

CORPORATE DIVERSIFICATION, FIRM SIZE AND PERFORMANCE OF COMMERCIAL BANKS IN KENYA

By: Alexander Mbai¹, Winnie Nyamute (PhD, CPA)², Duncan Elly Ochieng (PhD,CIFA,CPA)³
and Margaret Muthoni (PhD)⁴

Abstract

This study sought to establish the effect of size on the relationship between corporate diversification and performance of commercial banks in Kenya. Specifically, the study sought to; determine the effect of corporate diversification on performance of commercial banks in Kenya, investigate the effect of performance on corporate diversification among commercial banks in Kenya, examine the effect of size on the relationship between corporate diversification and performance of commercial banks in Kenya, establish the combined effect of corporate diversification and firm size on performance of commercial banks in Kenya. Herfindahl Hirschman Index was used to measure interest income and non-interest income diversification and natural log of number of branches was used to measure geographic diversification. Bank performance was measured in terms of operating efficiency using the data envelopment approach comparing operational expenses and net income. Bank size was measured in terms of natural log of total assets. Correlation and regression analysis variants were used in analysis of the data. From the eight study sub hypothesis, the study findings present statistically significant positive relationships between efficiency on one hand and interest income diversification as well as branch diversification on another hand. Non-statistically significant negative relationships are established between efficiency on one hand and branch network diversification as well as the interaction term of size and branch diversification on another hand. Non-statistically significant positive relationships were established between non-interest income diversification and efficiency, performance and interest income diversification, performance and non-interest income diversification. The study finding contributes to the pool of literature, which has over the years demonstrated that there exists a positive direct linear relationship between revenue diversification and financial performance. This is the first study ever to decompose corporate diversification into interest income diversification, non-interest income diversification and branch diversification while lagging the predictor variables to an optimum five year lag in Kenya, using a data envelopment analysis approach and the Herfindahl Hirschman Index. On future research directions, there is a need to undertake a study on internal and external factors which influence levels of diversification and financial performance among financial institutions across geographical locations, financial product lines and non-financial institutions while taking cognizance of the organizations' motives and ownership structures.

¹ Department of Finance and Accounting, University of Nairobi (ambai@kpmg.co.ke)

² Senior Lecturer, Department of Finance and Accounting, University of Nairobi

³ Senior Lecturer, Department of Finance and Accounting, University of Nairobi

⁴ Lecturer, Department of Business Administration, University of Nairobi

Keywords: *Corporate diversification, Performance, Firm size, Commercial banks.*

Introduction

A bidirectional link exists between corporate diversification and company performance as presented by Bhatia and Thakur (2018). Lien and Li (2013) puts forward that diversification is a commonly employed approach for developing a company's market share, leading to increased revenue and profitability. According to He (2012), good company performance allows the adoption of various diversification approaches. Erdorf, Hartmann-Wendels, Heinrichs and Matz (2013) and Shyu and Chen (2009) opine that a simultaneous correlation exists between diversification strategies and corporate performance. These studies suggest that the level of diversification is endogenous to the company's profitability and similarly, enterprise performance is endogenous to the corporate diversification.

This study was anchored among others, on the financial intermediation theory, the resource based theory of the firm and the portfolio theory. The portfolio theory of Markowitz (1952 and 1959) conceptualizes how risk-averse investors wishing to maximize their expected returns will choose their optimally diversified portfolios. Banking institutions are in business to maximize investors' returns and profit. Because commercial banks act as intermediaries in the financial system, some studies in the sector are also underpinned by financial intermediation theory as proposed by Diamond (1984) which explains the role of banking systems as financial intermediaries. The resource-based theory of the company advanced by Rumelt (1984) and Barney (1991) confirms a positive impact of increased levels of diversification of products on the general financial performance owing to economic quasi-rents and economies of scope and scale that provide a competitive lead

Financial institutions hold diversified portfolio of loans in different categories with the objective of generating desired returns to their shareholders and to minimize the risk of default, aligned to the modern portfolio theory (Markowitz, 1952). Bank managers must therefore aim to invest the funds available to the organization in loan portfolios that balance the trade-off between optimum return and minimum risk in order to deliver value to the owners of the business. Agency theory (Jensen & Meckling, 1976) suggests that divorce of ownership and control in a firm often leads to conflict of interests between agents or managers and their principals who are shareholders of the organisation. Bank managers, as agents, are involved in decisions on which loan products to invest in and the type of product innovations to undertake in order to maximize returns for their principals, the shareholders.

Corporate diversification remains a central research topic with innumerable studies exploring its association with firm performance (Wernerfelt & Chatterjee, 1991, Palich, Cardinal and Miller, 2000). Flamini and McDonald (2009) illustrate that diversification explain performance levels variations. Ali, Haider Hashmi and Mehmood (2016) summarize that literature document mixed

results on the relationships between diversification and performance as ranging from linear, U-shaped or inverted U-shaped relationships. Bhatia and Thakur (2018) for instance documented a strong bidirectional relation between performance and diversification. The diversification extent was directly interrelated with corporate profitability, thus an indication that well diversified companies experience a substantial diversification premium. Further, total diversification had a positive effect on performance, suggesting that high performance brings about greater diversification. Benito-Osorio, Guerras-Martín and Zúñiga-Vicente (2012), Palich et al. (2000), Park and Jang (2013), Zahavi and Lavie (2013) and Zhou (2011) clarify that the research stream examining the diversification, size and performance relationships cannot be described as mature due to lack of an empirically shaped consensus.

Globally, Dimitrios and Mike (2016), Psillaki and Mamatzakis (2017) and Gololo (2018), observe that worldwide, the banking industry has encountered various difficulties which has led interest income destabilization. In particular, the industry continues to face growing problem loans, competition from non-banks and unprecedented financial technology growth. In response to these challenges, Mohamed and Bett (2018) and Ferrari, Masetti and Ren (2018) explain that in the last three decades, banking institutions have extended their sources of revenue by undertaking non-interest revenue producing activities also called nontraditional activities, like shares brokerage as well as underwriting, to supplement the declining interest revenues. Flamini, Valentina, McDonald and Liliana (2009) and Slocombe (2017) illustrate that sub-Saharan Africa (SSA) banking entities make more profits compared to the others across the globe. In Kenya, as noted by Kiweu (2012), higher levels of bank profitability are a concern for public furor though Ndungu and Muturi (2019) observe that over the years, in Kenya, diversification has been viewed as important in improving commercial banks financial performance. Teimet, Lishenga, Iraya and Ochieng (2020) posit that the Kenyan-banking sector has experienced numerous regulations that have affected diversification activities, financial performance and size of the corporations over the years.

Mazur and Zhang (2015) identify adverse implications of diversification on performance. Stulz (1990) illustrates that diversification exacerbates agency conflicts between small shareholders and corporate insiders. Saoussen and Dominique (2011) illustrate that diversification performance relationship is nonlinear with risk, and not significantly uniform across business lines and among banks. A strand of studies has examined the difference between related and unrelated diversification with no consensus. Christensen and Montgomery (1981), Palepu (1985) Rumelt (1974 and 1982) and Tanriverdi and Venkatraman (2005) argue that related diversification can improve performance. Markides and Williamson (1994) observe that unrelated diversification can compromise performance. In Kenya, Olweny and Siphon (2011) and Onuonga (2014) documented a significant linkage between diversification and corporate profitability. Teimet, Lishenga, Iraya and Ochieng (2020) also show that the level of diversification positively affected Kenyan banks financial performance with the central revenue streams having a positive correlation. Inferring from the contradictory findings globally and with some studies indicating a dual causality relationship between corporate diversification and performance, it is deduced that empirical studies are yet to conclusively address the research question: what are the effects of size on the relationship between corporate diversification and performance of commercial banks in Kenya?

To address the above research question, the study addressed the objective through the following null hypothesis and three sub hypotheses:

H₁: There is no significant effect of size on the relationship between corporate diversification and performance of commercial banks in Kenya.

The hypothetical relationships were as presented in Figure 1.

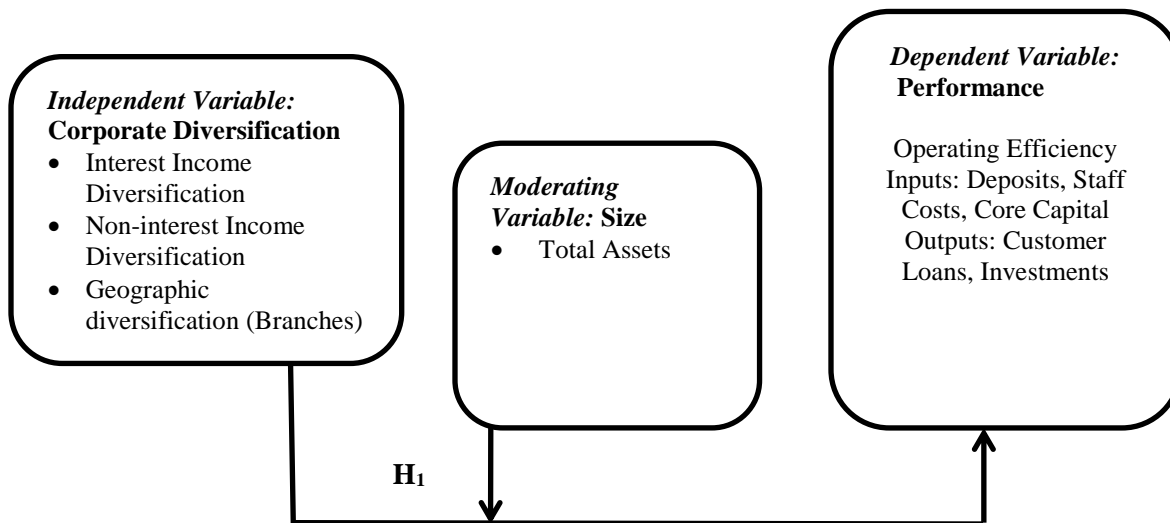


Figure 1: Conceptual Framework

Methodology

In order to visualize the data collected and make a meaningful presentation, descriptive statistics were generated for each variable. The descriptive statistics include; Maximum, Minimum, Mean, Median, Standard Deviation, Skewness, Kurtosis, and Jarque-Bera. Mean is a measure of central tendency of the most indicative number in a set of numbers, while the standard deviation shows how widely the tabulated values have dispersed from the mean value. Skewness measures the data symmetry or lack of symmetry, while kurtosis is an indication of how the tails of distribution differ from the normal distribution. Skewness ranges between positive two and negative two (± 2), while kurtosis ranges from positive three to negative three (± 3) (George & Mallery, 2010).

For this study, both descriptive and inferential statistics were used. To test the study hypotheses, simple and multiple linear regressions were used. Simple linear regression analysis was used to test Hypothesis 1 and 2, granger sim causality test was also applied in testing hypothesis 2, hierarchical regression analysis coupled with Baron and Kenny (1986) three step approach for testing moderation was used to test Hypothesis 3. The current study adopted Pearson correlation

‘r’ and usually an absolute |r| value of a coefficient degree greater than or equal to |0.8| is considered high in a relationship examination between and among variables. A moderate association occurs when the absolute value ranges between |0.8| and |0.5| while a low relationship occurs when the absolute value is below |0.3| and no association when the absolute value is 0 (Cooper & Schindler, 2011). The Pearson’s correlation ranges from a negative one to a positive one ($-1 \leq r \leq 1$), where 1 shows that as one variable increases, the other variable increases proportionately and vice-versa. Zero (0) show that there exists no relationship at all (Pearson, 1880).

To determine the effect of size on the relationship between corporate diversification and performance of commercial banks in Kenya (objective 3), hypothesis (H₃) the following model was used;

Hierarchical Regression Analysis

$$\text{Step 1 : } Y_1 = \alpha + \beta_1 X + \varepsilon$$

$$\text{Step 2 : } Y_2 = \alpha + \beta_1 X + \beta_2 Z + \varepsilon$$

$$\text{Step 3 : } Y_3 = \alpha + \beta_1 X + \beta_2 Z + \beta_3 X.Z + \varepsilon$$

α = constant (intercept), $\beta_1, \beta_2, \beta_3$ = coefficients

Y_1, Y_2 and Y_3 = Efficiency Ratio ; X = Diversification indicator; Z = Size indicator; $X.Z$ = Diversification and Size indicator interaction; ε = Error term

Diagnostic tests for statistical assumptions

Fitness of the variables to a normal distribution was tested and results are summarised in table 1 below:

Table 1: Normal distribution test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Efficiency	.064	555	.000	.970	555	.000
Interest Income Diversification	.043	555	.016	.993	555	.009
Non-Interest Income Diversification	.175	555	.000	.765	555	.000
Branches	.083	555	.000	.965	555	.000
Firm Size	.246	555	.000	.722	555	.000

a. Lilliefors Significance Correction

The study used Shapiro-Wilk and Kolmogorov-Smirnov statistics to test the fit of the variables to a normal distribution. As presented in table 1 above, the Kolmogorov-Smirnov statistics for efficiency (0.064, $p < 0.05$), interest income diversification (0.043, $p < 0.05$), Non-interest income diversification (0.175, $p < 0.05$), branches (0.083, $p < 0.05$) and firm size (0.246, $p < 0.05$) are all

statistically significant. Shapiro Wilk statistics for technical efficiency (0.970, $p < 0.05$), interest income diversification (0.993, $p < 0.05$), Non-interest income diversification (0.765, $p < 0.05$), branches (0.965, $p < 0.05$) and firm size (0.722, $p < 0.05$). These statistics are an indication that generally, the data collected for the study variables exhibited a normal trend especially considering the sample size.

Variance Inflation Factor (VIF) was used in this study to evaluate the level of correlation between the predictor variables. As a rule of thumb adapted from Newbert (2008) and Field (2009), if any of the VIF are greater than 10 (greater than 5 when conservative) then there is Multicollinearity presence. From the findings as presented in Table 2 below, the VIF are all less than 10 thus indicating that there is no multicollinearity problem with the predictor variables

Table 2: Multi Collinearity Coefficients

Variable	Collinearity Statistics	
	Tolerance	VIF
Interest Income Diversification	.893	1.120
Non-Interest Income Diversification	.977	1.023
Branches	.475	2.103
Firm Size	.495	2.022

a. Dependent Variable: Efficiency

Analysis and Discussion of findings

Descriptive Statistics

To visualize the dataset, descriptive statistics were generated as shown in table 3

Table 3: Descriptive Statistics

		Efficiency	Non-Interest Income Diversification	Branches	Firm Size	Interest Income Diversification
N	Statistic	555	555	555	555	555
Minimum	Statistic	.00	.06	.69	.01	.01
Maximum	Statistic	1.00	.77	5.89	1.45	.65
Mean	Statistic	.6687	.6275	2.7689	.2503	.3624
Std. Deviation	Statistic	.21824	.12177	1.08754	.32235	.11868
Skewness	Statistic	-.348	-2.285	.511	1.803	-.128

	Std. Error	.104	.104	.104	.104	.104
	Statistic	-.283	6.114	-.193	2.611	-.333
Kurtosis	Std. Error	.207	.207	.207	.207	.207

The commercial banks efficiency which is the dependent variable in this study varies from 0.00 to 1.00, revealing a significant variation in levels of efficiency among the commercial banks in Kenya. The banks mean efficiency was 0.668 with a standard deviation of 0.218 that show the levels of variation in the banks' efficiency. The mean efficiency discloses that on average, the banks on average exhibit above average levels of efficiency. With a maximum efficiency level at 1, technical efficiency maximum and minimum values were 0.00 and 1.00, a pointer to heterogeneity and diversity in efficiency among the banks sampled. Skewness and kurtosis show the shape of variables distributions and aid to check for normality and heteroscedasticity in a distribution. Efficiency is negatively skewed (-0.348) specifying that the firm efficiency distribution is relatively not normally distributed. The distribution has a negative peakedness with a kurtosis of -0.283 revealing that some banks presented very low levels of efficiency.

The commercial banks efficiency which is the dependent variable in this study varies from 0.00 to 1.00, revealing a significant variation in levels of efficiency among the commercial banks in Kenya. The banks mean efficiency was 0.668 with a standard deviation of 0.218 that show the levels of variation in the banks' efficiency. The mean efficiency discloses that on average, the banks on average exhibit above average levels of efficiency. With a maximum efficiency level at 1, technical efficiency maximum and minimum values were 0.00 and 1.00, a pointer to heterogeneity and diversity in efficiency among the banks sampled. Skewness and kurtosis show the shape of variables distributions and aid to check for normality and heteroscedasticity in a distribution. Efficiency is negatively skewed (-0.348) specifying that the firm efficiency distribution is relatively not normally distributed. The distribution has a negative peakedness with a kurtosis of -0.283 revealing that some banks presented very low levels of efficiency.

Non-Interest Income diversification which was computed using the Herfindahl Hirschman index (HHI) varies from 0.06 to 0.77, revealing a significant variation in levels of non-interest income diversification among the commercial banks in Kenya. The banks mean non-interest income diversification was 0.627 with a standard deviation of 0.122 that show the levels of variation in the non-interest income diversification. The mean non-interest income diversification discloses that on average, the banks on average exhibit above average levels of corporate diversification with respect to non-interest income. Non-interest Income diversification maximum and minimum values were 0.06 and 0.77, a pointer to heterogeneity and diversity in non-interest income earning activities among the banks sampled. Non - interest income diversification is negatively skewed (-2. 28) indicating that the non-interest income distribution among the banks is relatively not normally distributed. The distribution has a positive peakedness with a kurtosis of 6.114 revealing that some banks presented very high earnings from non - interest incomes.

The Natural log of the number of branches was another indicator of corporate diversification. The indicator varied from 0.69 to 5.89 inferring a significant variation in the number of branches

amongst the commercial banks in Kenya. The banks mean natural log of number of branches was 2.768 with a standard deviation of 1.087 that show the levels of variation in the number of branches established by the respective banks. The mean natural log of the number of branches discloses that on average, the banks on average have established several branches in corporate diversification efforts. The natural log of number of branches is positively skewed (0.511) indicating that the number of branches among the banks is relatively normally distributed. The distribution has a negative peakedness with a kurtosis of -0.193 revealing that some banks presented very few numbers of branches as compared to the other banks. Firm size measured in terms of natural log of total assets varied from 0.01 to 1.45, revealing a significant variation in levels of asset holdings among the commercial banks in Kenya. The banks mean natural log of asset holding was 2.503 with a standard deviation of 0.322 which show the levels of variation in the asset sizes of the respective banks. The natural log of bank asset holding is positively skewed (1.803) indicating that the asset holdings among the banks is relatively normally distributed. The distribution has a positive peakedness with a kurtosis of 2.611 revealing that some banks presented very high levels of asset holdings.

Effect of size on the relationship between corporate diversification and performance

The third objective of this study was to examine the effect of size on the relationship between corporate diversification and performance of commercial banks in Kenya. The third hypothesis tested in hierarchical regression models was as:

H₃: There is no significant effect of size on the relationship between corporate diversification and performance of commercial banks in Kenya.

The first step in testing the first sub hypothesis requires regression of interest income diversification on efficiency whose output are presented in tables 4 to 6 below.

Table 4: Model Goodness of fit of Interest Income Diversification and Efficiency

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.032 ^a	.011	.002	.20617

a. Predictors: (Constant), Interest Income Diversification

b. Dependent Variable: Efficiency

As presented in table 4 above, 0.2 percent of variations in efficiency is explained by variations in interest income diversification amongst the commercial banks (Adjusted R²= 0.002). Table 5 below shows that the relationship between interest income diversification and efficiency is not statistically significant (F (1,368) = 0.378, p>0.05).

Table 5: Model Goodness of fit of Interest Income Diversification and Efficiency

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.016	1	.016	.378	.539 ^b
	Residual	15.642	368	.043		
	Total	15.658	369			

- a. Dependent Variable: Efficiency
b. Predictors: (Constant), Interest Income Diversification

Table 6 below presents a non statistically significant positive relationship between interest income diversification and efficiency ($\beta = 0.032$, $t = 0.615$, $p > 0.05$) implying that a unit increase in interest income diversification results into an increase in efficiency by upto 0.032 units.

Table 6: Model Regression Coefficients of Interest Income Diversification and

		Efficiency				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.668	.034		19.537	.000
	Interest Income Diversification	.056	.091	.032	.615	.539

- a. Dependent Variable: Efficiency

The second step in testing the first sub hypothesis requires regression of interest income diversification and bank size on efficiency and the results are presented in tables 7 to 9 below.

Table 7: Model Goodness of fit of Interest Income Diversification, Size and

Efficiency				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.114 ^a	.013	.008	.20521

- a. Predictors: (Constant), Firm Size, Interest Income Diversification

- b. Dependent Variable: Efficiency

As presented in table 5.17 above, 0.8 percent of variations in efficiency is explained by variations in interest income diversification (Adjusted $R^2 = 0.008$). Table 8 below shows that the model of the relationship between interest income diversification, firm size and efficiency is not statistically significant ($F(2,367) = 2.412$, $p > 0.05$).

Table 8: Model Goodness of fit of Interest Income Diversification, Size and

Efficiency						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.203	2	.102	2.412	.091 ^b
	Residual	15.455	367	.042		

Total	15.658	369
-------	--------	-----

a. Dependent Variable: Efficiency

b. Predictors: (Constant), Firm Size, Interest Income Diversification

In table 5.19 below, there is a statistically significant positive relationship between firm size and efficiency ($\beta = 0.109$, $t = 2.107$, $p < 0.05$) inferring that a unit increase in firm size leads to an increase in efficiency by up to 0.109 units. The positive relationship between interest income diversification and efficiency is not statistically significant ($\beta = 0.030$, $t = 0.584$, $p > 0.05$) inferring that a unit increase in interest income diversification leads to increase in efficiency by upto 0.030 units.

Table 9: Model Regression Coefficients of Interest Income Diversification, Size

		and Efficiency				
Model		Unstandardized Coefficients		Standardize	t	Sig.
		B	Std. Error	d Coefficients Beta		
1	(Constant)	.651	.035		18.617	.000
	Interest Income Diversification	.053	.090	.030	.584	.559
	Firm Size	.069	.033	.109	2.107	.036

a. Dependent Variable: Efficiency

In the third step, the interaction term between interest rate diversification and size is introduced in the model and the findings are presented in tables 10 to 12 below.

Table 10: Model Goodness of fit of Interest Income Diversification, Size and

		Efficiency		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.133 ^a	.018	.010	.20500

a. Predictors: (Constant), IID.Size, Interest Income Diversification, Firm Size

Table 10 above presents that 1% of variations in efficiency is explained by variations in interest income diversification and size (Adjusted $R^2 = 0.010$). In table 11 below, it is presented that the model of the relationship between interest income diversification, firm size and efficiency is not statistically significant ($F(3,366) = 2.201$, $p > 0.05$).

Table 11: Model Regression Coefficients of Interest Income

Diversification, Size and Efficiency						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	.277	3	.092	2.201	.088 ^b
	Residual	15.381	366	.042		
	Total	15.658	369			

a. Dependent Variable: Technical Efficiency

b. Predictors: (Constant), IID.Size, Interest Income Diversification, Firm Size

On the introduction of the interaction term of interest income diversification and size in the analysis, it is evident in table 5.22 below that the relationship between interest income diversification and efficiency is negative but not statistically significant ($\beta = -0.025$, $t = -0.381$, $p > 0.05$) inferring that a unit increase in interest income diversification leads to a decrease in efficiency by up to 0.025 units. The negative relationship between firm size and efficiency is also not statistically significant ($\beta = -0.164$, $t = -0.773$, $p > 0.05$) implying that a unit increase in firm size results into a decrease in efficiency by up to 0.164 units.

Table 12: Model Regression Coefficients of Interest Income Diversification, Size and

Efficiency						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.683	.042		16.089	.000
	Interest Income Diversification	-.044	.116	-.025	-.381	.703
	Firm Size	-.104	.134	-.164	-.773	.440
	IID.Size	.508	.382	.288	1.330	.184

a. Dependent Variable: Efficiency

Table 12 shows that there is a non-statistically significant positive relationship between the interaction term of interest income diversification and firm size with efficiency ($\beta = 0.288$, $t = 1.330$, $p > 0.05$) implying that a unit increase in the interaction term results into an increase in efficiency by up to 0.288 units.

Findings and Discussions

The study establishes none statistically significant influence of the interaction term of size with the three forms of diversification (interest income diversification, non-interest income

diversification and branch diversification) and bank efficiency. The finding is consistent with the arguments in George and Kabir (2012) that business group diversity does not influence the diversification–performance relationship as well as Schommer, Karna and Richter (2015) finding of little support for the role of various institutional developments that have long been thought to have affected diversification and its performance consequences.

Conclusions and Recommendations

On the moderating effect of size on the relationship between corporate diversification and performance of commercial banks, the study finds that the efficiency and diversification metrics nexus is not at all influenced by the bank size. This suggests that there may be other firm characteristics that influence the relationship other than bank size. For the combined effect, it is interesting to conclude that the effect of branch diversification on efficiency changes from negative to positive when included in the model with size, interest income diversification and non-interest income diversification. Interest income diversification, non-interest income diversification, branch diversification and size positively influence levels of efficiency though the relationship is not statistically significant. The study recommends that since larger, diversified and efficient commercial bank have better chances of withstanding financial shocks in one business line and revenue stream as can theoretically balance-out the impact of the inertia with a stable capital and earnings of other business streams. Effort should be put in place to attain a proper combination of revenue-generating activities that are constituted optimally, and leads to optimal out-put ratio, which in the end translates into better financial performance.

References

- Ali, S., Haider Hashmi, S., & Mehmood, T. (2016). Corporate diversification and firm performance: An inverted U-shaped hypothesis. *International Journal of Organizational Leadership*, 5, 381-398.
- Barney, J. (1991). Special theory forum the resource-based model of the firm: origins, implications, and prospects. *Journal of Management*, 17(1), 97-98.
- Bhatia, A., & Thakur, A. (2018). Corporate diversification and firm performance: An empirical investigation of causality. *International Journal of Organizational Analysis*.
- Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The review of economic studies*, 51(3), 393-414.
- Erdorf, S., Hartmann-Wendels, T., Heinrichs, N. and Matz, M. (2013), “Corporate diversification and firm value: a survey of recent literature”, *Financial Markets and Portfolio Management*, 27(2), 187-215.
- Flamini, C., Valentina C., McDonald, G., Liliana, S. (2009). The Determinants of Commercial Bank Profitability in Sub-Saharan Africa. IMF Working Paper
- Ferrari, A., Masetti, O., & Ren, J. (2018). Interest rate caps: the theory and the practice. The World Bank.
- George, R., & Kabir, R. (2012). Heterogeneity in business groups and the corporate diversification–firm performance relationship. *Journal of business research*, 65(3), 412-420
- Gololo, I. A. (2018). Challenges of the Nigerian Banking Sector and the Way Forward. *American Finance & Banking Review*, 3(1), 26-34.

- He, X. (2012), "Two sides of a coin: endogenous and exogenous effects of corporate diversification on firm value", *International Review of Finance*, Vol. 12 No. 4, pp. 375-397.
- Kiweu, J. M. (2012). Income diversification in the banking sector and earnings volatility: evidence from Kenyan commercial banks
- Lien, Y. C., & Li, S. (2013). Does diversification add firm value in emerging economies? Effect of corporate governance. *Journal of Business Research*, 66(12), 2425-2430.
- Mazur, M., & Zhang, S. (2015). Diversification discount over the long run: New perspectives. *Finance Research Letters*, 15, 93-98.
- Mohamed, A. I., & Bett, S. (2018). Strategic resources and performance of commercial banks in Kenya: Case of Equity Bank Limited. *International Academic Journal of Human Resource and Business Administration*, 3(3), 218-242.
- Ndungu, J. G., & Muturi, W. (2019). Effect of Diversification on Financial Performance of Commercial Banks in Kenya. *International Journal of Current Aspects*, 3(V), 267-285.
- Olweny, T., & Shipho, T. M. (2011). Effects of banking sectorial factors on the profitability of commercial banks in Kenya. *Economics and Finance Review*, 1(5), 1-30.
- Onuonga, S. M. (2014). The Analysis of Profitability of Kenya's Top Six Commercial Banks: Internal Factor Analysis. *American International Journal of Social Science*, 3(5), 94-103.
- Palich, L. E., Cardinal, L. B., & Miller, C. C. (2000). Curvilinearity in the diversification-performance linkage: an examination of over three decades of research. *Strategic Management Journal*, 21(2), 155-174.
- Psillaki, M., & Mamatzakis, E. (2017). What drives bank performance in transitions economies? The impact of reforms and regulations. *Research in International Business and Finance*, 39, 578-594
- Rumelt, R. P. (1982). Diversification strategy and profitability. *Strategic management journal*, 3(4), 359-369
- Schommer, M., Karna, A., & Richter, A. (2015). Performance Effects of Diversification Across Institutional Contexts: A Meta-analysis. In *Academy of Management Proceedings* (Vol. 2015, No. 1, p. 15633). Briarcliff Manor, NY 10510: Academy of Management.
- Shyu, J. and Chen, Y.L. (2009), "Diversification, performance, and the corporate life cycle", *Emerging Markets Finance and Trade*, Vol. 45 No. 6, pp. 57-68.
- Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of financial Economics*, 26(1), 3-27.
- Teimet, P. R., Lishenga, L. J., Iraya, M. C., & Ochieng, D. E. (2020). EFFECT OF BANK SIZE ON THE RELATIONSHIP BETWEEN REVENUE DIVERSIFICATION AND PERFORMANCE OF COMMERCIAL BANKS IN KENYA. *African Development Finance Journal*, 4(2), 1-18.