Towards Africa’s Agenda Aspirations: Can Kenyan commercial banks achieve financial sustainability through Economic diversification? Does debt structure matter?

Timothy K. Kiptum

*Moi University, School of Business and Economics, Department of Accountancy and Finance, kiptumtimothy9@gmail.com*

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Economic Diversification, Financial Sustainability, Debt structure, Commercial Banks and Africa’s Agenda Aspirations.

**Jel Classification**
G20, G21.

**Paper Type**
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**Abstract**

**Purpose:** The aim of this study is to examine the moderating effect of debt structure on the relationship between economic diversification and financial sustainability, a lesson for Africa commercial banks as they strive to achieve Africa’s 2063 Agenda Aspirations.

**Methodology:** The panel regression approach was utilised to analyse the study data. The financial sustainability and Economic diversification was measured using the return on assets and the proportion of non-interest income to total income respectively. While the debt structure was measured using the proportion of the bank debt to equity.

**Findings:** The findings showed that economic diversification positively and significantly influence the financial sustainability of Africa commercial bank sampled. Debt structure also presents negatively and significantly influences the financial sustainability. Finally the study found that debt structure negatively and significantly moderates the relationship between economic diversification and financial sustainability.

**Originality/Value:** The study’s findings will be helpful to diversification theorist to unlock both diversification premiums and discounts puzzle by adding knowledge on indirect relationships such as the moderating effect debt structure. The management of African commercial banks will be able to make good sound diversification decisions by considering the nature and degree of the debt levels in the balance sheet in quest to promote the financial sustainability.
Introduction

The move towards integration in Africa is no longer a contemporary issue with a lot of Pan-African initiatives, vision and agenda well documented with an aspiration of promoting inclusive growth and sustainable development, integrated continent, Africa’s good governance, a peaceful and secure Africa, strong cultural and heritage identity, people driven development and placing the continent as global leader in matters development and other international (African Union Commission, 2015: 4). At centre of these aspirations, various players needs to put more efforts in contributing towards the success of Agenda 2063 for African Countries. Establishing of efficient and sustainable of continental financial institutions was the priority aiming at accelerating integration and socio-economic development of the continent. The roles of these institutions are very vital in mobilizing the financial resources and enhancing financial intermediation and participating in promotion of investments through management of other financial players such the Pan African Stock Exchange (2016); African Monetary Fund (2018) and the African Central Bank (2028: 34) (AUC, 2015a: 16).

Hitt et al., (2016) claimed that firms strategically uses diversification to sustain business during economic downturns and other business challenges using core resources, cross-functional capabilities of business and improve integrated systems to enhance sustainable financial performance and competitive advantage. Globally, the link between of economic diversification and financial sustainability is not business as usual in the context of regional integration. In as much as some of the economic blocks push for economic integration and diversification towards shared prosperity, there are still some blocks that are still undecided on whether embrace it. Some notable global economic initiatives for instance; United Kingdom Vicker commission report (Edmonds,2013) and Volcker Rule (Richardson, Smith & Walter,2010) and Brexit (Samitas, Polyzos, & Siriopoulos,2018) have been linked to have antagonistic effects on economic diversification thus reducing the opportunities for income diversification while increasing the degree of specialization.

Financial sustainability rest on the objectives of the firm theory to profit maximization and wealth maximization (Meher, & Getaneh, 2019; Khan & Hussanie, 2018 & Khadka, 2018). When the continent establishes the sustainable financial institutions they are able to execute their
mandate in array of programs that are geared towards building resilient economies which are inclusive and sustainable development. However, the financial sustainability of the financial institutions in Africa is put at stake owing to major shocks that the continent have been facing over time such as global financial crisis 2007-08 (Kiyota, 2009; Léon & Zins, 2020), COVID 19 pandemic (Odey et al., 2021) and system risks (Saidane, Sène, & Kanga, 2021) and recently exacerbated by the Russia-Ukraine conflict (Bin-Nashwan, et al., 2022). With these prevailing conditions the commercials banks needs to lay out strategies to boost profits and manage the risks and increase value for posterity. Economic diversification is poised to be one of the strategy the financial institutions needs to pursue to increase profits, mitigate risks, promote investments and increase pan-African banking activities (Anyaehie, & Areji, 2015 and Githaiga, 2021). The strategy encourages bank to consider other sources of revenues other than depending from interest income to enhance financial sustainability in quest of promoting sustainable development.

**Overview of Economic Diversification and Financial sustainability in Africa**

With Africa's Agenda 2063, a fifty years aspirations rooted in and African Renaissance and Pan African-ism. Pan-African Banking has gained momentum over time. The continent has significant changes in banking industry statistics regarding efficiency and stability over a decade. The bank credit – deposit ratio record an average of 66.01 % (2020) and 66.14% (2011), Highest 124.5% (2020) and 123.18% (2011), and Lowest 26.5% (2020) and 14.16% (2011). Bank return on Assets average stood at 1.57%(2020) and 2.7% (2011), Highest 4.92% (2020) and 6.76% (2011), and Lowest -2.39% (2020) and 0.39% (2011). Bank diversification stands at mean 35.57%(2020) and 44.15% (2011), Highest 72.43% (2020) and 71.15% (2011), and Lowest 13.59% (2020) and 21.97 (2011)(Bankscope, 2020). The above indicators are very important in determining the levels of wealth and income levels of countries that are informed by economic diversifications. For example World Bank classified Seychelles and Mauritius as only Africa’s high-income countries (Serajuddin & Hamadeh, 2020; World Bank, n.d & Léon & Zins, 2020). To be country specific, the fig.1 below shows the trend of economic diversification amongst the selected African countries. For instance, between 2009 and 2019 Libya recorded highest levels economic diversification at (X>90%) and Seychelles(x>80 %)( Seychelles) while the
majority ranging between 40-55% and others shows lowest degree of economic diversification at (x<5%) as recorded by Zimbabwe.

**Overview of the Banking Industry in Kenya**

Kenya is one of very important player in the quest of achieving the continental aspirations due to its commitment of aligning her visions or plans to global goals such as the 17 global Sustainable development goals and 7 Africa aspirations. The vision 2030 which long-term development blueprint for the country and is motivated by a collective aspiration for a better society by the year 2030. The plan aims at transforming Kenya into a newly-industrialized middle income country that provides high quality to its citizens which is in line with Africa’s aspiration number one. Recently, the government policies were geared towards achieving four agenda commonly referred to as Big Four Agenda that comprise of guarantee food security, universal health care, affordable and decent housing and increase the manufacturing as a highway of contributing to its economic growth to 15% from 9.8% (Muigua, 2019).

This prominence of policy alignments make Kenya a suitable country for most scholars as it serves as a model for other African countries. However, Kenya banking industry is characterized by mixed performance for instance the profitability fluctuating for example in 2018 the ROA reduced from 2.8% to 2.63% in the same period the pre-tax profit increased to Kenya shillings 152.7 billion down Kenyan shillings 133.2 billion in 2017 (Kiemo & Kamau, 2021). With evidence of poor performance leading to others such as Family banks issuing a profit warning. Others on the extreme cases led to some placed under receivership (Chase bank), statutory management (Charter House Bank) (CBK; 2018 & 2019).

**Motivation of the Study**

The Africa Union documented on the Africa as a continent wants by the year 2063. According to the aspiration a prosperous continent is characterized by inclusive Growth and Sustainable Development (African Union Commission, 2015: 4). Part of the priority areas of this broad goal is encouraging economic diversification to promote income generation, trade and financial sustainability of financial institutions. DeGhetto, Gray, & Kiggundu, (2016), asserts that commercials banks in Africa should be
responsive to the emerging needs of the economy and society as a whole in order to achieve this ambitious goals for the continent especially in responding to external global opportunities and threats.

Similarly, there is mixed financial outlook among Pan-Africa banks due to declining income from interest, increase in non-performing loans, risk and deteriorating in asset quality (Kanga et al., 2019; Asongu&Minkoua, 2018; Banya&Biekpe, 2018 and Ozili, 2018). With such performance banks have gone out of their ways to innovatively diversify income as a way of compensating declining income which is an indicator of financial sustainability. Empirical literature documents two conflicting literature on income diversification namely; premiums (Ngozi&Emeka, 2022 & Hina et al, 2022) Debt levels is poised to influence the diversification and profitability with unclear moderating effects documented by the scholars (Pratiwi,Wijaya,& Paramitasari,2022 and Mansour,et al.,2022).

Therefore with these puzzle in practice the study sought to examine moderating role of debt structure on the relationship between economic diversification and financial banks in Africa a case of Kenya.

**Literature Review**

Numerous studies have been documented conflicting relationship between economic diversification and financial sustainability among financial institutions thus attracting interest in both practice and theory. Those in practice view in terms of revenue, cost cross border, financial synergy and market growth. The motivating factor in practice is declining interest income, increase risks, depreciation of asset quality and increase in non-performing loans(Erwin, et al.,2018).In brief, the puzzle comes from those who believes that diversification is beneficial because it increases revenue, reduces risk, increases tax-debt shields and improves financial synergies (Nußmann,2018 and Mansour,et al.,2022) while others argue that in practice the approach is costly, divert resources from profitable projects to non-efficient projects(Berger &Ofek,1995;Stiroh & Rumble, 2006).Theoretically: there are two major theoretical strands diversification premiums explained by modern portfolio theories, resource based theory, coinsurance effect diversification((Lewellen,1971).) and diversification discounts grounded by agency
theory (Stiroh & Rumble, 2006) and transaction cost perspective theory (O’Brien, et al., 2014). Against this background, the following hypotheses are posited:

Hypothesis 1: Bank diversification has a statistically significant relationship with financial sustainability.

Given that the relationship between economic diversification and financial sustainability has been well documented. More factors needed to be examining the mixed relationship. From the empirical literature diversifying firms needs more financial resources to invest in diversification. Banks can finance the diversification initiatives either using debt or raising capital from shareholders (Ajay & Madhumathi, 2015). With use of debts their comes benefits of tax shield and efficiency while attracting cost of debts which is usually interest payment that will reduce the profits of the banks which will is believed to be varying from banks to banks. The levels of debt can be low or high and it will influences the diversification and performance of the firms, as to increase diversifications the firm firms should have low debt ratio (Tanui, Yegon, & Bonuke, 2019).

Hypothesis 2: Debt structure has a statistically significant relationship with financial sustainability.

Moreover, mixed results are available on moderating role of firm debt levels in relation to diversification, organizational characteristics and financial performance (Warrad, & Oqdeh, 2018; Pratiwi, Wijaya, & Paramitasari, 2022; Mansour, et al., 2022 and Djan, Zehou, & Bawuah, 2017). Notwithstanding, these significant empirical literature there still exists a gap that needs to be filled, therefore the study sought to determine whether debt structure moderates the direct relationship between bank economic diversification and financial sustainability in Kenya.

Berger and Ofek (1995) also supported the theory by asserting that diversified corporations were using more debts than specializing firms due to the increased debt capacity. Feng, et al., (2022) also agrees with the theory proposition, they assert that the use of more debts influences the diversification that in turn affects investment on non-financial assets. Stein (2003) tested the theory and describes that there is “more-money” effect resulting from the debt coinsurance feature of the firms that are diversifying. Its
therefore relevant for firms to engage on economic diversification to generate more
returns because lack of correlation between units in businesses is greater hence giving
more opportunity for firms to assume more debt (Goncalves-Pinto, Schmidt & Chung,
2022). Therefore, the following hypothesis was formulated:

**Hypothesis 3: Debt structure significantly moderates the relationship between bank
diversification and financial sustainability.**

**Research Methodology**

**Research Philosophy**

The study follows a positivist paradigm approach where the cause and effect relationships are investigated to establish philosophical knowledge which is suitable for quantitative than qualitative (Park, Konge, & Artino, 2020). Inspired by this, the follows a quantitative approach and builds its arguments on the co-insurance effect theory of diversification.

**Sources of Data**

The study relied on secondary data obtained from the annual audited financial statements of commercial banks in Kenya.

**Research model**

The research consists of the following sets of variables; the dependent variable (financial sustainability), independent variable (Economic diversification), moderating variable (Debt structure) and control variables (bank size, lending strategy, loan portfolio quality and market share). The hypothesis was tested using panel data analysis estimation model and the choice between fixed and random effect will be determined by the results of the Hausman test. The study econometric model is shown below;

$$FP_{it} = \beta_0 + \beta_1 ID_{it} + \beta_2 DS_{it} + \beta_3 (ID_{it} \times FLEV_{it}) + \beta_4 BS_{it} + \beta_5 LS_{it} + \beta_6 LPQ_{it} + \beta_7 MS_{it} + \epsilon_{it}$$

**...Model 1**

Where:

FP is Financial Sustainability
ID is Economic diversification
FLEV is Debt structure
BS is bank size
LS is lending strategy
LPQ is loan portfolio quality
Ms is market share

$B_1 ..., B_n$ denotes the beta coefficients and $\epsilon$ is the error term
Data Type and Source

The main objective of this study was to establish whether debt structure moderates the relationship between economic diversification and financial sustainability. The panel data was drawn from a sample of 31 commercial banks in Kenya with inclusion criteria of all the banks that have been in operation from 2008-2019 using audited financial published statements.

Measurements of the variables

The measurements of the research variables are illustrated in table 1 below.

Table 1. Measurement of Variables

<table>
<thead>
<tr>
<th>Type</th>
<th>Variable</th>
<th>Measurement</th>
<th>Reference(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>Financial</td>
<td>ROA</td>
<td>Hinaet a.l,(2022)</td>
</tr>
<tr>
<td></td>
<td>Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent variable</td>
<td>Economic</td>
<td>ID=1-{Interest income/Total income}</td>
<td>Luu, H. N., Nguyen, L. Q. T., &amp; Vu, Q. H. (2019)</td>
</tr>
<tr>
<td></td>
<td>Diversification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderating Variable</td>
<td>Debt Structure</td>
<td>DS = Debt / Equity</td>
<td>Benz &amp; Hoang,(2021)</td>
</tr>
<tr>
<td>Control variables</td>
<td>Bank Size</td>
<td>Natural logarithm of total assets</td>
<td>Gürbüz, Yanik and Aytürk, (2013)</td>
</tr>
<tr>
<td></td>
<td>Lending strategy</td>
<td>Ratio of loans to total assets</td>
<td>Githaiga (2021)</td>
</tr>
<tr>
<td></td>
<td>Loan portfolio</td>
<td>Ratio of non-performing loans to total loans and advances</td>
<td>Adesina, (2021)</td>
</tr>
<tr>
<td></td>
<td>quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Market share</td>
<td>Ratio of bank total assets to industry's total assets</td>
<td>Genchev, E. (2012)</td>
</tr>
</tbody>
</table>
Findings and Discussion

Descriptive statistics

The descriptive statistics of commercial banks are given in which mean, median, maximum, minimum values, standard deviations and observations are reported in table II. The correlation coefficients and the regression results are shown in table III and IV respectively.

Table II Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP</td>
<td>372</td>
<td>.0359195</td>
<td>.0284539</td>
<td>-.0033</td>
<td>.436</td>
</tr>
<tr>
<td>Bank Size</td>
<td>372</td>
<td>17.37676</td>
<td>1.225367</td>
<td>14.97238</td>
<td>20.0195</td>
</tr>
<tr>
<td>Bank Age</td>
<td>372</td>
<td>35.8871</td>
<td>29.21328</td>
<td>1</td>
<td>123</td>
</tr>
<tr>
<td>FLS</td>
<td>372</td>
<td>.540505</td>
<td>.1731026</td>
<td>.00895</td>
<td>.8956</td>
</tr>
<tr>
<td>LPQ</td>
<td>372</td>
<td>.1248543</td>
<td>.1056437</td>
<td>.0089204</td>
<td>.9010086</td>
</tr>
<tr>
<td>MS</td>
<td>372</td>
<td>3.204624</td>
<td>4.841534</td>
<td>.002</td>
<td>20.62</td>
</tr>
<tr>
<td>ID</td>
<td>372</td>
<td>.4062503</td>
<td>.078702</td>
<td>.1039373</td>
<td>.49998</td>
</tr>
<tr>
<td>FLEV</td>
<td>372</td>
<td>.1647367</td>
<td>.367044</td>
<td>.1000124</td>
<td>0.2710649</td>
</tr>
</tbody>
</table>

Source: (Researcher, 2022)

From the results in the financial sustainability measured by ROA presents that mean value stands at 0.36 with a minimum and maximum value of -0.0033 and 0.436 respectively and indication that performance is mixed those making profits and losses. The economic diversification had a mean of 0.406 with specific bank presenting very high level of diversification at 0.49998 meaning nearly half of that bank revenue come from non-interest income a supporting assertions behind the bank sustainability that encourages the banks to innovate to compensate declining interest income (Hina et al, 2022; Meher, & Getaneh, 2019). For the debt structure, the banks registered mean of 0.164 to imply in the bank balance sheet the proportion of debt is 16.4%, the lowest consumers of debt stood at 10% while the highest consumer of the debt in its financing activities standing at 27.1% . The dynamics shows a significant debt can be of in financing diversification (Alouane et al, 2022).
The mean bank size of 17.37 and a standard deviation of 1.225 suggest a small bank size variation. The age of the oldest bank is 123 years with average bank age being 35 years an indication that banks under study have undergone through life cycle. Lending strategy registered a mean of 0.54 while loan portfolio quality had an average of 0.1248, inferring a low loan performance in terms of repayment supporting studies that have noted that the level of non-performing loans is in upward trajectory (Adesina, 2021). The mean market share is 3.2 meaning the banks commands a significant share of industry shares.

**Table III:** Pairwise correlation analysis

<table>
<thead>
<tr>
<th></th>
<th>FP</th>
<th>Bank Age</th>
<th>Bank Size</th>
<th>LPQ</th>
<th>FLS</th>
<th>MS</th>
<th>ID</th>
<th>FLEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Age</td>
<td>0.3827*</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Size</td>
<td>0.6902*</td>
<td>0.4865*</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LPQ</td>
<td>0.0815*</td>
<td>-0.2174*</td>
<td>-0.3142*</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLS</td>
<td>-0.3138*</td>
<td>-0.1156*</td>
<td>-0.1830*</td>
<td>-0.1964*</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td>0.5524*</td>
<td>0.5021*</td>
<td>0.6647*</td>
<td>-0.2945*</td>
<td>-0.1905*</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>0.2757*</td>
<td>-0.0205</td>
<td>0.1101*</td>
<td>-0.0370</td>
<td>-0.026</td>
<td>0.1811*</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>FLEV</td>
<td>-0.2793*</td>
<td>0.0679*</td>
<td>0.0831</td>
<td>0.0334*</td>
<td>-0.0355</td>
<td>-0.1684</td>
<td>-0.1229*</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

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

Correlation analysis Correlation results presented in Table III indicate that economic diversification (ID) \((r = 0.2757, \ p < 0.05)\) have a substantive and significant relationship with Financial sustainability (FP). The association between debt structure (FLEV) and Financial sustainability (FP) is negative and significant \((r = -0.2793, \ p < 0.05)\). All the control variables are significantly correlated with the dependent variables. Further, the pairwise correlation matrix shows that all coefficients are below 0.8, confirming no multicollinearity.
Table IV. Stepwise Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>FP Model 1</th>
<th>FP Model 2</th>
<th>FP Model 3</th>
<th>FP Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Age</td>
<td>.366**</td>
<td>.331**</td>
<td>.437**</td>
<td>.404**</td>
</tr>
<tr>
<td>Bank Size</td>
<td>.201**</td>
<td>.234**</td>
<td>.186**</td>
<td>.181**</td>
</tr>
<tr>
<td>LPQ</td>
<td>.178**</td>
<td>.150**</td>
<td>.085**</td>
<td>.094**</td>
</tr>
<tr>
<td>FLS</td>
<td>-0.150**</td>
<td>-0.147**</td>
<td>-0.145**</td>
<td>-0.148**</td>
</tr>
<tr>
<td>MS</td>
<td>.120**</td>
<td>.108**</td>
<td>.103**</td>
<td>.104**</td>
</tr>
<tr>
<td>ID</td>
<td>-</td>
<td>0.52**</td>
<td>0.537**</td>
<td>0.294**</td>
</tr>
<tr>
<td>FLEV</td>
<td>-</td>
<td>-</td>
<td>-0.341**</td>
<td>-0.249**</td>
</tr>
<tr>
<td>ID*FLEV</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.164**</td>
</tr>
<tr>
<td>Cons</td>
<td>-7.79</td>
<td>-8.04</td>
<td>-8.32</td>
<td>-8.22</td>
</tr>
<tr>
<td>R-sq(within)</td>
<td>0.33</td>
<td>0.39</td>
<td>0.391</td>
<td>0.417</td>
</tr>
<tr>
<td>R-sqΔ</td>
<td>-</td>
<td>0.06</td>
<td>0.001</td>
<td>0.0163</td>
</tr>
<tr>
<td>Wald chi</td>
<td>33.2</td>
<td>36.63</td>
<td>30.65</td>
<td>26.39</td>
</tr>
<tr>
<td>Prob&gt; F</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Hausman chi2</td>
<td>0.00</td>
<td>0.00</td>
<td>0.006</td>
<td>.000</td>
</tr>
<tr>
<td>sigma_u</td>
<td>0.46</td>
<td>0.46</td>
<td>0.491</td>
<td>0.475</td>
</tr>
<tr>
<td>sigma_e</td>
<td>0.42</td>
<td>0.40</td>
<td>0.411</td>
<td>0.403</td>
</tr>
<tr>
<td>Rho</td>
<td>0.54</td>
<td>0.57</td>
<td>0.589</td>
<td>0.582</td>
</tr>
</tbody>
</table>

Source: Researcher data, 2022

**significance levels 5%. Standard errors are in parentheses
From the study the fixed effects table IV was supported by hausman test (p<5%). As indicated in table four steps for conducting moderation was followed. First the effects of control variables was done on dependent variable (Financial Sustainability) the results shows that all the five control variables were significant with Financial Sustainability with R squared within standing at 33%. The findings support existing literature that there exist significant determinants that affects the financial sustainability (Tehulu, 2013; Rahman et al., 2014 and Alouane et al., 2022). Githaiga (2021) and Adesina, (2021), asserted that being core determinants of the bank sustainability they need to be controlled in regression analysis.

The second step was to determine the relationship between bank economic diversification and financial sustainability. The results were significant positive (β=0.52<0.05) with R squared within standing at 39% a change of 6% from step one. This support the diversification premium that support existence of diversification benefits such as risk diversification of risks, increase revenues and debt capacity (Kurniawan & Siswanto, 2021; Ngozi & Emeka, 2022; Hina et al., 2022). Although the findings supports benefits its contrary to dark side of diversification hypothesis (Stiroh & Rumble, 2006; Cadenas, Gzyl & Park, 2021). In fact, they believed that the worst side of diversification is associated with diversification risks contrary to t being an incentive to manage risks.

The third step was to regress the direct effects with the debt structure while controlling economic diversification and other control variables, the results that debt structure had negative significant effect on financial performance (β= -0.341<0.05) with R squared of 39.1% a slight change of 0.1%. Alouane et al., (2022) and Benz, & Hoang (2021), found that capital structure is negatively significant to bank performance which the current study supports. The empirical literature associates the agency costs and conflicts, debt cost to be reasons behind the negative relationship between debt and profitability (Erwin, et al., 2018 & Cappa, Cetrini, Oriani, 2020).
The final step was to regress the interaction of economic diversification with debt structure (ID*FLEV) with Financial Sustainability as shown in step four. The results show that the moderation of debt structure was significant at (β = -0.164, ρ < 0.05) with R squared of 41.7% resulting a change of 0.0163. This means that given positive relationship between economic diversification and performance, the moderating effect of debt structure was significantly negative. In this case the relationship has changed from positive to negative. The findings agree to previous that have documented the significant moderating role of debt structure for firms such as (Warrad, & Oqdeh, 2018; Pratiwi, Wijaya, & Paramitasari, 2022). The studies found enhancing moderating effects of capital structure on relationship between organizational structure and strategies on financial performance but contradicts with antagonistic moderating effects on the following previous (Mansour, et al., 2022 and Djan, Zehou, & Bawuah, 2017).

In simple explanation when the banks with high levels of debts diversify they are likely to get more returns. This supports the co-insurance effect theory that asserts that the risk is reduced through diversification improves the financial sustainability that arises due to imperfect correlation between different cash flows from diversification and the use of debt (Lewellen, 1971; Tanui, Yegon, & Bonuke, 2019). In summary the debt structure has a significant moderating effect on the relationship between economic diversification and financial sustainability. The regression model can be fitted as follows:

\[
FP_{it} = \beta_{0i} + 0.294ID_{it} - 0.249FLEV_{it} - 0.164(ID_{it} * FLEV_{it}) + 0.404Ba_{it} + 0.181BS_{it} \\
- 0.148FLS_{it} + 0.094LPQ_{it} + 0.104MS_{it} + \epsilon_{it}
\]
Conclusions
The study investigated whether debt structure moderates the relationship between bank diversification and financial sustainability. From Table IV the article documents that debt structure significantly moderates the relationship between economic diversification and financial sustainability. The findings provide that bank economic diversification significantly influences the financial sustainability. This because of co-insurance benefits associated with diversification premiums. This results support the benefit the co-insurance effect such as reduces the variability of returns and helps the firms to avoid countercyclical deadweight costs. However, model 4 in Table IV shows that debt structure has an antagonistic moderating effect on the relationship between economic diversification and financial sustainability.

This implies that as the bank debt levels increases, it will not enhance the relationship between the economic diversification and financial sustainability.

In conclusion the commercials banks can diversify their revenues away from traditional interest income sources in quest to enhance their financial sustainability. A consistent findings with Ngozi&Emeka, (2022) and Hina et al,(2022) who postulated that having more income revenues creates stability by reducing risks, compensating the dwindling income from the bank portfolio and reducing the adverse effects of depreciating of asset quality.Mansour,et al.,(2022),alluded that debt structure influences the performance of the bank, this support the finding the moderating role of the debt structure on the relationship between economic diversification and financial sustainability

Policy Recommendation
From the evidence provided in this study recommends that;

The Commercial banks in Africa should devise comprehensive strategies to ensure that their the financial performance is sustained over years rises ,this is achieved through deviating from traditional interest income activities and welcoming non interest such as dividend incomes, fees, commission and offering insurance services among others to increase more revenues.
Debt structure of the commercial banks should be monitored since it affects negatively the balance sheet strength thus possibility of affecting negatively the financial sustainability.

Furthermore, during economic diversification, management is encouraged to use other sources of finances apart from debt to increase the financial sustainability. Also there is a need for African regulatory bodies in banking industry such as the central banks and the capital market authorities needs to relax polices and laws that discourage the economic diversifications. To curb the reversal of the diversification benefits these regulatory bodies should also consider introducing more prudential financial guidelines or models that are not only debt but also funds such as government financing such as bonds, a move that will reduce financial distress economic diversification.

Limitations of the Research and Suggestion for future studies.

This study examines the effects economic diversification as combination of various constructs influence on the financial sustainability. Future studies should investigate the specific attributes of diversification such as dividend, fees, rent income among others on the financial sustainability of banks. The study was limited to only 31 commercial banks in one country thus the finding applies only to Kenya. They cannot be applied to banks in other countries with distinct legal, institutional, structural, or cultural characteristics. For this reason, future research may concentrate on other African countries.

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References


