels of customer satisfaction, gain increased market share in the industry and in the end have a sustainable competitive advantage that is hard to replicate (Karlsson & Tavassoli, 2016).

Essmann and Preez du (2017) indicate that organisations implement innovation practices to add value to products and services offered to customers. There are three kinds of innovative practises namely product, process, and market. Product innovation entails creating products or services or developing of existing products or services. Process innovation entails adopting new approaches (methods) of doing things to enable the organisation to remain competitive and continuously meet customer demands. Innovation involves improving mix of target markets and ways in which these markets are served to widen access to products and services through new distribution process in both local and foreign markets (Kahn, 2018).

Innovations in terms of products, processes, marketing, and technology in the delivery of health insurance can result in more-convenient, more-effective, and less-expensive treatments for today's time-stressed and increasingly empowered health care consumers (OECD, 2017). For example, a health plan can involve consumers in the service delivery process by offering low-cost, high-deductible insurance, which can give members greater control over their personal health care spending.

The health insurance industry, across the world, is going through a wave of innovations, representing a new era of healthcare consumerism (Kruger & Ni Bhroin, 2020). The health

insurance industry didn't pay much attention to technologies until recently. According to Statista, in 2016, the global insurance industry spent only 76 million U.S. dollars on software using AI and ML technologies. Nowadays, this number is forecasted as up to 571 million U.S. dollars in 2021. Such a significant difference, by eight times, demonstrates industry commitment to adopting innovations in health insurance.

Operational performance is defined as the outcomes of work because it provides the strongest linkage to the strategic goals of an organization, customer satisfaction and economic contributions (Tangen, 2015). Operational performance measurements provide one of the best ways to spearhead overall health system and hospital improvements by providing solid data on the current state of efficiencies and effectiveness (Jung, 2018).

Operational performance in health insurance is measured in terms of efficiency and effectiveness aimed towards effective delivery of services in healthcare (Richard, 2015). There are five principal dimensions used to judge health insurance performance that is reliability, responsiveness, assurance, empathy and tangibles listed in relative importance to customers (Fitzsimmons & Fitzsimmons, 2016). Reliability is the ability to perform the promised service dependably and accurately (Parasuraman, Zeithaml & Malhotra, 2005). Responsiveness is the willingness to help customers and to provide prompt service (Parasuraman, Zeithaml & Malhotra, 2005).

Assurance refers to employee knowledge, courtesy and the ability to convey trust and confidence (Parasuraman, Zeithaml & Malhotra, 2005). Empathy refers to the level of caring, knowing customer needs and individualized attention that the organization needs to provide to their customers (Parasuraman, Zeithaml & Malhotra, 2005). Tangibles is the appearance of physical facilities, equipment, personnel, and communication materials (Parasuraman, Zeithaml & Malhotra, 2005).

In health care service delivery like the case of the health insurance service providers, performance can be viewed from three measures: process, structure and outcome (Gitau, 2018). Process measures indicate what a provider does to maintain or improve health, either for healthy people or for those diagnosed with a health care condition (Ameh et al., 2017). Structural measures give consumers a sense of a health care provider's capacity, systems, and processes to provide high-quality care (Ameh et al., 2017). Outcome measures reflect the impact of the health care service or intervention on the health status of patients (Ameh et al., 2017). The operational performance measures that were considered in the

study are service delivery, increase scope of coverage and reduction in operational cost at NHIF.

1.1.2 The National Hospital Insurance Fund

The National Hospital Insurance Fund (NHIF) is a public institution that was established in 1966 to provide mandatory health insurance to formal sector employees, and its mandate later expanded to cover informal sector workers in 1998. Membership to the NHIF is mandatory for formal sector workers, who pay an income-rated monthly contribution through statutory deductions, whereas it is voluntary for informal sector workers, who pay a flat rate contribution directly to the NHIF. The NHIF is the main health insurer in Kenya consisting of 1984 member of staff, 67 branches, 23 satellites and staff at all huduma centers covering 16% of Kenyans, whereas the 32 private health insurers collectively cover a mere 1% of the Kenyan population (National Hospital Insurance Fund, 2020). In absolute numbers, the number of Kenyans enrolled in the NHIF increased from about 2.7 million in 2010 to 8.9 million in 2020. Despite an increase in the proportion of the Kenyan population enrolled in the NHIF between 2010 and 2020, the level of health insurance coverage by the NHIF remains low. Kenya has however made a commitment to try achieving UHC, in an effort to enhance the NHIF's capacity to deliver the promise of UHC to Kenyans (National Hospital Insurance Fund, 2020).

The innovative practices that have been adopted by NHIF and considered in the study include product innovations, process innovations, market innovations and market innovations (Njagi, 2016; Omesa, 2019; Njeri, 2017; Kiarie,2018). Product innovations in health insurance in Kenya include the enhanced medical scheme packages developed such as PET scan and specialised surgeries. Process innovations include online preauthorisation and authorisation, online member registration and online claim payment process. Market innovations include digital marketing like Facebook, Twitter and a Toll-free customer line. Technological innovations include biometric registration, online tracking of claims process, SMS feedback on approval of preauthorised LOU and online tracking on the hospital accreditation process (Ministry of Health, 2021).

1.2 Problem Statement

Health insurance schemes are often hailed as social innovations and a major growth opportunity for the industry. However, promoting sustainable adoption of health insurance

innovations remains challenging despite various push factors being in place (Smith, 2018). Barriers related to fragmentation, patient-centeredness, data security, privacy, trust, and job security need to be addressed. Currently, relatively few health insurance innovations have been efficiently used despite various actors having expressed enthusiasm for digital health insurance and large investments being made (Van Velthoven & Cordon, 2019). In the past health insurance service providers in Kenya have not performed to the expectations of its members with many feeling that they do not get value for their money (Mutungi, 2018). To address the above, the health insurance service providers and especially the NHIF have undertaken product, process, market, and technological innovations to facilitate timely remittance of member contributions and maintenance of up-to-date payment information for individual accounts (NHIF, 2020).

There however exist gaps regarding what we know on the link between innovation and performance of NHIF in Kenya. Papanicolas et al. (2019) studied performance of United Kingdom National Health Service (NHS) and noted that NHS showed pockets of good performance, including health service outcomes, but spending, patient safety and population health were all below average at best. However, a conceptual gap exists as the study didn't address the innovation practices while a contextual gap exists as the study focus was on NHS and not NHIF and hence the need to undertake the present study at NHIF Kenya.

Shigute et al. (2020) studied the effect of Ethiopia's community-based health insurance scheme on revenues and quality of care and noted there was a direct relationship between the percentage of enrolees and the poor health indices of the population. However, a conceptual gap exists as the study didn't address the innovation practices while a contextual gap exists as the study focus was on Ethiopia and not NHIF and hence the need to undertake the present study at NHIF Kenya.

Mbogori, Ombui and Iravo (2015) studied innovative strategies influencing performance of NHIF in Nairobi County and established those innovative strategies play a critical role in improving performance of NHIF. However, a gap exists as the above study was limited to NHIF in Nairobi County and thus may not represent the operational performance in other counties especially the marginalized counties.

Gitahi (2018) studied innovative healthcare financing and equity through community-based health insurance schemes in Kenya and noted there existed a positive relationship between

enrolment in CBHIs and equity in healthcare in Kenya. However, a contextual gap exists as the study was limited to community-based health insurance schemes while a conceptual gap exists as the study didn't highlight the performance of NHIF in terms of efficiency and its effectiveness and hence the need to undertake the present study at NHIF Kenya. This study addressed these gaps by looking at innovation in a different kind of health organization and by having a national rather than sub national focus.

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study was to establish the effects of innovative practices on operational performance of the National Hospital Insurance Fund in Kenya.

1.3.2 Specific Objectives

The study was guided by the following research objectives

i. To establish the effect of product innovation on operational performance of the National Hospital Insurance Fund in Kenya.
ii. To evaluate the effect of process innovation on operational performance of the National Hospital Insurance Fund in Kenya.
iii. To establish the effect of market innovation on operational performance of the National Hospital Insurance Fund in Kenya.
iv. To evaluate the effect of technological innovation on operational performance of the National Hospital Insurance Fund in Kenya.

1.4 Research Questions

i. What is the effect of product innovation on operational performance of the National Hospital Insurance Fund in Kenya?
ii. To what extent does process innovation on operational performance of the National Hospital Insurance Fund in Kenya?
iii. What is the effect of market innovation on operational performance of the National Hospital Insurance Fund in Kenya?
iv. To what extent does technological innovation affect operational performance of the National Hospital Insurance Fund in Kenya?

1.5 Scope of the Study

This study focused on the effect of innovative practices on operational performance of NHIF in Kenya. The specific variables that were to assess the effects of product innovation, process innovation, market innovation and technology innovations on operational performance of NHIF in Kenya. A quantitative descriptive research design was adopted in the study. The population of interest comprised 148 employees from NHIF headquarters in Upperhill Nairobi from the ICT department, operations, finance, and marketing department. Stratified random sampling technique was used. The researcher employed primary data which was collected through questionnaires that were closed ended. The study was undertaken from March 2022 to June 2022.

1.7 Significance of the Study

The policy makers may benefit from the findings of the study in that it may be able to formulate effective strategies for effective innovative practices and in turn enhance service delivery to the public. Through having in place good policies for service delivery, the public may benefit from the study as they may know the innovations in place at NHIF and thus they may be able to access the services efficiently thus saving time and resources when accessing NHIF services at their place of convenience and time.

The managers at NHIF may benefit from the study as they may appreciate the role played by innovative practices in enhancing their performance in terms of better service quality and service delivery. Thus, they may be able to increase the resources allocated to research and innovation to be able to serve customers better.

The research may add value to the theory of Innovative Firm and the Resource Based theory. According to the theory Innovative Firm, a firm can gain and sustain its competitiveness to compete effectively in its industry through innovation. Thus, the theory may enable NHIF, and other firms use innovations to enhance their performance. The Resource Based theory posits that a firm can gain competitive advantage by being in possession of distinctive resources or capabilities which are valuable. Thus, NHIF and other firms may be able to put in place sufficient resource to facilitate innovation and in turn enhance performance

The study may contribute to the body of knowledge and understanding on the effect of innovative practices on operational performance of the NHIF in Kenya. The future researchers and scholars may benefit in that they may be able to increase their

understanding of the pertinent issues concerning innovation practices. The research may add value to the body of knowledge and understanding of innovative practices and operational performance of the NHIF in Kenya.

1.8 Chapter Summary

The chapter focused on the background to the study which has discussed the innovation practices and operational performance at NHIF. The chapter has discussed the problem statements and research objectives which include the effect of product innovation, process innovation, market innovation and technological innovation on operational performance of the National Hospital Insurance Fund in Kenya. The chapter also includes research questions, scope of the study and significance of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter deals with literature review in line with past studies and theoretical review on the effect of innovation practices on operational performance.

2.2 The Theoretical Foundation

2.2.1 Theory of the Innovative Firm

The proponent of the theory of the Innovative Firm is Joseph Schumpeter that organization benefits if their innovation is successful either in reducing the overall cost of production or increasing the demand for their product (Sledzik, 2013). According to the theory of the innovative firm the function of a firm is to transform productive resources into goods and services that can be commercialized in health insurance. Firm in health insurance can accomplish this by engaging in innovation (Hahn et al., 2019). Innovative firms have the ability to transforms productive resources into higher quality, lower cost goods and services translating to a gain for the customers and other participants in the economy (Lazonick, 1994).

According to the theory, health insurance firms can gain and sustain its competitiveness to compete effectively in its industry through innovation. An innovative firm may also innovate to retain its market share against an innovative competitor or to gain a strategic market position in the market (Teece, 2010). Innovative firms can compete, through innovation as opposed to varying price and quantity. Innovative firms become competitive by investing in quality and quantity productive resources. This provides a base upon which the firms can develop capabilities to access other market segments (Teece, 2010). The theory is relevant to the study since innovative firm are able to use innovation to achieve differentiation by offering different products and services to customers that are unique in health insurance. The theory is also relevant to the study since innovation does not necessarily mean inventing new products that have never existed but also entails new methods of doing things. Thus, NHIF use the innovations at its disposal and also come up with other innovations to improve its service delivery and accessibility of its services to the public hence enhancing its performance in health insurance.

2.2.2 The Resource Based Theory

The Resource Based theory originally put forward by Penrose (Mahoney & Pandian, 2012). The theory argues that firms' own resources which they can employ to become competitive. The theory posits that a firm can gain competitive advantage by being in possession of distinctive resources or capabilities which are valuable, difficult to imitate and rare in the marketplace (Bakar & Ahmad, 2015). Proponents of this view argue that organizations need to utilise internal sources of competitiveness as opposed to external sources. According to RBV proponents, it is much more feasible to exploit external opportunities using existing resources in a new way rather than trying to acquire new skills for each different opportunity. Firm resources and processes are important to firms since they influence its behaviour and activities in health insurance. It is the distinctive resources that lead to sustained competitiveness and superior returns in firms (Bakar & Ahmad, 2015).

This theory supports the objective of the study on the effect of organization innovation on the performance of organizations. Financial resources are among the most important bundle of resources for a firm that can be used to support innovative activities especially R & D in health insurance. Likewise, human capital is a key determinant of firm performance and competitiveness in health insurance. Another key resource for firm's competitiveness is the knowledge-based resources. Organizational innovation facilitates the discovery of ideas and exploitation of opportunities for innovation and therefore organization innovation facilitates access of useful information for transformation and the development of other resources for enhancing organizational performance in health insurance (Tangen2015). Thus, the theory is relevant to NHIF as it seeks to enhance its performance through efficiency and effectiveness of its services by putting in place enough resources to facilitate and enhance innovation and hence the relevance of Resource Based theory to the study.

2.3 Empirical Literature

The section gives an insight on literature from previous studies concerning the effects of innovative practices on operational performance of organizations.

2.3.1 Product Innovations and Firm Operational Performance

Njagi (2016) studied the effect of product innovation on the performance of private manufacturing firms in Nairobi County. The variables for the study were new Product development, quality Improvement and technical Specifications Descriptive research

design was used and primary data was collected using questionnaires. The study found a positive and significant correlation between product innovation and return on assets (ROA). The study concluded that product innovation has positive effects on profitability. Hence, recommended that manufacturing companies should invest more on product innovation practices as it improves financial performance and their competitive advantage. A gap exists as the above study context was private manufacturing firms while the current study focuses on National Health Insurance Fund in Kenya.

Muigai (2019) used both primary and secondary data to study the effect of product innovation on performance of commercial banks in Kenya. The variables for the study were self-service account opening, saving innovations products, loans innovations product and payment innovations products. Descriptive statistics such as mean, standard deviation and frequency distribution were used to analyse the data. Data presentation was done using percentages and frequency tables. From the study findings, it can be concluded that product innovation impacts on customer satisfaction and that the reputation in the market makes the bank stand out. Therefore, commercial banks should aim at product innovation to enhance customer satisfaction. A gap exists as the above study context was in the banking sector while the present study focuses on product innovations at NHIF in Kenya.

In summary, a contextual gap exists as the above studies were in different context in terms of relevance as they were not in the health insurance sector. A conceptual gap also exists as the measure of product innovation in the different sectors were different from the existing study where product innovation measures for NHIF the enhanced medical scheme packages developed e.g PET scan and specialised surgeries that may be used to enhance customer satisfaction by increase in scope of coverage and overall performance.

2.3.2 Process Innovations and Firm Operational Performance

AlShorma et al. (2020) focused on the effect of process innovation on business performance in Malaysia. The variables for the study were innovations in technology, skill, techniques, system, and procedure. The quantitative research design approach was used in this study to collect data from 386 respondents selected from the product industries in Malaysia. The required data were obtained using simple random sampling by a validated questionnaire. The results of this study showed that there is a significant relationship between process innovation and business performance thus process innovation should be emphasized by firms as its primary distinctive competence for competitive advantage thus enhancing firm

performance. A gap exists as the above study was in the global context and focused on the general business performance while the present study focuses on National Hospital Insurance Fund in Kenya.

While evaluating the effect of process innovation on financial performance in utility companies in Kenya: a case study of Kenya Power, Omesa (2019) used descriptive research design in the study. The variables for the study were the prepaid power electronic service and 'jisomee mita-read your meter' initiative. Data collected was analyzed using descriptive and inferential statistics to interpret the data. From the study it is evident that the process innovation has affected the sale of electricity in terms of increased revenue thus enhancing financial performance. A gap exists as the above study context was on financial performance and the energy sector while the present study focuses on process innovations at NHIF in Kenya. In summary, a contextual gap exists as the above studies were in different context in terms of relevance as they were not in the health insurance sector.

A conceptual gap also exists as the measure of process innovation in the different sectors were different from the existing study where process innovation measures for NHIF are online pre-authorisation and authorisation of Letter of Undertaking (LOU), online member registration for both formal and informal sectors and online claim payment process which have enhanced efficiency of service delivery and overall performance.

2.3.3 Market Innovations and Firm Operational Performance

Kariuki (2017) focused on effect of market innovation on performance among commercial banks in Kenya. The study employed a descriptive survey research design. Structured questionnaire was used to collect primary data, which was analysed using SPSS version 22 for descriptive and inferential statistics. The findings on the effect of market innovation on competitive advantage revealed the existence of a positive significant relationship between market innovation and competitive advantage and performance of the firm. Market innovations provide banks the opportunity to enhance their performance through increase in market share, and product differentiation to the market. A gap exists as the above study context was on commercial banks in Kenya while the present study focuses on National Hospital Insurance Fund in Kenya.

Njeri (2017) studied effect of market innovation on firm performance in telecommunications industry: a case of Safaricom Kenya Limited. The research adopted a descriptive survey research design. Descriptive analysis, correlation analysis and

regression analysis were used to analyse the data. The study therefore concludes that there is a positive and significant effect of market innovation strategy on performance of Safaricom Limited. The study concludes that market innovation strategy was the second most significant innovation strategy to affect performance of Safaricom Limited. A gap exists as the above study context was on the telecommunications industry while the present study focuses on market innovation at NHIF in Kenya. In summary, a contextual gap exists as the above studies were in different context in terms of relevance as they were not in the health insurance sector. A conceptual gap also exists as the measure of market innovation in the different sectors were different from the existing study where market innovation measures for NHIF are digital marketing platforms such as Facebook, Twitter and toll free telephone which have enhanced customer satisfaction as clients don't need to walk to offices for information as they can get in their comfort, growth and overall performance.

2.3.4 Technological Innovations and Firm Operational Performance

Wachira (2016) focused on the effect of technological innovation on the financial performance of commercial banks in Kenya. The researcher employed a descriptive cross-sectional design. Primary data was gathered from personnel from the customer care departments using a structured questionnaire. There was a positive and significant relationship between banks' performance in terms of profitability and adoption of various technological innovations including customer independent technology, customer assisted technology and customer transparent technology. A gap exists as the above study context was on the financial performance of commercial banks in Kenya while the present study focuses on National Health Insurance Fund in Kenya.

While focusing on technological innovation and customer satisfaction in Kenya Power, Kiarie (2018) collected data using structured questionnaire and analysed using descriptive statistics. The responses of the customers were likely to be influenced by the prevailing conditions such as availability of power in general and reliability of Mpesa services that are provided by mobile providers during the time of collecting the data. The study recommended to the organisation to carry out an awareness campaign where all information pertaining to technological innovations implemented was disseminated to the customers. A gap exists as the above study context was on customer satisfaction in Kenya Power while the present study focuses on technological innovations at NHIF in Kenya. In summary, a contextual gap exists as the above studies were in different context in terms of relevance as

they were not in the health insurance sector. A conceptual gap also exists as the measure of technology innovation in the different sectors were different from the existing study where technology innovation measures for NHIF are biometric registration, online tracking of claims processing and hospital accreditation and SMS feedback on LOU approval which have enhanced efficiency and overall performance.

2.4 Summary of Knowledge Gaps

Table 2.1: Summary of Knowledge Gaps

Author	Focus on Previous Research	Research Gaps
Njagi (2016)	Effect of product innovation on the performance of private manufacturing firms in Nairobi County	This study was on product innovation in private manufacturing firms in Nairobi County while the current study focuses on innovative practices on operational performance of the NHIF
Muigai (2019)	Effect of product innovation on performance of commercial banks in Kenya	The study focus was on product innovation on performance of commercial banks in Kenya while the current study focuses on innovative practices on operational performance of the NHIF
AlShorma et al. (2020)	Effect of process innovation on business performance in Malaysia	A gap exists as the above study focus was on process innovation on business performance while the present study focuses on innovative practices on operational performance of the NHIF
Omesa (2019)	Effect of process innovation on financial performance in utility companies in Kenya: a case study of Kenya Power	The focus was on process innovation on financial performance and the context was Kenya Power while the present study focuses on innovative practices on operational performance of the NHIF
Kariuki (2017)	Effect of market innovation on performance among commercial banks in Kenya	The focus was on market innovation on performance of commercial banks while the present study focuses on innovative practices on operational performance of the NHIF

Njeri (2017)	Effect of market innovation on firm performance in telecommunications industry: a case of Safaricom Kenya Limited	The study focused on market innovation on firm performance and the context was telecommunications industry while the present study focuses on innovative practices on operational performance of the NHIF
Wachira (2016)	The effect of technological innovation on the financial performance of commercial banks in Kenya	The focus was on technological innovation on the financial performance of commercial banks while the present study focuses on innovative practices on operational performance of the NHIF
Kiarie (2018)	Technological innovation and customer satisfaction in Kenya Power	The study focus was on technological innovation and customer satisfaction in Kenya Power while the present study focuses on innovative practices on operational performance of the NHIF

Source: Author (2022)

2.5 Conceptual Framework

The conceptual framework provides the relationship that the researcher feels is present between the research variables. The Independent variables are product innovation, process innovation, market innovation and technology innovations while the dependent variable is operational performance.

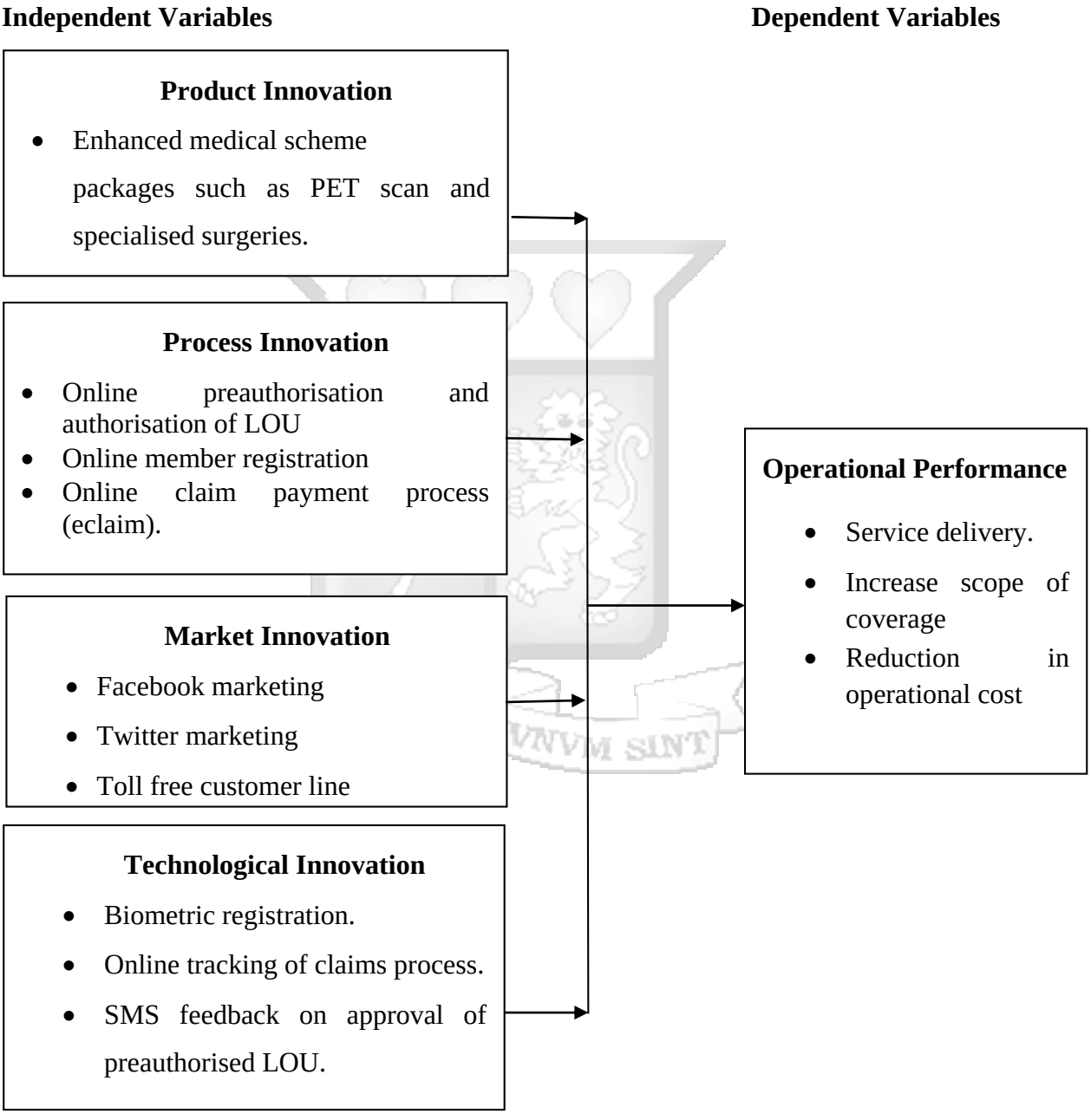

Figure 2.1: Conceptual Framework

Source: Author (2022)

2.6 Conceptualization

Product innovation is the introduction of a good or service that is new or significantly improved regarding its characteristics or intended uses, including significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics (Morone& Testa, 2014). Products that are constantly improved are particularly important for long term operational performance (Bayus, Erickson & Jacobson, 2013). The product innovations include the enhanced medical scheme packages developed such as PET scan and specialised surgeries.

Process innovation is the implementation of a new or significantly improved production or delivery method, including significant changes in techniques, equipment and/or software (OECD, 2019). Process innovation is intended to decrease unit costs of production, to increase quality and to improve delivery of products and services (Oke, Burke & Myers, 2016). According to O'brien (2017) process innovation achieves quality function deployment and business processing reengineering and in turn enhancing operational performance. The process innovations include online preauthorisation and authorisation of LOU, online member registration and online claim payment process (eclaim).

Market innovation is defined in the OECD (2019) as the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing. Market innovations target at addressing customer needs better, opening new markets, or newly positioning a firm's product on the market with the intention of enhancing organization operational performance (Gunday *et al*., 2017). The market innovations include Facebook marketing, Twitter marketing and toll-free customer line.

Technological innovation is, presently, renowned as one of the main factors on the competitive advantage of the firm's as well as a crucial element in enhancing the financial and economic results of firms (Mick & Fournier, 2014). Indeed, increased operational performance has been observed among organizations capable of employing innovation to differentiate their services and products and improve their processes in association to their competitors. The success of most firms majorly depends on efficient operational processes which result from more investments in technologies that enhance firm internal efficiencies (Munyoroku, 2014). Technological innovation include biometric registration, online

tracking of claims process, SMS feedback on approval of preauthorised LOU and online tracking on the hospital accreditation process.

According to Daft (2016) operational performance is the organization's ability to attain its goals by using resources in an efficient and effective manner. It is determined by how well a firm manages its internal resources and adapts to its external environment and further reflects the accomplishment of its strategic objectives and growth goals (Hult, Hurley & Knight, 2014). Operational performance was measured in terms of service delivery with the use of process, market and technology innovation, reduction in operational cost by enhancing process and technology innovation and increase scope of health coverage by promoting product, marketing, and technology innovation.

2.7 Operationalization and Measurement of Variables

This sub-section identifies and operationalizes the key variables independent and dependent variables of the study. The operationalized is based on how the variable has been used in the current study.

Table 2.2: Operationalization and Measurement of Variables

Variable	Indicators	Source	Data Collection tool	Data Analysis
Organizational Performance	• Service delivery • Reduction in operational cost • Increase scope of health coverage	NHIF (2022)	Questionnaire in form 5-likert scale questions	Descriptive and inferential analysis
Product Innovation	• Enhanced medical scheme packages developed such as PET scan and specialized surgeries.	NHIF (2022)	Questionnaire in form of open ended and 5-likert scale questions	Descriptive and inferential analysis
Process Innovation	• Preauthorisation and authorisation of LOU online • Online member registration • Online claim payment process	NHIF (2022)	Questionnaire in form of open ended and 5-likert scale questions	Descriptive and inferential analysis
Market Innovation	• Facebook marketing • Twitter marketing • Toll free telephone	NHIF (2022)	Questionnaire in form of open ended and 5-likert scale questions	Descriptive and inferential analysis
Technological Innovation	• Biometric registration • Online tracking of claims and accreditation process. • Sms feedback on approval of pre-authorized LOU	NHIF (2022)	Questionnaire in form of open ended and 5-likert scale questions	Descriptive and inferential analysis

Source: Researcher (2022)

2.8 Chapter Summary

The chapter covered introduction, theoretical foundation, empirical literature, summary of knowledge gaps, conceptual framework, conceptualization, operationalization, and measurement of variables. The literature review began by looking at the theories that guided the study that included theory of the Innovative Firm and the Resource Based Theory. According to the theory of the innovative firm, the function of a firm is to transform productive resources into goods and services that can be commercialized. Innovative firms can transform productive resources into higher quality, lower cost goods and services translating to a gain for the customers and other participants in the economy. The Resource Based theory posits that a firm can gain competitive advantage by being in possession of distinctive resources or capabilities which are valuable, difficult to imitate and rare in the marketplace. The product innovations include the enhanced medical scheme packages developed such as PET scan and specialised surgeries. The process innovations include online preauthorisation and authorisation of LOU, online member registration and online claim payment process (eclaim). The market innovations include Facebook marketing, Twitter marketing and toll-free customer line. Technological innovation includes biometric registration, online tracking of claims process, SMS feedback on approval of preauthorised LOU and online tracking on the hospital accreditation process. Operational performance was measured in terms of service delivery with the use of process, market and technology innovation and reduction in operational cost.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The research methodology topic gives an outline of different methodologies used in data collection, procedures incorporated in carrying out this study, the methods applied in analyzing and interpreting the collected data.

3.2 Research Philosophy

Research philosophy relates to the development of knowledge and the nature of that knowledge (Saunders, Lewis & Thornhill 2012). There are different types of research philosophy in research that include positivism, social constructivism/interpretivist, pragmatism, and realism. Positivism assumes in its understanding of the world that the environment and the events of interest are objective, external and independent of the researcher (Bryman & Bell, 2015). Social constructivism, however, assumes that the understanding of the environment and events in it are socially constructed and subjective from the researcher's point of view. Pragmatism is adopted when the phenomenon under inquiry draws different views and interpretations to produce multiple realities and researchers believe that the study benefit from the strengths of both qualitative and quantitative technique.

In realism, people's social interpretation and behaviour are influenced by the existence of external and objective reality and is preferred on a qualitative research Positivism relies on quantitative data that positivists believe is more reliable than qualitative research. Positivism believes quantitative research is more scientific in its methods than qualitative research and thus more trustworthy (Saunders, Lewis & Thornhill 2012). The positivism research philosophy was thus appropriate for this study since the study is quantitative in nature. This was an appropriate philosophy in determining the effect of innovative practices on operational performance of the National Hospital Insurance Fund in Kenya.

3.3 Research Design

A quantitative descriptive research design was adopted that aim at establishing the effect of innovative practices on performance of the National Hospital Insurance Fund in Kenya. A descriptive research design was employed which is a research method that describes the characteristics of the population or phenomenon studied. Descriptive research design focuses more on the what of the research subject than the why of the research subject

(Saunders, Lewis & Thornhill, 2012). The descriptive design was applied because it gives a room for obtaining large data volume from a substantial population in an economical, effective and efficient way by use of questionnaires (Saunders, Lewis & Thornhill, 2012). This technique was preferable because it allows the analysis of a number of variables by the researcher at a go and by use of this technique, the research is capable of describing the various variables and conditions (Erik & Marko, 2011). The research design was applied in creating frequency distributions, percentages, and tables.

3.4 Population of the Study

Population refers to a full set of objects, cases or individuals that have some similar observable features, (Mugenda & Mugenda, 2012). The target Population is the specific population under research (Kothari, 2014). Kothari (2014) notes that the target population should be characterized by traits that can be observed and which helped the researcher make generalizations on the whole population. The population of interest comprised of 148 employees from NHIF headquarters in Upperhill Nairobi from the ICT department, operations, finance and marketing department. The headquarter was targeted since it would not be possible to target all the branches while at the same time was deemed to be a representative of all the branches as it has staffs from different management levels and departments who manage the data on operational performance.

Table 3.3: Population

Population Category	Population Frequency	Percentage (%)
ICT Department	26(1 HOD, 5 Managers and 20 Senior Officers)	17.6
Operations Department	38(1 Director,3 HODs, 10 Managers and 14 Senior Officers)	25.7
Finance Department	65(1 HOD, 7 Managers and 57 Senior Officers)	43.9
Marketing Department	19(1 HOD, 1Manager and 17 Senior Officers)	12.8
Total	**148**	**100.0**

3.5 Sampling Technique

According to Erik and Marko (2011) sampling is the process of selecting a number of individuals for a study in such a way that the individual represents a true representation of the group from which they are selected. A sample is a small group obtained from accessible population (Mugenda & Mugenda, 2012). Sampling method is the procedure a researcher uses to gather people, places or things to study (Kombo & Tromp, 2014). Stratified random sampling technique was used since the population of interest is not homogeneous and could be subdivided into groups or strata to obtain a representative sample. This method was used since it reduces chances of bias and all items have an equal chance of being selected.

The study used the Yamane (1967) formula to arrive at the sample size. The selection formula is as follows:

$n= (N/ (1+N (e)^2$

Where n= the required sample size

N = is the Target Population (148 employees)

e = accuracy level required. Standard error = 5%

$n=148/ (1+148 (0.05)^2$

n=148/1.37

n=108

A sample of 108 respondents was used

Table 3.4: Sample Size

Population Category	Sample Size	Percentage (%)
ICT Department	19	17.6
Operations Department	28	25.7
Finance Department	47	43.9
Marketing Department	14	12.8
Total	**108**	**100.0**

3.6 Data Collection and procedures

Data collection enable the researcher to accumulate information about people, objects, or a phenomenon and about the setting in which they occur and are essentially categorized in to primary and secondary data collection methods (Cooper & Schindler, 2011). The researcher employed primary data which was collected through structured questionnaires that were closed ended and was self-developed by the researcher. The close-ended questions were in the Likert scales because they are reliable and give increased data volumes as compared to the rest of the scales. The questionnaire contained background information of respondents as well as questions regarding the objectives of the study.

Primarily, researchers deal with generating, collecting, collating, analysing data and drawing inferences from them. This study used both primary and secondary data, where the former refers to information obtained from key informants. Protocol for data collection was followed attentively.

3.7 Data Quality

The researcher observed data quality by ensuring that the techniques and reports used are reliable to produce consistent reports when used by other researchers. The researcher conducted a pilot study at NHIF Westlands branch where 12 respondents were used as the pilot group, and they were not involved in the actual study.

3.7.1 Reliability of Instruments

Reliability is the measure of whether one gets a similar result using an instrument for measuring an item more than one time. A specific measure is reliable if its application on the same object of measurement number of times produces the same results (Bryman & Bell, 2015). Reliability is evaluated repeatedly through using a test–retest reliability approach of the Cronbach Alpha measure of internal consistency (Cooper & Shindler, 2011). For this study reliability was measured using Cronbach alpha. It tests internal consistency used to calculate correlation values among responses on an assessment tool. The 0.70 is the level acceptable that is the desirable reliability (Bell & Bryman, 2015).

Table 3.5: Reliability Analysis Results

Factor	Cronbach's Alpha	Comments
Product innovation	0.726	Accepted
Process innovation	0.741	Accepted
Market innovation	0.719	Accepted
Technological innovation	0.812	Accepted
Operational performance	0.765	Accepted

After the test, all the alpha characteristics were more than 0.7 as shown in Table 3.5. Product innovation had an alpha estimation of 0.726, process innovation had Cronbach's alpha estimation of 0.741, market innovation had Cronbach's alpha1estimation of 0.719, technological innovation had Cronbach's alpha1estimation of 0.812 while operational performance had a Cronbach's alpha estimation of 0.765. This was an indication that there was consistency in responses in the questionnaire and thus the questionnaire was deemed to be reliable as it was above 0.70 is the level acceptable.

3.7.2 Validity of Instruments

According to Cooper and Shindler (2013) validity is the degree by which the sample of test items represents the content the test is designed to measure. There are seven key types of validity in research that include face validity, content validity, construct validity, internal validity, external validity, statistical conclusion validity and criterion-related validity. However, content validity was applied in this research which measures the level by which collected data by use of instruments mirrors a particular content or domain of specific concept. To achieve this, the questionnaire was proofread to ensure that there are no errors both typographical and in form. To determine the validity of the questionnaire, it was necessary to pretest it before actually using it. The pretesting of the research instruments ensured that the instruments are valid in that they can measure the concept(s) it is intended to measure

3.8 Data Analysis

Analysis of data was carried out by employing SPSS version 23 and the results presented in form of tables. The study used descriptive and inferential statistics to analyze quantitative data. The quantitative data in descriptive form was analyzed in form of mean, standard deviation, frequency, and percentages. Descriptive statistics help us to simplify large

amounts of data in a sensible way for easier interpretation. Inferential statistics in the form of multiple regression analysis was also used.

A multivariate regression model was used in establishing the relationship amongst the studied factors. Regression as well can estimate the linear equation's coefficients, comprising one or many independent variables, that best estimates the dependent variable's value (Cooper & Schindler, 2011).

The regression model was as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where:

Y = Organizational Performance

X_1= Product Innovation

X_2= Process Innovation

X_3= Market Innovation

X_4= Technological Innovation

$\beta 0$ = Constant Term; β_1, β_2, β_3 and β_4 = Beta coefficients which were employed for measuring dependent variable's sensitivity (Y) to a change in a unit of predictor variables.

ε = Error term

3.9 Ethical Considerations

The researcher sought the necessary approvals before the research begins where ethical clearance was sought from the University Ethical Review Board (ERB) and the National Commission for Science, Technology, and Innovation (NACOSTI). The research upheld the ethical rights of the respondents when administering the questionnaire. The respondents were assured that their identity and information provided remain confidential and would not be used against them. Anonymity was maintained whereby the researcher instructed the respondents that they need not indicate their identities in the given questionnaires. The researcher sought the consent of the respondents before administering the questionnaires to them and emphasized that responding to the questionnaire is voluntary. The respondents maintained the right to withdraw from the study at any point in the study.

3.10 Chapter Summary

This chapter presents the research methodology which was applied in analysis of questions of research. The study adopted a descriptive research design. The target population comprised of 148 employees from NHIF headquarters in Upperhill Nairobi from the ICT department, operations, finance, and marketing department. The stratified random technique was used to obtain 108 respondents. The study used structured close ended questions to collect primary data. Analysis was done quantitatively by employing inferential and descriptive statistics. Presentation of data was done through frequencies, mean, standard deviation and percentages and presented in form of tables.

CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The chapter presents the research findings. The chapter begins with the response rate and the demographic characteristics of the respondents. The descriptive and inferential findings of the study objectives are then presented.

4.2 Response Rate

The researcher distributed 108 questionnaires to the sampled respondents from NHIF headquarters. Out of the 108 questionnaires administered, 91 questionnaires were duly filled and returned representing a response rate of 84.3%. Kothari (2010) asserts that a response rate of 50 percent is adequate while that of above 70% is very good. This information is in line with Mugenda and Mugenda (2012), who state that a response rate of 50 % is adequate, 60 percent is good and above 70 % is very good. Based on this information the response rate achieved in this study from the correctly returned questionnaires was adequate.

4.3 Demographic Characteristics

The study sought some demographic information concerning the respondents that included the highest level of education and the period worked in the organization.

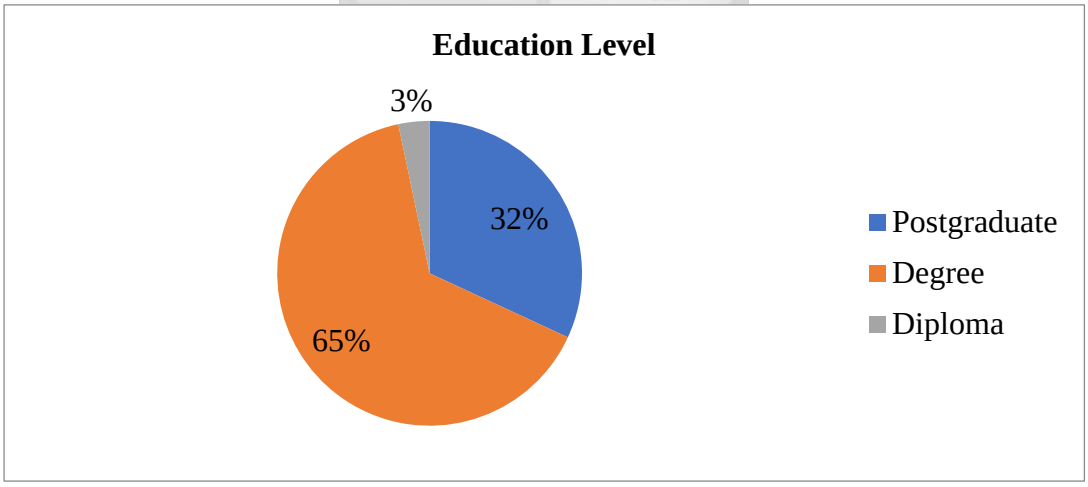

Figure 4.2: Highest Levels of Education

The study sought to find the highest levels of education of the respondents. From the results, the majority (65%) of the respondents were holders of a bachelor's degree, slightly more than a third (32%) of the respondents indicated that they possessed postgraduate

qualifications, while 3% were holders of diplomas. These results imply that the employees at NHIF have a high level of academic qualifications.

The study sought how long the respondents had worked in the organization.

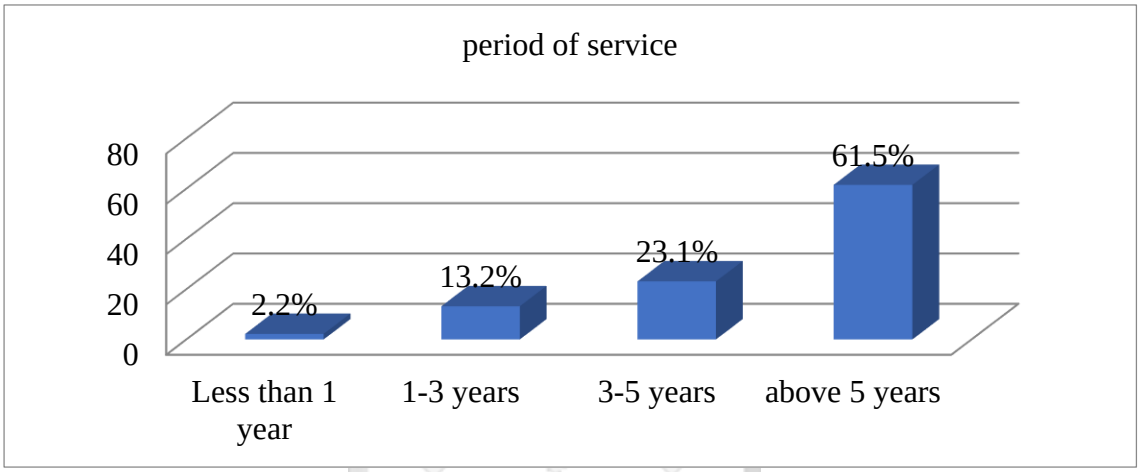

Figure 4.3: Period of Service

The findings revealed that over half of the respondents (61.5%) had worked in the organization for over 5 years, 23.1% for 3-5 years, 13.2% for 1-3 years and 2.2% for less than 1 year. The findings indicate that majority of the respondents had been in the organization for a period long enough to have an understanding of the innovations adopted and their effects on the operational performance of the organization.

4.4 Product Innovation and Operational Performance

4.4.1 Descriptive Statistics

The study requested the respondents to indicate their agreement level on the statements that relate to the effect of product innovation on the operational performance of the National Hospital Insurance Fund in Kenya.

Table 4.6: Statements on product innovation

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.Dev
Our firm has introduced new services in the insurance sector	0	4	15	40	32	4.10	0.83
Our firm has introduced new products in the insurance sector	1	6	7	45	32	4.11	0.89
Product innovations enhance cost savings of our firm	0	7	9	40	35	4.19	0.91
Product innovations attract diverse customers with varied needs of our firm	0	4	6	56	25	4.12	0.71
Product innovation provides the most obvious means for generating revenues of our firm	1	16	12	37	25	3.76	1.08
Product innovation provides the means for improving quality of our firm	4	5	14	39	29	4.03	1.10
Product innovation enhances the competitiveness of our firm	0	2	4	66	19	4.12	0.57

Majority of the respondents agreed that product innovations enhance cost savings of our firm as shown by a mean of 4.19 which is in the range of agree between 3.5 to 4.2. With a standard deviation of 0.91 which is less than 1, the responses had low variance. The respondents agreed that product innovations attract diverse customers with varied needs of their firm as demonstrated by a mean of 4.12 which lies in the range of agree between 3.5 to 4.2. The responses had less variance as shown by a standard deviation of 0.71 which is less than 1. The respondents agreed that product innovation enhances the competitiveness of our firm as shown by a mean of 4.12 and a standard deviation of 0.57 indicating a low variance in the responses. The respondents also agreed that their firm has introduced new products in the insurance sector as demonstrated by a mean of 4.11 with a standard deviation of 0.89 which shows low variances in the responses. The respondents agreed that their firm has introduced new services in the insurance sector as illustrated by a mean of

4.10 which lies in the agree range of 3.4 to 4.2. This had a standard deviation of 0.83 indicating a low variance in the responses. In addition, the respondents agreed that product innovation provides the means for improving the quality of their firm and that product innovation provides the most obvious means for generating revenues for our firm as shown by a mean of 4.03 and 3.76 and standard deviations of 1.10 and 1.08. The standard deviations are above 1 depicting a high variance in the responses. Consistent findings were established by Muigai (2019) that product innovation attracts the customer and creates a competitive advantage for the firm.

4.4.2 Inferential Statistics

This section presents a regression analysis on the effect of product innovation on operational performance of the National Hospital Insurance Fund in Kenya. A simple linear regression analysis was conducted to test the effect of product innovation on operational performance of the National Hospital Insurance Fund in Kenya. The model summary is presented in Table 4.6.

Table 4.7: Regression Between Product Innovation on Operational Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.526	0.277	0.243	0.95046

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.325	1	8.325	9.219	.031[b]
	Residual	80.4	89	0.903		
	Total	88.725	90			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.139	0.403		5.308	0.000
	product innovations	0.578	0.138	0.526	4.188	0.031

R which is the correlation coefficient showed that there existed a moderate positive relationship between product innovation on operational performance as indicated by the correlation coefficient of 0.526. The R-squared also called the coefficient of determination is the percent of the variance in the dependent variable explained uniquely or jointly by the independent variables. The model had a coefficient of determination (R^2) of 0.277 and which implied that 27.7% of the variations in operational performance were explained by product innovation.

From the ANOVA, the study established that the regression model had a significance level of 0.031% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (9.219> 3.948) an indication that product innovation had a significant effect on operational performance. The significance value was less than 0.05 indicating that the model was significant.

From the regression model obtained above, a unit change in product innovation while holding other factors constant would positively change operational performance by a factor of 0.578. The p-value was 0.000, an indication that product innovation had a significant influence on operational performance at a 5% significance level.

4.5 Process Innovation and Operational Performance

4.5.1 Descriptive Statistics

The study requested the respondents to indicate their agreement level on the statements that relate to the effect of process innovation on operational performance of the National Hospital Insurance Fund in Kenya.

Table 4.8: Statements on Process Innovation

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.Dev
Our firm has invested in process innovation	0	12	8	42	29	3.97	0.97
Process innovation decreases cost of operations of our firm	0	10	25	38	18	3.70	0.91
Process innovation enhance quality of products and services of our firm	1	9	6	47	28	4.01	0.94
Process innovation enhance business processing reengineering of our firm	0	10	12	48	21	3.88	0.89
Process innovation enhance employee participation and commitment of our firm	1	8	10	48	24	3.95	0.91
Process innovation enhance product innovation of our firm	0	10	5	51	25	4.00	0.88
Process innovation enhance competitiveness of our firm	0	2	9	64	16	4.03	0.60
Process innovation increase the market share of our firm	1	7	11	32	40	4.13	0.98
Process innovation enhance customer loyalty of our firm	1	7	8	47	28	4.03	0.90

The majority of the respondents agreed that process innovation increase the market share of the firm as illustrated by a mean of 4.13 which lies in the range of 3.5 to 4.2. The responses had a low variance as shown by a standard deviation of 0.98 which is less than 1. The respondents agreed that process innovation enhances competitiveness of their firm as demonstrated by a mean of 4.03 which is the range of agree between 3.5 to 4.2. The responses had a standard deviation of 0.60 which is lower than 1 implying a low variance. They agreed that process innovation enhances customer loyalty to their firm as shown by a mean of 4.03 which is in the range of agree between 3.5 to 4.2. The responses had a variance of 0.90 which is low than 1 indicating a low variance.

The respondents also greed that process innovation enhances the quality of products and services of their firm as shown by a mean of 4.01 which is in the range of 3.5 to 4.2. The standard deviation of 0.94 shows that the responses had a low variance. The respondents agreed that process innovation enhances product innovation of the firm as shown by a mean of 4.00 which is in the range of 3.5 to 4.2. The responses had a standard deviation of 0.88 which shows a low variation in responses. The respondents agreed that their firm has invested in process innovation as shown by a mean of 3.97 and a less than 1 standard deviation of 0.97 implying low variance in responses. They greed that process innovation enhances employee participation and commitment to their firm as shown by a mean of 3.95 and a low standard deviation of 0.91 which implies that the responses had a low variance. Further, the respondents agreed that process innovation enhances business processing reengineering of their firm as illustrated by a mean of 3.88 and a low standard deviation of 0.89 indicating a low variance of the responses. The respondents agreed that process innovation decreases the cost of operations of their firm as shown by a mean of 3.70 which lies in the range of 3.5 to 4.2 and a low standard deviation of 0.91 implying a low variance in the responses. Similarly, Omesa (2019) that process innovation improves the products and service quality of the firm and also decreases the cost of operations of the firm.

4.5.2 Inferential statistics

A simple linear regression analysis was conducted to assess the association between process innovation and operational performance of the National Hospital Insurance Fund in Kenya.

Table 4.9: Regression Between Process Innovation and Operational Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.475[a]	.225	.212	.80313

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.703	1	4.703	7.291	.001[b]
	Residual	57.407	89	.645		
	Total	62.110	90			

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.848	.471		6.048	.000
	Process innovation	0.341	0.102	0.278	3.343	.001

The correlation coefficient (R) showed that there existed a moderate positive relationship between process innovations on operational performance as indicated by the correlation coefficient of 0.475. The R-squared also called the coefficient of determination is the percent of the variance in the dependent variable explained uniquely or jointly by the independent variables. The model had a coefficient of determination (R^2) of 0.225 and which implied that 22.5% of the variations in operational performance were explained by process innovation.

From the ANOVA, the study established that the regression model had a significance level of 0.001% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (7.291> 3.948) an indication that process innovation had a significant effect on operational performance. The significance value was less than 0.05 indicating that the model was significant.

From the regression model obtained above, a unit change in process innovation while holding other factors constant would positively change operational performance by a factor of 0.341. The p-value was 0.001, an indication that process innovation had a significant influence on operational performance at a 5% significance level.

4.6 Market Innovation on Operational Performance

4.6.1 Descriptive Statistics

The study requested the respondents to indicate their agreement level on the statements that relate to the effect of market innovation on operational performance of the National Hospital Insurance Fund in Kenya.

Table 4.10: Statements on Market Innovation

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.Dev
Our company has invested in market innovation	2	6	9	35	39	4.13	0.99
Market innovation enhances customer needs of our firm	2	17	8	35	29	3.79	1.15
Market innovation leads to opening new markets of our firm	2	5	2	49	33	4.16	0.89
The use of technology has led to the development of new ways to market our firm	0	2	4	65	20	4.13	0.58
Market innovation enhance competitiveness of our firm	3	9	5	39	35	4.03	1.07
Market innovation plays a crucial role in fulfilling market needs of our firm	3	11	8	25	44	4.05	1.17
Market innovation plays a crucial role in responding to market opportunities of our firm	4	19	8	27	33	3.73	1.27
Market innovation enhance survival of our firm in an environment of fast changing market	1	4	12	37	37	4.15	0.89
Market innovation enables our firm to safeguard their already existing business	1	9	7	41	33	4.05	0.97

Majority of the respondents agreed that market innovation leads to opening up new markets for their firm as shown by a mean of 4.16 which is in the range of agree between 3.5 to 4.2. The responses had a standard deviation of less than 1 (0.89) indicating low response variance. They further agreed that market innovation enhances survival of their firm in an environment of fast-changing market as indicated by a mean of 4.15 which is in the range of agree between 3.5 to 4.2. This had a standard deviation of 0.89 which shows a low variance. The respondents agreed that their company has invested in market innovation as shown by a mean of 4.13 and a standard deviation of 0.99 implying a low variance in the responses. The respondents agreed that the use of technology has led to the development of new ways to market their firm as shown by a mean of 4.13 and a standard deviation of

0.58 implying a low variance in the responses. Market innovation plays a crucial role in fulfilling the market needs of the firm as illustrated by a mean of 4.05 which is in the range of agree between 3.5 to 4.2. This had a standard deviation of1.17 which is over 1 implying a high variance in the responses.

The respondents agreed that market innovation enables their firm to safeguard their already existing business as illustrated by a mean of 4.05 and a standard deviation 0.97 which is less than 1 indicating a low response variance. The respondents agreed that market innovation enhances the competitiveness of their firm as shown by a mean of 4.03 which is in the range of agree between 3.5 to 4.2 with a standard deviation of more than 1 (1.07) implying a high response variance. The respondents agreed that market innovation enhances the customer needs of their firm as shown by a mean of 3.79 which is in the range of agree between 3.5 to 4.2. The responses had a high variance as indicated by a standard deviation of 1.15 which is greater than 1. The respondents agreed that market innovation plays a crucial role in responding to market opportunities of their firm as shown by a mean of 3.73 which is in the range of agree between 3.5 to 4.2. The response had a standard deviation of 1.27 which is greater than 1 implying a high variance in the responses. Similarly, Kariuki (2017) established that market innovations provide firms the opportunity to enhance their performance through an increase in market share, and product differentiation in the market.

4.6.2 Inferential Statistics

A simple linear regression analysis was conducted to assess the association between market innovation and operational performance of National Hospital Insurance Fund in Kenya.

Table 4.11: Regression Between Market Innovation and Operational Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.508[a]	.258	.256	.43165

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.400	1	4.400	6.362	.013[b]
	Residual	61.556	89	.692		
	Total	65.956	90			

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	3.001	0.414		7.247	.000
	Market innovation	0.357	0.113	0.289	3.159	.013

The correlation coefficient (R) showed that there existed a moderate positive relationship between market innovation on operational performance as indicated by the correlation coefficient of 0.508. The R-squared also called the coefficient of determination is the percent of the variance in the dependent variable explained uniquely or jointly by the independent variables. The model had a coefficient of determination (R^2) of 0.258 and which implied that 25.8% of the variations in operational performance were explained by market innovation.

From the ANOVA, the study established that the regression model had a significance level of 0.001% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (6.362> 3.948) an indication that market innovation had a significant effect on operational performance. The significance value was less than 0.05 indicating that the model was significant.

From the regression model obtained above, a unit change in market innovation while holding other factors constant would positively change operational performance by a factor of 0.357. The p-value was 0.013, an indication that market innovation had a significant influence on operational performance at a 5% significance level.

4.7 Technological Innovation and Operational Performance

4.7.1 Descriptive Statistics

The study requested the respondents to indicate their agreement level on the statements that relate to the effect of technological innovation on operational performance of the National Hospital Insurance Fund in Kenya.

Table 4.12: Statements on Technological Innovation

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.Dev
Our company has invested in technological innovation	0	11	12	33	35	4.01	1.01
Technological innovation enhances the competitive advantage of our firm	0	4	30	48	19	3.90	0.78
Technological innovation enhances survival of our firm in an environment of fast changing market	1	9	8	43	30	4.01	0.96
Technological innovation enhances customer satisfaction and loyalty in our firm	0	5	5	52	29	4.15	0.76
Technological innovation enhances the efficiency of operational processes of our firm	0	7	8	34	42	4.22	0.90
Technological innovation helps explore new revenue opportunities of our firm	2	9	17	38	25	3.82	1.02
Technological innovation plays a crucial role in responding to market needs of our firm	5	9	11	38	28	3.82	1.14

The respondents agreed that technological innovation enhances the efficiency of operational processes of their firm as shown by a mean of 4.22 which is in arrange of agree between 3.5 to 4.2. The responses had a standard deviation of 0.90 which is less than 1 implying a low variance. The respondents agreed that technological innovation enhances customer satisfaction and loyalty in their firm as illustrated by a mean of 4.15 which is in the range of agree between 3.5 to 4.2. The responses had a standard deviation of 0.76 which is less than 1 implying a low variance. The respondents agreed that their company has invested in technological innovation as shown by a mean of 4.01 and a standard deviation of 1.01 which is greater than 1 implying a high variance in the response.

The responses agreed that technological innovation enhances the survival of the firm in an environment of fast-changing market as shown by a mean of 4.01 which is in a range of agree between 3.5 to 4.2. The responses had a standard deviation of 0.96 implying a low

variance in responses. The respondents agreed that technological innovation enhances the competitive advantage of the firm as shown by a mean of 3.90 and a standard deviation of less than 1 (0.78) implying that the responses had a low variance. The respondents agreed that technological innovation helps explore new revenue opportunities for their firm as demonstrated by a mean of 3.82 which is in the range of agree between 3.5 to 4.2. The responses had a standard deviation of 1.02 which is higher than 1 implying a high variance in the responses. The respondents agreed that technological innovation plays a crucial role in responding to the market needs of their firm as shown by a mean of 3.82 which is in the range of agree between 3.5 to 4.3 and a standard deviation of 1.14 which is greater than 1 implying a high variance in the responses. Similarly, Wachira (2016) found that firms adopt various technological innovations including customer-independent technology to enhance their efficiency.

4.7.2 Inferential Statistics

A simple linear regression analysis was conducted to assess the association between technological innovation and operational performance of National Hospital Insurance Fund in Kenya.

Table 4.13: Regression Between Technological Innovation and Operational Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.601[a]	.361	.342	.64368

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.644	1	8.644	9.701	.014[b]
	Residual	79.299	89	0.891		
	Total	87.943	90			

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	3.023	.388		7.790	.000
Technological innovation	0.417	0.097	0.382	4.299	.014

R which is the correlation coefficient showed that there existed a moderate positive relationship between technological innovations on operational performance as indicated by the correlation coefficient of 0.601. The R-squared also called the coefficient of determination is the percent of the variance in the dependent variable explained uniquely or jointly by the independent variables. The model had a coefficient of determination (R^2)

of 0.361 and which implied that 36.1% of the variations in operational performance were explained by technological innovation.

From the ANOVA, the study established that the regression model had a significance level of 0.014% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (9.701> 3.948) an indication that technological innovation had a significant effect on operational performance. The significance value was less than 0.05 indicating that the model was significant.

From the regression model obtained above, a unit change in technological innovation while holding other factors constant would positively change operational performance by a factor of 0.417. The p-value was 0.000, an indication that technological innovation had a significant influence on operational performance at a 5% significance level.

4.8 Operational Performance of National Health Insurance Fund in Kenya

4.8.1 Descriptive Statistics

The study requested the respondents to indicate their agreement level on the statements that relate to operational performance of the National Hospital Insurance Fund in Kenya.

Table 4.14: Statements on operational performance

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std.Dev
Our firm has had a decrease in operational cost of its operations	0	2	4	65	20	4.13	0.58
There has been efficiency of operations in our firms	3	5	8	44	31	4.04	0.98
There has been less customer complains in regard to services offered by our organization	0	9	10	47	25	3.97	0.89
The customers have been increasing over the years	0	9	5	52	25	4.02	0.86
There has been better service delivery in our firm	0	5	16	33	37	4.12	0.89
The reputation and brand image of our firm has improved	4	9	8	44	26	3.87	1.08
There has been development of new products in our firm	2	12	10	40	27	3.86	1.06

The respondents agreed that their firm has had a decrease in the operational cost of its operations as shown by a mean of 4.13 which is in the range of agree between 3.5 to 4.2. The responses had a low variation as the standard d deviation (0.58) was low than 1. The respondents agreed that there have been better service delivery in the firm as illustrated by a mean of 4.12 which is the range of agree between 3.5 to 4.2. The responses had a low variance as shown by a low standard devotion (0.89) less than 1.

In addition, the respondents agreed with a mean of 4.04 ranging at agree level between 3.5 to 4.2 that there has been efficiency of operations in their firms. The responses had a standardization of low variance (0.98) since it was less than 1. The customers have been increasing over the years as shown by a mean of 4.02 which is in arrange of agree between 3.5 to 4.2. The responses had a standard deviation of 0.86 indicating a low variance since its less than 1. The respondents also agreed that there has been less customer complaints in regard to services offered by their organization as shown by a mean of 3.97 which is in the range of agree between 3.5 to 4.2 with a low variance as shown by a standard deviation of 0.89 which is less than 1. The respondents agreed that the reputation and brand image of their firm has improved as shown by a mean of 3.87 which is with the range of between 3.5 to 4.2. The standard deviation of 1.08 which is more than 1 indicates a high variance in the responses. Finally, the respondents agreed that there has been the development of new products in the firm as shown by a mean of 3.86 which is in the range between 3.5 to 4.2. The response had a standard deviation of 1.06 which is more than 1 indicating a high variance in the responses.

4.9 Overall Relationship

A multiple regression analysis was conducted to test the effects of innovative practices on the operational performance of the National Hospital Insurance Fund in Kenya. The model summary is presented in Table 4.14.

Table 4.15: Regression between innovative practices and operational performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.719[a]	.517	.476	.33195

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.896	4	11.724	17.791	.002[b]
	Residual	56.674	86	0.659		
	Total	103.57	90			

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.57	0.759		4.704	0.000
	Product innovation	0.483	0.104	0.425	4.644	0.002
	Process innovation	0.362	0.086	0.279	4.209	0.001
	Market innovation	0.287	0.102	0.281	2.814	0.000
	Technological innovation	0.531	0.162	0.477	3.278	0.001

The correlation coefficient (R) showed that there existed a moderate positive relationship between product innovation, process innovation, market innovation and technological innovation on operational performance as indicated by the correlation coefficient of 0.719. The R-squared also called the coefficient of determination is the percent of the variance in the dependent variable explained uniquely or jointly by the independent variables. The model had a coefficient of determination (R^2) of 0.517 and which implied that 51.7% of the variations in operational performance were explained by product innovation, process innovation, market innovation and technological innovation.

From the ANOVA, the study established that the regression model had a significance level of 0.002% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (17.791> 2.478) an indication that product innovation, process innovation, market innovation and technological innovation

had a significant effect on operational performance. The significance value was less than 0.05 indicating that the model was significant. From the regression model obtained above, a unit change in product innovation while holding other factors constant would positively change operational performance by a factor of 0.483. The p-value was 0.002, an indication that product innovation had a significant influence on operational performance at a 5% significance level. A unit change in process innovation while holding other factors constant would positively change operational performance by a factor of 0.362. The p-value was 0.001, an indication that process innovation had a significant influence on operational performance at a 5% significance level.

From the regression model obtained above, a unit change in market innovation while holding other factors constant would positively change operational performance by a factor of 0.287. The p-value was 0.000, an indication that market innovation had a significant influence on operational performance at a 5% significance level. A unit change in technological innovation while holding other factors constant would positively change operational performance by a factor of 0.531. The p-value was 0.001, an indication that technological innovation had a significant influence on operational performance at a 5% significance level.

4.10 Chapter Summary

The chapter has presented the findings and the interpretation of the findings. The findings established a positive association between product innovation and operational performance, a positive association between process innovation and operational performance, a positive association between market innovation and operational performance as well as a positive association between technological innovation and operational performance.

CHAPTER FIVE: DISCUSSIONS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

The general objective of the study is to establish the effects of innovative practices on operational performance of the National Hospital Insurance Fund in Kenya. In specific, the study sought to establish the effect of product innovation on the operational performance of the National Hospital Insurance Fund in Kenya, to evaluate the effect of process innovation on operational performance of the National Hospital Insurance Fund in Kenya, to establish the effect of market innovation on operational performance of the National Hospital Insurance Fund in Kenya and to evaluate the effect of technological innovation on operational performance of the National Hospital Insurance Fund in Kenya.

5.2 Discussions on findings

5.2.1 Product Innovation and Operational Performance

The study sought to establish the effect of product innovation on operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between product innovation and operational performance. There existed a moderate positive relationship between product innovation and operational performance of the National Hospital Insurance Fund in Kenya. A unit change in product innovation while holding other factors constant would positively change operational performance. Similarly, Njagi (2016) on product innovation on performance established a positive and significant correlation between product innovation and performance.

The study revealed that product innovations enhance the cost savings of the firm. Product innovations attract diverse customers with varied needs of the firm. Product innovation enhances the competitiveness of the firm. The firm has introduced new products in the insurance sector. The firm has introduced new services in the insurance sector. In addition, product innovation provides the means for improving the quality of the firm and also provides the most obvious means for generating revenues for the firm. Concurring with the study findings, Muigai (2019) found that product innovations create a competitive edge and also introduce new products and services in the market enhancing organizational performance.

5.2.2 Process Innovation and Operational Performance

The study sought to establish the effect of process innovation on operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between process innovation and operational performance. There existed a moderate positive relationship between process innovation and operational performance of the National Hospital Insurance Fund in Kenya. A unit change in process innovation while holding other factors constant would positively change operational performance. Consistent with the study findings, AlShorma et al. (2020) focused on the effect of process innovation on business performance in Malaysia and found a significant relationship between process innovation and business performance.

The findings revealed that process innovation enhances the competitiveness of the firm, product innovations, business processing reengineering and enhances employee participation and commitment to the firm. From the findings, process innovation enhances the quality of products and services of the firm and enhances customer loyalty to the firm. In addition, the study found that the firm has invested in process innovation which decreases the cost of operations of the firm and increases the market share of the firm. The findings concur with the findings by Omesa (2019) that process innovation improves the products and service quality of the firm and decreases the cost of operations of the firm.

5.2.3 Market Innovation and Operational Performance

The study sought to determine the effect of market innovation on operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between market innovation and operational performance. There existed a moderate positive relationship between market innovation and operational performance of the National Hospital Insurance Fund in Kenya. A unit change in market innovation while holding other factors constant would positively change operational performance. Similarly, Kariuki (2017) revealed the existence of a positive significant relationship between market innovation and the performance of the firm.

The study established that the company has invested in market innovation. The use of technology has led to the development of new ways to market the firm. From the study, market innovation leads to opening up new markets for the firm, enables the firm to safeguard their already existing business, enhances the competitiveness of the firm and also enhances survival of the firm in an environment of the fast-changing market. The findings

also showed that market innovation enhances customer needs of the firm, plays a crucial role in responding to market opportunities of the firm and plays a crucial role in fulfilling market needs of the firm. Consistent with the study findings, Njeri (2017) found that there is a positive and significant effect of market innovation strategy on performance since market innovation strategy enhances competitiveness of the firm and also enhances the survival of the firm.

5.2.4 Technological Innovation and Operational Performance

The study sought to determine the effect of technological innovation on operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between technological innovation and operational performance. There existed a moderate positive relationship between technological innovation and operational performance of the National Hospital Insurance Fund in Kenya. A unit change in technological innovation while holding other factors constant would positively change operational performance. The findings correspond to the findings by Wachira (2016) that there was a positive and significant relationship between performance and adoption of various technological innovations.

The study results revealed that the company has invested in technological innovation. Technological innovation enhances customer satisfaction and loyalty in the firm enhances the competitive advantage of the firm and also enhances the survival of the firm in an environment of a fast-changing market. In addition, technological innovation helps explore new revenue opportunities for the firm. It plays a crucial role in responding to the market needs of the firm and also enhances the efficiency of the operational processes of the firm. Similarly, Kiarie (2018) found that technological innovation enhances customer satisfaction and loyalty in the firm thereby enhancing the competitive advantage of the firm.

5.3 Conclusions

The study sought to establish the effect of product innovation on the operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between product innovation and operational performance. The study thus concludes that there is a positive and significant effect of product innovation on the operational performance of the National Hospital Insurance Fund in Kenya. Product innovations enhance cost savings, attract diverse customers with varied needs, and competitiveness and also introduce new products in the insurance sector.

The study sought to establish the effect of process innovation on the operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between process innovation moderate positive relationship between and operational performance. In conclusion, therefore process innovation has a positive and significant effect on the operational performance of the National Hospital Insurance Fund in Kenya. Process innovation enhances competitiveness, product innovations, business processing reengineering, quality of products and services as well as customer loyalty to the firm.

The study sought to determine the effect of market innovation on the operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between market innovation and operational performance. Thus, market innovation has a positive significant effect on the operational performance of the National Hospital Insurance Fund in Kenya. The has invested in market innovation which leads to opening up new markets, enables the firm to safeguard their already existing business, enhances the competitiveness of the firm and also enhances the survival of the firm in an environment of a fast-changing market.

The study sought to determine the effect of technological innovation on the operational performance of the National Hospital Insurance Fund in Kenya. The study found a positive association between technological innovation and operational performance. The study thus concludes that technological innovation has a positive significant effect on the operational performance of the National Hospital Insurance Fund in Kenya. The firm has invested in technological innovation which enhances customer satisfaction and loyalty, competitive advantage, survival of the firm in an environment of the fast-changing market and also helps explore new revenue opportunities for the firm.

5.4 Recommendations

5.4.1 Policy Recommendations

The study recommends that the government should implement policies that enable the NHIF to develop and innovate its products but at the same time protect the interests of the members so as to enhance its performance.

The study recommends that the government should ensure that NHIF innovative processes are undertaken in the rightful ways to ensure its efficiency and the performance of the fund is optimal.

The study recommends that the government should provide marketing regulations and policies to ensure that the NHIF products are fully marketed to reach the entire population since it is the primary health insurance provider in Kenya.

The study recommends that the government should have policies that govern the technological innovations that are adopted by the NHIF so that performance of the fund is enhanced but also protecting the fund from exploitations.

5.4.2 Managerial Recommendations

The study recommends that the management of the NHIF should put in place resources and undertake research and development so as to improve its product, process, market and technological innovations so as to enhance its operational performance in terms of service delivery, increase scope of coverage and reduction in operational cost.

5.4.3 Theoretical Contributions

The study used two theories the theory of the Innovative Firm and the Resource Based theory and thus the study recommends that other theories such as the theory of performance and technology acceptance model should be used in future while undertaking similar studies in future to support the study objectives.

5.5 Limitations of the Study and Suggestions for Further Research

This study was likely to face some limitations such as some employees of the firm may have declined to give information concerning the innovations and operational performance of the firm for fear of competitors and privacy codes. However, the researcher clearly outlined the motive of the study to them before embarking on data collection. Additionally, some employees could not be willing to give information about their organizations for fear of victimization and intimidation. The researcher mitigated it by assuring the respondents of the confidentiality of the information they would provide. The study suggests that further research should be undertaken regarding innovative practices and operational performance in other organizations and compare the results.

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APPENDICES

Appendix I: Letter of Introduction

Dear Respondent:

I am a Strathmore University student undertaking a Master's Degree. As part of the requirement of my program, I am carrying out a study on EFFECT OF INNOVATIVE PRACTICES ON OPERATIONAL PERFORMANCE OF THE NATIONAL HOSPITAL INSURANCE FUND IN KENYA. To achieve this, you have been invited to participate in this academic research by filling out the questionnaire. The information obtained will be used for academic purposes only and will remain confidential. The results obtained from the survey will be presented in summary form and will not disclose any individual or company information.

Thank you for your participation.

Appendix II: Questionnaire

Kindly show by a tick the correct answer and elaborate your answer where required.

Part A: Respondents Information

1 What is your highest level of education?

Postgraduate 〔 〕 Degree 〔 〕 Diploma 〔 〕

2 How long have you worked in the organization?

Less than 1 year 〔 〕1-3 years 〔 〕 3-5 years 〔 〕 above 5 years 〔 〕

Part B: Product Innovation

3 What's your agreement when it comes to statements that relate to the effect of product innovation on operational performance of the National Hospital Insurance Fund in Kenya?

Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

Statement	**1**	**2**	**3**	**4**	**5**
Our firm has introduced new services in the insurance sector					
Our firm has introduced new products in the insurance sector					
Product innovations enhance cost savings of our firm					
Product innovations attract diverse customers with varied needs of our firm					
Product innovation provides the most obvious means for generating revenues of our firm					
Product innovation provides the means for improving quality of our firm					
Product innovation enhances the competitiveness of our firm					

Part C: Process Innovation

4 What's your agreement level when it comes to the below statements that relate to the effect of process innovation on operational performance of the National Hospital Insurance Fund in Kenya? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

Statement	**1**	**2**	**3**	**4**	**5**
Our firm has invested in process innovation					
Process innovation decreases cost of operations of our firm					
Process innovation enhance quality of products and services of our firm					
Process innovation enhance business processing reengineering of our firm					
Process innovation enhance employee participation and commitment of our firm					
Process innovation enhance product innovation of our firm					
Process innovation enhance competitiveness of our firm					
Process innovation increase the market share of our firm					
Process innovation enhance customer loyalty of our firm					

Part D: Market Innovation

5 What's your agreement level when it comes to the below statements that relate to effect of market innovation on operational performance of the National Hospital Insurance Fund in Kenya? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

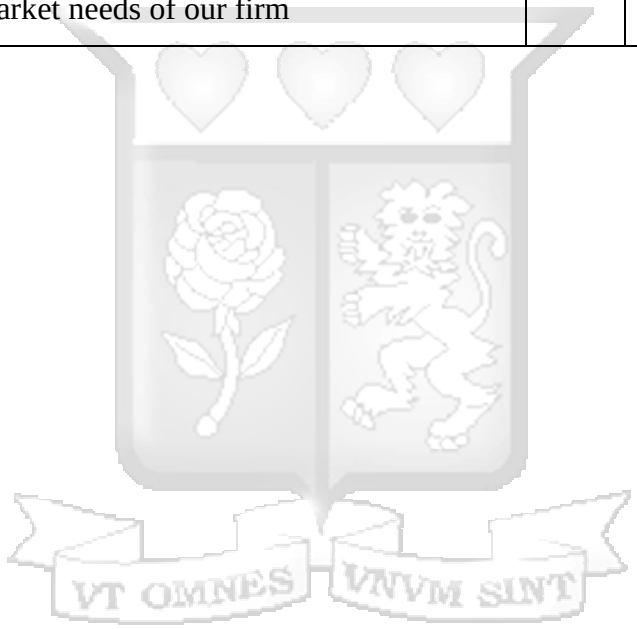
Statement	1	2	3	4	5
Our company has invested in market innovation					
Market innovation enhances customer needs of our firm					
Market innovation leads to opening up new markets of our firm					
The use of technology has led to the development of new ways to market our firm					
Market innovation enhance competitiveness of our firm					
Market innovation plays a crucial role in fulfilling market needs of our firm					
Market innovation plays a crucial role in responding to market opportunities of our firm					
Market innovation enhance survival of our firm in an environment of fast changing market					
Market innovation enables our firm to safeguard their already existing business					

Part E: Technological Innovation

6 What's your agreement level when it comes to the below statements that relate to the effect of technologically innovation on operational performance of the National Hospital Insurance Fund in Kenya? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

Statement	1	2	3	4	5
Our company has invested in technological innovation					
Technological innovation enhances the competitive advantage of our firm					

Technological innovation enhances survival of our firm in an environment of fast changing market					
Technological innovation enhances customer satisfaction and loyalty in our firm					
Technological innovation enhances the efficiency of operational processes of our firm					
Technological innovation helps explore new revenue opportunities of our firm					
Technological innovation plays a crucial role in responding to market needs of our firm					



Part F: Operational performance of National Health Insurance Fund in Kenya

7 To what extent does you agree the following aspects of Operational performance of National Hospital Insurance Fund? Where Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

Statements	**1**	**2**	**3**	**4**	**5**
Our firm has had a decrease in operational cost of its operations					
There has been efficiency of operations in our firms					
There has been less customer complains in regard to services offered by our organization					
The customers have been increasing over the years					
There has been better service delivery in our firm					
The reputation and brand image of our firm has improved					
There has been development of new products in our firm					

THANK YOU