

AN ANALYSIS OF THE EFFECT OF PROCESS INNOVATION ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

This research was conducted with an objective to find out how financial innovation affected Kenyan commercial banks' financial performance. The study's objective was to find out how process engineering affected Kenyan commercial banks' financial results. As of December 2022, there were forty-three active commercial banks in Kenya, which made up the study's population of interest. A set of closed-ended and open-ended questionnaires was used to gather primary data from the management personnel of commercial banks. Senior, middle, and low management personnel from the corresponding banks were the targeted responders. Secondary data was gathered from the Central Bank of Kenya's Bank Supervision Department annual reports in

addition to the annual reports of commercial banks. It was done using a descriptive analysis method. The results of the study indicated that process innovation and the financial performance of Kenya's commercial banks had a positive and statistically significant link ($r = 0.825$; $p < 0.05$). According to the study, process innovation should be welcomed in order to boost competitiveness and enhance the provision of high-quality services. The findings of this study recommend that more investigation be done into the obstacles to financial innovation adoption in Kenyan commercial banks.

Key words: Process Innovation, Financial Performance, Commercial Banks.

INTRODUCTION

Background of the Study

With the growing number of new players entering the market, commercial banks have been undergoing strategic adjustments. Due to this, commercial banks have had to innovate their processes in order to guarantee that their products are provided to a larger clientele at the lowest possible cost (Munyiva & Wachira, 2021). In essence, process innovation serves as a conduit to assist commercial banks in their mission to deliver services at a cheap cost. Financial institutions around the world have adopted process improvements as a component of financial innovations. According to Nazir, Tan & Nazir (2021), financial system innovation has the potential to greatly expand the financial sectors of China, India, and Pakistan. The degree to which financial innovation has facilitated financial advancement, high-tech development, proficient financial intermediation, and improved economic expansion is seen in these emerging nations' financial infrastructure. According to Llanto & Fukui (2013), the Philippines is one of the Southeast Asian nations that has effectively adopted financial engineering, including process improvements in commercial banks. In order to enable financial institutions to finance a wide spectrum of impoverished rural households,

the nation has fully embraced developing advances during the past ten years. These measures have been implemented in a sustainable manner, thereby reducing risks among commercial banks and minimizing transaction costs through the use of financial engineering.

While internet banking and mobile banking are important preconditions for financial advances, most African nations are still working toward ensuring that their population have easy access to computers and the internet. Just 35% of Africa's 1.2 billion inhabitants have used the internet, and only 6% of them have active internet subscriptions at this time (Faturoti, 2022). In terms of mobile phone and internet users, South Africa, Egypt, Kenya, and Nigeria top the African list. According to Ernawati & Nugroho (2012), the sophisticated developments that accompany mobile phone use have led to a growth in the uptake of financial products in Africa. SACCOs have benefited from the deployment of several forms of transactions made possible by mobile phones in order to enhance customer service and outperform other financial sector companies. According to Ogidiaka and Ogwueleka (2020), Smartphone penetration in Nigeria is 30%, and 71% of online consumers use major ecommerce platforms via their mobile devices at least once a month. This demonstrates the degree to which financial innovations are becoming more prevalent throughout the industrialized globe.

Process reengineering has become very popular in Kenya as banks increase their market penetration tactics. Process innovation has shown up in Kenya in a variety of forms, such as stock trading, mobile and electronic banking, and commercial bank services. Furthermore, with a number of institutions adopting the innovation, including Gulf African Bank, First Community Bank, and Barclays Bank of Kenya, Islamic banking has taken center stage in the financial industry (CBK, 2018). Thanks to the efficient application of information technology, the business climate in Kenya has changed dramatically during the last 20 years. According to Ouma, Omagwa, and Ngaba (2018), the nation's financial sector has heavily embraced information technology, leading to an increase in operational, product, and marketing advancements.

Statement of the Problem

The financial industry sector presents a unique context for studying financial innovations. Financial advances have accelerated the expansion of economies, markets, and commercial banks. The financial industry has successfully become a breeding ground for financial innovation, including services, processes, procedures, business models, and technologies. Commercial banks play an important role in economic growth since they are at the forefront of delivering financial services not just to rural and metropolitan areas, but also to low-income individuals. These financial innovations are primarily intended to assist members in effectively managing their personal banking, which may have a positive impact on commercial banks' financial performance. Previous studies fail to give sufficient data on financial engineering and performance of commercial banks in Kenya, let alone a unified consistent classification of these.

As banks broaden their approaches to market penetration, process reengineering has become increasingly popular in Kenya. Process innovation has shown up in Kenya in a variety of forms, such as stock trading, mobile and electronic banking, and commercial bank services. Furthermore, Islamic banking has emerged as a major player in the banking industry, having been adopted by a

number of banks like Gulf African Bank, First Community Bank, and Barclays Bank of Kenya (CBK, 2018). The efficient application of information technology has resulted in a significant change in the corporate environment in Kenya over the last 20 years. According to Ouma, Omagwa, and Ngaba (2018), the nation's financial sector has heavily embraced information technology, leading to an increase in operational, product, and marketing advancements. These findings have prompted the researcher to investigate impact of financial engineering on performance of commercial banks.

Purpose of the study

This research was conducted with an objective to find out how financial innovation affected Kenyan commercial banks' financial performance.

Objective of the study

To find out how process innovation affects Kenya's commercial banks' financial performance.

Research Question

How do process innovations affect Kenya's commercial banks' financial performance?

Theoretical and Empirical Review

Disruptive Innovation Theory

Christensen proposed the disruptive innovation idea in 1997. He argued that innovation is the secret to competitive advantage in a world that is changing swiftly and full of uncertainty. However, market pressure and unpredictability are also increased by innovation. It is harder to predict an innovation's potential and market acceptability the more radical it is. The dynamics of the market and growing complexity lead to a significant knowledge gap between theory and practice. Numerous businesses lack the organizational structure necessary to consider novel concepts, spot market trends, respond promptly to shifting conditions, or even initiate market shifts. Innovative disruptions alter the rules. They take aim at an established company and present excellent chances for fresh revenue expansion. Growth is only possible with dramatic brea A radical innovation is a good, service, or method that offers previously unheard-of performance features or well-known features with a large cost or performance boost that changes or expands an existing market. Inventions that are the foundation of numerous later inventions are the source of breakthrough innovations. Breakthrough breakthroughs are particularly dangerous due to their extended development period and the ambiguous, tumultuous, and uncertain situations they occur in. Leifcer (2017).

When multiple smaller ideas based on seeing the world in a different way, questioning assumptions, pushing boundaries, identifying "white space," identifying unmet customer needs, setting difficult goals, thinking outside the box, and questioning our ingrained mental models come together, it often leads to disruptiv Fractals characterize innovation patterns, wherein smaller decision cycles are embedded within larger ones, with the fundamental development phases (identify, develop, plan, and implement) serving as the guiding principles. The process of disruptive innovation can be summed up as a rhythm of seeking and choosing, investigating and trying, learning and unlearning,

and cycles of divergent and convergent thought. It is an intricate and dynamic process of inquiry, education, and feedback. In contrast to gradual, linear innovation processes like the stage-gate ideas (Cooper et al., 2017a, b), disruptive innovation resembles a continuous, quick feed-forward and feed-back loop development process more like a spiral or circular process. The development process of disruptive innovation is an interconnected system founded on the ideas of dynamic strategic planning and system thinking.

Process Engineering

Engineering draws on whatever theory is deemed acceptable at any given point in the cycle due to the very nature of its development and application. Investment theories typically take sharp turns, usually following the disappointment of an extended bear market. A catastrophic collapse reveals flaws that are corrected by new theories, which engineering then implements. Process re-engineering questions the work, organization, and management theories and practices that have been developed over the past 100 years. It proposes a novel business strategy and innovative methods that demand a transformation in the way business is conducted (Hammer and Stanton, 2015). The longer Hammer and Champy worked with organizations, the more concerned they were about the word "re-engineering" being abused and misused, as well as the fact that many of the people using the term

Process innovation involves business process reengineering and the introduction of quality functions (Cumming, 2018). Although this kind of invention is difficult, its goal is now clear. With continued effort to increase productivity, a productive provider should eventually be able to produce products that are just as good yet cost less. These cost savings might or might not be transferred to consumers in the form of cheaper costs. Process innovation is crucial for the provision of the main product as well as for any offer's supporting components. It is necessary to meet and uphold quality standards for both parts of an offer. The management of process innovation is a particularly difficult task in the case of services, which by definition depend on interpersonal connections to produce results (John and Storey, 2018). In order to overcome opposition to change and develop the innovation process, energy is needed.

To overcome this opposition, imaginative and dedicated leadership is therefore crucial in providing the necessary energy. Innovative leaders must be skilled and informed about their field, as well as adept at motivating staff members (Higgins, 2015). According to research by Kakabadse and Kakabadse (2018), the most effective leaders were those who had held high positions with the organization for a significant amount of time and were primarily outwardly focused. When it comes to banks with few managerial resources, this factor is crucial. Furthermore, current bank managers are not as likely to devote their time to comparing their organization's leadership and innovation to those of other businesses (Raymond et al., 2018).

Certain firms have cultures that are far more supportive of these kinds of advances than other companies. One may refer to an approach that encourages the creation and adoption of inventions with these qualities as proactive (Calanone et al. 2015). Companies using a reactive innovation strategy strive to hit a lot of singles, according to Porter (2020). While these are simpler to accomplish than home runs, they do not carry a team as far on their own. According to the marketing

concept as it was initially defined, meeting customer wants should be the main focus of all business operations. A market orientation is reflected in organizational structures and procedures, and a genuine consumer focus is expected of every employee. Prior to developing and producing new products, market-oriented companies are also known to devote a significant amount of attention to customer research (Damanpour, 2016).

Process innovation must receive greater attention than product innovation in the reactive innovation strategy. This kind of innovation is easier to achieve; thus, reward schemes should focus on outcomes. The vision of the results must be one of commercial success. Reactive innovators typically foster an environment that is less supportive of artistic brilliance and more welcoming of individuals who advance methodically and logically (Prahalad and Hamel, 2016). Reactive innovators, as opposed to proactive innovators, sometimes have to spend more time and energy monitoring their rivals. As the reactive innovator places a strong emphasis on utilizing other people's inventions, it is obvious that staying up to date on new inventions and how they are being embraced, and what elements dictate when a late mover is most suited to present its idea. Moreover, Fulmer (2017) states that imitation innovations necessitate not only awareness but also a thorough comprehension of the good or service being mimicked. These kinds of adjustments are frequently seen by businesses in transitional nations as a result of adapting to changing market conditions. As their goal is to improve enterprise conditions and find new techniques and procedures targeted at boosting its business performance, strategic and organizational changes are considered to be beneficial to innovation activities, even though they need not be explicitly focused on them.

Conceptual Framework

Financial performance was the dependent variable, and process innovation was the independent variable. Process innovations were taken into account in the study together with the quantity of customers serviced in a certain amount of time and the personnel quality to quantify the quality of service provided. Financial performance was gauged by revenue growth, profitability, and return on assets.

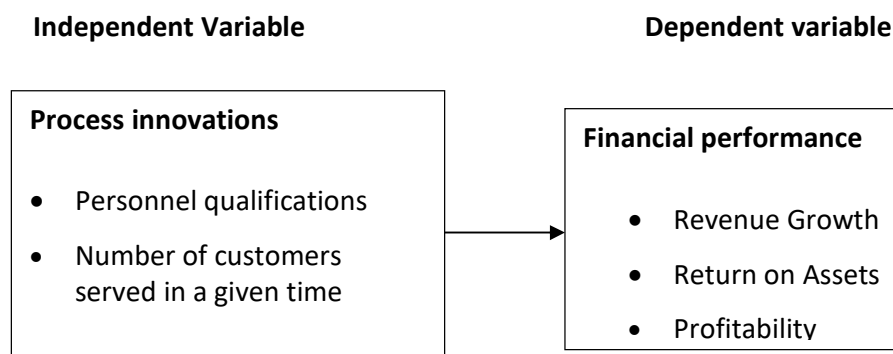


Figure 1: Conceptual framework:
Source (Researcher, 2023)

RESEARCH METHODOLOGY

Research Design

The research design used was descriptive. It acted as a framework and provided direction for the collection and examination of data. Examining the effect of financial engineering on the financial performance of commercial banks' decisions was one of the research's distinctive features. In addition to examining the relationship between the dependent and independent variables, this design made it possible to precisely describe the phenomenon under investigation.

Target Population

The study's population of interest was made up of Kenyan commercial bankers; as of December 2022, a total of forty-three commercial banks in Kenya (CBK Report, 2022). Thus the study used a census survey owing to the small number of commercial banks in Kenya. The research's population of interest consisted of employees at the head office of commercial banks. This research concentrated on managers in the fields of marketing, customer service, information technology, accounting, and finance because their expertise in financial engineering and its effects on financial performance was greater. 172 workers from 43 commercial banks, each of which represented all four departments within the commercial banks, made up the entire population. In the study, a census survey was employed.

Data Collection Instrument

The study employed primary data gathering techniques. A questionnaire that the respondents self-administered was employed to gather primary data. A closed, structured-ended question was put in the adopted questionnaire. As to Kothari's (2018) analysis, a questionnaire was the most appropriate instrument for this research since it allowed for a substantial amount of data in a relatively short period. Revenue performance data was gathered through the use of secondary data. Secondary data was gathered from commercial banks' annual reports covering the last five years, from 2018 to 2022. The Central Bank and specific commercial banks provided the information.

Proposed Data Analysis, Techniques and Procedure.

For easier understanding and analysis, data gathered was arranged and tabulated. The statistical tools for social science research (SPSS), Version 25.0 was used to analyze the data. When analyzing the data, the mean, standard deviations, and percentages were used. Tables were used to present the quantitative results that came from the analysis, and regression models and correlation coefficients from inferential statistics were used for analysis.

Regression Model

The regression model below was used:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

Y = Financial Performance

β_0 = Constant Term

β_1 = Beta coefficients

X₄= Process innovation

ε=Error

RESEARCH FINDINGS AND DISCUSSION

Descriptive statistics

Use of process innovation financial performance of commercial bank.

The study sought to find out the rank of use of process innovation on financial performance of commercial bank. The statements were scale of: 1 – most used, 2– used, 3 – moderately used, 4– least used or 5–not used . The results are as indicated in table 1

Table 1: process innovation on financial performance of commercial bank.

Statements	N	1	2	4	5	6	Mean	Std
		%	%	%	%	%		
Increasing profit	147	30	48	18	3	1	4.81	.71
Enhancing quality personnel	147	41	42	17	11	8	4.78	.73
Saving of costs	147	47	43	35	18	10	4.52	.90
Attracting more customers	147	31	33	25	9	3	4.61	.77
Increasing competitiveness	147	41	30	31	12	3	4.87	.78
Providing the means for safeguarding and improving quality of service	147	35	43	31	11	5	4.45	.83

(Source field data,2024)

The study findings on increasing profit showed that majority ranked used at 48 % and those who most used at 30 %. Those who ranked moderately used were at 18 %, 3 % less used extent while the minority not used ranked at 1 %. The mean was 4.81 with a standard deviation of 0.71. These results revealed that process innovation increases profit on financial performance of commercial banks in Kenya. The study findings on enhancing quality personnel showed that majority ranked used at 42 % and those who most used at 41 %. Those who ranked moderately used were at 17 %, 11 % less used while the minority not used ranked at 8 %. The mean was 4.78 with a standard deviation of 0.73. These results revealed that process innovation enhances quality personnel on financial performance of commercial banks in Kenya.

The study findings on saving of costs showed that majority ranked most used at 47 % and those who used at 43 %. Those who ranked moderately used were at 35 %, 18 % less used while the minority not used ranked at 10 %. The mean was 4.52 with a standard deviation of 0.90. These results revealed that process innovation saves costs on financial performance of commercial banks in Kenya. The study findings on attracting more customers showed that majority used at

33 % and those who most used at 31 %. Those who ranked moderately used were at 23 %, 9 % less used while the minority not used ranked at 3 %. The mean was 4.61 with a standard deviation of 0.77. These results revealed that process innovation attracts more customers on financial performance of commercial banks in Kenya.

The study findings on increasing competitiveness showed that majority most used at 41 % and those who used at 30 %. Those who ranked moderately used were at 31 %, 12 % less used while the minority not used ranked at 3 %. The mean was 4.87 with a standard deviation of 0.78. These results revealed that process innovation increases competitiveness on financial performance of commercial banks in Kenya. The study findings on providing the means for safeguarding and improving quality of service showed that majority used at 43 % and those who most used at 35 %. Those who ranked moderately used were at 31 %, 11 % less used while the minority not used ranked at 5 %. The mean was 4.45 with a standard deviation of 0.83. These results revealed that process innovation provides the means for safeguarding and improving quality of service on financial performance of commercial banks in Kenya.

Extent process innovation affect profitability of the bank

The study sought to establish the extent process innovation affect profitability of the bank on financial performance of commercial banks in Kenya. The statements were scale of I to 5 Where: 1.; Very great extent 2 Great extent, 3 moderately extent 4. Little extent 5 Not at all. The results are as indicated in table 2

Table 2: process innovation and profitability of the bank

Parameters/ factors	N	1	2	3	4	5	Mean	Std
		%	%	%	%	%		
Process innovation is important in both the supply of the core product as well as in the support part of any offer.	147	33	41	13	12	7	4.33	.87
Process innovations that are radical, inventive and early offer greater rewards and performance improvement.	147	30	41	23	10	9	4.38	.76
Companies with a reactive innovation strategy aim to hit many singles	147	32	41	21	14	4	4.34	.81

(Source field data,2024)

The study findings on process innovation is important in both the supply of the core product as well as in the support part of any offer showed that majority agreed to a very large extent 41 % and those who agreed at large extent were 33 %. Those who agreed at moderate extent were at 13 %, 12 %

agreed to a less extent while the minority agreed at no extent at 7 %. The mean was 4.33 with a standard deviation of 0.87. These results revealed that process innovation has importance in both the supply of the core product as well as in the support part of any offer an effect on financial performance of commercial banks in , Kenya.

The study findings on process innovations being radical, inventive and early offer greater rewards and performance improvement showed that majority agreed to a large extent 41 % and those who agreed a very large extent were 30 %. Those who agreed at moderate extent were at 23 %, 10 % agreed to a less extent while the minority agreed at no extent at 9 %. The mean was 4.38 with a standard deviation of 0.76. These results revealed that process innovations are radical, inventive and early offer greater rewards and performance improvement on financial performance of commercial banks in Kenya. The study findings on companies with a reactive innovation strategy aiming to hit many singles showed that majority agreed to a large extent 41 % and those who agreed a very large extent were 32 %. Those who agreed at moderate extent were at 21 %, 14 % agreed to a less extent while the minority agreed at no extent at 4 %. The mean was 4.34 with a standard deviation of 0.81. These results revealed that companies with a reactive innovation strategy aims to hit many singles on financial performance of commercial banks in, Kenya.

Inferential statistics

Correlation Analysis

Process innovation and financial performance

The purpose of the study was to determine how process innovation impacted Kenyan commercial banks' financial results. The findings from the research are displayed in Table 3.

Table 3: Process innovation and financial performance

		Financial Performance
Process Innovation	Pearson Correlation	.825**
	Sig. (2-tailed)	.000
	N	147

** . Correlation is significant at the 0.05 level (2-tailed).

The study shows that process innovation and the financial performance of commercial banks in Kenya had a moderately favorable and statistically significant association ($r = 0.825$; $p < 0.05$), as illustrated in Table 3. This suggests that Kenyan commercial banks' financial performance is impacted by process innovation.

Regression Coefficients

A regression analysis was carried out to evaluate the impact of process innovation and the financial performance. The model summary was provided in table 4.

Table 4: Regression Coefficients

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.076	.130		.277	.751
Process innovation	.268	.165	.229	3.740	.008

Table 4 shows the overall significant test results for the hypothesized research model. The interpretations of the findings indicated follow the following regression model.

$$Y = \beta_0 + \beta_1 X_1$$

Therefore,

$$Y = 0.076 + 0.268 X_1$$

The intercept (β_0) indicates that the financial performance of commercial banks was 0.076 when the four independent variables were held constant. Finally, a unit increase in process innovation would result in a 0.268 improvement in the financial performance of Kenya's commercial banks, leaving all other variables constant.

Process innovation and financial performance

These findings suggested that Kenya's commercial bank's financial performance is impacted by process innovation. The results of the study showed that process innovation improves the financial performance of Kenyan commercial banks in terms of profit. The study's conclusions showed that process innovation improves the caliber of employees' contributions to Kenyan commercial banks' financial performance. The results of the study showed that process innovation improves the financial performance of Kenyan commercial banks by reducing expenses. The results of the study showed that process innovation improves the financial performance of Kenyan commercial banks by drawing in more clients. The study's conclusions showed that process innovation boosts Kenyan commercial banks' financial performance competitiveness. The results of the study showed that process innovation offers a way to protect and enhance the quality of services provided in relation to Kenya's commercial banks' financial performance. The results of the study showed that process innovation has an impact on the financial performance of Kenyan commercial banks in both the supply of the core product and the support component of any offer. The study's conclusions demonstrated that process innovations that are bold, creative, and early provide bigger returns and improve the financial performance of Kenya's commercial banks. The study's conclusions showed that businesses using a reactive innovation approach try to score a lot of hits on Kenya's commercial banks' financial performance.

Conclusion

The study indicates that there was a moderate positive and statistically significant correlation between process innovation on financial performance of commercial banks in Kenya ($r = 0.825$; $p < 0.05$). This implies that process innovation affects financial performance of commercial banks in Kenya

Recommendation

To boost competitiveness and enhance the provision of high-quality services, process innovation should be embraced.

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