The Nexus between Organizational Innovation and the Performance of the National Registration Bureau in Kenya

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DOI: https://doi.org/10.47772/IJRISS.2026.100900704

Received: 30 September 2026; Accepted: 05 October 2026; Published: 21 October 2026

ABSTRACT

In a dynamic market, one of the best ways to maintain an edge over the competition is to constantly innovate. The National Registration Bureau, which is responsible for issuing official identifying credentials and maintaining a database of all citizens, had used cutting-edge technology to improve its services to the public. However, evaluation of these technologies' outcomes remained an open question. This research examined the nexus between organizational innovation and the performance of the National Registration Bureau in Kenya. The study aimed to demonstrate a positive relation between organizational innovation and performance of the National registration Bureau in Kenya. Employees at Nairobi's Department of National Registration Bureau were the focus of the research. A random selection of 271 respondents was used. Respondents provided information via a standardized, self-administered questionnaire. Using Statistical Package for the Social Sciences, data was analyzed through descriptive and regression analysis. The study concluded that organizational innovation is a crucial driver of performance at National Registration Bureau. Emphasizing organizational innovation could therefore be key strategies for enhancing the departments overall efficiency and effectiveness. The study recommended that there is a need for the department to allocate a specific portion of its budget to training and development initiatives.

Keywords: Innovation, Process, Marketing, Performance

INTRODUCTION

Organizations are determined to establish or sustain a competitive edge through innovation due to the heightened competition at both regional and global levels (Canh et al., 2019). Consequently, these organizations may experience accelerated growth, enhanced efficiency, and ultimately greater profitability compared to those that do not engage in innovative practices. This is attributed to the advancements in products and processes that innovation fosters. In an era characterized by rapid change, innovation is frequently regarded as one of the most crucial elements for achieving long-term competitive advantage (Atalay et al., 2013). According to Srensen and Torfing (2011), it is acknowledged as the primary catalyst for wealth generation, a vital source of competitive advantage, and an essential factor in cost reduction within the public sector. Furthermore, it plays a significant role in fostering favorable economic conditions.

Innovation within the public sector exhibits variability, contingent upon the specific interventions and modifications to processes that are enacted. As noted by Buchheim et al. (2020), while innovation holds equal significance for public sector organizations as it does for private companies, the former tend to emphasize the common good over profit maximization, potentially influencing the types of innovations adopted. Consequently, this study seeks to explore the relationship between innovations and the performance of government institutions in Kenya.

Companies worldwide are increasingly adopting various forms of innovation. The Global Innovation Index (GII) 2021 indicates significant potential for enhancing global innovation performance. As noted by Jarabulus (2015), organizational innovation acts as both a catalyst and a foundation for other innovation types. The primary objective of organizational innovation is to enhance a company's performance by reducing operational costs (Alharbi et al., 2019). An instance of marketing innovation is the

implementation of a new strategy for product promotion that necessitates considerable changes in the product's design, packaging, placement, advertising, or pricing (Atalay et al., 2013).

The Registration of Persons Act (Cap 107), Laws of Kenya, required the creation of the Department of National Registration Bureau in 1978. All Kenyan nationals above the age of eighteen are required by law to undergo identification, registration, and get an identity card. Identification of Kenyan residents, simplification of the voting process, and encouragement of economic activity are all ways in which national identity cards contribute to Kenya's security, social, economic, and political growth (National Registration Bureau [NRB], 2022). The agency has implemented new methods in order to provide superior customer service. Over the years, the government agency has progressed from relying only on human labor to a semi-automated registration system that distributes reliable national identification cards to all qualified people.

Research Problem

The relationship between innovation and success has been explored in Kenya. Muchoki (2013) conducted a survey of mobile phone service providers in the country. Similarly, Njogu (2014) performed an analysis of small and medium-sized enterprises (SMEs) in Nairobi County. Additionally, Muigai and Gitau (2018) examined the financial sector in Kenya. Kibisu's (2020) study at KENGEN investigated the impact of innovation on the company's financial performance. Wangila (2018) researched the county administration of Nairobi, Kenya. Furthermore, Odero et al. (2020) assessed the innovative practices of savings and credit cooperatives (SACCOs) that accept deposits. Like many other nations, Kenya's research on innovation and productivity has predominantly concentrated on the private sector.

The National Registration Bureau has embraced innovation to enhance its service delivery to the public, fulfilling its role as both a producer and issuer of secure identity documents and as a steward of a comprehensive database of registered individuals. Various studies have been conducted to evaluate the Bureau's performance. For example, Kondo (2014) investigated the influence of the external environment on the organization's performance.

Similarly, Mwenda (2015) explored the challenges faced by the NRB in implementing its strategic initiatives and the subsequent effects on its performance. Obwaku (2018) focused on the impact of conflict management strategies on the performance of the NRB. Additionally, research by Jumale and Minja (2019) analysed the factors influencing effective civic registration within the NRB. It is evident that the impact of innovations has not yet been fully assessed. This study specifically aimed to examine the nexus between organizational innovation and the performance of the National Registration Bureau within the public service sector in Kenya.

Specific Objective

To examine the nexus between organizational innovation and the performance of the National Registration Bureau in Kenya.

LITERATURE REVIEW

Organizational innovation has been demonstrated to significantly enhance business performance. Research by Azar and Ciabuschi (2017) on Swedish export initiatives revealed that organizational innovation directly boosts export performance through sustained technical innovation and indirectly through its effects on exports. This latter aspect enhances export performance in two primary ways: by increasing the radical nature of technical innovations and by broadening the scope of innovation. The observed discrepancy arises from the fact that export performance was treated as the dependent variable. The findings of this study focus on the effectiveness of service delivery to the general public.

A study conducted in Spain and published by Soto-Acosta et al. (2016) suggests that the adoption of e-business is primarily driven by internal organizational resources and technological advancements, rather

than external pressures. The findings also indicate that the implementation of e-business practices positively impacts company performance by fostering innovative organizational practices. The key distinction lies in the fact that the earlier research was undertaken by a commercial entity, while the latter was conducted by a governmental organization.

Research by Scuotto et al. (2017) illustrates that information and communication technologies (ICTs) enhance both processes related to the development of new products and services. However, this investigation's limitation is its focus on organizational innovation strictly within the realm of information technology. In contrast, the current research encompasses a broader spectrum of organizational innovations. Nevertheless, a study in Portugal by Moreira et al. (2017) found no definitive evidence that healthcare innovation leads to improved financial outcomes, highlighting the significant differences between the healthcare sector and the registration services examined in this research.

According to Kafetzopoulos and Psomas (2015), "innovation capability" has a positive effect on both product quality and operational performance. This research was conducted in the industrial sector, whereas the next one focused on the public sector. Canh et al. (2015) found that innovation improves goods and services in terms of features or pricing, helping businesses maintain or increase their market share. This research was conducted in the industrial sector, whereas the next one was conducted in the public sector.

Rajapathirana and Hui (2018) conducted research in Sri Lanka and discovered that there was no substantial impact from new technologies. According to research conducted by Narayan and Hungund (2021) in the field of Indian biotechnology, implementing innovative practices has a constructive effect on business outcomes. However, this research falls short since it was conducted by a commercial organization, whereas the next one was conducted by a government organization.

Organizational innovation was shown to contribute to the success of SMEs in a research conducted by Hongbo and Koffi (2019) in Cote d'Ivoire. The difference between this research and the current study is that the former was performed among SMEs and the latter inside a government organization. Kombe (2023) conducted research in Kenya and found that financial innovations boost the financial performance of banks by increasing transaction volume, introducing new levels of comfort for customers, and reducing the cost of maintenance. In contrast to the present research, which was conducted in the public sector, this one was conducted in the banking business.

THEORETICAL FRAMEWORK

This study was anchored on the Innovation Diffusion Theory, which was developed by Everett Rogers in 1962. The primary objective of this theory is to elucidate the mechanisms behind the spread of new ideas and technologies, as well as the speed at which this occurs (Ho, 2022). According to the theory, the adoption rate of an innovation is affected by the attributes of the innovation itself, the traits of potential adopters, and the communication channels employed to share information regarding the innovation.

This study utilized the Innovation Diffusion Theory to gain insights into the processes through which innovations disseminate within a specific population. It was posited that the NRB could enhance its understanding of the factors influencing the adoption of innovations among its users, thereby enabling the organization to devise more effective strategies for fostering innovation adoption and ultimately enhancing institutional performance.

RESEARCH METHODOLOGY

This study employed a descriptive survey methodology. It focused on 838 employees from the Department of National Registration Bureau located in Nairobi. To select participants, simple random sampling was utilized, resulting in a total of 271 respondents. The sample size of 271 was determined using Slovin’s formula, as detailed below.

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

$n=838/ (1+838*0.05^2) =270.75$

Respondents were distributed as follows;

Table 1.1 Sampling

Population	Number	Sample
Management	48	16
Supervisors	79	26
Junior employees	711	230
Total	838	271

A structured self-administered questionnaire was employed to gather data from the participants. The questionnaire link was distributed to respondents via email, which facilitated a reduction in both time and costs associated with the study. Data analysis was conducted using descriptive and regression techniques. Background information, innovation, and performance metrics were quantified through descriptive statistics. Qualitative data were analyzed using content analysis, with open-ended questions and comment sections transcribed verbatim. The researcher identified recurring themes that encapsulated the primary concepts. Additionally, the researcher explored the patterns, relationships, and associations among the categories to uncover overarching themes or trends. The findings were presented using tables, charts, and graphs, while the results of the qualitative analysis were conveyed through narrative descriptions.

The research adhered to the following ethical principles: authorization, voluntary participation, informed consent, anonymity, and confidentiality. The Graduate School at Kenyatta authorized the research. The National Commission for Science, Technology, and Innovation (NACOSTI) issued a research permit. A request for data collection permission was submitted to the NRB administration. The poll was performed voluntarily, with only those NRB professionals who wished to be involved. No coercion or inducement was present to engage in the study. The participants were also mandated to furnish signed informed consent to verify their involvement. During data collection, respondents were anonymous, and neither their names nor any personal details were documented. The collected data was handled with confidentiality, encoded, and kept on a password-protected computer

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Response Rate

The researcher distributed questionnaires to 271 employees of the Department of National Registration Bureau in Nairobi. Table 1.2 presents the response rate of the study.

Table 1.2 Response Rate

Population	Sample	Participants	Response (%)
Management	16	11	68.8
Supervisors	26	24	92.3
Junior employees	230	211	91.7
Total	271	246	90.8

A total of 246 questionnaires were returned filled and fit for analysis. As shown in Table 1.2, this represents a response rate of 90.8%. The response rate in this table is deemed adequate as it is higher than 70% recommended by Kothari (2017) for descriptive surveys. The high response rate in this study enhances the statistical power of the study which adds to the study's credibility allowing for more confident conclusions to be drawn.

Reliability Results

Cronbach's alpha coefficient (α) was used to assess the reliability of the instrument. The summary of analysis of pre-test data is presented in Table 1.3.

Table 1.3 Reliability Results

Variable	Number of Items	α
Organizational innovation	10	0.901
Process innovation	10	0.862
Organizational marketing innovation	10	0.947
Performance	3	0.710
Total	33	0.954

The findings indicate that the variables examined in the study exhibited coefficients ranging from 0.710 to 0.947, with an overall coefficient of 0.954. This indicates an acceptable level of reliability, as suggested by Taber et al. (2018), who advocate for coefficients of 0.7 or higher in survey research. Consequently, the instrument reflects exceptional reliability, indicating a robust internal consistency across all sections that assess innovation and performance. Thus, the questionnaire facilitated the researcher in gathering reliable data, which in turn allowed for the formulation of significant conclusions regarding the relationship between innovation and performance.

Demographic Results

To describe the sample in the study, respondents' demographic data namely level of education and working experience were collected. The data was analyzed using frequency county and percent and the results are summarized in Table 1.4.

Table 1.4 Demographic Results

		N	%
What is your highest level of education?	Diploma	59	24.0%
	Bachelor's degree	133	54.1%
	Postgraduate degree	54	22.0%
How long have you worked for this department?	1-5 years	112	45.5%
	6-10 years	84	34.1%
	11-15 years	50	20.3%

Slightly above half (54.1%) of the respondents in the study had acquired a bachelor's degree while 24% had a diploma as their highest level of education. As for working experience, results in Table 4.3 demonstrate that slightly below half (45.5%) of their respondents had between 1 and 5 years while 34.1% had between 6 and 10 years of working experience.

The results therefore indicate that the sample in this study was made up of highly educated and fairly experienced respondents. This means that majority of respondents could be able to understand the questions posed to them and provide appropriate feedback regarding innovation and performance in their institution

Descriptive Results

This section presents the descriptive results of innovation and performance.

Extent of Organizational Innovation in the Department of National Registration Bureau

To measure organizational innovation, respondents were asked to agree or disagree to 10 items covering resource allocation, strategy, organizational structures, employee training, quality management systems and

organizational culture using a 5-point Likert scale. Data was then analyzed using mean and standard deviation and results summarized in Table 1.5

Table 1.5 Descriptive Analysis of Organizational Innovation

	N	Min	Max	Mean	St D
The Department of National Registration Bureau encourages and supports innovation.	246	3	5	4.11	0.658
New strategies have been adopted in order to improve the overall efficiency and effectiveness of the organization.	246	2	5	4.21	0.713
The Department of National Registration Bureau has a culture that values creativity and new ideas.	246	1	5	3.42	1.071
The Department of National Registration Bureau invests in training and development to foster innovation.	246	1	5	3.37	0.895
The department encourages collaboration and teamwork to generate new ideas	246	1	5	4	1.054
There has been implementation of new organizational structures	246	1	5	4	0.943
The department is quick to adopt new technologies to improve services.	246	1	5	3.84	1.167
The organization structure has been renewed to facilitate teamwork	246	1	5	3.95	0.911
The human resources management system has been improved.	246	1	5	3.53	1.02
Quality management systems such as ISO 9001 are applied in our firm	246	1	5	3.79	1.084
Total				3.82	0.952

A mean of 4.11 was obtained for the statement "The Department of National Registration Bureau encourages and supports innovation," indicating that most respondents agreed with this assertion. The standard deviation of 0.658 suggests relatively low variation in the responses, showing a general consensus among the respondents. Regarding the adoption of new strategies to improve organizational efficiency and effectiveness, a mean of 4.21 was recorded. This high mean signifies that the majority of respondents agreed that new strategies had been adopted. The standard deviation of 0.713 indicates minimal variability in responses, reflecting a strong consensus. For the statement about the organizational culture valuing creativity and new ideas, a mean of 3.42 was obtained. This moderate mean shows that there was some agreement among respondents, though not overwhelmingly so. The standard deviation of 1.071 indicates considerable variation in responses, suggesting differing opinions on this matter. The investment in training and development to foster innovation was reflected by a mean of 3.37. This result indicates moderate agreement among respondents. The standard deviation was 0.895 points to moderate variability in the responses, showing a range of opinions.

When asked about the encouragement of collaboration and teamwork to generate new ideas, respondents gave a mean score of 4.00, indicating strong agreement. The standard deviation of 1.054, however, suggests some variability in responses. A mean of 4.00 was also recorded for the implementation of new organizational structures, indicating that most respondents agreed with this statement. The standard deviation of 0.943 suggests a moderate level of variation in responses. For the adoption of new technologies to improve services, the mean was 3.84, showing moderate to high agreement among respondents. The standard deviation of 1.167 indicates considerable variability in responses, reflecting differing experiences or perceptions.

The statement "The organization structure has been renewed to facilitate teamwork" received a mean score of 3.95, indicating strong agreement. The standard deviation of 0.911 suggests moderate variability in responses. The improvement of the human resources management system was reflected by a mean of 3.53, indicating moderate agreement. The standard deviation of 1.020 shows considerable variation in responses, suggesting diverse opinions or experiences. Lastly, the application of quality management systems such as ISO 9001 had a mean score of 3.79, indicating moderate to high agreement among respondents. The standard deviation of 1.084 suggests notable variability in responses.

The average score for all items was 3.82, accompanied by a standard deviation of 0.952. This indicates a consensus among respondents regarding the existence of organizational innovation within the National Registration Bureau; however, the level of agreement and variability varies across different domains. Certain areas, such as collaboration and strategic initiatives, show progress, yet there remains an opportunity to enhance the culture of creativity, invest in innovation training, and utilize technology and quality management systems to further advance innovation.

Challenges to Organizational Innovations

Analysis of responses showed several key themes namely resource constraints, bureaucratic hurdles, resistance to change, limited support and time constraints. Resource constraints can limit the financial and human capital necessary for developing and implementing innovative initiatives, thereby stifling creativity and experimentation. Bureaucratic hurdles often result in slow decision-making processes, which can frustrate employees and hinder the agility required to respond to market demands. Additionally, resistance to change from employees, stemming from fear of the unknown or perceived threats to job security, can create a culture that is not conducive to innovation.

Limited support from leadership can intensify these challenges, as insufficient guidance and motivation may result in employee disengagement. Moreover, time limitations, caused by stringent deadlines and conflicting priorities, can hinder the comprehensive exploration of new concepts, leading to hasty decisions that fail to fully leverage innovative opportunities. Njeru (2012) highlights inadequate resources and poor communication as critical obstacles to the implementation of innovation strategies at Equity Bank of Kenya, reinforcing concerns about resource limitations and insufficient support.

Alshwayat et al. (2023) point out the negative effects of excessive bureaucracy and resistance from middle management on innovation within the banking sector, which aligns with the findings regarding bureaucratic challenges and resistance to change in the present study. Additionally, Maier et al. (2016) address the pressures of a competitive landscape that can impose time constraints, indicating that organizations frequently prioritize short-term outcomes over long-term innovative pursuits.

Data was analyzed using SPSS through descriptive and regression analysis. Tables were employed to present the results. Regression analysis revealed a robust positive correlation ($r=0.843$) between the independent variables and performance, indicating that 71% of the variance in performance can be attributed to the three types of innovations. The regression model exhibited statistical significance ($P<0.01$). Organisational innovation ($p=0.027$) and process innovation ($p<0.001$) were significant among the variables. Nonetheless, marketing innovation ($p=0.576$) was not statistically significant.

Recommendations for Encouraging Organization Innovation

The analysis of responses revealed several key themes, including the importance of training and development, a supportive organizational culture, the need to minimize bureaucracy, the implementation of incentive programs, benchmarking practices, and enhanced communication. Respondents indicated that the National Registration Bureau should prioritize investment in its workforce by offering training and development opportunities, fostering an environment that welcomes innovative ideas, simplifying bureaucratic procedures, and establishing incentive programs to encourage employee motivation.

Alshwayat et al. (2023) underscore the necessity for improved communication and greater employee engagement to address barriers to innovation within the banking sector, which aligns with the recommendations of the current study for better communication practices. In a similar vein, Njeru (2012) points out the critical role of leadership support and effective communication in executing innovation strategies at Equity Bank of Kenya, further emphasizing the importance of a supportive culture for fostering innovation. Additionally, Maier et al. (2016) highlight the need for the adoption of contemporary techniques and tools in managing the innovation process, which corresponds with the call for enhanced training and development. The literature also advocates for organizations to actively work towards

reducing bureaucratic impediments to create a more conducive environment for innovation, as noted by Alshwayat et al. (2023).

CONCLUSION

The research sought to determine the relationship between organizational innovation and the performance of the National Registration Bureau in Kenya. Descriptive analysis revealed that participants largely concurred that the department fosters and promotes innovation, embraces new strategies, appreciates creativity, and allocates resources for training and development. The findings suggested that respondents predominantly agreed that the department had implemented new methodologies and frameworks to enhance processes, optimize operations, and integrate new technologies.

The research indicated that participants expressed moderate agreement regarding the department's initiatives to create innovative marketing strategies, modifications in service design, and the adoption of new technologies. The regression analysis revealed a strong positive correlation ($r=0.843$) between the independent variables and performance, with 71% of the variance in performance attributable to the three categories of innovations. The regression model demonstrated statistical significance ($P<0.01$). Among the variables analyzed, organizational innovation ($p=0.027$) and process innovation ($p<0.001$) were found to be significant, while marketing innovation ($p=0.576$) did not reach significance. Notably, process innovation exhibited the most substantial effect on performance in comparison to organizational innovation, as evidenced by its larger coefficient and greater statistical significance.

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