Technology Innovation Strategy and Performance of Commercial Banks in Nairobi City County, Kenya

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Abstract: **Kenyan commercial banks have shown performance challenges in the recent years. This has been reflected in low market share, reduced competitive advantage as well as reduced strategic partnerships. This research sought to establish the effect of technology innovation strategy on performance of commercial banks in Nairobi City County. It adopted a descriptive research design targeting 39 commercial banks within Nairobi City County as at December 31st 2021. The respondents were 897 managers within the 39 commercial banks. The study sampled 90 managers using on stratified random sampling adopting primary data collected via semi-structured questionnaire. Nine participants from a sample of 90 were involved in the pilot test. For quantitative data descriptive statistics, correlation analysis and multiple regression was adopted for analysis. The study found that technology innovation strategy positively affected performance of commercial banks. The study recommends that the management of commercial banks in Nairobi city county should uphold technology innovation for improved performance. There is need for further research based on other factors influencing organization performance, other organizations, secondary data and other counties.**

Keywords: **Technology Innovation Strategy, Commercial Banks, Organizational performance.**

1. INTRODUCTION

The main objectives of every organisation are to generate revenue, expand, and endure in the environment within which they exist. The environment tends to have an impact on a company's mission and aims by placing constraints on it (Derek, 2016). The rivalry that puts a cap on the objectives defined by the organisation may be one of these limitations in a company's objective setting. Kareem (2017) asserts that an organization's performance depends on its ability to choose the best strategy for the complex and dynamic environment in which it operates. According to Ansoff (1987), the idea of strategy is nebulous and relatively arbitrary.

Globally, commercial banks have displayed poor performance in the last five years. In 2022, the sector showed a drop in its profit by 23.4% (World Bank, 2022). In addition, the market share fell by 0.1% to $2.8tr in 2022. This shows that at the global scene, commercial banks have been experiencing performance challenges. In the US, the banking industry experienced a drop in their performance by 14% over the past year (World Bank, 2022). In China, commercial banks have also shown performance challenges in the recent years. Regionally, the performance challenges are rampant among the commercial banks. For example, in South Africa, the commercial; baking industry showed a decline in their performance by 12% in the last five years. Further, average performance for African banks fell by 50 percent in 2022 from 14 percent in 2018 (World Bank, 2022). The African banks have come up with strategic responses in their attempt to address the

challenge of performance. The strategic responses adopted by the African banks relate to technology innovation and market expansion within and outside the continent.

In Kenya, commercial banks have shown deteriorating performance in the last five years. Based on the bank supervision reports, the profitability level, for example pre-tax profit reduced from 133.2 billion in 2017 to Ksh.112.4 billion in 2020 (CBK, 2022). On the other hand, the sector saw a reduction in the gross loans from 4,002.741 billion in 2017 to Ksh. 2,658.7 billion in 2021. The sector also experienced increased in non-performing loans by 29.6% with a 177.2% increase in loan loss provision in 2021. This shows performance challenges among the Kenyan commercial banks.

Banking technology innovation has revolutionised how people in underdeveloped nations send and receive money, and it is now ready to provide more complex banking services that may significantly improve the quality of life. This sort of technology can give a variety of services like accounts details and alert users to improvements and transactions on their accounts via mobile devices. On mobile phones, users receive brief alerts reminding them of recent activities in the bank wallets. Technology innovation indicators will include e-banking, m-banking, Online loan and account application and short message services. Giovanis, Assimakopoulos and Sarmaniotis (2019); Broby (2021); and Wewege, Lee and Thomsett (2020) identified technology innovation in banking to include digital banking platforms, mobile banking and payments, Fintech partnerships, and open banking.

1.1 Statement of the Problem

The majority of the time, organisations react to environmental changes since they may cause certain tactics to become antiquated and ineffective (Gichangi, 2011). Day and Schoemaker (2015) assert that organisations should always be alert for environmental changes that may affect their survival, expansion, and ultimately overall success. Therefore, strategic fit is a crucial consideration for every organisation looking to outperform its rivals and stay competitive in its immediate surroundings. To respond to the environmental changes, commercial banks respond by adopting key strategic responses in their attempt to remain competitive and maintain their performance.

The commercial banks Nairobi city county have faced performance challenges in terms of reduced profits, increased loan defaults, trade volume reductions as well as dwindling market share in the financial sector. The banks have accrued these challenges to the dynamic environment within the banking sector. The banks have shown deteriorating performance in the last five years. Based on the bank supervision reports, the profitability level, for example reduced from 133.2 billion in 2017 to Ksh.112.4 billion in 2020. On the other hand, the sector saw a reduction in the gross loans from 4,002.741 billion in 2017 to Ksh. 2,658.7 billion in 2021. The sector also experienced increased in non-performing loans by 29.6% with a 177.2% increase in loan loss provision in 2021. The performance challenges have led to the collapse of various banks in the recent years with most recent being Chase bank, Dubai Bank and Imperial Bank (CBK, 2021). It's critical for banks to develop strategies that would save them from the performance woes facing them to avoid collapse.

1.2 Objective of the Study

To evaluate the effect of technology innovation strategy on performance of commercial banks in Nairobi city county

1.3 Significance of the Study

This research would be of significance to various stakeholders. They involve policy makers, commercial banks, scholars and researchers. The policy makers would find this paper important in policy making. The information provided by this study would create an understanding among policy makers on how strategic responses adopted by banks influence their performance. This would form the basis for government policy to improve performance of commercial banks through improved strategic responses.

The commercial banks may also be beneficiaries of the findings of this research paper. The commercial banks through its top executives would be able to come up with relevant strategies that would enhance performance by understanding how strategic responses relate to the performance of the banks. The banks may also adopt the recommendations that will be given by this research paper in their attempt to enhance their performance through effective strategic responses. Scholars and researchers would also be major beneficiaries of this research. This research will provide literature on strategic responses and their effect on performance of commercial banks. This creates a source for literature for scholarly assignments especially in strategic responses and organizational performance.

2. THE DIFFUSION OF INNOVATION THEORY

The diffusion of innovation theory, developed by Rogers (1962), explores how new technologies or innovations are adopted and spread within a social system. In applying the Diffusion of Innovation theory to this topic, several key concepts come into play. Firstly, organizations go through various stages of innovation adoption, including knowledge, persuasion, decision, implementation, and confirmation. They must identify and evaluate innovative technologies, assess their potential benefits, and make informed decisions on whether to adopt and implement them as strategic responses.

Additionally, the theory recognizes that certain attributes of innovations influence their adoption and diffusion. Organizations consider attributes such as relative advantage, compatibility with existing systems, complexity, trialability, and observability when selecting strategic responses. Innovations that offer clear advantages, align with existing infrastructure, and are easy to implement are more likely to be adopted. The decision to adopt an innovation is influenced by factors such as organizational culture, leadership support, resource availability, and external pressures. Organizations need to assess these factors to understand their readiness for adopting technological innovations as strategic responses.

Effective communication channels play a critiacal role in spreading information and influencing adoption of innovations. Organizations should communicate the benefits, risks, and implementation strategies of technological innovations to internal stakeholders, including employees, managers, and decision-makers, in order to encourage their adoption as strategic responses. Moreover, having innovation champions within organizations can facilitate the adoption and diffusion of innovations. These champions act as change agents, advocating for the adoption of technological innovations and promoting their benefits to key stakeholders. Their efforts play a vital role in driving strategic responses and improving organizational performance.

By applying the diffusion of innovation theory, organizations can gain a deeper understanding of the factors which influence the adoption and implementation of technological innovations as strategic responses. While the theory primarily focuses on the adoption and diffusion of innovations among individuals or groups, it can also be applied to understand the strategic responses of organizations and their influences on organizational performance. In the context of this paper, the theory can provide insights into how organizations adopt and implement technological innovations to enhance their performance and competitiveness. This theory addressed the technology innovation variable.

2.1 Empirical Review

Chege and Wang (2020) investigated how environmental sustainability practises in Kenya may improve SME performance. Hierarchical regression models and sample of 204 small firms were utilized in the research. The results of the research demonstrate how ecologically conscious business owners are affected by technology innovation and how this has a beneficial effect on the company's performance. The study adopted hierarchical regression model with the current study adopting a multiple regression model for analysis. The study included sustainability practices to technology and performance creating a conceptual gap. It utilized SMEs other than commercial banks.

Mwania (2017) conducted research on the connection between Kenyan commercial banks' expansion strategies and performance. Data was gathered from the top management staff with the research goal being all Kenyan commercial banks. Researchers utilised mixed data. Using a questionnaire, primary data was gathered. Excel and the Statistical Package for Social Science (SPSS) programme were used for coding, tabulation, and analyzing the data. To analyse the data, descriptive statistics were employed. Descriptive statistics were used to examine the research issues. According to the survey, banks used a variety of growth tactics to improve their performance. The investigation also established that market development and expansion strategies benefit commercial banks' performance. Wahu and Assumptah's (2017) investigation of the impact of ICT strategies on performance in the aviation sector. The research chose 98 staff members using stratified random selection for selecting the sample size. Outcomes showed that performance was favourably impacted by the implementation of technology. The findings of the research, nevertheless, were restricted to Kenya Airways and couldn't be applied to Kenya's commercial banks. The study looked at ICT strategies with the current study looking at technology innovation.

Empirical evidence from Kenyan commercial banks was used by Mutuku, Muathe, and James (2019) to investigate the mediating role of competitive advantage in the link between e-commerce competence and performance. An explanatory research design was adopted in the study. 43 commercial banks were surveyed, and performance information for the 2016–2017 fiscal year was retrieved. Websites of commercial banks provided the data needed to calculate the e-commerce capabilities. Descriptive and inferential statistics were used in the data analysis process. The results of the

study showed that the relationship between Kenyan commercial banks' performance and their ability to do e-commerce is somewhat mediated by competition.

Ombati (2020) studied the effect of strategic responses on the performance of oil marketing companies in Kenya utilizing a descriptive survey research design. Target population was 248 management level employees. Stratified sampling method was adopted in sampling. The sample size of the study was 124 management level employees. Questionnaires were used to collect primary data which was both quantitative and qualitative. The study established that information technology deployment possesses a significant influence on performance of oil marketing companies which was positive. The study involved the management team assuming the subordinates who are included in the present one. The study used both quantitative and qualitative data with the current based on quantitative data. The research utilized correlation analysis with the current adopting regression analysis.

Chege, Wang and Suntu (2020) studied impact of information technology innovation strategy on firm performance in Kenya. A sample of 240 SMEs was used. Structural equation modelling as well as descriptive statistics were used for analysis. Technology innovation impacted firm performance positively. It involved SMEs where the impact of IT innovation on organization performance may be different compared to commercial banks. This study, on the other hand, adopted structural equation modeling with the current study adopting multiple regressions for analysis. The study focused on IT innovations with the current looking at all technology innovations.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study adopted a descriptive research design. Mugenda and Mugenda (2012) argue that the design entails a method that is scientifically deals with observation and documenting a subject's behavior without changing it. The design was relevant for this research in that it enabled the researcher to collect data using quantitative and qualitative methods in order to describe the strategic responses and performance of commercial banks. The design also enabled the researcher to describe the strategic responses and performance based on the actual data other than manipulated data.

3.2 Target Population

This study targeted commercial banks within Nairobi city county. There were 39 commercial banks in Nairobi city county as at December 31st 2021 (Central Bank of Kenya, 2021). The respondents were managers within the commercial banks. From the human resources departments (2022), the commercial banks had 897 managers within their employee portfolio.

Table 1: Target Population

Level	Population	Percentage
Top	83	9.2
Middle	285	31.8
Low	529	59.0
Total	897	100.0

Source: HR Department, Commercial Banks (2023)

3.3 Sampling Design and Sample Size

Lakens (2022) indicated that indicate that the aim of doing sampling is to obtain a number out of the population that can be studied and give results that accurately represent that population. Majid (2018) argue that where the target population is more than 100, sampling ought to be done. The study sample 90 managers using on stratified random sampling. This was based on the level of management. This study used Yamane formula to calculate the sample.

$n = N/[1+N(e)^2]$ where;

N=target population

n=sample

e=sampling error (10%)

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

$= 897/ [1+897(0.1)^2]$

$= 90$

Table 1: Sample Population

Level	Population	Proportion	Sample
Top	83	0.09	8
Middle	285	0.32	29
Low	529	0.59	53
Total	897		90

Source: Researcher (2023)

3.4 Data Collection Instrument

This research paper adopted primary data collected via semi-structured questionnaire. The questionnaire was preferred as it enabled the researcher to guide the research by having questions/statements that would answer the research objectives. A questionnaire is also easy to administer and cheaper compared to other data collection instruments like interview guides.

3.5 Validity of the Research Instrument

The researcher tested for validity of the research instrument to check on the research quality. This was done to test whether the research instrument measured what it ought to measure and whether it produced consistent results. A pilot study was done to check on the research quality. Before beginning the actual research, the questionnaire was tested on a small group of participants with similar attributes to see if it would produce the anticipated outcomes (In, 2017). The advantage of tool testing is that it made it simple to view questionnaire elements that the participants might not understand during the procedure. Additionally, important elements and responses from the participants were tracked, allowing the scholar to improve the questionnaire's reliability. According to Viechtbauer et al (2015), 10% of the entire sample with homogeneous characteristics should be used for piloting. Nine participants from a sample of 90 took part in the pilot test.

3.5.1 Validity of Research Instrument

According to Mohajan (2017), the degree at which a data collection tool evaluates the research topics is called validity. There are three basic categories of validity: construct, content and criterion validity. In this study, the content validity was checked. The degree to which the contents of the questionnaire accomplish the objectives of the research is known as content validity. The supervisor, who also served as the research specialist in this survey, graded the survey questions on their applicability and representativeness to the subject matter. The content of the surveys was double-checked to make sure that they cover all crucial facets of the subject they were assessing.

3.5.2 Reliability of the research instrument

Reliability of the research instrument was tested to check on whether the research instrument produced consistent results. When the same subjects are treated with different circumstances while following the same methods, an instrument is said to be reliable to the extent that it measures the same manner each time (Ranjit, 2015). The reliability of the questionnaire was examined using Cronbach's alpha reliability coefficient. A credible data gathering tool, according to Morse, Barrett, Mayan, Olson and Spiers (2012), should have an alpha value better than or equal to 0.70. In this study, the researcher concludes that the research instrument is reliable if the Cronbach alpha value is greater than 0.70.

3.6 Data Collection Procedure

Kenyatta University's graduate school granted permission to undertake this research through an introduction letter. The graduate school introduction letter together with the proposal was shared with NACOSTI for the research permit that would allow for data collection. In addition, the researcher sought permission from the management of the banks to collect data from the institutions. The management of every banking institution were informed of the survey's goal and its significance, and the amount of engagement required from the managers. Data collection was done through the drop-wait-and-pick methodology. This involved the researcher giving the questionnaire to the respondent and waiting for it to be filled after which he picks and proceeds to the next respondent.

3.7 Data Analysis and Presentation

The Statistical Package for Social Sciences (SPSS) version 27 was used to analyse the quantitative data employing descriptive and inferential   statistics. This involved the use of Pearson correlation coefficient. Multiple regression was also done to determine the effect of strategic responses on performance. The analysis model took the following form:

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

Whereby;

Y   = Organizational performance

X1   = Technology innovation strategy

β_1 = Regression coefficients

ε   = Error term

4. FINDINGS AND DISCUSSION

4.1 Response rate

Table 1: Response rate

	Questionnaires Administered	Filled and Returned	Percentage
Respondents	90	82	91.1

The issued 90 questionnaires from which 82 were filled and returned. This gave a response rate of 91.1%. Based on the assertion, the response rate was sufficient.

4.2 Reliability Analysis

Table 2: Reliability Analysis

Variable	Cronbach Alpha coefficient score	No. Of Items	Comments
Cost Reduction	0.849	6	Reliable
Market Expansion	0.890	7	Reliable
Technology Innovation	0.911	7	Reliable
Risk Management	0.732	5	Reliable

The table shows that technology innovation strategy had the highest reliability (α= 0.911), followed by market expansion (α=0.890), cost reduction (α=0.849) and risk management strategy (α=0.849). Hence, the instrument was reliable as Cronbach alpha was above 0.7.

4.3 Background Information

This section contains the respondent's age, years working in banking the banking sector, years in current bank, and highest educational qualifications.

Distribution of Respondent's by Their Age Category Age

The study required respondents to indicate their age category. Results were presented in Table below

Table 3: Age of the Respondents

Category	Frequency	Percentage
Less than 25 years	9	11.0
25-35 years	24	29.3
36-45 years	24	29.3
46-55 years	20	24.4
56 years and above	5	6.1
Total	82	100.0

From the research findings, it was established that most of the respondents (29.3%) were aged between 25-35 years and 36-45 years in each case. However, 24.4% were aged between 46-55 years, 11.0% less than 25 years while 6.1% indicated 56 years and above. Based on the study results, the study draws the conclusion that the respondents were fairly drawn from various age groups which implies that opinions from these groups were well captured in this research. However, majority were aged above 35 years which shows that the management within the banks

Period of Service in Banking the Banking Sector

Respondents were asked to indicate the duration which the respondent had worked in banking sector. Results are presented in Table 4.

Table 4: Period of Service

	Frequency	Percentage
5-10 years	16	19.5
11-15 years	24	29.3
16-20 years	31	37.8
More than 20 years	11	13.4
Total	82	100.0

Results show that most (37.8%) of the respondents had served in the banking sector for 16-20 years. However, 29.3% indicated 11-15 years, 19.5% indicated 5-10 years with 13.4% indicating more than 20 years. This shows that majority of the managers in commercial banks have served in their banks for more than 15 years. This was a considerable time to provide relevant data on the research problem.

Period of Service in the Current Bank

Further researcher asked the respondents to indicate the period of service with the current financial institution. The findings are shown by table 5.

Table 5: Period of Service in the Current Bank

	Frequency	Percentage
1-5 years	16	19.5
6-10 years	24	29.3
11-15 years	31	37.8
More than 15 years	11	13.4
Total	82	100.0

Results show that most (37.8%) of the respondents had served the current organization for a period of 11-15 years, 29.3% indicated 6-10 years, 19.5% indicated 1-5 years while 13.4% indicated 1-5 years. Hence, majority of the respondents had served their current position for a considerable period which implies that they deeply understood the firm's processes.

Highest Level of Education

The study inquired on respondent's highest educational qualifications. Results are presented in Table 6.

Table 6: Highest level of education

	Frequency	Percentage
Diploma and below	11	13.4
Bachelor's Degree	44	53.7
Master's Degree	18	22.0
Doctoral Degree	9	11.0
Total	82	100.0

Results show that majority (53.7%) of the respondents had bachelor's degree, 22.0% indicated master's degree, 13.4% indicated diploma and below. However, 11.0% indicated doctoral degree. This shows that majority of the managers within commercial banks in Kenya have a bachelor's degree. It's evident that majority were literate hence understood the research problem.

4.4 Technology Innovation Strategy

Respondents were requested to show their level of agreement on statements relating to technology innovation strategy in their bank. The findings are shown by table 7.

Table 7: Statements relating to relating to technology innovation

Statements	Mean	Std Dev
My bank has come up with innovative processes that improve business operations	4.11	0.67
My bank has adopted digital banking platforms in its operations	4.04	0.66
My bank adopts electronic banking in offering services to the customers	4.16	0.62
Mobile banking has been adopted by my bank in its business offers	4.20	0.60
My bank has entered into partnerships with Fintech companies in recent years	4.00	0.80
My bank has adopted open banking in strategic response	3.91	0.59
Technology innovations have contributed to my bank's success	4.11	0.61

From the findings, the respondents agreed that mobile banking was adopted by their banks in their business offers (M =4.20 SD =0.60), it was also established that mobile banking had become an integral part of modern banking, offering convenience, efficiency, and security for customers while helping financial institutions reach a broader and more digitally connected customer base. These findings concur with research deduction by Wairugi, (2017) mobile banking can improve financial inclusion by providing access to banking services for people in remote or underserved areas who may not have access to traditional banks.

Further, the respondents agreed that their banks adopted electronic banking in offering services to customers (M = 4.16 SD =0.62) with electronic banking reducing the need for paper-based transactions, making it environmentally friendly and contributing to a reduction in paper waste. These findings correspond with study inference by Burnaby and Hads (2015) that electronic banking had revolutionized the way individuals and businesses manage their finances, offering a host of benefits that include convenience, efficiency, security, and improved financial management capabilities.

Further, the respondents indicated that their banks had come up with innovative processes that improved business operations (M = 4.11SD =0.67). It was also established that innovative processes reflect the evolving landscape of banking, with a strong emphasis on customer experience, operational efficiency, security, and adaptability to changing market dynamics. Similar conclusions were made by Chege and Wang (2020) that banks adopt agile methodologies for software development and project management, allowing for quicker adaptation to changing customer needs and market conditions.

The respondents, further, agreed that technology innovations had contributed to their bank's success (M = 4.11SD =0.61). This was supported by the qualitative information reveled that banks continuously strived to improve their business operations through innovation, leveraging technology and creative approaches to enhance efficiency, customer service, and competitiveness. These findings correspond with study inference by Ombati (2020) that Banks that embrace and effectively implement such innovations can gain a competitive advantage and better meet the needs of their customers.

The respondents also agreed that their banks had entered into partnerships with Fintech companies in recent year (M =4.00 SD =0.80). They also indicated that collaborations and partnerships between traditional banks and fintech (financial technology) companies had become increasingly common in the financial industry. These findings correspond with study inference by Mwania (2017) that banks partner with Fintech companies to access and incorporate cutting-edge solutions, such as mobile apps, digital payment systems, and blockchain, to enhance their services and stay competitive.

The results also showed that banks had adopted digital banking platforms in its operations (M = 4.04 SD =0.66) with the adoption of digital banking platforms becoming a fundamental aspect of the operations of many banks. These findings correspond with study inference by Wahu and Assumptah's (2017) that many banks offer mobile wallet solutions that allow customers to make digital payments, store payment cards, and access loyalty rewards, all within a mobile app.

In addition, the study revealed that banks had adopted open banking in strategic response (M =3.91 SD =0.59). The findings also showed that open banking fosters innovation by enabling third-party fintech companies to develop new financial products and services. This stimulates competition, which can lead to more diverse and improved offerings

in the market. These findings agree with study inference by Chege and Wang (2020 that open banking is a key component of a bank's digital transformation strategy. It allows them to modernize their infrastructure, enhance their technology stack, and stay relevant in an increasingly digital world.

4.5 Organization Performance

Respondents were asked to indicate their level of agreement on statements relating to performance of the bank. Results are shown by Table 8.

Table 8: Statement assessing on bank's performance

	Mean	Std Dev
My organization has the goals aligned to the strategic plan	2.12	0.87
The organization has met their short-term goals in the last one year	1.90	0.71
My company has implemented new strategies in the recent years	2.04	0.81
The organization has achieved positive outcomes in the implementation of its strategies	1.76	0.71
My organization has been able to attain better service delivery to the customers	1.90	0.73
My organization has experienced significant growth in the last five years	1.89	0.69
My organization has experienced increased market share in the recent years	2.12	0.87
The number of strategic partners in my organization has increased in the recent years	1.90	0.71
Competitive advantage has increased in my organization	2.04	0.81

From the findings, respondents disagreed that the banks had achieved positive outcomes in the implementation of its strategies (M = 1.76 SD =0.71), their banks had experienced significant growth in the last five years (M =1.89 SD =0.69) and had been able to attain better service delivery to customers (M =1.90 SD =0.73). These findings align with research deduction by Amah and Oyetunde (2019) Failed or poorly executed mergers and acquisitions can result in stagnant growth if integration issues or financial challenges arise.

Respondents also disagreed that their banks had met their short-term goals in the last one year and that the number of strategic partners with the banking institution had nor increased in the recent years (M =1.90 SD =0.71). They also disagreed that the competitive advantage of their banks increased (M = 2.04 SD =0.81). Similar conclusion by Ngumo, Collins and David (2020), also show that organizations that do not have clear strategic plans or long-term growth strategies may find it challenging to achieve significant growth.

Further they disagreed that their banks had implemented new strategies in the recent years (M = 2.04 SD =0.81). Further, the banking organizations had the goals poorly aligned to the strategic plan and that organization had not experienced increased market share in the recent years (M = 2.12 SD =0.87). These findings correspond with study inference by Adeleye and Adusei (2002) that effective leadership, mismanagement, or a lack of a clear growth strategy can hinder an organization's ability to expand.

4.6 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables.

The research used statistical package for social sciences (SPSS V 26) to code, enter and compute the measurements of the multiple regressions. The model summary is presented in the table 9 below.

Table 9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.717	.529		3.244	.002
Technology Innovation	.584	.158	.337	3.686	.000

a. Dependent Variable: Performance

From the regression analysis, a unit increase in technology innovation would increase performance of banks by 0.584. Therefore, technology innovation had a positive effect on performance of banks. The study found that technology innovation had a positive effect on performance of commercial banks. This shows that increased technology innovation

would lead to increased performance levels within the organizations. The outcomes are aligned to those of Chege, Wang and Suntu (2020) who found that technology innovation impacted firm performance positively. Wahu and Assumptah's (2017) who found that performance was favourably impacted by the implementation of technology.

5. SUMMARY OF THE FINDINGS

Based on the third objective, findings showed that banks had come up with innovative processes that improved business operations. In addition, the banks adopted electronic banking in offering services to the customers. The results also showed that the banks had adopted digital banking platforms in their operations. They had also entered into partnerships with Fintech companies in recent years which contributed to the bank's overall success. It was further found that mobile banking had been adopted by banks in the business offers. The findings also showed that the banks had adopted open banking in strategic response. Technology-driven banks were often more attractive targets for mergers and acquisitions, as they brought digital assets, customer bases, and technology infrastructure that could complement the acquiring bank's strategy. From the regression analysis, technology innovation strategy had a positive effect on commercial banks' performance.

5.1 Conclusions

The study further concludes that adoption of technology innovation strategy enhanced the performance of commercial banks in Nairobi city county. Technology innovation can improve financial inclusion by making banking services accessible to under banked and unbanked populations. The study also concludes that well-crafted technology innovation strategy can significantly influence the performance of commercial banks in Nairobi city county by improving customer experience, reducing costs, increasing efficiency, creating new revenue streams, and enhancing security and compliance.

5.2 Recommendations

Banks management should define clear, specific, and measurable objectives for the technology innovation strategy. These objectives should align with the overall business goals and customer needs. Banks can also embrace digital transformation by offering online and mobile banking services, digitizing paperwork, and providing self-service options to customers and invest in user-friendly interfaces and responsive design for a seamless digital experience

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