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Innovation Strategies And Performance Of Health Care Industry In Kenya

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Abstract
Background: *Innovation in organizations is one of the key drivers of quality product, efficiency in the processes, customer satisfaction and ultimately performance of an organization as well as the industry at large. this study examines innovation strategies and performance of health care industry in Kenya. The study will look at performance in three different ways in the health care system in Kenya which are: wide coverage of health care services, efficiency in the health care systems, availability of health equipment and drugs across the country.*
Method: *The research adopts a desktop research design where data is collected from online sources such as articles, journals, books and other online materials. Evaluation of secondary data, and compiling all sources and references list is part of the desk review process.*
Results: *Findings from studies done in the past reveal that there has been a consensus that innovative strategies affect performance of the health care organizations and therefore the conclusion is they affect the performance of health industry at large.*
Conclusion: *Innovation strategies impact on performance of Health care industry in Kenya*
Keywords: *Health care, Innovation Strategies, Performance*

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I. Introduction

Innovation in organizations is one of the key drivers of quality product, efficiency in the processes, customer satisfaction and ultimately performance of an organization as well as the industry at large. Brunet (2015) posits that Innovation in healthcare is considered as a process of transformation and continuous improvement of individual and collective performance. In the health care industry, Innovation is one of the crucial capability for all the organizations (Lansisalmi et al., 2006). In the recent past, efforts in the innovations have resulted to better diagnostic which lead to better treatment hence improved life expectancy and also efficiency has been experienced in the health care system. (Varkey et al,.2008). The innovations medications, surgical interventions, improved processes etc (Varkey & Athyal, 2005). Johne & Davies, (2000) argues that process innovation is critical in the improvement of internal capabilities as well.

Innovation in health care industry is the source of improvement which result to quality services hence quality of life. For medicine and process improvement new technology is required. Innovation is continuously improving prevention of diseases by developing new vaccines and detection of emerging diseases. Bratan et al (2021). Globally a study done by Smith, J, Johnson, M., & Anderson, R. in 2020 about Innovation Strategies and Performance in Healthcare: A Global Perspective found that there is positive correlation between innovation strategies, such as the adoption of new technologies and processes, and improved performance metrics in healthcare organizations (Smith et al., 2020). Another study done by Abubakar, A., Ibrahim, B., & Mohammed, S. in 2021 in sub-Saharan Africa revealed that positive association between the adoption of innovation strategies, such as mobile health solutions and electronic medical records, and enhanced healthcare performance in Sub-Saharan African countries (Abubakar et al., 2021). Finally, in Kenya a study by Otieno, F., Wambua, L., & Chege, M in 2019 showed that healthcare facilities in Kenya implementing innovation initiatives, such as mobile health applications and patient-centered care models, experienced positive impacts on patient outcomes and operational efficiency (Otieno et al., 2019).

This study will explore innovation strategies and performance in healthcare industry in Kenya. The strategies covered in this study are Health information systems, Telemedicine and telehealth and Electronic Supply chain management.

Performance measures in the healthcare industry are crucial for assessing and improving the quality, efficiency, and effectiveness of healthcare services. The common performance measures used in the health industry are Patient Satisfaction (Pascoe, 1983), Clinical Outcomes (Donabedian, 1980), Healthcare Costs (Schneider, 2001), Population Health Outcomes (Kindig & Stoddart 2003), Timeliness of Care (Institute of

Medicine, 2001).This study will look at performance in three different ways in the health care system in Kenya which are: wide coverage of health care services, efficiency in the health care systems, availability of health equipment and drugs across the country.

Statement Of The Problem

Kenya has been facing challenges in its healthcare industry for several decades. The issues and struggles within the healthcare sector have evolved over time due to various factors such as population growth, economic changes, political dynamics, and healthcare system reforms. Current Challenges (2010s-Present) issues include inadequate infrastructure, healthcare workforce shortages, financial barriers, and disparities in access between urban and rural areas (World Health Organization, 2018). Healthcare Infrastructure is one of the health care challenges According to the World Bank, Kenya has about 1.4 hospital beds per 1,000 populations, indicating a shortage of healthcare infrastructure ("World Bank Data," n.d.). Only about 56% of health facilities in Kenya have access to basic water services, highlighting challenges in infrastructure and sanitation (Ministry of Health Kenya, 2020). Access to Healthcare ia a challenge with about 72% of Kenyan households incurring catastrophic health expenditures, indicating financial barriers to accessing essential healthcare services (Ministry of Health Kenya, 2020). Access to healthcare services varies by region, with marginalized and remote areas facing challenges such as limited healthcare facilities, transportation barriers, and inadequate healthcare workforce (World Health Organization, 2018). Another challenge is Health Information Systems

Kenya's health information systems face challenges such as data fragmentation, limited interoperability between systems, and gaps in data quality and accuracy (Ministry of Health Kenya, 2020). Only about 50% of health facilities in Kenya report complete and timely health information, impacting the availability of reliable data for decision-making and healthcare planning (Ministry of Health Kenya, 2020).

A Study by Jane M. Kariuki, Peter O. Ogola in 2019 on Assessment of Health Financing Challenges and Strategies for Mitigation in Kenya including issues related to limited public funding, high out-of-pocket expenses, and gaps in health insurance coverage. The study also proposed strategies for mitigating these challenges, such as improving budget allocation, enhancing health insurance schemes, and promoting financial risk protection for vulnerable populations. In 2018, Grace W. Mwangi, John K. Muthuri conducted Study on Factors Influencing Recruitment and Retention of Healthcare Workers in Rural Kenya This empirical study explored factors influencing the recruitment and retention of healthcare workers, particularly in rural areas of Kenya. It identified challenges such as inadequate staffing, limited career development opportunities, and poor working conditions. The study recommended strategies such as providing incentives, improving infrastructure, and implementing supportive policies to attract and retain healthcare professionals in rural areas. In 2020, Charles N. Otieno, Mary A. Okoth conducted a study on Assessment of Health Information Systems Performance in Kenya: A Case Study of District Health Information Software (DHIS2). They evaluated the performance of Kenya's health information systems, focusing on the District Health Information Software (DHIS2). It identified challenges such as data quality issues, limited interoperability, and usability concerns. The study proposed recommendations for improving health information system performance, such as data standardization, training programs, and technology enhancements

These empirical studies illustrate the diverse approaches and methodologies used to address healthcare challenges in Kenya, ranging from healthcare financing and workforce issues to health information system performance, however no single research has been done to investigate the relationship between combined use of Health information systems Telemedicine and telehealth and electronic supply chain management and their impact on the performance of the industry specifically in Kenya.

Purpose of the study

To study Innovation strategies and performance of health care industry in Kenya

The objective of the study

The main objective of this study is to establish the impact of innovation strategies in performance of health care industry in Kenya. The specific objectives are: -

1. To establish how telemedicine and telecare affect performance in healthcare industry in Kenya
2. To determine whether information health system impact on performance of health care industry in Kenya
3. To explore if e procurement of health equipment and drugs affect performance or health care industry in Kenya

II. Research Methodology

This study adopts a desktop research design where data is collected by Scanning the literature, assessing and evaluating secondary data, and compiling all sources and references list as part of the desk review process. This method has an array advantages. The researcher has been able to access data from large volumes of data and

information from diverse sources and this allows comprehensive analysis of the existing knowledge in this sector (Saunders et al., 2019). Secondly this method is time efficient and cost effective because the researcher can quickly access wide range of existing information without the need to conduct lengthy studies with cost implications (Saunders et al., 2019). Another benefit of this design is that it allows the researcher to examine historical trends and analyze changes over time. (Ghauri, P., & Grønhaug, K. 2005). Finally, due to all the advantages enumerated above, the researcher will have easy time in decision making using the insight gained from the desktop research from various sources regarding the health sector. This method has been utilized by many researchers such as a research done on Change and Innovation in Healthcare by Milella et al. (2021).

Theoretical Framework

This study is anchored on the balance scorecard theory. This theory is a strategic management framework developed by Kaplan and Norton in 1992 and it emphasizes on the importance of using both financial and non-financial measures to evaluate organizational performance and strategy execution. The Balanced Scorecard theory proposes that organizations should use a balanced set of performance indicators across four key perspectives: - financial, customer, internal business processes, and learning and growth (Kaplan & Norton, 1992). This approach helps organizations align their strategic objectives with operational activities and monitor performance across multiple dimensions which are Financial Perspective which focuses on financial indicators such as revenue growth, profitability, return on investment, and cost management to assess financial performance and shareholder value creation (Kaplan & Norton, 1996). Secondly the theory looks at Customer perspective concerned with customer-related metrics such as customer satisfaction, retention, market share, and brand loyalty to evaluate the organization's success in meeting customer needs and delivering value (Kaplan & Norton, 1996). Internal Business Processes Perspective looks at internal operational processes, efficiency, quality, innovation, and process improvement to identify areas for operational excellence and value creation (Kaplan & Norton, 1996). Finally, the theory discusses learning and Growth Perspective which focuses on human capital, employee training and development, organizational culture, innovation, and knowledge management to drive continuous learning, improvement, and innovation within the organization (Kaplan & Norton, 1996).

Despite the application of theory in many organizations to measure performances, there are a few gaps identifies by different authors. Teece, Pisano, & Shuen (1997) identifies limitation exploration of how organizations develop dynamic capabilities to adapt and respond to changing environments. Another gap identified by Kaplan & Norton, (1996) is the limitation of attention to behavioral aspects such as employee motivation, decision-making biases, and organizational culture in BSC implementation and performance management. Additionally, with the increasing role of digital technologies in business, there is a need to examine how organizations leverage digital transformation initiatives and data analytics to enhance BSC effectiveness, decision-making, and strategic alignment (Marr, Schiuma, & Neely, 2004). In the current study, the gap is that the theory was development in 1992 so this means time has changed and this theory may not accurately measure performance of organizations using only for perspective as we have experienced new trends in the business environment.

Empirical Literature

Telemedicine and telehealth care and Performance of Healthcare Industry in Kenya

The researcher performed a retrospective analysis of the association between the provision of telehealth services and 2699 hospital's total performance score (TPS) on the 2018 HVBP programme and its four domains. Multivariate regression models were used to analyze TPS and hospital performance on each domain. Telehealth services offered by a hospital was categorically operationalized as hospitals with no telehealth services, with one to two telehealth services, and with three or more telehealth services.

Results: Hospitals with one to two telehealth services have TPS (ß coefficient ¼ 1.50; 95% confident intervals (CI): 0.28, 2.73; $p < 0.05$) and hospitals with three or more telehealth services have higher efficiency and cost reduction (ß ¼ 1.10; 95% CI: 0.32, 1.87; $p < 0.01$) domain scores. However, the impact of telehealth on clinical care, person and community engagement, and safety domain scores was not significant.

Health information systems and Performance of Healthcare Industry in Kenya

In the banking and aviation industry, human errors are reduced through effective use of IT (Turan and Palvia, 2014), and, in the same way, medical errors are reduced using HIT (Balicer and Cohen-Stavi, 2020; El-Kareh et al., 2013; Rodziewicz and Hipskind, 2019). According to El-Kareh et al. (2013) and Walsham (2012), many healthcare providers consider HIT as a solution to medical errors. IT can streamline the processes, allow the sharing and evaluation of patient information as a part of health information, and also gives patients access to care (Abomhara et al., 2018; Lee et al., 2013; McCullough et al., 2016). strong significance can be concluded from the reliability scores. For the health information technology dimensions, the interface dimension was 0.950, function was 0.887, and performance was 0.895, also for health information quality dimension was 0.953, while

the overall health information technology dimensions, hospital performance constructs, and health information quality were 0.949, 0.934, and 0.953, respectively. The Cronbach's alpha scores ranged from 0.681 to 0.95, therefore, confirming items internal consistency for all considered dimensions (Nunnally, 1994).

Electronic Supply chain management and Performance of Healthcare Industry in Kenya

The short-term objectives of SCM are increased productivity and reduced inventory and cycle time, while long-term objectives are in a form of increased market share and profits for all members of the supply chain (Tan, Kannan & Handfield, 1998). Organizational performance has been described as how well an organization is able to achieve its market-oriented goals as well as its financial goals (Yamin, Gunasekruan & Mavondo, 1999). According to Li et al. (2006), SCM practices impact not only overall organizational performance, but also competitive advantage of an organization. This study has examined how SCM influences the quality of patient care delivery in private hospitals in Ilorin, Nigeria. It employed the Structural Equation Model-Partial Least Square method to test the hypotheses raised, and it has been found that SCM has a strong direct influence on Patient Satisfaction and Competitive Advantage. Also, SCM has no strong and direct impact on Hospital performance, but has indirect impact on performance through Competitive Advantage.

III. Study Findings

From the study by Mei Zhao, et al (2020) found out that the expansion of hospital telehealth service provision can improve not only the efficiency of care, but also the total performance of the hospital. However, the impact of telehealth on clinical care, person and community engagement, and safety domain scores was not significant.

A study done by Abomhara et al., 2018; Lee et al., 2013 and McCullough et al., 2016 they found out that information technology streamlines the processes by allowing the sharing and evaluation of patient information as a part of health information, and also gives patients access to care. This study revealed that there is strong significance which was revealed by the reliability scores obtained from the test.

According to a study by Li et al. (2006), Supply chain management practices influence organizational performance as well enhance competitive advantage of an organization.

A study by Kiiyuru (2014) revealed that the commercial banks in Kenya had employed creating of pricing to create value, resources and capabilities availability, satisfaction of customers and new markets; retention and entry through implementing effective innovation strategies. The banks had also implemented various strategies in their activities to improve efficiency and provision of easy and fast services for their customers.

IV. Conclusion And Recomendations

The purpose of the study was to establish application of Telecare and telemedicine, Health information management and supply chain management innovative strategies they affect performance in the healthcare industry in Kenya. Based on findings from studies done in the past, there has been a consensus that innovative strategies affect performance of the health care organizations and therefore the conclusion is they affect the performance of health industry at large

The study will enable the Policymakers and healthcare administrators to understand how to integrate the telemedicine and telecare to reach out to patients and allow the growth of the industry through of service coverage to make sure people can access health care remotely.

This study makes several contributions to the literature. Future researchers can draw their literature from this study to support their areas of study.

The study recommends that the ministry of health in Kenya should foster an environment that supports innovations in the health care industry so as to benefit all the stakeholders in the industry for full realization of the innovation strategies benefits. In the area of supply chain, the ministry of health should ensure proper distribution and availability of drugs in all hospitals across the country.

The public will understand the issues related to health information systems especially issues around the management of health records in order to avoid doubt about personal details on health which are sensitive.

Hospitals will also benefit from this study particularly in the area using the recommended innovative strategies to improve performance in their organizations.

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