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KNOWLEDGE MANAGEMENT PROCESSES AND PERFORMANCE OF KENYA NATIONAL INNOVATION AGENCY

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ABSTRACT

Effective knowledge management (KM) practices are critical for organizations to stay competitive in today's rapidly changing business environment. However, despite the significant resources invested in KM initiatives by many organizations, it is unclear whether these initiatives have led to improved organizational performance. KENIA recognizes the importance of knowledge management in promoting innovation and has implemented various KM practices to enhance its performance. However, there is no empirical evidence to support the claim that these initiatives have led to improved performance. This study therefore sought to establish the effect of knowledge management processes on performance of Kenya National Innovation Agency (KeNIA). The study was guided by the following specific objectives; to examine the effect of knowledge capture on performance of Kenya National Innovation Agency and to determine the effect knowledge protection on performance of Kenya National Innovation Agency. The study adopted a cross-sectional research design. The study targeted the employees at KeNIA. Therefore, the study population was 1500 employees of KeNIA. The Yamane formula was adopted to calculate the study sample size of 316 respondents. The study used a simple random sampling in selecting the sample from study population. Data was collected using semi-structured questionnaires. The pilot group was 32 individuals which represent 10% of the total study sample size. The pilot group was excluded from the final study. Quantitative data collected was analyzed using SPSS Version 28. The findings were presented in tables. Validity results show that all the variables had AVE values of above 0.5 and indication that they were valid. Also, all the variables had Cronbach alpha values of above 0.7 an indication that reliability was met. The study found that knowledge management processes significantly influence the performance of the Kenya National Innovation Agency (KeNIA). Specifically, knowledge capture ($\beta = 0.241$, $p < 0.001$), and knowledge protection ($\beta = 0.252$, $p < 0.001$) show positive associations with organizational performance. Based on the findings, it is recommended that KeNIA prioritize investments in enhancing knowledge management processes. This includes implementing robust systems for capture and protection to leverage the organization's intellectual capital effectively.

Key Words: knowledge management processes, knowledge capture, knowledge protection, performance of Kenya National Innovation Agency

Introduction

In today's fast-paced business environment, knowledge is a critical asset for organizations seeking to gain a competitive advantage (Obeidat, Tarhini, Masa'deh & Aqqad, 2017). Obeid and Rabay'a (2016) add that an organization's ability to exploit knowledge, develop and create new knowledge is linked to superior performance. Effective knowledge management (KM) practices are essential for organizations to harness their knowledge assets and convert them into business value. KM processes refer to the strategies and activities an organization employs to create, acquire, store, disseminate, and apply knowledge.

According to Al-Tit (2018), KM is the ability of an organization to manage, store, value, and distribute knowledge. It enables an organization to learn from its corporate memory, grow, succeed, and innovate. Knowledge management involves identifying and leveraging collective knowledge. KM also helps organizations to gain insight and understanding from their own experiences. Specific knowledge management activities help focus on acquiring, storing, and utilizing knowledge for problem-solving, dynamic learning, strategic planning, and decision-making. It also prevents intellectual assets from decay, adds to firm intelligence, and provides increased flexibility (Ochara & Mokwena, 2018).

Knowledge management has been linked to a variety of benefits for organizations, including improved innovation, enhanced decision-making, increased efficiency, and higher levels of customer satisfaction (Jashapara, 2017). As a result, many organizations are investing significant resources in KM initiatives to enhance their performance. In this study, KM processes will be measured in terms of knowledge acquisition, capture, sharing, and protection. The relationship between knowledge management processes and organizational performance has been extensively studied in the literature with varying findings. Several studies have found a positive relationship between KM processes and organizational performance (Alavi & Leidner, 2021; Gold, Malhotra, & Segars, 2021; Wixom & Todd, 2017). Other studies, however, have found mixed results or no significant relationship between KM processes and organizational performance (Davenport & Prusak, 2018; Zack, McKeen, & Singh, 2019). The inconsistency in findings may be due to variations in research methods, samples, and measures used to assess KM processes and organizational performance.

Statement of the Problem

Effective knowledge management (KM) practices are critical for organizations to stay competitive in today's rapidly changing business environment (Jashapara, 2017). However, despite the significant resources invested in KM initiatives by many organizations, it is unclear whether these initiatives have led to improved organizational performance. In Kenya, specifically, there is limited empirical evidence on the relationship between knowledge management processes and organizational performance, particularly in the context of government agencies. KENIA recognizes the importance of knowledge management in promoting innovation and has implemented various KM practices to enhance its performance. However, there is no empirical evidence to support the claim that these initiatives have led to improved performance.

Kenya, like other countries committed to the SDGs, has a goal of achieving SDG 9 (Industry, Innovation, and Infrastructure), SDG 16 (Peace, Justice, and Strong Institutions), and SDG 17 (Partnerships for the Goals). However, despite recognizing the importance of knowledge management in promoting innovation, Kenyan government agencies like KENIA lack comprehensive knowledge management strategies, have inadequate information systems to support knowledge management, and lack a culture of knowledge sharing and collaboration among staff, hindering effective implementation of government policies and programs (Obeidat et al., 2017).

The Global Innovation Index (2021) reports that Kenya ranks 88th out of 132 countries in terms of innovation performance, indicating a need for KENIA to improve its innovation capabilities to remain competitive. A study by Ouma, Njeru, and Oloko (2018) found that KENIA lacks a comprehensive knowledge management strategy, has inadequate information systems to support knowledge management, and lacks a culture of knowledge sharing and collaboration among its staff. Similarly, Mwangi and Were (2018) found that inadequate knowledge management practices in Kenyan government agencies, including KENIA, hinder effective implementation of government policies and programs. Statistical evidence suggests that organizations that effectively manage their knowledge assets outperform those that do not. For example, a study by Jashapara (2017) found a positive relationship between KM practices and organizational innovation, while Obeidat et al. (2017) found that effective KM practices positively influence organizational performance. However, there is a lack of empirical evidence on the specific KM practices that lead to improved organizational performance in the context of government agencies such as KENIA. Therefore, this study aimed to address the problem of poor performance in KENIA due to ineffective knowledge management practices.

Objectives of the Study

i. To examine the effect of knowledge capture on performance of Kenya National Innovation Agency
ii. To determine the effect knowledge protection on performance of Kenya National Innovation Agency

LITERATURE REVIEW

Theoretical Review

Knowledge-Based View Theory

The knowledge-based view theory, introduced by Barney in 1991, asserts that knowledge is a fundamental resource for firms in attaining and maintaining a competitive advantage. According to this theory, organizations must effectively capture and leverage knowledge to create value and retain their competitiveness within their industry. In the realm of organizational knowledge management, the knowledge-based view theory provides insight into the significance of capturing and storing knowledge within the organization to facilitate decision-making, foster innovation, and enhance overall performance (Barney, 1991). The theory emphasizes that knowledge plays a pivotal role in organizational success, as it enables firms to develop unique capabilities and gain a competitive edge over their rivals. Knowledge encompasses both explicit and tacit knowledge, including technical know-how, intellectual property, insights from experience, and expertise possessed by individuals within the organization. By effectively capturing and leveraging this knowledge, organizations can improve their operational efficiency, product development processes, and strategic decision-making, ultimately leading to superior performance outcomes (Grant, 1996).

Other scholars have further contributed to the knowledge-based view theory by emphasizing the importance of knowledge sharing and knowledge integration within organizations. For instance, Grant (1996) highlights the significance of knowledge sharing as a means to facilitate learning and innovation, as well as the role of knowledge integration in combining and synthesizing different knowledge components to create new knowledge and capabilities.

Critiques of the knowledge-based view theory often revolve around challenges related to knowledge transfer, knowledge retention, and the potential for knowledge to become obsolete. Some argue that effectively capturing and leveraging knowledge requires organizations to develop suitable mechanisms for knowledge storage, retrieval, and dissemination. Additionally, organizations must continually update and adapt their knowledge repositories to keep pace with

changing market dynamics and technological advancements (Alavi & Leidner, 2001). In the context of the present study, the knowledge-based view theory can be applied to highlight the importance of knowledge capture and utilization for organizational performance. By examining how organizations capture, store, and leverage knowledge, the study can uncover the mechanisms and practices that contribute to effective knowledge management and its impact on decision-making, innovation, and overall performance.

Resource-Based View (RBV) theory

The RBV, initially developed by Wernerfelt (1984) and later expanded by Barney (1991), focuses on how firms can gain a sustainable competitive advantage through the acquisition, deployment, and protection of valuable and rare resources. In the context of Knowledge Protection, the RBV theory provides insights into how organizations can safeguard their knowledge assets to achieve and maintain a competitive edge. The RBV theory posits that knowledge, including both explicit and tacit knowledge, is a critical resource that can create a competitive advantage when it is rare, valuable, difficult to imitate, and not easily substitutable (Barney, 1991). Knowledge Protection is crucial in this regard, as it ensures that valuable knowledge is not lost, stolen, or replicated by competitors. By effectively protecting their knowledge assets, organizations can maintain uniqueness and exploit their knowledge to generate superior performance outcomes. Scholars have recognized the importance of Knowledge Protection within the RBV framework. For example, Grant (1996) highlights the significance of knowledge protection mechanisms, such as patents, copyrights, and trade secrets, in preserving the uniqueness and exclusivity of organizational knowledge. He argues that these protection mechanisms prevent knowledge from being easily imitated or replicated, thus enhancing the organization's competitive advantage.

Critiques of the RBV theory, specifically in the context of Knowledge Protection, highlight potential challenges related to knowledge leakage, obsolescence, and the difficulty of protecting tacit knowledge. Some argue that in a rapidly changing environment, knowledge protection mechanisms may be insufficient to safeguard knowledge from becoming obsolete or outdated. Additionally, tacit knowledge, which resides in individuals' skills and experiences, is inherently challenging to protect, as it is embedded within individuals and may leave the organization when individuals leave (Bierly et al., 2009). In the present study, the RBV theory can be applied to understand how organizations can protect their knowledge assets to achieve and sustain a competitive advantage. By exploring the mechanisms and strategies employed by organizations to protect their valuable knowledge, the study can assess how effective Knowledge Protection contributes to organizational performance and the preservation of competitive advantage.

Conceptual Framework

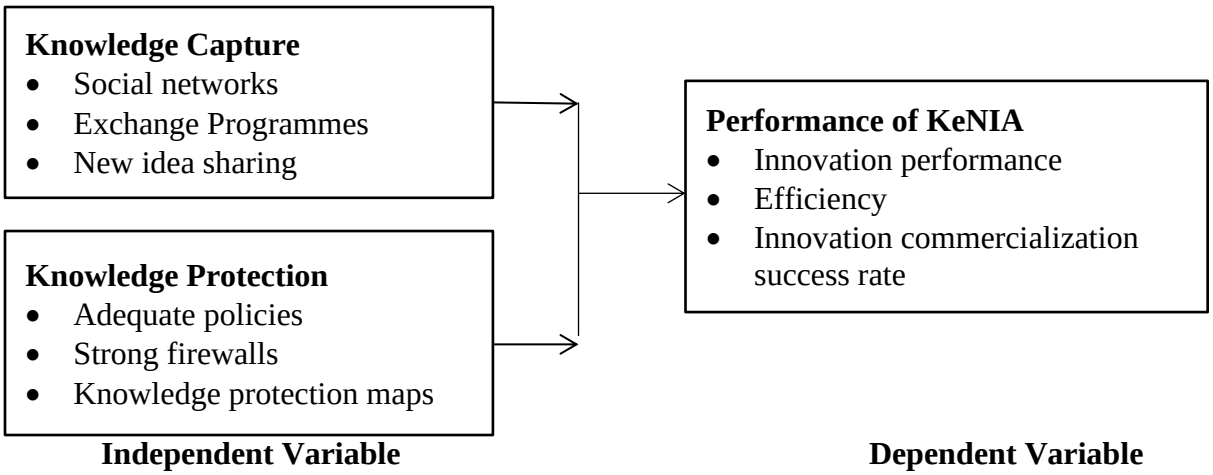

Figure 1: Conceptual Framework

Knowledge Capture

Knowledge capture is the process of collecting, storing, and organizing both explicit and tacit knowledge within an organization. It enables the preservation and accessibility of knowledge for reference, learning, and decision-making purposes. Knowledge capture is crucial for leveraging intellectual capital, promoting continuous learning, and driving innovation within organizations (Choo, 2019).

The effective capture of explicit knowledge, such as documents and reports, ensures that valuable information is preserved and readily available for employees. It facilitates efficient problem-solving and informed decision-making processes. Additionally, capturing tacit knowledge, which resides in individuals' skills and experiences, preserves valuable insights that might otherwise be lost (Davenport & Prusak, 2020).

Organizing and structuring captured knowledge in a systematic manner enables easy retrieval and utilization. Categorizing and tagging knowledge assets helps create a knowledge repository that facilitates quick access to relevant information. This foundation for continuous learning allows employees to build upon existing knowledge and insights (Szulanski, 2019).

Knowledge capture leverages an organization's intellectual capital by fostering knowledge sharing and collaboration. It taps into collective expertise and experience, enhancing individual and team performance. Sharing knowledge across departments and teams leads to improved problem-solving, faster decision-making, and the generation of innovative ideas (Nahapiet & Ghoshal, 2019).

Davenport and Prusak (2017) highlight the significance of knowledge capture as a fundamental aspect of knowledge management. They discuss how organizations can effectively manage their intellectual assets and utilize knowledge to gain a competitive advantage. This emphasizes the importance of capturing knowledge to facilitate decision-making processes and meaning construction within the organization. Grant (2018) also argues that knowledge plays a central role in organizational performance and highlights the need to capture and utilize knowledge effectively. Grant's work emphasizes that successful organizations are those that can harness and leverage their knowledge assets.

Nonaka and Takeuchi's (2017) stress the importance of knowledge capture as a means of fostering innovation. By capturing knowledge and facilitating its sharing and dissemination, organizations can create a dynamic environment that encourages the generation of new ideas and the implementation of innovative practices (Nonaka & Takeuchi, 2017).

Knowledge Protection

In today's dynamic business environment, organizations are increasingly recognizing the importance of protecting their data and information. However, there is often a significant gap when it comes to adequately protecting and managing knowledge assets. Knowledge, which encompasses valuable insights, expertise, and experiences, plays a crucial role in maintaining an organization's competitive advantage. Therefore, organizational risk management should place greater emphasis on protecting knowledge to safeguard this valuable resource (Nawaz, Hassan, & Shaukat, 2016).

Knowledge protection is a key strategy within the broader framework of knowledge management. It complements knowledge creation and knowledge transfer as one of the three central pillars of effective knowledge management practices (Bloodgood et al., 2016). Knowledge protection involves implementing proactive measures to prevent knowledge from being altered, lost, transferred to other organizations, or becoming obsolete. By safeguarding knowledge assets,

organizations can mitigate the risk of losing valuable intellectual capital, ensure its longevity, and maintain a competitive edge (Bloodgood et al., 2016).

Neglecting knowledge protection can have detrimental effects on an organization's competitive advantage. Without proper safeguards, valuable knowledge can be compromised, replicated, or lost. This not only erodes an organization's unique capabilities but also leaves it vulnerable to imitation by competitors. Striking a balance between protecting and sharing knowledge becomes essential to address the boundary paradox—an organization's need to protect its intellectual capital while also enabling knowledge sharing for innovation and growth (Nawaz, Hassan, & Shaukat, 2016).

By effectively protecting knowledge, organizations can enhance their risk management practices and ensure the longevity of their intellectual assets. Implementing measures such as access controls, encryption, secure storage, and knowledge retention strategies can help safeguard knowledge from unauthorized access, loss, or unintended disclosure. Furthermore, fostering a culture of knowledge protection, where employees are aware of the value of knowledge and their responsibility in its preservation, can significantly contribute to organizational success.

Therefore, protecting knowledge is a crucial component of organizational risk management. Organizations must recognize the need to safeguard their knowledge assets to maintain a competitive advantage and mitigate the risk of losing valuable intellectual capital. By striking a balance between knowledge protection and knowledge sharing, organizations can navigate the boundary paradox and create an environment that fosters innovation, growth, and long-term success.

Organization Performance

Organizational performance is a multifaceted concept that encompasses the measurement and evaluation of an organization's achievement of goals, objectives, and desired outcomes (Dess & Robinson, 2016). It encompasses financial performance, operational efficiency, customer satisfaction, employee productivity, innovation, and overall organizational effectiveness. Assessing and enhancing organizational performance is essential for long-term success and competitiveness.

Ittner and Larcker (2017) highlight the significance of considering nonfinancial performance measures when assessing organizational performance. They argue that relying solely on financial indicators may not provide a comprehensive picture of an organization's performance. By incorporating nonfinancial dimensions, such as customer satisfaction and employee engagement, organizations gain a more holistic understanding of their overall performance.

The present study focuses on measuring organizational performance in terms of innovation performance, efficiency, and innovation commercialization success rate. Innovation performance is a key aspect of organizational performance as it reflects an organization's ability to generate and implement novel ideas, products, or processes. Measuring innovation performance involves assessing the organization's capacity for research and development, creativity, and the successful implementation of innovative solutions (Laursen & Salter, 2016). Organizations that excel in innovation performance often display a higher level of competitiveness, adaptability, and differentiation in the market.

Efficiency focuses on optimizing resource utilization and operational processes to achieve maximum productivity and cost-effectiveness (Kaplan & Norton, 2019). Efficient organizations streamline their operations, eliminate waste, and achieve higher levels of productivity. Measuring efficiency involves evaluating factors such as resource allocation, process optimization, and overall operational effectiveness. The innovation commercialization success rate measures an organization's ability to successfully bring innovations to market and derive value from them. It

assesses the organization's capability to transform innovative ideas into commercial products, services, or processes that generate revenue and capture market share (García-Morales et al., 2017). Organizations with a high innovation commercialization success rate demonstrate their effectiveness in turning ideas into tangible outcomes and achieving a competitive advantage.

Empirical Review

Knowledge Capture on Organization Performance

Hari, Egbu, and Kumar, (2018) studied knowledge capture in small and medium enterprises in the construction industry: Challenges and opportunities. Few large construction organisations have implemented and reaped the benefits of formal KM approaches. However, there are very few empirical studies on KM geared towards small and medium enterprises (< 250 employees). This paper is part of on-going PhD research on small and medium enterprises (SMEs), focusing on KM. This paper discussed the importance and challenges of knowledge capture from a social and technological perspective. It also discussed appropriate methodology for knowledge capture. In addition, the paper documents the nature of training provisions that benefited SMEs through their knowledge capture initiatives. It also notes that SMEs can benefit from effective knowledge capture practices. Capturing knowledge within an organisation helps in problem solving, managing change, organisational learning, succession planning and innovation, to name a few. The paper concludes that capturing knowledge in SMEs is not easy. It is an integrated and complex social process, which has culture, people, technology, communication, leadership and organisational structures at its core. The paper recommends that more research effort needs to be targeted at improving knowledge capture practices in SMEs, and that there is ample scope for empirical research in this area.

Stephen (2022) studied the effects of knowledge capture and acquisition practices on organizational performance. The study was based on descriptive research design. The target population will be 532 SMEs firms in Kisumu City County. The sample size was 150 SMEs covering different sectors. The study will use questionnaires, containing both open ended and closed ended questions to obtain primary data. Descriptive statistics including the means and standard deviations will be used to analyse the data and capture the characteristics of the variables under the study. The conclusions of this study were informed by the findings based on each study objective and also findings of other similar studies. The findings of the study revealed that knowledge creation, knowledge acquisition, knowledge sharing and knowledge implementation are positively related with performance of SMEs in Kisumu County. Knowledge creation, knowledge acquisition, knowledge sharing and knowledge implementation were found to be satisfactory variables in explaining performance of SMEs in Kisumu County.

Aming'a (2017) studied knowledge capture and acquisition mechanisms at Kisii University. The aim of this study was to investigate the knowledge capture and acquisition mechanisms at Kisii University. This was a case study in which data were collected through interviews and questionnaires. Purposive sampling was used to determine interview participants while questionnaire respondents were selected through stratified random sampling. Qualitative and quantitative data were analysed using SPSS® student version 14; it revealed that there were various knowledge capture and acquisition mechanisms at Kisii University. It was also established that the University encountered various challenges in knowledge capture and acquisition and lacked some essential knowledge capture and acquisition mechanisms. In this regard, this study proposed knowledge capture and acquisition guidelines that may be adopted by the University to enhance its organizational memory and performance.

Knowledge Protection on Organization Performance

Foss and Pedersen, (2018) examined the impact of knowledge protection mechanisms, such as patents and intellectual property rights, on organizational performance in multinational corporations. The researchers conducted a literature review and theoretical analysis to understand how knowledge protection influences the organization's ability to leverage its intellectual assets and enhance performance. Their study suggests that effective knowledge protection contributes to enhanced performance in multinational corporations. The study contributes to the field by providing conceptual insights into the relationship between knowledge protection and organizational performance.

Ahmed and Shepherd, (2020) investigated the relationship between knowledge protection and innovation management. They utilize a conceptual framework to explore how appropriate knowledge protection mechanisms influence the organization's innovation processes and, subsequently, its overall performance. The study draws upon theoretical perspectives and existing literature to develop a comprehensive understanding of the interplay between knowledge protection and innovation-driven performance. They argued that appropriate knowledge protection mechanisms are essential for fostering a conducive environment for innovation and, subsequently, improving organizational performance.

Subramaniam and Youndt, (2017) explored the influence of intellectual capital, including knowledge protection, on different types of innovative capabilities. They employ a quantitative research design and survey data collection methods to examine the relationship between knowledge protection, intellectual capital, and organizational performance. The study employed statistical analysis to establish empirical evidence of the positive impact of knowledge protection on organizational performance in terms of innovation outcomes. Their research highlighted the positive relationship between knowledge protection and organizational performance in terms of innovation outcomes.

Johnstone and Hu, (2018) investigated the relationship between intellectual property protection, foreign direct investment (FDI), and economic growth, with a specific focus on China. The study utilizes an empirical approach and employs econometric analysis techniques to analyze a large dataset encompassing FDI flows, intellectual property protection indicators, and economic growth measures. Through regression analysis, the study provides empirical evidence of the positive relationship between intellectual property protection, FDI, and overall economic performance.

Zahra and George (2018) examined the concept of absorptive capacity and its relationship with organizational performance. They utilize a comprehensive review of the literature, including empirical studies, to develop a theoretical framework of absorptive capacity. The study draws upon various research methodologies and empirical evidence to explore the impact of knowledge protection on an organization's ability to absorb and apply external knowledge, leading to improved performance outcomes. They suggested that knowledge protection plays a significant role in enhancing an organization's ability to absorb and apply external knowledge, leading to improved performance outcomes.

RESEARCH METHODOLOGY

The study adopted a causal-comparative research design. The study was conducted at Kenya National Innovation Agency (KeNIA). The study targeted the employees at KeNIA. From the KeNIA website, the organization has approximately 1500 employees. Therefore, the study population was 1500 employees of KeNIA.The Yamane formula was adopted to calculate the study sample size. Therefore, the study sample size was 316 respondents. The study used simple random sampling in selecting the sample from study population. Data was collected by use of semi-structured questionnaires.

Data was collected by use of the drop and pick-up later method and the questionnaires were collected after one week by the research assistants. According to Cauvery, Nayak, Girija and Meenakshi (2017), pilot study should 10% of the actual sample size. Therefore, in this study, the pilot group was 32 individuals which represents 10% of the total study sample size. The pilot group was excluded from the final study. Quantitative data collected was analysed by the use of descriptive statistics which include percentages, means, standard deviations and frequencies. Content analysis was used to test data that was collected from the open-ended questions and findings were presented in tables and figures. This study also conducted inferential statistics through correlation analysis and regression analysis

RESEARCH FINDINGS AND DISCUSSION

Out of the 316 questionnaires distributed, 253 were completed and returned, representing a response rate of 80.1%. As indicated by Metsamuuronen (2017), a response rate that is above fifty percent is considered adequate for data analysis and reporting while a response rate that is above 70% is classified as excellent. Hence, the response rate of this study was within the acceptable limits for drawing conclusions and making recommendations.

Descriptive Statistics Analysis

The study requested respondents to rate their responses in a scale of 1-5 where 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. The means and standard deviations were used to interpret the findings where a mean value of 1-1.4 was strongly disagree, 1.5-2.4 disagree, 2.5-3.4 neutral, 3.5-4.4 agree and 4.5-5 strongly agree. Standard deviation greater than 2 was considered large meaning responses were widely spread out and not tightly clustered around the mean.

Knowledge Capture

The first objective of the study was to examine the effect of knowledge capture on performance of Kenya National Innovation Agency. Respondents were therefore asked to indicate the extent to which they agree or disagree with the following statements relating to the effect of knowledge capture on performance of Kenya National Innovation Agency. Table 1 presents summary of the findings obtained.

Table 1: Descriptive Statistics on Knowledge Capture

Statement	Mean	Std. Dev.
Knowledge capture practices at effectively preserve valuable organizational knowledge and expertise.	3.853	0.627
The captured knowledge is readily accessible and utilized for decision-making and problem-solving.	3.617	0.165
Effective knowledge capture enhances the efficiency and effectiveness of KeNIA's operations and processes.	3.782	0.489
The captured knowledge contributes to the improvement of KeNIA's innovation capabilities and the development of new initiatives.	3.609	0.979
Knowledge capture efforts facilitate seamless knowledge transfer and knowledge sharing among employees.	3.716	0.227
The captured knowledge supports KeNIA in adapting to changing market dynamics and emerging trends in the innovation ecosystem.	3.866	0.751
Knowledge capture activities at KeNIA are adequately supported by technology and information management systems.	3.93	0.492
Aggregate Score	**3.768**	**0.533**

The finding shows that the respondents greed on average that knowledge capture practices at effectively preserve valuable organizational knowledge and expertise (M= 3.853, SD= 0.627); that the captured knowledge is readily accessible and utilized for decision-making and problem-solving (M= 3.617, SD= 0.165); and that effective knowledge capture enhances the efficiency and effectiveness of KeNIA's operations and processes (M= 3.782, SD= 0.489). They also agreed that the captured knowledge contributes to the improvement of KeNIA's innovation capabilities and the development of new initiatives (M= 3.609, SD= 0.979); that knowledge capture efforts facilitate seamless knowledge transfer and knowledge sharing among employees (M= 3.716, SD= 0.227); that the captured knowledge supports KeNIA in adapting to changing market dynamics and emerging trends in the innovation ecosystem (M= 3.866, SD= 0.751); and that knowledge capture activities at KeNIA are adequately supported by technology and information management systems (M= 3.93, SD= 0.492).

The findings above supported by an aggregate mean of 3.768 (SD= 0.533) show that the respondents were in agreement that knowledge capture affects performance of Kenya National Innovation Agency. The findings resonate with Hari, Egbu, and Kumar (2018) who discussed the challenges and opportunities of knowledge capture, emphasizing its importance for problem-solving, organizational learning, and innovation, all of which are crucial for enhancing organizational performance. Similarly, Stephen (2022) highlighted the positive relationship between knowledge capture practices and the performance of small and medium enterprises (SMEs), suggesting that effective knowledge capture contributes to improved organizational outcomes. Moreover, Aming'a (2017) investigated knowledge capture mechanisms in an academic setting, suggesting that enhancing knowledge capture practices can improve organizational memory and performance. These findings underscore the significance of knowledge capture for organizational success, aligning with the perception of respondents regarding its impact on KeNIA's performance.

Knowledge Protection

The second objective of the study was to determine the effect knowledge protection on performance of Kenya National Innovation Agency. Respondents were requested to indicate the extent to which they agree or disagree with the statements relating to the effect of knowledge protection. Table 2 presents summary of the findings obtained.

Table 2: Descriptive Statistics on Knowledge Protection

Statement	Mean	Std. Dev.
Knowledge protection measures at KeNIA effectively safeguard valuable intellectual assets from unauthorized access or misuse.	3.608	0.321
The implementation of knowledge protection strategies enhances competitive advantage in the innovation ecosystem.	3.836	0.127
Knowledge protection practices contribute to maintaining the confidentiality and integrity of sensitive information and data.	3.665	0.505
Effective knowledge protection measures reduce the risk of knowledge loss or leakage, preserving core competencies.	3.729	0.439
Knowledge protection efforts ensure the long-term viability and sustainability of the organization.	3.714	0.539
The awareness and adherence to knowledge protection policies and procedures positively impact the performance of KeNIA.	3.75	0.32
Knowledge protection practices align with legal and regulatory requirements, mitigating potential risks and liabilities.	3.679	0.93
Aggregate Score	**3.712**	**0.454**

The findings show that on average the respondents agreed that knowledge protection measures at KeNIA effectively safeguard valuable intellectual assets from unauthorized access or misuse (M= 3.608, SD= 0.321); that the implementation of knowledge protection strategies enhances competitive advantage in the innovation ecosystem (M= 3.836, SD= 0.127); and that knowledge protection practices contribute to maintaining the confidentiality and integrity of sensitive information and data (M= 3.665, SD= 0.505). Respondents also agreed that effective knowledge protection measures reduce the risk of knowledge loss or leakage, preserving core competencies (M= 3.729, SD= 0.439); and that knowledge protection efforts ensure the long-term viability and sustainability of the organization (M= 3.714, SD= 0.539). They further agreed that the awareness and adherence to knowledge protection policies and procedures positively impact the performance of KeNIA (M= 3.75, SD= 0.32); and that knowledge protection practices align with legal and regulatory requirements, mitigating potential risks and liabilities (M= 3.679, SD= 0.93).

The findings supported by an aggregate mean of 3.712 (SD= 0.454) show that the respondents agreed that knowledge protection affects performance of Kenya National Innovation Agency. The findings are consistent with studies such as Foss and Pedersen (2018) who explored the impact of knowledge protection mechanisms, such as patents and intellectual property rights, on organizational performance, highlighting the importance of effective knowledge protection for leveraging intellectual assets and enhancing performance outcomes. Ahmed and Shepherd (2020) investigated the relationship between knowledge protection and innovation management, emphasizing the role of appropriate knowledge protection mechanisms in fostering a conducive environment for innovation and improving organizational performance. Additionally, Subramaniam and Youndt (2017) examined the influence of intellectual capital, including knowledge protection, on different types of innovative capabilities, providing empirical evidence of the positive impact of knowledge protection on organizational performance in terms of innovation outcomes. These findings collectively suggest that knowledge protection plays a crucial role in influencing organizational performance, aligning with the perception of respondents regarding its impact on KeNIA's performance.

Organization Performance

The main focus of this study was to establish the effect of knowledge management processes on performance of Kenya National Innovation Agency (KeNIA). Respondents were therefore asked to indicate the extent to which they agree or disagree with the statements relating to performance of Kenya National Innovation Agency. Table 3 presents summary of the findings obtained.

Table 3: Descriptive Statistics on Organization Performance

Statement	Mean	Std. Dev.
KeNIA has effectively leveraged knowledge acquisition, knowledge capture, and knowledge sharing to enhance its organizational performance.	3.829	0.133
The knowledge-based strategies implemented have positively influenced its innovation performance, efficiency, and success rate in commercializing innovations.	3.83	0.496
KeNIA's strong focus on knowledge acquisition has contributed to its ability to identify and capitalize on emerging trends and opportunities in the innovation ecosystem	3.814	0.65
The effective capture and organization of knowledge within KeNIA have facilitated streamlined processes, informed decision-making, and continuous learning	3.627	0.731
The culture of knowledge sharing and collaboration has fostered a dynamic and innovative environment, positively impacting its overall performance and ability to deliver high-quality services.	3.692	0.083
The organization-wide commitment to knowledge management practices has resulted in improved innovation capabilities, and effective utilization of knowledge resources.	3.898	0.09
Aggregate Score	**3.782**	**0.364**

The findings show that the respondents agreed on average that KeNIA has effectively leveraged knowledge acquisition, knowledge capture, and knowledge sharing to enhance its organizational performance (M= 3.829, SD= 0.133); that the knowledge-based strategies implemented have positively influenced its innovation performance, efficiency, and success rate in commercializing innovations (M= 3.83, SD= 0.496); and that KeNIA's strong focus on knowledge acquisition has contributed to its ability to identify and capitalize on emerging trends and opportunities in the innovation ecosystem (M= 3.814, SD= 0.65). Respondents also agreed that the effective capture and organization of knowledge within KeNIA have facilitated streamlined processes, informed decision-making, and continuous learning (M= 3.627, SD= 0.731); that the culture of knowledge sharing and collaboration has fostered a dynamic and innovative environment, positively impacting its overall performance and ability to deliver high-quality services (M= 3.692, SD= 0.083); and that the organization-wide commitment to knowledge management practices has resulted in improved innovation capabilities, and effective utilization of knowledge resources (M= 3.898, SD= 0.09).

The findings suggest a strong consensus among respondents regarding the positive impact of knowledge management practices on the performance of the Kenya National Innovation Agency (KeNIA). These findings resonate with Barinua and Akpan (2022) who highlighted the significance of knowledge acquisition for enhancing organizational performance, aligning with the perception of respondents regarding KeNIA's effective leveraging of knowledge acquisition. It also aligns with Hari, Egbu, and Kumar (2018) who emphasized the importance of knowledge capture for streamlining processes and informed decision-making, which corresponds with the findings regarding KeNIA's effective capture and organization of knowledge. Finally, Kang et al. (2018) discussed the positive impact of knowledge sharing on organizational performance, supporting the notion that KeNIA's culture of knowledge sharing and collaboration has fostered a dynamic and innovative environment. These findings collectively underscore the critical role of knowledge management practices in driving organizational success and innovation performance within KeNIA, aligning with the perspectives of the respondents.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables and the dependent variable. This study assessed the effect of knowledge management processes measured by knowledge acquisition, and knowledge capture on performance of Kenya National Innovation Agency (KeNIA).

Model Summary

The model summary provides an overview of the regression model's performance in explaining the variability in the dependent variable (performance of the Kenya National Innovation Agency (KeNIA)) based on the predictors included in the model: Knowledge Acquisition, and Knowledge Capture. Table 4 presents the findings.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841[a]	.707	.703	.46758

a. Predictors: (Constant), Knowledge Acquisition, Knowledge Capture

The R value represents the correlation coefficient. It indicates the strength and direction of the linear relationship between the combination of predictors (Knowledge Acquisition, and Knowledge Capture) and the dependent variable (performance of Kenya National Innovation Agency - KeNIA). In this study, the multiple correlation coefficient (R) is approximately 0.841. This suggests a strong positive linear relationship between the predictors collectively and the performance of KeNIA. The closer the R value is to 1, the stronger the linear relationship.

Therefore, an R value of 0.841 indicates a substantial and positive association between the combination of knowledge management processes and KeNIA's performance.

The coefficient of determination (R Square) indicates that approximately 70.7% of the variance in KeNIA's performance can be explained by the predictors included in the model. This suggests that the model, comprised of Knowledge Protection and Knowledge Capture, accounts for a substantial proportion of the variability observed in KeNIA's performance. However, the remaining 29.3% suggests that there are other factors that affect performance that were note discussed.

Analysis of Variance

The ANOVA table provides information about the overall fit of the regression model and whether the predictors included in the model significantly contribute to explaining the variance in the dependent variable, which in this case is the performance of the Kenya National Innovation Agency (KeNIA). In this study, the significance of the model was tested at 5% confidence interval.

Table 5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	131.065	4	32.766	149.872	.000[b]
	Residual	54.220	248	.219		
	Total	185.285	252			

a. Dependent Variable: Performance of KeNIA

b. Predictors: (Constant), Knowledge protection, Knowledge Acquisition, Knowledge Sharing, Knowledge Capture

In this study, the F-statistic is 149.872, and the associated p-value (Sig.) is .000 < 0.05. This indicates that the regression model is statistically significant. In other words, the predictors (Knowledge Protection and Knowledge Capture) collectively contribute significantly to explaining the variance in KeNIA's performance. Therefore, based on the ANOVA results, we can conclude that the predictors collectively (Knowledge Protection and Knowledge Capture) significantly contribute to explaining the variance in KeNIA's performance.

Beta Coefficients

Table 6: Beta Coefficients of Study Variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.364	.170		2.137	.034
	Knowledge Capture	.241	.061	.239	3.931	.000
	Knowledge protection	.252	.058	.523	4.345	.000

a. Dependent Variable: Performance of KeNIA

The fitted regression model was as follows:

$$Y = 0.364 + 0.241\ X_1 + 0.252\ X_2 + \varepsilon$$

Similarly, Knowledge Capture has a coefficient of .241 with a p-value of .000, indicating a significant positive impact on KeNIA's performance. This suggests that for every one-unit increase in Knowledge Capture, there is a .241 increase in KeNIA's performance, holding other factors constant. This finding is consistent with studies like Hari, Egbu, and Kumar (2018), which emphasize the importance of effective knowledge capture practices in improving organizational performance, especially in knowledge-intensive sectors.

Finally, Knowledge Protection has a coefficient of .252 with a p-value of .000, indicating a significant positive impact on KeNIA's performance. This suggests that for every one-unit increase in Knowledge Protection, there is a .252 increase in KeNIA's performance, holding other variables constant. This finding resonates with literature such as Foss and Pedersen (2018), which suggests that effective knowledge protection mechanisms contribute to improved organizational performance by safeguarding intellectual assets and enhancing innovation outcomes.

Conclusions

The study reveals that knowledge capture plays a crucial role in shaping the performance of Kenya National Innovation Agency (KeNIA). Effective knowledge capture practices, including preserving valuable organizational knowledge, facilitating knowledge transfer, and supporting decision-making processes, were positively associated with KeNIA's performance. Thus, we conclude that knowledge capture significantly contributes to KeNIA's organizational performance by enhancing efficiency, innovation capabilities, and adaptation to changing market dynamics.

The study underscores the critical role of knowledge protection in driving the performance of Kenya National Innovation Agency (KeNIA). Effective knowledge protection measures, such as safeguarding intellectual assets, maintaining confidentiality, and aligning with legal requirements, positively influenced KeNIA's performance outcomes. Thus, we conclude that knowledge protection positively and significantly contributes to KeNIA's organizational performance by mitigating risks, preserving core competencies, and ensuring long-term viability and sustainability.

Recommendations

To capitalize on the benefits of knowledge capture identified in the study, KeNIA should focus on strengthening its knowledge capture practices. This may involve implementing robust systems and processes for preserving valuable organizational knowledge, enhancing knowledge transfer mechanisms, and leveraging technology to support knowledge capture efforts. Moreover, fostering a culture that values and promotes knowledge capture among employees through recognition and rewards can further enhance the effectiveness of these practices. Additionally, KeNIA should regularly review and update its knowledge capture strategies to ensure they remain aligned with organizational goals and adapt to evolving market dynamics.

To safeguard its intellectual assets and mitigate risks, KeNIA should strengthen its knowledge protection measures. This may involve implementing robust policies and procedures for safeguarding sensitive information, enhancing data security measures, and providing training on information security best practices to employees. Additionally, KeNIA should regularly assess its knowledge protection strategies to identify and address any potential vulnerabilities or gaps. Moreover, ensuring compliance with legal and regulatory requirements related to knowledge protection will help mitigate risks and liabilities associated with intellectual property rights infringement or data breaches.

Recommendations for Further Studies

Further research could focus on investigating the remaining 29.3% of factors that were not explicitly discussed in this study but are perceived to influence organizational performance. By gaining insights into these unexplored variables such as, organizational culture, leadership styles, external market dynamics, and technological advancements, researchers can provide a more holistic understanding of the determinants of organizational performance and potentially uncover new avenues for enhancing performance outcomes. Additionally, comparative studies across different organizations or industries could be conducted to identify common factors affecting performance and develop generalized frameworks for improving organizational effectiveness. Such research could contribute to the development of tailored strategies and interventions aimed at optimizing organizational performance in diverse contexts.

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