

Firm Size and Financial Performance: Evidence from Commercial Banks in Kenya

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Abstract

Commercial banks perform a critical role of mediation in an economy. Their growth in size and financial performance provides an indicator of a country's economic growth and stability. This study examined the effect of firm size on financial performance of commercial banks in Kenya. Financial intermediation theory, stakeholders' theory and behavioural theory of firm growth provided the theoretical basis to explore the hypothesized relationship among the identified study variables. Data was collected for a period of 10 years from 2014 to 2023 from all commercial banks operating in the country. Descriptive data analysis was carried out to describe characteristics of the data collected. Diagnostic tests were also carried out to determine conformity with assumptions of linear regression. Data sets were transformed in order to obtain a normal (bell shaped) data curve. ROA was dropped as a measure of financial performance due to its high autocorrelation ratio with total assets (independent variable). The outcomes indicated that firm size as measured by total assets positively influences financial performance where the overall model was significant ($p < 0.05$) at 95% confidence interval. However, the effect of number of loan accounts was not significant. This study was able to add to the existing body of knowledge and provide an empirical insight to managers, policy makers and regulators on the effect of firm size on financial performance

Keywords: Firm Size, financial performance, Commercial Banks, Kenya, Return on Assets, Return on Equity

Date of Submission: 03-12-2025

Date of Acceptance: 14-12-2025

I. INTRODUCTION

A. Background

The size of a financial institution has become of interest to investors in the recent past. Large commercial banks are able to attract and retain investors since they portray potential for high returns than medium and small banks (Terraiza, 2015). As bank grow, they attain a level of maturity, reduce risk exposure and provide optimal levels of returns. Commercial banks provide capital, facilitate cashflow as well as provide investment vehicles and thus influence the entire economy (Sarpong & Winful, 2017). By leveraging in their market dominance and size commercial banks have the ability to improve their financial performance and profitability for the benefit of the shareholders and investors.

In Kenya commercial banks have grown steadily over the years to 39 in number by the end of 2023 due to improved regulations and technological advancements. Despite this, the banking industry has experienced challenges where some banks have been liquidated and others have been put under receivership. Furthermore, several commercial banks have merged in order to increase their market share, reduce operating cost and improve profitability (Central Bank of Kenya, 2021). Consequently, the government has enacted laws to ensure that banks are better managed and are well equipped to handle financial shocks that may arise.

Empirical studies on firm size and financial performance in Kenya have yielded contradictory results. While some studies indicate a positive and significant effect of firm size on financial performance, other studies indicate that there is mild or no relationship at all. Measures such as customer number, number of branches and assets have been used to measure size; while profits and ratio such as ROA and ROE have been used to measure performance. These inconsistencies are attributed to methodological approach used by researchers as well as the type of data collection tools and the method of analysing the study variables. The aim of this study is to analyse how

B. Problem Statement

Commercial banks intermediate between those with excess capital and those in need of capital. In Kenya, commercial banks have facilitated establishment and growth of businesses as well as provided a solid financial backbone. Over time banks have grown in size and they are classified as small, medium or large depending on some weighted parameters. In the recent past, there has been cases of collapsed banks that have sunk with depositors' funds, diluting investors' confidence. In the wake of these challenges, the central bank of Kenya has developed strict guidelines to ensure that the banking sector remains sound.

The actual effect of firm size on the financial performance of commercial banks has not been explored. Several banks classified as small have remained relatively stable while some classified as large have had to merge to remain competitive. Studies conducted on the subject matter have pointed to conflicting outcomes. While it is expected that firm size influences performance, other suggest that smaller firms are more efficient in generating returns to investors. The cause of differences in research findings is largely attributed to firm characteristic, the volume of trade, the market segmentation and bank specific variables.

Differences in research methodology results in difference in findings. While some studies have used value of assets as measure of firm size, others have used number of branches, number of customers and other parameters. The interaction between the study variables selected and financial performance vary from one study to the other. The analysis method also differs between studies, while other use ordinary least square method other utilise multiple linear regression method, or other analytical tools. This study aims to address such gaps by analysing panel data from commercial banks in Kenya by obtaining data for a period of 10 years between 2014 and 2023. Data was collected from published financial records from all operating commercial banks during the period under study.

II. LITERATURE REVIEW

A. Theoretical Review

This study is anchored on financial intermediation theory as advanced by Gurley and Shaw in 1960. This theory outlines that financial institution exists to transform illiquid assets from savers to liquid assets by borrowers thereby mediating the relationship between the two. It relies on the basic assumption that savers and borrowers do not have a direct relationship and that commercial institutions exist to create that relationship and eliminate information asymmetry. Banks carryout these activities with the aim of maximizing returns and reducing their credit risk exposure. Managers therefore seek to grow the size of the firm and increase profitability.

Additionally, the stakeholder theory as proposed by Freeman 1984, is relevant to this study. According to this theory, managers have to factor in other players that influence the operation and performance of the firm. The traditional agency theory by Jensen and Meckling (1976) only focused on the relationship between owners and managers and how their conflicting interests influence a firm. However, under the stakeholder theory, it is important to factor in how other entities influence the firm. Government regulations and restriction dictate how much banks operate. This implies that the desire to grow is inhibited by external parties actions. The relevance of this theory is to highlight that the financial performance of commercial banks in Kenya is not only dictated by internal environment of the firm but might also be influenced by the external stake holders.

Behavioural theory of firm growth by Cyert and March (1963) provides the ultimate aim of firm. It provides that organisation make goals and targets with the aim of growing in the long and optimise returns to shareholders. Managers set goals and targets based on past performance, industry levels or predictive output levels geared towards improved position, performance or market dominance. Additionally, this theory outlines the need for top management to develop goals and communicate these goals to middle level managers; who intern interpret them to supervisors for implementation. Once the growth objective has been identified, it is the collective responsibility of all to work towards that goal.

B. Empirical Review

On the global stage various studies have been conducted on the research area. Research by Mohammad (2015) and Muhammad (2017) indicate that firm size has a positive influence on financial performance. However, the focus of the study utilised different parameters to measure and analyse study variables. Additionally, the studies present a contextual research gap having tat the current study focused on Kenya that has a significantly different economic and regulatory set up. Research by Tharu and Shrestha (2019), yielded a contradictory finding; where the research concluded that sized does not affect financial performance.

In Kenya, empirical study by Mirie (2018) concluded that firm size influences financial performance. This was done by analysing data from 2007 and 2016. However, this study focused on a smaller sample and excluded ROE as a measure of financial performance and number of loan accounts as a measure of firm size as outlined in this study. The inclusion of ROA and asset value as independent and dependent variables respectively presented a conceptual issue since the 2 variables exhibit high level of autocorrelation. This is caused by the fact

that ROA is a quotient that uses total asset as a denominator. The current study incorporates these study variables to find out if the results would be confirmed or negated.

To address the identified research gaps, this empirical study utilised Asset values and number of loan accounts as a measure of firm size while ROA and ROE were used as a measure of financial performance. The target population were all commercial banks in operation during the period of the study eliminating sampling biasness that might evolved from selecting a sample.

III. METHODOLOGY

The study utilised descriptive research design in assessing the effect of firm size on financial performance of commercial banks. The research set out objectives and hypothesis to be tested which is line with the positivism philosophy of research. The target population was all commercial banks operating in Kenya between 2014 and 2023.

Secondary data was obtained from published financial statements for the period. Firm size was measured using asset values and number of loan accounts while financial performance was measured using ROE and ROA. Data was collected for the entire period. It was observed that some institutions were not operational for the entire period of research. This resulted in unbalanced panel data.

Data collected was analysed using regression tools, where diagnostic tests were carried out to determine how fit the data was for purposes of hypothesis testing. These diagnostic tests included test for autocorrelation, multicollinearity, stationarity test, heteroskedasticity and normality. Hausam test was used to identified if the study variables fit into random or fixed effect model. The final study models were used to statistically test the effect of firm size on financial performance.

IV. RESULTS AND DISCUSSION

A. Descriptive Results

A total of 371 data sets were collected for the period under research. This was obtained by collating published financial reports of commercial banks in Kenya for a period of 10 years. To better understand the data, descriptive statistics (mean, standard deviations, minimum, maximum values and variance) were computed. Table 1 presents the findings:

Firm size was measured using total assets and number of loan accounts: both had a positive skewness. While ROE and ROA (measure of financial performance) had a negative skewness. This implies that the variables did not exhibit a normal curve around the mean. Total assets and number of loan accounts were measured in millions while ROE and ROA were expressed as a ratio.

The average asset value was 118,707 million with a standard deviation of 188,257. Number of loan accounts as a measure of firm size had a mean of 0.2157 million accounts and a standard deviation of 0.984. ROA and ROE were used a measure of financial performance and had a mean of 1.048 and 8.029 respectively. The standard deviation for ROA and ROE was recorded at 4.75 and 34.76 respectively.

Table 1: Summary of Descriptive Statistics

	Total Assets (Million)	No. of Loan Acc (Million)	ROA	ROE
N Statistic	371	371	371	371
Range Statistics	1425355.1	10.25	46.3	503
Minimum	14.9	0	-37	-357.7
Maximum	1425370	10.25	9.3	127.3
Mean	118707.625	0.2157	1.0484	8.0293
Std Deviation	188257.472	0.98464	4.75313	34.7624
Variance	35440875891	0.97	22.592	1208.425
Skewness	2.834	7.882	-4.478	-5.647
Kurtosis	10.279	68.318	29.249	55.164

The study analysed the effect of firm size on financial performance. Autocorrelation test carried out indicated that ROA as an independent variable had a high autocorrelation with the dependent variable (Asset). This infers that

ROA was not the appropriate measure for financial performance when firm size is measured by total asset. Consequently, ROE was eliminated and ROE was retained as a measure of financial performance. To align the data with the assumptions of linear regression model, data was transformed to obtain a normal (bell shaped) model. Hausman specification tests indicated that a random effect model was the best to analyse the data obtained.

B. Hypothesis Testing

The study developed a hypothesis that: *there is no significant effect of firm size on financial performance of commercial banks in Kenya*. This subjected to hypothesis test and the outcome is as shown in table 2 below:

Table 2: effect of firm size on financial performance

Random-effects GLS regression	Number of obs	=	371
Group variable: ID	Number of groups	=	39
R-sq:	Obs per group:		
within = 0.0011	min =		5
between = 0.2961	avg =		9.5
overall = 0.1724	max =		10
corr(u_i, X) = 0 (assumed)	Wald chi2(2)	=	10.16
	Prob > chi2	=	0.0062

ROE	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
TotalAssetsmillion	.0000486	.0000153	3.17	0.002	.0000186 .000078
NoloanAccmillion	-1.75872	2.642051	-0.67	0.506	-6.937045 3.41960
_cons	2.251114	4.298067	0.52	0.600	-6.172941 10.6751
sigma_u	22.870914				
sigma_e	22.675017				
rho	.504301	(fraction of variance due to u_i)			

The results led to the conclusion that firm size as measured by total assets have a positive and statistically significant effect on financial performance ($p < 0.05$) while firm size as measured by number of loan accounts does not have an effect on financial performance ($p > 0.05$) at 95% confidence interval. The outcome indicate that firm size explains 17.24% of change in financial performance as indicated by the value of R-squared.

The regression model obtained had a constant term of 2.25 which is the value when ROE is zero. The model summary had a p value of 0.0062 ($p < 0.05$) indicating that the model was statistically significant. All the 371 observations were used in regression analysis implying that there were no omissions or alterations that would compromise the data quality.

Hypothesis testing evaluated the relationship between firm size and financial performance with the assumption that there is no effect of firm size on financial performance. The research findings indicated that there is a significant effect of firm size as measured by total assets on financial performance as measured by ROE. The hypothesis was therefore rejected as the overall p value was lower than 0.05 ($p < 0.05$).

V. CONCLUSION

This study set out to investigate the effect firm size on financial performance of commercial banks in Kenya. Data was collected from all commercial banks operating in Kenya between 2014 and 2023. The findings indicated that firm size has a positive and statistically significant influence on financial performance of banks. These results affirm the need for firms to grow in size in order to optimise returns

Firm size as measured by asset values had a significant effect on performance while number of loan accounts had no effect. However, the model explains 17.9% change in financial performance, implying that there are other variables that also influence the causal relationship between size and performance. ROA is not the best measure of performance when asset values are used to measure firm size. This is due to high autocorrelation between the two variables.

VI. RECOMMENDATIONS

The study recommends that firm managers and shareholders should aim at growing their business size which will lead to improved performance. This is a strategic direction with promising returns. As firm aim at growing, they should monitor other variables (including internal and external environment screening) since firm size is not the sole variable influencing performance.

Second, policy makers and regulators (such as the central bank) should set regulations that allow firms to grow in size but within set parameters to avoid aggressive growth that might eventually erode returns derived. The study recommends further research on how non-financial factors influence financial performance.

Finally, policymakers and regulators should strengthen the institutional and legal frameworks that enable firms to grow in size as they seek to provide maximum returns to shareholders. Shareholders and managers should mobilise resource (assets) that will enable firms grow, this will result in increased profitability.

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