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Effect of Automation of Accounting Services on the Performance of Commercial Banks in Kenya

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Abstract
Purpose: *The purpose of this study was to determine the effect of the automation of accounting services on the financial performance of the commercial banks in Kenya.*
Methodology: *The study adopted a descriptive survey study model in which data was collected from all the commercial banks in Kenya. The Likert scale was used to design the data collection tool. The data collected from primary sources was analyzed descriptively using the SPSS software.*
Findings: *The response rate for the study was 73%. The predictor variables of the study were accounting software, automated accounting functions and accounting software securities while the dependent variable was financial performance. The control variables of the study were bank rates and bank size. The study findings showed that the performance of commercial banks is determined 46.5% by the factors of automation of accounting services under study, while 53.5% is accounted for by other variables not under this study.*
Implications: *The study concluded that the automation of accounting standards does affect the financial performance of the commercial banks in Kenya. It further concluded that although the automation of accounting services does affect the performance of commercial banks, it cannot be held as a strong estimator of the financial performance of commercial banks but should be backed with other factors not under this study.*
Value: *The study focused on the automated accounting services of the commercial banks, which would help banks to refocus and capitalize on the areas of great gain. The findings and conclusions will assist the banks to focus more on the variant performance evaluation measures when determining the significance of applied systems.*

Keywords: *Financial Performance, Automation of accounting services, commercial banks in Kenya*

Introduction

Automation of accounting refers to the application of the technology in the processing of accounting reports and information. The improvements in technological advancement are a catalyst to the changing and dynamism in the accounting field as well as in other business processes (Wilson & Sangster, 1992). The introduction of the computers and AIS in the business has been said to bring forth positive reward in operational and financial results of the Organizations (Olayiwola et.al, 2015). The impact of the application of the automated accounting to the implementation of various strategies can be used as a parameter to measure how successful the Organization is. Organizations have perceived the application of automation as a primary need to the healthy performance and competitiveness within the various industries (Erik & Forss, 2018). The benefits earned from the application of accounting automation include the motivation of employees, the better performance in the financial perspectives such as the growth in returns on assets and

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the return to equity, development of better and new product offering for the customers, increased market share, and growth in production.

This study will be anchored by the systems theory and the positive accounting theory. Systems theory, formulated in the 1950's is an interdisciplinary theory, regarding the complex systems of nature, society, and science is used to explain the working together of various objects when grouped together to form a harmonious unit (Bertalanffy, 1950). The interaction of objects in the system can be used in the understanding of the communication part of the system through feedback in what the formulators of the theory called cybernetics. The positive accounting theory which was formulated in the 1960's explains reasons as to why management would take certain decisions as regards to the accounting practices and to matters of the organization's performance. It is built on three different hypothesis of maximizing compensation, minimizing organizational politics and reducing creditor disputes (Akanbi and Adewoye, 2018). The use of the accounting theory is therefore necessitated in this study as it explains the use of accounting information for decision making.

Commercial banks are financial institutions that have been authorized to receive and lend money to various entities and individuals. The Kenyan commercial banks are governed by the Central Bank of Kenya which sets forth regulations that the bank should follow in carrying out its operations. According to the annual report by Central Bank of Kenya in 2017, the banking sector consists of forty-two commercial banks, one bank, Charterhouse Bank under state management, 13 microfinance banks, nine foreign bank representative offices, 3 CRBs, seventy-three foreign exchange bureaus, one licensed Mortgage finance institution and nineteen Money Remittance providers (CBK, 2017). Numerous changes have been seen in the operations of the commercial banks in Kenya mostly accounted for by the growth of the use of communications technology within the economy. This has increased the utilization of automation in most of the services being offered by the banks (Kemboi, 2018). The various changes in the economy and the various innovative ways have necessitated that the banks may also transform their accounting practices from manual to the automated one so as to keep clear track of their transactions which are now largely automated.

The measurement of performance or an organization can be gauged through various ways, to determine if the organization is making progress in its achievement of its financial and non-financial goals (Gilbert, Meyerand Vaughan, 2002). Financial performance is an indication of the wellbeing of the organization in terms of earning returns for the investors of the organization (Ogare, 2001). Most organizations have measured the performance of the organization as a ratio of profit on the assets (ROA) or as a proportion of profit on equity invested (ROE). The rate of ROA will indicate if an organization is making money or incurring losses on the funds that have been put into its operations (Obiekwe & Anyanwaokoro, 2017).

Automation of Accounting Services

Automation of accounting refers to the application of artificial intelligence to the performing of the accounting tasks (Gass, 2018). The combination of all inputs, transactional processes, financial recording, and collection system, storage and communication of the financial information using machines sums up to automated accounting (Wilson andSangster, 2010). Professionals in the accounting field are making use of computer and computer aided designs systems to collect, record, analyze, organize, interpret and present financial information to the different parties (Marvic, 2009). A successful computerized accounting system is likely to give a clear picture of the organizational quality of the company allowing for quick comparative analysis with estimates and previous results (Longenecker & Moore, 2006).

An organization that has automated its accounting services will be identified through its intensive utilization of the various accounting information systems (AIS), and computers in accounting. AIS are used to computerize the organizational accounting processes producing real-time information. The most important role of AIS is to ensure better management, adaption to dynamic environment and maintaining a great degree of competitiveness in the organization (Akanbi and Adewoye, 2018). AIS is dependent on computers and various accounting software that varies from the simplest accounting software like excel sheets and QuickBooks to the most integrated whole-system software like ERP and IFEMIS (Saira et.al, 2010). The governments in developing countries have increased the use of AIS majorly using the IFEMIS due to pressure from the global business partners like the World Bank that require high levels of accountability and reporting (Sugut, 2012). There major resource required when implementing the use of any accounting software is the infrastructure, training and skills of the employees (Kale et.al, 2000).

Computerized accounting has led to ease in the implementation of various standards such as IFRS (Mihai, 2011) and has been uploaded by numerous software developers and academicians (Briciu et.al, 2010). With the current shift in business, businesses should automate as a necessity for operations (Boorman, 2018). It is important therefore that all organization adapt to varied systems in automation. In the banking sector this has happened gradually with various computer processes being applied to computer service (Rogelberg, 2018). Activities such as those of withdrawal and deposit of currencies have been reduced from a tellers' work to the computer system through the utilization of ATMs for the banking institutions, automated audits, general invoicing, online order and order processing procedures, and many other important transactions are important to the progress of the business.

The measurement of automated accounting is subjective and can be clearly established by observing various features of the system. The quality and success of an efficient accounting system will depend majorly on the amount of investment that one has put in the improvement of the system (Scovia & Kayigamba, 2015). Automated accounts utilize systems like the payroll system, CRM systems, and inventory management systems, accounts receivables, general ledger systems in various accounting applications. The measurement of how vast an organization has automated its accounting tasks will be highly shown by, how much an activity is done using the computers, the resources allocated for the same and the proportion of investment that has been allocated to the automated system.

Financial Performance

Financial performance is a term used in reference to the outcome of the organizations operations and can be measured subjectively, using financial data such as the profit earned and the expenses and investments incurred for a period (Jouirou & Kalika, 2004). The performance of a business is not entirely depended on the internal factors of the organization but that it can as well be as a result of external factors (IGI Global, 2018). Although it has been subject to debate, the introduction of information technology in the accounting and operations of banks, has contributed to the financial growth in terms of profits of the banks (Ogare, 2001). It is not uncommon to realize negative financial returns from the introduction of automated accounting in operations as there is need for input of resources during and after automation (Kariuki, 2005).

According to Njagi and Kombo (2014), the financial performance of an organization is evaluated by various parameters, which include; the rate of returns on assets, rate of returns on equity, rate of returns on total assets and the amount of profit earned at the close of an accounting period. To understand the impact that the application of automated accounting has on the financial performance, various parameters should be considered, e.g., liquidity, profitability and activity ratios (Kemboi, 2018). It is required of any organization to earn continually growing profit so as to sustain the return on the assets invested, grow the value of the shareholders and increase its reserves (Asia et.al, 2015).

Measures of Financial Performance

Financial performance as a subjective measure helps in understanding the efficiency with which the organization is using the available resources to attain wealth for its investors. This performance can be measured in all the dimensions of cost saving and profit maximization of the business (Johnston, 2015). Automation of accounting services is said to assist in the financial performance through its contribution to save cost of labor force and its efficient utilization in the organization (Santos, 2013).

Profitability in the banking industry is said to be a sustaining factor that helps the bank to avoid insolvency which could result to being wound up (Alrabei, 2014). While profitability is important for financial health, it is advisable that all commercial banks exercise a balance between their profitability and liquidity two of which are items of the financial performance parameters (Saunders, 2004). The sustainability of the financial performance of the different organizations is measured through comparison of periodical performances between the expenses and incomes of the organization over different periods. The information calculated in ratios provides better clarity in the analysis of financial performance (Ngango, Mbabazize & shukla, 2015).

Automation of Accounting Services and Financial Performance

Computerized accounting systems allow for continuous updated information on the organizational performance, customer needs and dynamic environment. For an organization to be prepared for the satisfaction of the customer, growth and survival in the current economy there is a need to employ automated accounting technology (Porter and Millar, 1985). According to Alshebeil (2010), there is a significant improvement in the areas of competitive advantage for the banking industry that has resulted from the introduction of the AIS. This has been seen through the improvement of cost of offering services, improved prices for the banking services, increased growth in market share and high speed of delivery to the customers (Sugut, 2012).

In their research, Furst, et.al, (2002) found that the profitability of banks after the introduction of internet banking was remarkable in a study they carried amongst the national banks in the United States. Their study indicated a great association between the performance of the banks and the introduction of the use of technology to carry out operations. The effect of automation on the banking processes and the accounting services has a measurable impact on its return on assets and the ROE of the organization (Hasan et.al, 2005). The use of computerized accounting has been attributed to various factors among which is the need to reduce the organizational cost in accounting that arises from the numerous data that requires to be analyzed and processed (Wilson & Sangster, 1992).

It has been argued that, innovations in technology and telecommunication has a great impact in the way the banks are currently doing their business, from areas of financial reporting and banking operations, changing drastically the commercial banking businesses, and making a prediction on the future of the industry (Chipeta & Muthinja, 2018). Financial innovations have been highly linked to the future success of the banking industry performance although the link with the past performance is not clear (Bowen et.al, 2010).

Commercial Banks in Kenya

Kenyan commercial banks are governed by the Central Bank of Kenya. The application of automation in the Kenyan banks has come as a necessity as the operations of various institutional clients run from local to international due to various activities of import and export. With the various changes in the economy and the various business practices in the economy, the customers to the banks have the need to operate in a bank that is able to provide them with both real time information from their accounts and carryout transactions in the most efficient way possible (Daru, 2015). The major objectives of commercial banking institutions in Kenya are to ensure that there are adequate credit facilities for the various investors to ensure that the economy is adequately running (Cytonn, 2019). The banks achieve these by ensuring that there is wide access to its products by the customers.

Commercial banks in Kenya have been seen developing various services such as mobile apps that are enabling organizations to be able to go through a number of transactions without having to get to the bank (Chipeta & Muthinja, 2018). Individuals and businesses can acquire their loans with the use of their mobile applications and also be able to make withdrawals and deposits on the same platform. This has necessitated the need to have automated systems that can keep track of loaning for the banks, various general ledger transactions among other accounting practice of the organization (Cytonn, 2019). The bank has now the need to ensure that there is a wholly synchronized system that allows them to generate the account details of all their clients and their own operations as well at one particular time, or as needed. The competition on the acquisition and retention of customers is very high among banks and all must be prepared to acquire the latest technology so as to be competitive in the market (Akanbi and Adewoye, 2018).

Research Problem

As the various changes have occurred in today's market place, organizations have found themselves at a point where automation has become an operating advantage if one is to compete effectively in the market place (Daru, 2015). Areas of delivery of value-added products, customer service and satisfaction delivery as well as operations, have become significantly important to be highly invested with information technology. The automation of accounting services started majorly in the manufacturing industry and has grown gradually into other economies with the service industry being greatly affected by the same (Marvic, 2009). It has been argued that, the application of automation in accounting field has improved efficiency and effectiveness the organization come lower enabling the various organizations to identify those areas that do need to be reviewed to ensure that there is maximum profitability from them (Sugut, 2012).

The banks are today putting in the investment for the purpose of cost efficiency and competitive advantage in the market with other Organizations in same industry (Ware, 2015). Kenyan banks have continued to majorly invest in the use of automated services which has seen banks developing and grown in the area of digital ranging from the mobile banking, to electronic payment methods and use of RTGS which have necessitated the use of automation in accounts so that the organization has a track of the various transactions (Central Bank of Kenya, 2016). These developments have increased the complexity of the bank operations among which is accounting, necessitating the need to come up with systems that can fully integrate the banks operations and transactions giving real-time update (Ogare, 2001).

A series of studies have been conducted investigating the aspect of automation on banks and within other industries. Alrabei (2014) investigated on the effect of accounting information systems on the Islamic banks within Jordan seeking to establish the effect of Organization performance in relation to the application of AIS. This study concluded that there exists a strong arithmetical relationship between the application if AIS and the performance of the organization, and made recommendations regarding the use of AIS as a performance tool. In a research done by Olayiwola et.al (2015) investigating the effect of automated financial accounting on the audit process, concluded that the automation caused a great challenge to auditing process although it does not hide the audit evidence. Ogolla (2016) did a research on the impact of automation on banks in Kenya to the customer service which he argued that, there exists a positive association between the automation of banking services and customer satisfaction for the various areas which he investigated. In a different study the relationship of application of information technology in accounting was said to be an indirect factor of Organization performance (Sumit et.al, 2019). There exist conflicting findings on the various researches done on the automated accounting services. This research intends to fill the gap created by these conflicting findings by providing answer to the question: What effect does automation of accounting services has on commercial banks performance?

Research Objective

The objective of this study is to establish the effect of the automation of accounting services on the performance of the commercial banks in Kenya.

Literature Review

Theoretical Review

This study is based on two theories, the systems theory, and the positive accounting theory.

The Systems Theory

A system is defined as a combination of independent parts which are bound with major features being the ability to maintain equilibrium, through interdependency and complexity (Wiener, 1948). Systems theory relates to the suggestions from “General System Theory”, Cybernetics suggested by Claude Shannon, Wiener and William Ross, and the information theory (Stichweh, 2019). According to this the system is seen as a way to select information from provided alternatives. Systems theory analysis entails the deconstruction of explanations and observable facts under study and the creation of an explanation which illuminates the reason for the behavior of the properties of the component variables and the blending of these to understand the whole (Anaeli, 2017). The idea of the interconnectivity has been employed to describe the relationship between the computer and other systems. The accounting system as an information system interacts with the computer system to produce results from the data that is run through it.

This theory relates strongly to this research because when studying the automation of accounting, we are looking at how the accounting information systems have been interconnected with technology to become more efficient within the organizations. Jaret (1983), there is a great dependency between the accounting branches and a study through how these intertwine with technology is key. The component acts as a control system while the production component acts as a processor transforming the inputs to outputs and then the information part communicates and measures feedback, in this manner the accounting system is generally acting as a feedback information component. Anaeli (2017) suggests that the methods used by organizations in the production of their economic, management and financial reports are similar to those applied by the systems theory, as they apply the regulations of GAAP and the explanations are held to follow the CAS forming one integrated system.

Positive Accounting Theory

The hypothesis of positive accounting is a theory of general application and interpretation of the activities that do happen when an action is taken. This theory which was first published in the 1960's with the work of Ball and Brown (1968) and has been advanced by the research of various researchers such as Watts and Zimmerman (1978, 1979) who in their various works have advocated for its application in various accounting research fields, in both research and practice. It makes interpretation that is mostly of a prediction of what will be the outcome when a particular action has been taken (Anaeli, 2017). This theory which was initially highly used by the researchers who majored in empirical data analysis has grown in use in the accounting research with its application growing wide in areas of social and economic accounting research.

According to a report by Ryan et.al (2002), the theory is a complementary to the other theories in accounting for management which eliminates the aspect of competition within the parties. The positive accounting theory is a theory that explains the effect of various accounting practices and reports to the management performance (Kaya, 2017). Since in the measurement of the Organization performance in this study we are keen to see the effect on the learning and growth which entails the role of management on the internal culture of the organization, this theory is of great use. It also helps in the explanation of the results of all the financial systems that are generated from transactions that are recorded and processed through various accounting systems. Its use will aid in the inference of the behavior that is expected from the managers with the application of the automated accounting to the Organization processes. The introduction of automated accounting does not only change the way in which an organization does its accounting roles but also the way in which other operations are carried out in the Organization for the purpose of integration.

Empirical Review

In a study by McNulty and Ferlie (2004), on the shift of processes in the governmental entities, it was concluded that obstacles lied in the partnership working, networking and organizational revamp. The difference in focus of evaluation in ICT and IT between the investor and scholars, show that operationally the communication of information to in-house and peripheral stakeholders bears more importance in the organization today and as a result there should be assessment of the business procedures and processes to ensure that all the implementers are truly on board (Lee, 2004).

Al-Kaabi (2004) investigated the role of AIS in the improvement of administrative performance in banks, aiming to bring out an explanation on the impact accounting systems have had in helping commercial banks in areas of supervision, planning, credit and investment decision making processes. The conclusion of the study was that accounting information was greatly relied upon in the execution of tasks as deciding on various issues, planning and controlling of these activities.

Mohammed Amidu et.al, (2011), in a Ghanaian research aimed to explain the role of electronic accounting among the SMEs in the country; they used survey methodology of study and concluded that SMEs in Ghana were comfortable making use of both accounting software and the chartered accountants to carry out their accounting practices. The findings further indicated that those SME's which had high adoption of e-accounting had greater chances to get external funding.

Ankabi and Adewoye (2018), researched on the impact of AIS adoption on financial welfare of the banks in Nigeria, in which survey method was utilized in collection of primary data while secondary data was collected through accessing the published organizational reports. The findings indicated that there exists a strong positive association between the adoption of AIS and the return on capital employed, gross profit margin, ROTA, and net profit margin with the correlation coefficients going as high as 80.1%, 80.6%, 83.1% and 76.4% respectively. The study recommended that the banks should adopt more of the AIS and provide platforms for training of their staff in the same as there was a positive correlation for those banks that had a high adoption level of the Accounting information systems.

In a different study by Abayomi and Adegoke (2016), in which they studied the effect of CAS on the running of Nigerian banks, made a conclusion based on the findings that the computerized accounting had made a positive impact on the banks, resulting to increased efficiency, customer base, productivity and profitability. The study recommended that all banks should adopt computerized accounting and ensure proper training of their staff.

Otieno and Oima (2013), in a study to determine the effect of computerized accounting system on the management of audit risk in parastatal enterprises with focus on Kisumu County, the duo used the exploratory survey utilizing both longitudinal and cross-sectional studies. They collected their data using structured interviews and questionnaires. The study conclusion of the research was that there exists a positive beta correlation between the computerized accounting systems and the control of audit risk and a great effect on the attitude of the employees within the public enterprises.

Kemboi and Muturi (2017) on the impact of automation of financial services on the financial wellness of Trans-Nzoia county, it was realized that most respondents agreed that the use of the information technology, computers and software, intranet and internet led to efficiency in the management of financial resources within the county. There was sufficient response in agreement to the statements that the use of IFEMIS helped in the debt collection and tracking and the realization of the payroll system within the county. The study recommended that the county should use the accounting automation in the process of budgeting to ensure that the use of e-platform is procurement is highly utilized.

Husein (2018) on the impact of CAS and the quality of the financial information on selected Somaliland banks, the research used a descriptive research design. The conclusions of the study were that, the use of CAS has led to the improvement of data processing and as a result led to efficient and quality reports. The researcher suggested that bank management should invest more in the computerized accounting and training of staff in the use of this technology so as to improve the quality of their reports.

Ankabi (2018) on the impact of accounting information systems on the output of Nigerian banks found a positive correlation between AIS and the various performance determinants such as ROA, ROTA and return on net operating margin. The researcher recommended that further study should be done in other banking Organizations to justify the universality of the findings.

Peter, Kamau and Ombui (2018), on the impact of CAS on the welfare of SMEs in Bomet County the study considered variable such as the accounting software used, the literacy and level of awareness of the accounting systems among others. The researchers concluded that the CAS affected the performance of the SMEs with a significant level of correlation. The study recommended adoption of master strategies in which the accounting systems would be phased according to the financial capability of the organizations.

Methodology

This study employed a descriptive research design. This research design was used because it allows for the multiple analyses of different responses and varied data that was collected for the study. The study applied the survey method to collect data from the 41 commercial banks in Kenya. The design used both qualitative and quantitative data that was collected from the primary and secondary sources in the research process. The Likert scale and ratio scale were used in designing of the data collection tool.

Findings and Discussions

The findings of the study were that the automation of accounting services influences the performance of commercial banks. The findings further indicated the automation of accounting services is not a sufficient estimator of the financial performance.

Model Summary

According to the model summary of the research, the result of the adjusted R square, shows that a 46.5% variance of financial performance is as a result of automation of accounting services and a 53.5% variance from other factors of performance not studied in this study.

Table 4.11 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change	Durbin-Watson
1	.712[a]	.596	.465	1.5656	0.013	1.032

a. *Predictors*

Analysis of Variance

From the ANOVA statistics, the model is significant for the study since its probability value is less than 5% and the calculated F (F=3.918), is higher compared to the critical value of 2.705.

Table 4.12 Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	44.164	5	8.833	3.918	.013[b]
	Residual	42.835	19	2.254		
	Total	86.998	24			

a. Dependent Variable

b. Predictors

Regression Model Analysis

From the results of the regression model analysis, tabulated in table 4.13, the Constant coefficient is -3.005 while the summary of the model is $Y= -3.0+0.764X_1+1.203X_2-0.947X_3+0.055X_4+0.029X_5$

Table 4.13 Regression Coefficients

Model	Unstandardized coefficients B	Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	-3.005	3.825		-0.786	0.442
Accounting software (X_1)	0.764	0.882	0.164	0.866	0.097
Automated accounting functions(X_2)	1.203	0.788	0.401	1.527	0.043
Accounting software Security(X_3)	-0.947	0.508	-0.342	-1.865	0.078
Bank rates(X_4)	0.055	0.11	0.093	0.501	0.062
Bank size(X_5)	0.029	0.012	0.42	2.403	0.027

*Significant at the 0.05 level (2-tailed)

The results from this study show that the study model at confidence level of 95% is significant as the probability value (p=0.013) was below the significant level of 5%. From the analysis the independent variables account for 46.5% of the variations in the dependent variable, while the remaining 53.5% is accounted for by other determinants of ROA which are not studied in this research. This finding shows that the there exists a positive correlation between the automation of accounting software and the performance of commercial banks. This finding is consistent with Amveko (2011), carried a study to establish the influence of computerized information systems in financial reporting in Kampala, found a positive correlation on automation of accounting practice. The study findings also indicate that the variables in this study are not adequate to estimate the value of ROA of the banks.

It is clear from the results that the automated accounting functions are significant to the prediction of rate of return on assets. The findings indicate that a change in a unit of accounting software would result in 0.764 change of the ROA, while units change in the automated accounting functions would result in a change of 1.203 in ROA. A change of one unit in of accounting software security would result in a negative change in ROA of 0.947. These findings are in harmony with Ogare (2001), in a study on the influence of banking electronically on performance of banks found that the coefficients of ATMS was negative in relation to the banks performance and concluded that they negatively affected banks performance.

The control variables to this research were bank rates and bank size which was measured in the amount of equity invested. According to the findings of this study, the bank size is a significant predictor of ROA while the bank rates are not significant predictors. The coefficients of both variables were positive and a change in the bank rates would result to a change of 0.055 of the value of ROA while a change in the amount of equity invested would result to a change of 0.029 in ROA. This finding is disputed by Saira *et.al* (2010) that opinionates that, although automation of the accounting result in a positive affect performance, the size of the organization is not relevant to performance. The control variables of this study are therefore significant in predicting ROA.

Conclusions and Recommendations

This study recommends that the commercial banks ought to take initiatives to ensure that most of their accounting functions are automated to increase their financial performance since; the study findings indicate a significant contribution on financial performance through automated accounting functions. Most of these factors were pointed out to be the improvement of security through secondary protection applications and the continued evaluation to improve in areas that do not meet the operations of the bank. Since the quality of the automated accounting software has a considerable influence on the performance of the bank in its financial performance, the banks should ensure continued quality through update and continued servicing of accounting machines. It is important that commercial banks in Kenya take advantage of the new technology, by updating their accounting software and utilizing them to improve its accounting operations and the general bank operations. The findings of the study indicate that automation of accounting services is an inadequate variable to estimate financial performance. The researcher should consider using other variables or adding to accounting automation other variables that affect the financial performance for better prediction of performance.

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