The Effect of Financial Innovation on the Financial Performance of Financial Institutions in Cameroon

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Abstract

Purpose: The study sought to investigate the effect of financial innovations on financial performance of depository financial institutions in Cameroon. The specific objectives of the study were to examine the effect of product, process and institutional innovation on the financial performance of financial institutions.

Methodology: The study adopted a cross-sectional research design. Purposive and convenience sampling methods were used to select 210 respondents from 75 financial institutions in Cameroon. Primary data was collected using a self-administered questionnaire. Data collected was sorted, coded and analyzed using the Statistical Package for Social Sciences (SPSS v22.0). Data collected was analysed descriptively with the use of mean and inferentially with the use of ordered logit regression model and Pearson correlation metric to establish the relationship between the dependent variable and the independent variables and the results were presented in tables.

Findings: The findings show that increased financial innovation through process and institutional innovation can increase financial performances. For the basic regression used to find banks’ performance, the analysis indicates that process and product innovation, measured by the ATM, POS, mobile banking and credit card, significantly influence financial performance of financial institutions. Although there is no significant effect of institutional innovation on financial performance, there is still a positive effect.

Unique Contribution to Theory, Policy and Practice: The study therefore recommended that further study can be carried out on the effect of financial innovation on performance of depository financial institutions using different methods. In addition, depository financial institutions should transform banking service by adapting to process innovation so as to increase access to financial services.

Keywords: Financial Innovation, Financial Performance, Depository Financial Institutions
1.0 INTRODUCTION

Financial institutions play an important role in the development of an economy. Financial institutions are made up of commercial banking system, microfinance, insurances and other financial institutions. Among the financial institutions, the depository financial institutions form the central part in the financial sector. Depository institutions are one of the main sources of indirect finance to the economy where it has control over the deals with deposits and loans from corporations or large businesses, as opposed to individual members of the public (Alemadi, 2021). To remain in the market, depository financial institutions need to be profitable and by having good financial performance facilitates innovation and access to more banking services, which may have a mix results in different countries and continents.

Performance of depository financial institutions has experienced a mixed results in the Americas banking market (Berger & Humphrey, 1997), European banking markets, Asian banking markets and the African banking sector (Altunbas et al., 2001). and according to Weigand (2013) the banks’ revenue growth, profitability and levels of balance sheet capital decline from 2007-2009 in America, while the European banks continue lagging in terms of banks’ revenue growth, profitability and levels of balance sheet capital. According to Ayadi et al. (2012) factors contributing to European banks’ decline are more dangerous and include the persistent economic disparity between stronger and weaker Eurozone countries and the European Central Bank’s painfully slow efforts to reduce exposure to systemic risk, compared with countries such as the U.S. and the U.K. similarly in Asia, depository financial institutions touching and interesting performance over the years.

In Asia and particularly in the Kingdom of Kuwait, depository financial institutions contribute to 16.7% of the Kingdom’s total real GDP in 2013 (Alemadi, 2021). By November 2014, banking sector assets stood at over US$189.1 billion, more than twelve times annual Gross Domestic Product. In the United States of America, commercial banks contrasts sharply with that of their European counterparts in 2012. By the end of 2012, 15 of the 20 largest commercial banks in the U.S. posted record setting revenues, with 12 of these banks also earning record profits (Weigand, 2013). The financial performance of these banks may mean that they are ready to compete in a free-market environment and require no further post crisis regulatory support. According to Weigand (2016), financial performance of 20 largest commercial banks in Japan, U.S. and Europe from 2003-2015 shows that the stocks of U.S. commercial banks continued outperforming Japanese and European banks during the 2014-2015 period, but all three sets of banks underperformed their regional stock indexes from 2014-2015. Large banks in Japan, the U.S. and Europe continue to struggle to grow their total revenue post-crisis.

In Africa and Sub-Saharan Africa (SSA) in particular, the global banking or depository financial sector during the last two decades has experienced major transformations in its environment, resulting in a significant impact on its performance. Poor performance of banks (La Porta et al., 1997), has been largely due to lack of openness to foreign competition. Privatization which took
place in 1980s and 90s was expected to improve and boost performance of the banking sector in Africa. Various efforts through financial sector reforms, financial markets have remained largely fragmented with substantial gaps in the financing of economic activities for private agencies. Since the 1980s, the importance of the banking sector motivated the liberalization and restructuring of state dominated monopolistic, inefficient and fragile banking system in Sub-Saharan Africa (SSA) to contribute to economic development (Hauner & Peiris, 2005) though financial sector performance has remained low with depressed savings rates. Regardless of some improvements in economic growth in some African countries during the 80s and early 90s, financial sector performance has remained low with depressed savings rates. The low savings rates in the Sub-Saharan African countries suggest that investment and economic growth is still heavily dependent on foreign savings in form of external finance. The World Bank (2006) acknowledged that there are few signs of sustainable progress arising from financial sector and public enterprise reform.

Furthermore, in Cameroon, depository institutions have evolved over the years and have played a key role in the financial system and economic development as a whole. The Cameroonian banking system is constituted of microfinance and commercial banks among which the first three commercial banks are Société Générale de Banques du Cameroun (SGB), Banque Internationale du Cameroun pour l’Epargne et le Crédit (BICEC) and Afriland First Bank with respective capital of 12,5Billion XAF, 12Billion XAF and 15.8Billion XAF. And in terms of total assets, SGB registered 668.661Billion XAF, followed by BICEC with 658.468Billion XAF and Afriland First Bank with 654.902 Billion XAF (Kegninkeu, 2018) while CamCCUL, an umbrella organisation of microfinance in Cameroon controls over 80% of microfinance establishment in Cameroon.

The Cameroon banking sector experienced the failure of two major banks namely with the liquidation of Banque Meridien BIAO Cameroun (BMBC) in 1996, and Credit Agricole du Cameroun (CAC) in 1997. Although COBAC put in place better policies and prudential norms to ensure the stability of the system, it still experienced the failure of Amity Bank PLC in 2008 whose assets were bought over by Banque Atlantique in May 2009 (Kegninkeu, 2018). Also, the Commercial Bank of Cameroon (CBC) which is typically owned totally by Cameroonians faced financial difficulties for many years and is currently under restructuring. Also, some Microfinance Institutions recently collapsed such as FIFFA, CAPITOL and COFINEST just to mention a few. These various bank crises may lead to a reflection that the innovative tools used is one to take in consideration to the greatest extend, be it process, product or institutional innovative tools. Innovative tools should be as efficient and effective as to be able to mobilise resources at a lower cost.

A well-functioned financial sector looks for continuous adaptation, evolvement, and the diffusion of innovative financial assets, institution, and services along with easy access to financial services, and readily available for the population (Qamruzzaman and Wei, 2019). The role of financial innovation in the financial system assist in improving financial institutions performance (Chipeta and Muthinja 2018). According to Ignazio (2007) financial innovations refers to the development
of new financial products, new ways of delivering already existed financial services or new financial services with new processes. Thus, financial innovations can take different ways such as product, process, service and institutional innovation. Noyer (2007) defines financial innovation as processes that bring about new products in the market place. Therefore, financial innovation is a tool of easing, simplifying and ensuring financial products/services meet and exceed the requirement of their clients. So, it is imperative to examine the effect of financial innovation on the financial performance of deposit financial institutions in Cameroon given that the relationship between the financial innovation and banking performance is oblique and yet to test in empirical studies in Cameroon.

1.1 Problem Statement

Depository financial institutions’ performance in Cameroon has remained poor and inefficient in the overall financial intermediation process. The intensity of the challenges faced by depository financial institutions could be traced in recent past wherein, in 2019, the total balance sheet amount, commercial bank deposits, commercial banks credit and net profit in relation to bank clients dropped by 23%, 15%, 25% and 29% respectively (Ministry of Finance, 2020). Among the 15 active banks in Cameroon, the total balance sheet amounted to FCFA 6 472.40 billion; deposits of CFA francs 487.00 billion, total amount of credits of CFA francs 3 664.40 billion and the net profit of all the banks stood at CFA francs 75.5 billion. These figures are far lower than that of the previous years and a similar scenario of falling banking performance was also experienced in microfinance institutions during the same period.

Empirical study of previous studies’ outcome on financial innovation and financial performance has had mixed results. According to Ozili (2017), digital finance had a positive effect on financial performance in emerging and advanced economies. Francesca and Claeys (2010) concluded that financial innovations had insignificant impact on financial performance while Adhiambo (2014) ended that financial innovation had significant effect on financial performance. Fentaw and Thakkar (2022) revealed that financial innovation has positive and significant effect on financial performance of private commercial banks in Ethiopia. Okoth and Muia (2020) studies revealed that financial innovativeness of commercial banks had a positive and significant effect on financial performance of banks. The study further revealed that financial innovation constructs positively and significantly correlated with financial performance. From these results, it is clear that innovativeness dimension of commercial banks significantly affects financial performance of the banking sector in Cameroon. It is noteworthy that literature on financial innovation in low-income countries like Cameroon is just emerging coupled with varying results and conclusions on the effect financial innovation on performance of depository financial institution that underscores the relevance of this study. The study is out generally to answer the question, such as what is the effect of banking innovation on the performance of commercial banks in Cameroon?

Objectives of the Study
i. To examine the effect of product innovation on the financial performance of depository financial institutions.

ii. To study the effect of process innovation on the financial performance of depository financial institutions.

iii. To assess the effect of Institutional innovation on the financial performance of depository financial institutions.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Transaction Cost Innovation Theory

According to Hicks (1982), business entities can reduce transaction cost uncured through the use of innovative solution/tools. This is true because an introduction of mobile banking and internet banking reduced the number of walking in customers and the number of clients to be attended to by the tellers. This lead to the reduction in the number and tellers and a reduction in cost of paying these tellers. As a result, improved bank services, financial institution are able to earn increase profits.

Institutionalist Theory

Institutional theory was propounded in the late 1970s by John Meyer and Brian Rowan as a means to explore further how banking institutions are related to, and were shaped by their societal, state, national, and global environments. The main assumption of institutionist theory is that institutions create elements of order and predictability. They fashion, enable, and constrain management as they act within logic of appropriate action. Institutions in this context are financial intermediaries, markets and regulators. The institutionalist approach focuses primarily on the creation of viable financial institutions that can allow the unserved customers or inadequately served customers to be appropriately served thereby exposing them to access to a whole range of adapted finance services and to gain financial self-sufficiency for a larger outreach of activities (Ejigu, 2009; Gutiérrez-Nieto et al., 2009). The central point of the approach is the institution, and institutional success is generally measured by the progress made by the institution towards confronting financial self-sufficiency (Adair & Berguiga, 2010).

The loophole of the institutionalist approach is that it considers customers or micro entrepreneurs very close to the poverty line (\$2 per day) whose interest rates are high enough to ensure the financial autonomy of banking institutions. A tradeoff between targeting the poor and profitability at the same time by banking institutions (Morduch, 1998) termed “microfinance schism”. The significance of the institutionalist approach is grounded on the fact depository financial institution focus is to set up a system of financial intermediation durably and especially dedicated to the poor. In such an approach, the future of the depository financial institution will be dominated by many
great institutions with lucrative goals that provide finance departments with high-quality services to a great number of poor customers.

**Diffusion of Innovation Theory**

Everett Rogers authored diffusion of innovations theory in 1962. The theory states that new ideas can be spread over time and therefore the theory aimed explaining how, why, and at what rate new ideas and technology spread. Based on the assumptions that the diffusion of innovation theory centers on conditions which may increase or decrease the probability that an idea or product gains momentum and diffuses through a specific population group or social system, people as part of a social system adopt a new product (ATM, internet banking or debit card) as perceived by them as a new or innovative. This means that diffusion is possible only when the product is perceived to be innovative or new. According to Schumpeter, Markets are more conducive to innovation due to profit and intensive investments in research and development. According to him, the monopolistic firms are better positioned to be innovative since they encounter less market risks and have relatively stable cash flows to support innovations. Arrow competition is necessary for innovation to happen and therefore monopolistic firms may not have the incentive to innovate.

Institutional theory of financial innovations can be partly explained by regulations. Regulations interact with financial innovations in two ways. Firstly, regulations can be implemented to encourage financial market participants to invent responsible and beneficial financial innovations. Financial regulation remains to be an important driver in the growth and development of financial innovations. Secondly, regulations can be drivers of financial innovations in the sense that they prohibit financial firms to engage in particular financial activities. In order to circumvent around the rules and regulations, financial institutions innovate in order to maintain their profits.

Difficulties in quantifying human behaviours and human networks due to their complexity are among the chief weaknesses of this theory. It is extremely difficult or impossible to measure what exactly causes adoption of an innovation (Damanpour, 1996). Those encouraging adoption of financial services innovations need to be aware of the many forces acting on an individual and his or her decision to adopt an innovation. Hence, the theory misses some pertinent factors or variables that may influence adoption. However, this theory is significant to this study as it shows how institutional dynamics have interacted to result to emergence and development of some of the financial innovations. A classic example of financial innovation emanating from institutional dynamics is internet banking. The BEAC and COBAC through its legislations has supported internet banking through enactment of relevant legislations and guidelines, which supports internet banking. The strength of the theory lays in its ability to guide practical information flow from awareness stage to decision and implementation stage. The theory also uncovers the importance of technology in every innovation. Technology (internet, mobile banking etc) facilitates individuals at the persuasion stage to get more information about the new product that would convince them to confirm and adopt the innovation. Despite these strengths, the weaknesses of diffusion of innovations theory go a long way to reducing its power.
2.2 Conceptual Framework

The article proposed that the financial performance of banking institutions is determined by products innovation, process innovation and institutional innovation as captured in figure 1.

**Figure 1: Conceptual Framework**

*Source; Researcher (2023)*

**Product Innovation**

Product innovation refers to the process of improving existing products or creating new products or product line. Financial institutions strive to maintain and increase their market share by preventing or reducing competition. According to Rosli and Sidek (2013) and Erickson and Jacobson (2010) and Alegre, Lapiedra and Chiva (2006), innovation in firm’s products have positive and significant impact on financial performance. Product innovation is captured by elements such as automated teller machines and point of sales. Mugane and Ondigo (2016) sought to investigate the effect of financial innovations on financial performance of commercial banks in Kenya. The study conducted a census on all the 43 commercial banks to collect primary data. An ordinary linear regression model was used and the study findings indicated that there is a negative and significant relationship between product innovation and ROA while service innovation and organizational innovation had a positive and significant relationship with ROA. The study recommended that commercial banks should implement effective product innovation strategies.
that won’t increase their operational risks and should focus more and invest more in both service and organisational innovation as a means to increase ROA.

**Process Innovation**

Process innovation is the development of new or improved financial delivery channels. Sampong (2015) in a study carried out on process innovation in mobile and internet banking in Ghana revealed that increased revenue, reduction of operating costs and improving profitability in commercial banks were observed as a result of process innovation. The adoption and introduction of process innovation during the 1987 to 2008 in the Tunisian banking sector increased the profit earned (Mabrouk and Mamoghli 2010). Mohamed and Olweny (2019) assessed the effect of innovation on financial performance of listed banks in Kenya. Specifically, the study investigated the effect of product innovation, process innovation, service innovation and institutional innovation on financial performance of listed banks in the Nairobi Securities Exchange. The study sample was drawn from the population using stratified random sampling technique with 94 respondents represented by the branch managers drawn from the different banks. The study used both primary data and Secondary data. Data analysis was carried out by use of descriptive statistics and inferential statistics that involved the use of regression analysis to determine the strength of association between the variables. The findings revealed that innovation has a significant effect on financial performance and recommended that banks should adopt innovation to enhance growth, competition, increased productivity and profits.

**Institutional Innovation**

Institutional innovation in the financial industry consist of the changes in the business structure of banks, improvement of new types of financial intermediaries and changes in the legal and supervisory framework (Frame & Lawrence, 2001). According to Muyoka (2014) institutional innovation has reduce institutions’ costs (transaction, administrative costs etc) that has led to increased firm performance in Kenya. Gambo (2020) examined the effect of banking innovations on financial performance of listed commercial banks in Nigeria. Secondary data was collected from all listed Commercial Banks in Nigeria between the period 2008 to 2019. Correlation analysis and multiple regression analysis were used to establish if the relationship/effect between the independent variable and the dependent variables. The study found that technology innovation as measured by ATM, mobile banking and internet banking has a positive impact on the financial performance of listed Commercial Banks in Nigeria. The study recommended that Commercial Banks managers and government should properly adopt strategy that will encourage businessmen and general public in using automated teller machine which will improve effectiveness and efficiency of the banking sector.

**Financial Performance**

Financial performance is an objective and subjective measure of an organization. Its measures how well the revenue of an organization is improved through effective utilization of organizational
assets. Financial performance measures the financial health of an organization at a particular point in time. There are different measurement of financial performance and according to (Jayawardhera & Foley, 2018) revenue from operations and total unit sales captured financial performance. Profit is the definitive goal of the firm and according to Bessler et al., (2008) profitability measures how an organization uses it resources to generate profits. This means that financial performance is the expression of the revenues in terms of financial resources. Return on Total sales revenue, profits, return on assets, return on equity and net interest margin are some financial performance measures (Murthy & Sree, 2013). ROA measures the ability of an organization's management to generate revenue from using company assets. According to Wong (2014), a higher ROA indicates that the company is more efficient in using its resources. ROE measures the rate of return on owner equity employed in the business (Mehran, 1995).

2.3 Research Gaps

The majority of financial inclusion studies have either focused on the supply side (outreach) perspective, assuming that the providers of financial products and services independently influence financial inclusion. While the supply side perspective is important, it is also useful to note that the supply side, on its own, may not adequately explain the financial inclusion incidence. To bridge the gap and achieve a balanced effect and a more complete financial inclusion process, this study has adopted a mixed approach by incorporating the demand side (access) that individual financial consumers use the products and services available.

To date, there has been a scanty literature on financial inclusion in Cameroon. This study will contribute to provide a measurement of financial inclusion and performance of financial institutions in Cameroon. We shall use measurement that have been applied in other countries to evaluate the situation of financial inclusion in Cameroon and how financial inclusion have impacted the performance of financial institutions in Cameroon.

Previous studies on financial performance have restricted their views on either product, process or organization. Thus limited single researches have been done on product, process and organization innovation as factors that affect the financial performance of financial institution. It is this research gap that motivated this particular study. Thus it sought to fill the gap by establishing the effects of product innovation, process innovation and organizational innovation on the financial performance of financial institutions.

We will fill an important gap in the literature by providing new evidence on the impact of financial inclusion on the performance of financial institutions in Cameroon. The reviewed literature above exposed that various conceptual studies have been conducted on financial inclusion but scarce empirical studies have touched varied aspects of financial inclusion. Further, there is paucity of empirically tested relation between financial inclusion and performance of financial institutions (both commercial banks and microfinance institutions).

3.0 MATERIAL AND METHODS
The study adopted a cross-sectional research design. Purposive and convenience sampling methods were used to select 210 senior managers’ respondents from the financial institutions' targeted population of 1590 senior managers’ respondents. Primary data was collected using a self-administered questionnaire. The questionnaire contained real questions aimed at avoiding perceptions and bias. The questionnaire was subjected to a pilot test wherein 5 heads of commercial banking and MFIs were requested to fill the questionnaire. Data was coded, entered into SPSS, and means calculated. This study applied descriptive statistics such as mean and standard deviation while inferential statistics such as ordered logit regression and Pearson correlation matrix were used to establish the relationship between the dependent variable and the independent variables. To make reading and interpretation easier, the results were presented in tables form. The research was guided by the following ordered logit regression model:

\[
\text{Perf} = \frac{1}{\sum_{j=1}^{4} \left( \exp \left( \alpha_0 + \alpha_1 \text{RODIN} + \alpha_2 \text{PROCIN} + \alpha_3 \text{INSTIN} + \alpha_4 \text{NATBNK} + \epsilon_i \right) \right)} \\
\text{Pr}(Y=j | j) = \frac{1}{\sum_{j=1}^{4} \exp \left( \alpha_0 + \alpha_1 \text{RODIN} + \alpha_2 \text{PROCIN} + \alpha_3 \text{INSTIN} + \alpha_4 \text{NATBNK} + \epsilon_i \right)} \\
\text{Apriori Expectation: } \alpha_0 \neq 0, \quad \alpha_1, \alpha_2, \alpha_3, \alpha_4, > 0
\]

Where:

\[
\text{Pr} = \text{order log odds or likelihood}; \quad Y = \text{the ordered response variable (dependent Variable) of 1 to 4}; \quad J = \text{Five levels of the response variable of strongly disagree, disagree, indifferent, agree, and strongly agree}; \quad \text{Perf} = \text{financial performance}; \quad \text{PRODIN}=\text{Product Innovation} \quad \text{PROCIN}=\text{Process Innovation}, \quad \text{INSTIN}=\text{Institutional Innovation}, \quad \text{NATBNK}=\text{Nature of the Bank}; \quad 1=\text{commercial bank}, \quad 0=\text{MFI}; \quad \alpha_0 = \text{constant term} \quad \alpha_1, \alpha_2, \ldots \ldots \ldots \alpha_4 = \text{parameters to be estimated}
\]

4.0 FINDINGS

The first part of this section, present the data description for all variables (dependent and independent). Further, the empirical analysis was presented in the second part for the models

Descriptive Statistics

Table 1, summarizes the descriptive statistics for the variables utilised in the study; it covers accurate information about the dependent and independent variables in the form of mean, standard deviation, minimum, and maximum.
From table 1 above, the findings revealed the average number of bank officials attested that they have experience an increased financial performance over the years with mean 3.6 and standard deviation 1.05. Among the independent variables, process innovation scored the highest mean (3.6), an indication that ATM and POS terminal have had a positive impact on the financial performance of financial Institutions. We used the variance inflation factor (VIF) test to test whether multicollinearity problem existence in the study models.

### Table 2. Correlation Matrix And Multicollinearity Diagnostics.

<table>
<thead>
<tr>
<th>Name of the bank</th>
<th>Financial performance</th>
<th>Product Innovation</th>
<th>Process Innovation</th>
<th>Institutional Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the bank</td>
<td>1</td>
<td>.152*</td>
<td>-.202**</td>
<td>1</td>
</tr>
<tr>
<td>Financial performance</td>
<td>-.152*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Innovation</td>
<td>.515**</td>
<td>-.202**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Process Innovation</td>
<td>.080</td>
<td>-.034</td>
<td>.861**</td>
<td>1</td>
</tr>
<tr>
<td>Institutional Innovation</td>
<td>.043</td>
<td>.125</td>
<td>.634**</td>
<td>.768**</td>
</tr>
<tr>
<td>VIF</td>
<td>3.906</td>
<td>5.692</td>
<td>2.455</td>
<td></td>
</tr>
<tr>
<td>Tolerance</td>
<td>.256</td>
<td>.176</td>
<td>.407</td>
<td></td>
</tr>
</tbody>
</table>

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

**Correlation is significant at the 0.01 level (2-tailed).
The VIF result above, indicated that the mean VIF was 4.018. The result indicated that the multicollinearity problem did not exist in the independent variables in this study. (Shihadeh et al., 2018) holds that the value of VIF should not be more than 10. The correlation between the variables are pretty good in the absence of a high correlation between the variables and, hence, the lack of a multicollinearity issue.

**Empirical Test – Ordered Logit**

*Table 3 Logistic regression results – financial innovation and performance*

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>Wald</th>
<th>P-Value</th>
<th>Odd Ratio 95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Performance = 2.00]</td>
<td>-15.012</td>
<td>2.797</td>
<td>28.05</td>
<td>.000</td>
<td>3.02E-07</td>
<td>-20.494</td>
<td>-9.530</td>
</tr>
<tr>
<td>Process Innovation</td>
<td>-10.427</td>
<td>1.757</td>
<td>35.237</td>
<td>.000</td>
<td>2.96E-05</td>
<td>-13.870</td>
<td>-6.985</td>
</tr>
<tr>
<td>Product Innovation</td>
<td>6.266</td>
<td>1.079</td>
<td>33.738</td>
<td>.000</td>
<td>5.26E+02</td>
<td>4.152</td>
<td>8.381</td>
</tr>
<tr>
<td>Institutional Innovation</td>
<td>.100</td>
<td>.402</td>
<td>.062</td>
<td>.803</td>
<td>1.11E+00</td>
<td>-.688</td>
<td>.889</td>
</tr>
<tr>
<td>[Commercial Bank=1]</td>
<td>-5.161</td>
<td>1.079</td>
<td>22.878</td>
<td>.000</td>
<td>5.74E-03</td>
<td>-7.276</td>
<td>-3.046</td>
</tr>
<tr>
<td>[Microfinance =2]</td>
<td>0</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>1.00E+00</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Financial Innovation</td>
<td>-.388</td>
<td>.269</td>
<td>2.068</td>
<td>.150</td>
<td>6.78E-01</td>
<td>-.916</td>
<td>.141</td>
</tr>
</tbody>
</table>

**Pseudo R²**

.856

**-2(Log Likelihood (β₀)**

Intercept Only=618.474 Final =.000,

\[ x^2 = 366.394 \quad 6 \quad \text{Sig} = .000 \]

**Goodness-of-Fit**

df=20, \( x^2 = 618.474 \) and \( \text{Sig} = .000 \)

Link function: Logit.

**Source: established by the author (2023)**

Reading from table 3, the threshold represents the response variable in the ordered logistic regression. The threshold estimate for [Perf = 2] to [Perf = 4] is the cut-off value used to
differentiate strongly disagree from strongly agree when values of financial performance variables are evaluated at zero. The results show that respondents that had a value of -15.012 or less on the underlying independent variable that gave rise to our performance variable would be classified as low performance (disagree) given the respondents were MFI, holding other variable constant. Respondents that had a value of -11.539 (this correspond to [Perf=4]) or greater on the underlying latent variable that gave rise to our performance variable would be classified as high performance (agree) given they were MFI respondents. Respondents that had a value less than -15.012 and greater than -11.539 (corresponding to [Perf = 1] $ [Perf = 4]) on the underlying latent variable would be classified as very low performance (strongly disagree) and very high performance (strongly agree) respectively. This means that if the respondents were to be evaluated one after each, respondents with scores less than -15.012 would indicates experiencing very low performance, respondents with scores greater than -11.539 would indicate experiencing very high performance. The location represents the explanatory variables in the ordered logistic regression. They are the ordered log-odds (logit) regression coefficients. A unit change in product innovation, process innovation and institutional innovation and bank type results to a change in financial performance by -10.427, 6.266, and .100 respectively in the ordered log-odds scale while the other variables in the model are held constant. While product innovation shows a negative relationship with financial performance, process innovation and institutional innovation shows a positive relationship. The ordered logit for type of bank=1 (commercial bank) being in a high performance category is -5.161 less than microfinance when the other variables in the model are held constant.

An increase in product innovation was associated with a decrease in the odds of experiencing high performance, with an odds ratio of 2.96 (95% CI, -16.777 to -6.985), a statistically significant effect, Wald $\chi^2 = 2.96$, $p=0.000$. This means that the odd of having high financial performance is 2.96 time less for banks with product innovation than banks with low product innovation. Secondly, an increase in process innovation was associated with an increase in the odds of experiencing high financial performance, with an odds ratio of 5.26 (95% CI, -4.152 to -8.381), a statistically significant effect, Wald $\chi^2 = 5.26$, $p = 0.000 < Alpha = .05$. This means that the odd of having high financial performance is 5.26 time higher for banks with increase process innovation than banks with low process innovation. Furthermore, an increase in institutional innovation was associated with an increase in the odds of considering high performance, with an odds ratio of 1.11 (95% CI, -16.688 to 0889), a statistically insignificant effect, Wald $\chi^2 =1.22$, $p=0.803 > alpha =0.05$. This means that the odd of having high financial performance is 1.11 time higher for banks with increase institutional innovation than banks with low investment in institutional innovation. Again, the odds of commercial bank experiencing high performance were 5.74 (95% CI, -7.276 to -3.046) times less than that of micro finance, a statistically insignificant effect, Wald $\chi^2 = 5.74$, $p=0.000 < alpha = 0.05$. This means that the likelihood of commercial bank experiencing high performance is lower than microfinance by 5.1%. This means that the odd of having high financial performance is 5.1 time lower for commercial banks than micro finance institutions. In sum, an increase in financial innovation was associated with an increase in the odds of considering performance to be high, with
an odds ratio of 6.78 (95% CI, 916 to .141), a statistically insignificant effect, Wald $\chi^2 = 2.068$, $p = 0.150 > \text{Apha} = 0.05$. This means that the odd of having high financial performance is 6.78 time lower for banks with financial innovation services such as internet banking, POS, agency banking and mobile banking services than banks with low usage of internet banking, POS, agency banking and mobile banking services.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Three key findings from this study established that product innovation has a negative and significant effect on financial performance of financial institutions. The study concluded that the negative effect may be due to increased risk of failure and high cost, resulting from huge capital injected and longer time committed in bring forth automated teller machines and credit cards. Majority of the clients do not use innovated products and preferred traditional system of operation since they are familiar with and to an extend lack the requisite knowledge to operate innovated products. Secondly, the findings revealed that process innovation has a positive and significant effects on the financial performance of financial institutions. This study therefore concluded that the positive effects may be explained by the fact that majority of the respondents attested that income generating potential of the bank has been expanded by the utilisation of POS terminal and mobile banking and that income from POS terminals and mobile banking has high margin hence contributing positively to bank annual profitability. Thirdly, institutional innovation was revealed to positively and insignificantly influence financial performance of financial institutions. It was revealed that internet banking has had no positive effect of increasing commission fee based income and interest based income. Also, Income from internet banking has low margin hence contributing negatively to bank annual profitability. The study then concluded that increase financial innovation through process and institutional innovation can increase financial performances.

5.2 Recommendations

The study recommended that financial institutions should adopt product innovation and institutional innovations since they affect their performance positively. Banking institutions in Cameroon should value popularization of mobile banking, internet banking and agency banking in the industry as this has a positive effect on their financial performance. Banks especially microfinance institutions should increase mobile and internet banking transactions through creation of a user friendly software that can provide easy interface between the banks and the clients in order to increase their profitability. Lastly, ATM should be established in remote areas that depository financial institutions do not have branches.

6.0 REFERENCES


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