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INCOME DIVERSIFICATION IN LOW INCOME SUB-SAHARAN AFRICAN COUNTRIES' COMMERCIAL BANKS: A "BLESSING" OR "CURSE"?

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Abstract

Dynamics in economic trend and banks' creditors' expectation have directed banks to search the innovative means of income generation. It is with this view that this study examines the relationship between the income diversification and financial performance of banks in SSA low income countries. A panel data of 1,280 observations were extracted from the financial profile of 160 commercial banks from 19 purposively selected countries from 2009 to 2016. The findings from the empirical analysis indicate that non-interest income accounts for 95% of operating income in Low Income countries' commercial banking sector. Also, it was found that income diversification in SSA banks enhanced financial performance as affirmed by the finance theory because both interest and non-interest income sources are indeed blessings as they increase the financial performance significantly. Therefore, low income SSA countries' commercial banks are urged to strive to ensure proper investment with their income diversification so that better performance of their economies is enhanced.

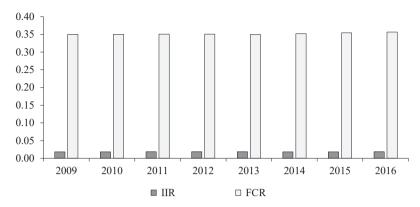
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JEL classification: G10, G21, G28, L21, L22, L25

Introduction

Rapidly changing financial environment, regulatory pressure, volatility of interest based income in banking sector, and increased competition have prompted banks to think about the non-interest activities to generate income. Sub-Saharan African (SSA) banks are highly competitive and, to survive in the intense competition, they need to diversify their income sources (Ismail, Hanif, Choudhary, Nisar, 2015). Banking sector, world over, is a crucial sector that supports the execution of commercial and socio-economic activities of individuals, corporate institutions, and sovereign states. It drives the support by primarily acting as an intermediary, or bridge the gap between the surplus and deficit units that stir the economy. However, the financial liberalization prompted the world-wide free market-based economies and this piqued the increasing role of equity and bond markets, which has led banks to engage in other activities rather than the traditional lending activities. Although the traditional source of revenue in banks is interest income, intensive effort has been made to engage in non-interest income generating activities after the commencement of financial liberalisation era, most especially in the banking operation of a developed market.

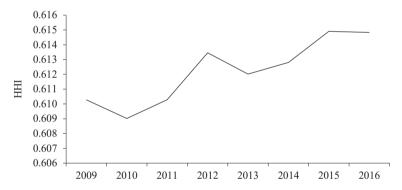
With the utmost reliance of banking sector on the non-traditional income generating activities, the effect of this income stream has not been established in the region due to the shallow status of the sector. The impact of non-interest income (fee income) has been established in other developed world, such as U.S and Europe, but yet to be established in SSA as a region. For instance, over 42.2 percent of U.S. total banks' operating income is accounted for by non-interest income as a result of diversification, and this contributed immensely to the growth of the sector (DeYoung, Rice, 2004). Succinctly, SSA banks survived the turmoil of 2007–2008 global financial crisis unscathed and since then, similar to developed economies, SSA banking sector is growing and is more competitive with a higher proportion of non-interest income in banking sector total operating income, even though, they are faced with high operating leverage, higher income volatility, and decline. This is clearly depicted in Figure 1. The gap between the two sources of income since the survival of the crisis is alarming and with the unchanged status of banking sector in these countries. This study finds it necessary to inquire into the effect of income diversification on bank performance in the selected countries.



Note that the graph only represents 19 selected countries with available data in the subject matter from 2009 to 2016. IIR is the interest income ratio, while FCR is the fee and commission ratio.

Figure 1. Income diversification graph in SSA low income countries

Source: author's calculation using the data collected from BankScope.



Note that the graph only represents 19 selected countries with available data in the subject matter from 2009 to 2016. HHI is the Herfindahl Hirshman Index of income which ranges from 0 to 1.

Figure 2. Income diversification of selected SSA banks

Source: author's calculation using the data collected from Bankscope.

While the banking sector in SSA differs in ownership structure, accounting treatment of various income sources, and financial liberalisation level, the sector is also characterised by income/interest rate volatility, fragility, inefficiencies in the intermediation process, and high risk investment. Several scholars have identified factors that can determine bank performance and one of these is diversification (Olweny, Shipho, 2011), despite this, there is no consensus on how the income source diversification has improved cost efficiency and spur performance

in the region. Growth in information technology and liberalisation across the world led banks to explore non-interest income so that they can survive the competition. Therefore, the effect caused by these streams of income (interest and non-interest) cannot be ignored so as to detect if there is the need to change the focus on either of the streams in order to improve the status of banking sector, most especially in low-income SSA banking sector.

The urgent need to investigate income diversification in SSA is motivated by the quest to know its effect on bank performance after this crisis. While studies such as Olweny and Shipho (2011) recommend income diversification, scholars such as J.M. Kiweu (2012) aver that the risk arising from income diversification is not offset by the benefits. Which side of this argument are SSA low income countries tending towards is yet to be established. The current underdeveloped status of the region and the lack of affirmation as to the effect of the income diversification motivate this study, so as to know if it is a blessing or a curse to the performance of the region. For these obvious reasons, if this can be established, bank managers, investors, and regulators will gain more insight on the diversification of income in the regions' banking market, and how it enhances the creation of more value that can boost the growth of the region. Greater financial return can be generated from a diversification strategy if the income generating capacities are enhanced. In order to enhance this capacity, banks might not only focus on the non-interest income (fee-based) activities, but also emphasise more on the traditional interest related income generating activities. But this depends on the outweighing effects of both streams.

This study will contribute to the existing knowledge by providing more literature for reference by finance scholars, bank managers, investors, and regulators. This is important at this time, because understanding whether income diversification and which of the streams of income can create value for banks or otherwise is important for decision makers in the banking sector. Also, the study contributes to the extant literature on income diversification in the region by considering the quoted banks from the low-income level economies of the region, a new data set. This is the first of its kind in SSA. By doing this, this study intends to fill the gap in the literature, enlighten regulators to understand the volatility of income sources that can perpetrate the default risk for the banks, and also contribute meaningfully to the economies which will inadvertently promote economic growth in the region.

Therefore, the research hypotheses are stated below:

H₀₁: Income diversification has no effect on financial performance in Low Income Sub-Saharan African Countries' commercial banks.

H₀₂: Interest income has no effect on financial performance in Low Income Sub-Saharan African Countries' commercial banks. H₀₃: Fee/commission income has no effect on financial performance in Low Income Sub-Saharan African Countries' commercial banks.

In section 1, apart from the background to the study and research hypotheses, the banking sector in SSA is introduced to show the current status of the region's sector. In section 2, relevant theoretical and empirical literatures are reviewed on income diversification and financial performance. In section 3, the dataset, variables, and research methodology are presented. In section 4, the empirical results are reported, the concluding sector is captured in section 5, and limitation cum suggestion for further study is captured in section 6.

1. Banking sector in SSA

SSA is sub divided into different income bracket. Specifically, there are 7 upper middle income economies, 12 lower middle income economies, and 26 low income economies (World Bank Database, 2017). The main focus of this study is the low income economies which constitute about 60% of the entire region. Sub-Saharan Africa confronts many problems on the one hand, but shows a great potential on the other. The level of human development is low, poverty is pervasive, infrastructural facilities are poor, and the region has a relatively poor regulatory environment and weak governance. Furthermore, growth has not been all-encompassing. Despite these challenges, some of the fastest growing countries in the world are located here, and the SSA financial sector has played a significant role in their financial deepening that led to growth (Nyantakyi, Sy, 2015). The region's banking sector remains underdeveloped and lags behind the rest of the world, with access to finance among both individuals and enterprises being among the lowest in the world. This hinders these countries from achieving their growth potential. The banking sector is at the forefront in terms of financial sector assets and activities, especially in low-income countries. Most SSA financial systems are small in size, with low levels of economic diversification, and governance problems. Furthermore, most economic activity takes place in the informal sector with no formal documentation to facilitate financial transactions. This had led to high interest rates and bank service costs. While access to financial services or account penetration in SSA countries increased by up to 20% between 2011 and 2014, particularly in East and Southern Africa, the financial soundness of the region remains weak. From 2012 to 2013, average non-performing loans (NPLs) for all SSA low-income countries, was approximately 7%, and was slightly higher for middle-income countries. However, the quality of assets in the region remains low. The IMF's financial soundness indicators show that ROA and net interest income decreased between 2004 and 2011, and that ROA in SSA banks was relatively low, to the tune of 1.77% in 2015. Banks in SSA have experienced changes in ownership. While most were predominantly owned by private companies, there has been a shift towards increased foreign ownership. This should lead to low concentration and the possibility of full growth, but the sector is still highly concentrated with low levels of competition. The main cause of these challenges is a failure to comply with supervisory standards. Indeed, only a handful of countries have implemented capital adequacy and deposit insurance which help to protect creditors' rights and maximise owners' wealth (Mecagni, Marchettini, & Maino, 2015). In terms of the proportion of private sector domestic credit to gross domestic product (GDP), which is a strong financial deepening indicator, SSA has the smallest financial depth among the various regions at 24%, half the average ratio recorded for Latin America and North Africa, and less than a quarter of OECD countries' ratio (Mlachila, Park, Yabara, 2013). This trend of partial growth cannot continue, as poor banking performance leads to deteriorating asset quality and low economic growth. It is important to examine how banks' income can boost performance.

2. Review of Literature

2.1. Relationship between Diversification and Financial Performance in Banking Sector

The capital market theory posits that there is a trade-off between returns and risks. The more an entity is willing to take up risk, the larger the returns. These risks are either market (undiversifiable) or systematic risk (diversifiable risk). Thus, a well-diversified bank is expected to yield higher financial returns on its investments than banks with little or no diversification. Under perfect capital market conditions, financial theory does not hold for a banking system. This led to the financial intermediation theory that emphasises the role of monitoring because of information asymmetries arising from agency relationships. Successful diversification calls for efficient monitoring because of the range of activities involved. D.W. Diamond (1984) posits that monitoring and its associated costs are constant across banks; hence, they should diversify their activities as widely as possible. This is despite the fact that previous studies point to a negative relationship between a bank's returns and diversification, because of the emphasis on specialisation (Winton, 1999). J. Goddard, D. McKillop, and J.O. Wilson (2008) identify three motivations for diversification: the quest for market power, utilisation of resources to enjoy competitive advantage, and minimising the agency problem. In terms of market power, diversified banks exhibit various anti-competitive characteristics. Resources refer to the core competencies; specific assets or distinctive capacities a bank possesses that can be exploited in its new activities. Finally, diversification can minimise empire building, and the pursuit of selfish interests and personal gain among managers, thus addressing the agency problem. This enables managers to focus on the ultimate goal of the bank, which is maximisation of owners' wealth that will spur their performances.

2.2. Review of Prior Studies

Previous empirical studies have produced mixed findings on income diversification and bank performance. Banks have two main stream/s of income, namely, interest income and noninterest (fee) income. While some studies have found interest income to be significant, others found that non-interest income was more important. An investigation into 472 US commercial banks covering the period 1988 to 1995 found that diversification of banking revenue from interest-based activities to fee-based activities leads to higher revenue volatility and total leverage (DeYoung, Roland, 2001). K.J. Stiroh (2004) study on US banks from 1984 to 2000 concluded that decreased volatility of net operating income is caused by the volatility of netinterest income; therefore, higher non-interest income is associated with lower risk adjusted profit and higher risk. Similarly, R. DeYoung and T. Rice (2004) examined US commercial banks for the period 1989 to 2001 using correlation and regression. They found that well managed banks have little involvement in non-interest activities. Furthermore, on average, a marginal increase in non-interest income leads to poorer risk-return trade-offs. Evidence from 978 banks in emerging and developing countries for the period 2000 to 2007 showed that competition and diversification of revenue into interest and non-interest activities increases stability. It was also found that revenue diversification gives rise to competition which affects insolvency risks in emerging market (Amidu, Wolfe, 2013). S. Sanya and S. Wolfe (2011) examined 226 banks across 11 emerging economies using system generalised methods of moments (SYS-GMM). The study found that diversification across both interest and non-interest income generating activities enhances profitability by decreasing insolvency risk. A study conducted by A.M. Sissy (2015) on 329 banks across 29 African countries for the period 2002 to 2013 found that cross border banking increases revenue diversification due to competition. This suggests that geographical and revenue diversification improves banks' performance and the stability of such performance. J.M. Kiweu (2014) examined income diversification in Kenyan banks between 2000 and 2010. The study showed that there is a positive correlation between net interest and non-interest income. The implication is that the benefits of income diversification do not offset the risks attached to fee-based income. In similar manner, P.R. Teimet, D. Ochieng, and S. Away (2011) employed correlation and multiple regression analysis to examine income diversification among 44 commercial banks in Kenya for the period 2005 to 2009. The findings point to positive correlation between the two sources of income, and suggest that diversification has a positive effect on Kenyan banks' financial performance. Amediku (2012) examined three Ghanaian banks for the period 2006 to 2010 using correlation and pooled regression. The results showed that non-interest income which is one of the dimensions of income diversification had significant and positive impacts on the performance of the sampled banks. In contrast, D.B. Senyo, A.T. Olivia, and A. Musah (2015) research on income diversification in Ghana for the period 2002 to 2011 using OLS found that interest income makes the highest contribution to banks' profits in Ghana, and that non-interest (fee) income only plays a positive role when there are short falls in interest revenue.

2.3. Theoretical Reviews

Structure, Conduct and Performance (SCP) Paradigm

Manson's Structure, Conduct and Performance (SCP) Paradigm has its recommendation by D.S.P. Mishra and D. Sahoo (2012) and G.A. Nabieu (2013) as the best hypothesis to test the relationship between the structure, conduct, and performance of the banking sector. The SCP hypothesis shows the relationship that subsists between market structure, firm conduct, and firm performance. The paradigm avers that barriers to entry, concentration or the diversification of their activities are the chief determinants of a bank's performance. In the banking context, the term 'Structure' in the SCP framework means the concentration or diversification of activities; and the number of banks in the industry; hence, the market structure of banks is affected by internal variables such as diversification, concentration, regulatory controls, and other external factors such as economic conditions (Nabieu, 2013). The term 'Conduct' in the framework denotes how banks behave in the market which includes their response to occasional withdrawals, price fluctuations, marketing strategies, and the innate behaviour of the banking business. Finally, 'Performance' refers to the level of returns generated from banks' products and services rendered (Nabieu, 2013). The SCP hypothesis affirms that firms' market structure affects their conduct and performance. Diversification affects their returns because of its potential to minimise risks by spreading their activities (Turkmen, Yigit, 2012).

Market Power Theory

Diversification is one of the strategies to address competition by enabling banks to increase their market power. Diversified firms accumulate market power and competiveness due to their stake in other markets. The market power theory has its origins in the work of Porter (1980), who used different strategies to distinguish a firm's position among its competitors. The theory

posited that diversification enhances profitability because firms with market power can cross subsidise, i.e. use the gain derived from one market to support competitive pricing in other markets, and can engage in mutual and reciprocal buying and selling that makes it difficult for potential competitors to enter the industry.

3. Data and methodology

3.1. Research design, nature of data, and sources of data

This research is an explanatory design focusing on the income diversification and banks' performance in SSA. Thus, it was carried out on the selected quoted commercial banks in low income economies of SSA. This study chooses to focus on the low-income countries because they constitute about 60% of the countries in SSA region, and with their predicament they are low income generating countries with huge dependence on banking system. Therefore, the banking sector needs to be improved so that it can positively spur their economies. There are 26 countries classified as low income economies, but only 19 countries have complete and required information on the variable to be considered for this study. Countries such as Burundi, Eritrea, Comoros, Congo (Democratic Republic), Sierra Leone, Somalia, and South Sudan are not included because of dearth of data. The countries examined are bank-based economies, hence, they are homogenous. They are either categorised as West Africa Economic and Monetary Union (WAEMU) or East Africa Community (EAC), which share similar economic and banking features. Therefore, this study deals with the general overview of income diversification and its effect on banks performance; may be it is a blessing indeed or a curse.

The secondary data used for this study are sourced from financial profile available at Fitch/IBCA Bureau Van Dijk Bank Scope database for the years 2009 to 2016. The choice of 2009 as a base year is based on the fact that the study focuses on the effect of income diversification after the 2007–2008 financial crisis, because the region vastly shifted to non-interest income sources after their harmless survival from the crisis.

3.2. Sampling of Low Income Countries' (LIC) banks

Table 1. Details of Sampled Banks using purposive sampling technique

S/N	Countries	No of Registered commercial Banks (N)	No of banks with relevant data for the study period (n)	Percentage of sample (n/N ×100)
1	Benin	12	6	50.00
2	Burkina Faso	12	7	58.00
3	Central Africa Republic	4	4	100.00
4	Chad	8	4	50.00
5	Ethiopia	15	8	53.00
6	Gambia	12	7	58.00
7	Guinea	15	8	53.00
8	Kenya	42	22	52.00
9	Liberia	9	5	56.00
10	Madagascar	10	6	60.00
11	Malawi	13	8	62.00
12	Mali	14	7	50.00
13	Mozambique	17	9	53.00
14	Niger	11	6	55.00
15	Rwanda	12	6	50.00
16	Tanzania	56	20	36.00
17	Togo	11	8	73.00
18	Uganda	25	10	40.00
19	Zimbabwe	13	9	69.00
Total banks used for the study		311	160	51.44

Source: author's review, IMF reports, and World fact book.

Since we are dealing with short panel study, unit root test will not be necessarily carried out. We adopt OLS, Fixed-Effect, and Random-Effect methods to estimate the parameters of the model stated for this study.

3.3. The Model

The simple performance equation framework of Structure, Conduct and Performance (SCP) hypothesis as used by G.A. Nabieu (2013) was adopted for this study:

$$P = f(C, S) \tag{1}$$

The performance model was written in panel data econometric form as given in equation (2):

$$P_{it} = \alpha_0 + \beta S_{it} + \gamma C_{it} + \varepsilon_{it}$$
 (2)

From the model, S_{it} captures structure which is proxy by diversification, C_{it} captures the conduct in the model. For the purpose of this study, only the effect of the structure (diversification) on performance is of keen interest. It was noted that there are different indices for measuring diversification degree. Herfindahl Hirschman Index (HHI) was used in this study because numerous studies have emphasized the acceptance of HHI as a good measure of diversification particularly in a financial sector (Kurincheedaran, 2015). Specifically, HHI ranges from 0 to 1 which weighs the relative proportion of various dimensions of the overall turnover for the business unit. Theoretically, a value greater than 0.5 denotes a high concentration of activities, and a value less than 0.5 denotes a better diversification. The value closer to 0 implies a higher degree of diversification, and a value of 0.5 denotes a perfect or complete diversification.

Explicitly, the model that reflects banks' financial performance (ROA) and income diversification is written as:

$$ROA_{it} = \beta_0 + \beta_1 IIR_{it} + \beta_2 FCR_{it} + \varepsilon_{it}$$
(3)

Based on the fact that the two main streams of income in the banking sector are non-interest income (fee income) and interest income (Stiroh, 2004), the HHI index of SSA income diversification was measured by net interest income and fee commission income.

These are proxied by the interest income ratio (IIR) and fee/commission ratio (FCR) respectively. To know the effect of income diversification on the performance of banks, the model to estimate will be:

$$ROA_{it} = \alpha_0 + \alpha_1 HHIin_{it} + \mu_{it}$$
(4)

3.4. Variable Definition

Based on the formular for HHI; HHI =
$$1 - \sum_{i=1}^{n} Q_i^2$$
, where $0 < HHI < 1$ and $Q_i = \frac{P_i}{P}$.

The HHI index of the income diversification (HHI_{in}) in SSA Low income countries is:

$$1 - \left[\left(\frac{\textit{Net Interest Income}}{\textit{Operating Income}} \right)^2 + \left(\frac{\textit{Feesand Commissions}}{\textit{Operating Income}} \right)^2 \right],$$

interest income ratio (IIR) is equal to
$$\left(\frac{\textit{Net Interest Income}}{\textit{Operating Income}}\right)$$
,

fee commission ratio (FCR) is equal to
$$\left(\frac{Feesand\ Commissions}{Operating\ Income}\right)$$
,

i is the cross-section, t is the time period, and ε/u is the error term. Also, α and β are parameters.

4. Data Estimate

4.1. Summary Statistics

Table 2. Description and Summary Statistics of variables

	ROA	IIR	FCR	ННІ
Mean	0.0251	0.3478	0.0546	0.5975
Median	0.0206	0.3152	0.0337	0.6138
Maximum	0.3928	2.5363	1.3376	1.0000
Minimum	-0.0133	0.0000	0.0000	-2.8545
Std. Dev.	0.0267	0.2358	0.0807	0.2433
Coefficient of variation	1.0656	0.6780	1.4772	0.4072
Skewness	5.8023	2.0842	6.5291	-3.4208
Kurtosis	57.2662	15.0631	84.5797	39.6620
Jarque-Bera	205,299.3000	10,859.6000	455,051.0000	92,727.4900
Probability	0.0000	0.0000	0.0000	0.0000
Sum	40.1179	556.5328	87.4355	956.0316
Sum Sq. Dev.	1.1415	88.9524	10.4200	94.6670
Observations	1,600.0000	1,600.0000	1,600.0000	1,600.0000

Source: author's computation (2018).

Table 2 shows the descriptive statistics of ROA, IIR, FCR, and HHI. The numbers of observations for the variables are of equal length. The table shows that only HHI is negatively skewed and this means that the fall in the level of HHI is more than the rise in the level of HHI. However, the variation in HHI is less than that of the reaming three variables as revealed by their respective coefficients of variation. Also, the peakedness parameters of the four variables suggest that they are all leptokurtic. Interestingly, the probability values of the Jarque-Bera show that ROA, IIR, FCR, and HHI are normally distributed.

4.2. Static Regression Estimate

Table 3. Regression Estimate 1 with Dependent variable: ROA

	OLS	Fixed-Effect	Random-Effect
ш	0.0041	0.0017	0.0024
IIR	(1.4398)	(0.5178)	(0.8109)
FCR	0.0221*	0.0206*	0.0208**
FCK	(2.6732)	(2.3533)	(2.5122)
Constant	0.0224***	0.0234***	0.0230***
Constant	(17.2584)	(17.6574)	(13.6930)

^{*, **, *** –} denotes significance at 10%, 5%, and 1% respectively.

Values in parenthesis are the t-stat.

Source: author's computation (2018).

Table 3 shows the impact of IIR and FCR on the interest variable ROA. The three different estimates of the parameters are presented in the table. OLS, Fixed-effect, and the Random-Effect estimators show that FCR impacted positively and significantly on ROA, while IIR impacted positively but not significant statistically. The positive effect of IIR and FCR was in tandem with the finance theory and the empirical findings of S. Sanya and S. Wolfe (2011) and P.R. Teimet, D., Ochieng and S. Away (2011).

The OLS, Fixed-effect, and the Random-Effect estimate agrees to a high extent; the parameter estimates are practically the same. A unit increase in FCR will bring about 0.02 increases in ROA. The implication of this is that FCR indeed has a significant impact in the determination of ROA in the selected countries. In order to check the robustness of the result derived above, HHI composite index of both IIR and FCR is used and the output generated is presented in Table 4.

Table 4. Regression Estimate 2 with Dependent variable: ROA

	OLS	Fixed-Effect	Random-Effect
ННІ	0.0056**	0.0044	0.0048*
nnı	(2.0493)	(1.4986)	(1.7143)
Constant	0.02843***	0.0277***	0.0279***
Colistant	(16.0652)	(14.8808)	(13.3686)

^{*, **, *** –} denotes significance at 10%, 5%, and 1% respectively.

Values in parenthesis are the t-stat.

Source: author's computation (2018).

The three different estimates of the parameters are presented in Table 4. OLS and the Random-Effect estimators show that HHI impacted positively and significantly on ROA, while Fixed-effect IIR show that HHI impacted positively but insignificantly on ROA. The three estimated parameters are practically the same and, therefore, no Hausman test was conducted. Based on the OLS result, it can be shown that a unit increase in HHI will bring about 0.006 unit increases in ROA, and the Random-Effect result shows that a unit increase in HHI will bring about 0.005 unit increases in ROA. The HHI combined effect of IIR and FCR shows a more appealing result, unlike when the variables are used separately. It is unarguable that income diversification impacted significantly on the financial performance of banks in the SSA low income countries.

Conclusions

This paper provides both theoretical and empirical evidences to sustain the idea according to which income diversification impacted on the financial performance of banks. It was ascertained that 95% of operating income in LIC's commercial banking sector comes from non-interest/fee and commission income source. This is logical based on the low access to finance, which is one of the predicaments of the region. Poverty is so high that people cannot afford adequate collateral for loan acquisition, and also there is no formal account report that can be used for advanced banking operations. Based on the fact that the existing literatures on this area of study show that income diversification is needed to survive intense competition. We used descriptive statistical tools and static regression econometrical tools; OLS, Fixed and Random effect model to show how diversification impacted on the financial performance of banks using data that spanned 2009-2016 for some commercial banks in SSA low income countries. The estimated OLS, Fixed and Random effect model show that FCR as a form of income diversification is highly significant in determining the financial performance of banks in the SSA low income countries. This implies that even though there is little or no switching and information cost involved in fee-based activities, the income generated by banks from this source is steady and stable. Also, there are adequate human resources and heavy financial investment in technology, which leads to decreasing operating leverage, reduced earnings volatility, and increased financial returns. However, the findings from OLS and Random effect model that FCR and IIR combined is highly significant in determining the financial performance of banks in the SSA low income countries. This implies that income diversification in this selected region's banking sector is indeed a blessing and not a curse. Hence, low income SSA countries' commercial banks are urged to strive to ensure proper investment with their income diversification to enhance better performance of their economies.

5. Limitation of this study and suggestions for further area of research

The limitation to this study is the inability to use all the low income countries and this is in no way a hitch to the findings as the 19 countries used covers more than 50% of the population. Also, further studies on this subject matter should look in depth into the reasons for the insignificance of interest based income source of banks, and how it can be corrected, as this is the traditional income source for banks which cannot be ignored.

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