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Financial Inclusion Strategies and Performance of Commercial Banks in Rwanda; A Case of I&M Bank in Rwanda

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Abstract

The research intended to analyze the effect of financial inclusion strategies on performance of commercial banks in Rwanda, a case of I&M Bank Rwanda Ltd. The specific objectives of the study were to examine the effect of agency banking, financial innovation and loan products on financial performance of commercial banks in Rwanda and guided by three theories which are agency theory, constraint-induced theory and innovation theory. A sample size of 92 employees among 1,232 was taken and data was collected through questionnaires and interview guide. SPSS 23, descriptive research design, correlation and regression statistic were used in the analysis of collected data. The results of the study indicated that agency banking application is the important driver to facilitate people to get banking services form banks. The results established that agency banking and financial inclusion are satisfactory in explaining the performance of commercial banks. The coefficient of determination, also known as the R square, was 0.594 (59.4%). This implied that agency banking and financial inclusion strategies explain 59.4% of the variations in the performance of commercial banks. As conclusions, financial inclusion strategies analysed in this research play an important role in the performance of commercial banks in Rwanda. Financial institutions in Rwanda use financial inclusion strategies to boost their financial performances. Automated Teller Machine (ATM) is important and very effective because it facilitates the customers the access of their accounts to withdraw or deposit money as it is for digital banking, debit cards and smart cards. This enables banks to increase sales and influence its financial performance. For loan product, it is concluded that this is an important strategy of I&M Bank to attract customers thus affect the financial performance of the bank. The study recommended that I&M Bank has to improve its agency banking by increasing their number and location. I&M Bank has to extend its branches to remote areas and increase the number of ATMs so that people in remote areas get different financial services easily.

Keywords: *financial inclusion strategies, agency banking, financial performance, I&M Bank, Rwanda*

1.0 Introduction

World Bank (2013) describes financial inclusion strategies as route maps of activities, agreed and defined at local or subnational level, which stakeholders follow to realize financial inclusion purposes. Hariharian and Markatanner (2012) defined the term financial inclusion to be a tactic which the purpose is to increase the number of individuals who have the access to official financial services while Chibba (2010) viewed financial inclusion as a financial interference tactic that aimed at conquering the market difficulties that impede the deprived and disadvantaged from having access to financial services. Agency banking is a kind of branchless banking that permits the traditional banks to spread their system of branches and services in a cost-efficient way throughout approved agents. Banking agents helps in cash-in, cash-out, balance inquiry, produce mini reports, microcredits, airtime buying, bills payments and money transfer. According to Joseph Schumpter, financial intermediaries mobilise savings, apportion capital, manage risk and hazard, comfort transactions, monitor businesses, lower cost of investment, improvement of society's resource (Schumpeter, 2012). Intermediaries or mediators can also vary risks and exploit economies of scale. For instance, an organization may want to finance a big project with great projected returns, but the investment may necessitate a enormous lump-sum capital expenditure (Verdouw, Uzsoki & Dominguez, 2015).

An investor may have no resources to finance the whole project nor the want to dedicate a disproportionate portion of savings to a sole investment. Therefore, lucrative occasions can go unexploited deprived of mediators to mobilize and apportion savings. Intermediaries do alot more than passively choose to finance the projects. They can start the formation and alteration of firms' activities. They also provide payment, disbursement, clearing and netting services. Modern economies, replete with difficult collaborations, necessitate secure mechanisms to settle activities. Deprived of these services, many transactions would be impossible, also there would be less scope for specialization, with a equivalent loss in efficiency. Financial intermediaries, in addition to improving resource apportionment, encourage individuals to save more efficiently by providing attractive tools that gather aspects of depositing, financing and insuring. They are essential for economic develoment (Schumpeter, 2012). The literature indicates four theories. The theory of constraint-induced financial innovation says that outside constraints like policy and interior handicaps like management of the organization are some of limitations in the process of pursuing profit maximization innovation (Silber, 2013). For it, the reason of financial innovation is to decrease the transaction cost. Kane (2011), an american economist is the inventor of circumventation innovation theory. For him, FIs involve the status like the decrease of income and the disappointment of organization (Kane, 2011).

Loan creation by itself does not look like to make banks exceptional. Likewise, banking theorists dedicated on the importance of liquidity endowment in combination with loan creation to clarify the sole economic function done by banks. Deposit runs denote a potent chastening device that limits banks' motivations for risk-taking and misalocation of assets. This offers some level of quality guarantee in bank's loan portfolios. Since non-bank lenders that cannot provide demand deposits do not have the profits of a friable capital structure, they are less reliable in their loan portfolio quality assurance. This may clarify why a loan endorsement by nonbak lenders does not convey the similar good new weight as does a loan endorsement by banks. Brunnermeier and Sannikov (2016) used the theory of money to highlight the role of credits provided by financial institution in money creation. For Fatihudin, Jusni and Mochklas (2018), financial performance is the attainment of the business's financial profitability for a certain period for the gathering and apportionment of finance measured by capital adequacy, liquidity, solvency, efficiency, leverage and profitability. For them, it is the company's capability to manage and control its own resources. I&M Bank as one of the financial institutions in Rwanda is also trying to adopt new technologies. The question was to know if these strategies are effective to the institution to achieve its goals and objectives. Analyzing the effect of financial inclusion strategies on financial performance of commercial banks in Rwanda focusing on I&M Bank.

1.1 Problem statement

Commercial banks have an important part in the lives of the population of countries. Good financial profitability of commercial banks in not only essential for their owners and other stakeholders but also to the whole economy. Different strategies must be put in place to sustain its performance. Among those strategies is financial inclusion. Actually, I&M Bank has presence in a region; Kenya, Mauritius and Tanzania. In Rwanda, I&M Bank has sixteen (16) branches and plan to expend its footprint throughout innovation as well as financial inclusion. In 2017, the net non-interest income of I&M Bank decreased by 11%. But the bank managed to contain interest and other similar expenses at 19% in line with the growth in the deposits. In this year, the operating expenses grew by 6% in line with the inflation rate and the profit before tax (PBT) of the bank grew at 17% to Frw9.8 billion compared to Frw 8.4 billion for 2016. In 2017, the bank held financial assets (financial securities) held for traiding amounting Frw 17.6 billion that was exposed to market risk where less than 1% of listed bonds have been traded in 2016 and 2017. The bank had non-current asset of Frw 1.9 billion relating to intangible assets and Frw 5.2 billion relating to tangible assets. The bank did not suffer concentration risk and there was no single customer who contributed more than 15% of the revenue.

2.0 Literature review

2.1 Empirical literature

Ayadi and Ellouse (2015) studied the determinants of Tunisian banking performance. They used regression analysis to do the study. They found that banks financial performance is all that helps to improve and viewed performance the ability to achieve the objectives while minimizing costs. Their findings revealed also that the performance of banks depends to capitalization, privatization and quotation. According to Jimoh, Shittu and Attah (2019), in their research, using regression analysis, they found that efficiency and effectiveness are important terms in evaluation measurement of business performance as well as profitabilityIndicators like Return on Asset (ROA), Return on Equity (ROE) and Net Interest Margin (NIM) exist for measuring financial performance of banks (Jimoh, Shittu & Attah, 2019). Hwang, Yen and Cheng (2014), with their study about critical factors influencing the adoption of data warehouse technology: a study of banking industry in Taiwan, they stated that over the past decade, the globalization and liberalization of financial markets advances in both financial and non-financial technologies, and various political and economic events have increased competition among African banks and forcing the authorities to deregulate and restructure the domestic banking industry. Before financial reforms, there were several potential financial crises among banks: peaks in nonperforming loan ratio, loose credit, inferior capital adequacy ratio, over banking due to excessive competition, less profitability and lack of innovation in banks.

Berg *et al.*, (2012), in their study about public investment, growth and debt sustainability: putting together the pieces, using a descriptive design, they found that to overcome these crises, reforms or restructuring programs are intended to foster better resources allocation and improve productivity. Financial innovation is an indispensable force encouraging the financial system toward the superior economic capability with great economic benefit accumulating from the variations over the time (Sekhar, 2018). Kamau and Ngari (2014) used descriptive research to study the influence of financial innovations. According to the authors, financial innovations such as usage of ATM, digital banking (mobile phone banking, internet banking (e-banking)/online banking), debit cards and smart cards usage are taking place at an overwhelming fast pace in the international banking industry. Their research found that banks in the country of Kenya use extremely financial innovations to survive in the current environment characterized by tough competition and competitive bank products. For the usage of internet banking, the study found that it adopted to expand correctness and proficiency and to increase quickness and reliability of the banking system.

Melody (2015) used a descriptive study to analyze the access to finance in Southern Soudan. Loans are provided for different reasons including purchases of home to live in, investing, renovation and other businesses (Melody, 2015). Financial inclusion is probable to affect the overall degree of lending chance of banks. By getting unbanked/ underbanked areas while extending small credits, commercial banks can decrease distances and shape a durable relationship with their clients. For Ahamed and Mallick (2017), when commercial banks differentiate to regions where big number of unbanked people are located, there are better able to comprehend the distinctions of the local household/organizational environment. This leads to reduced default risk, cost monitoring and improve lender-borrower proximity, and relationship, which in turn enhance banks return.

2.2 Critical Review and Research Gap Identification

There are different studies found in the empirical review relating to financial inclusion or the performance of commercial banks. These studies condidered other factors leading to the performance of commercial banks and or other importance of financial inclusion. Jimoh, Shittu and Attah (2019), consider efficiency and effectiveness as important terms in evaluation measurement of business performance. Kamau and Ngari (2014) in their research, they found that banks in the country of Kenya use extremely financial innovations to survive in the current environment characterized by tough competition and competitive bank products. For the usage of internet banking, the study found that it adopted to expand correctness and proficiency and to increase quickness and reliability of the banking system. According to Ahamed and Mallick (2017), when commercial banks differentiate to regions where big number of unbanked people are located, this leads to reduced default risk, cost monitoring and improve lender-borrower proximity, and relationship, which in turn enhance banks return. These studies are limited on determining factor of profitability of commercial banks or other causes of financial permance of banks without considering financial inclusion strategies this study intends to analyse or financial inclusion is considered to be used for other reasons.

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2.3 Theoretical framework

2.3.1 Constraint-induced Theory

The theory of constraint-induced financial innovation mentions that the purpose of profit maximization of financial institution is the main reason of financial innovation (Silber, 2013). The factors that handicap the financial performance can be self imposed, market imposed or government imposed. Silber expressed his opinion on institutions' behavior as a sample linear programming model of optimization where firms maximize utility subject to a number of internal and external constraints.

2.3.2 Regulation innovation theory

Regulation innovation theory was developed by Davies and Scylla (2012). For them, financial innovation attaches social directive assiduously and it is a regulation change that has mutual impact and is mutual connection with economic regulation. It is very challenging to have room of financial innovation in the planned economy with severe control and in the pure free-market. That is why any alteration leaded by regulation improvement in financial system can be considered as financial innovation (Davies and Scylla, 2012).

2.3.3 Agency Theory

An agent is an individual who acts on the behalf of another individual, the principal, in working with other people. The principal is one who delegates a task to the agent. Those authors proposed a theory of how the management of a business is founded on the conflicts of interest among the company's proprietors and its managers. Jensen and Meckling demonstrates this conflict by telling the way managers involve the increase in non-pecuriary expenditure by the management as they do not entirely internilize expenses. Agency problems of this kind generate agency costs. Agency costs are made when the managers also monitor an outsider's investment besides her own, as there is a important conflict of interest.

2.3.4. Circumvention Innovation Theory

This is a theory advanced by Kane (2011). In this theory, the author outlines the fovernment forms of controls and regulation. Kane's main force is the regulative function between the federal deposing regulation and the exogenous market forces such as technological dynamic change, changing depositing environment and uncertainty about financial prospective developments. Innovation takes the product dimension in order to circumvent regulation.

2.3.5 Transaction Cost Innovation Theory

The theory of transaction cost innovation was developed by Hicks and Niehans (2013). This theory refers to reduction of transaction cost in response to advance technology. The cost reductions stimulate financial innovation as well as improve efficient service delivery. Transaction costs play an important role with respect to innovation. In this case, theory explains it in relationship to other aspect that the primary reason of financial innovation in financial institutions is profit maximization.The authors of the theory argued that the dominant factor of financial innovation is the reduction of transaction costs. The reduction of transaction cost can stimulate financial innovation and subsequently improvement of financial services. The thory studied the financial innovation from the perspective of microscopic economic structure change. The theory's motive further explained another perspective relative to the radical motive of financial innovation of the

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purpose of the institution to earn shareholders' wealth or benefits.

3.0 Methodology

The research adopted a descriptive research design. The design was used because it allowed the researcher to study the problem in details as well as finding correlations between different variables. All 1141 staff and 91 customers of I&M Bank in I&M Bank Nyarugenge Main Branch, Remera Branch and Kigali Heights Branch formed the target population. The study adopted the Yamane (1987) to get the sample size. Data was collected through questionnaires. Secondary data for the research was collected from I&M Bank reports, Website, texts books from library, newspapers, magazines, journals and online portals. The reliability was measured to examine the degree to which the gauging items gave the same results over different repetitive trials. Content validity was determined by pre-testing. The data was analyzed using both descriptive and inferential statistic. In descriptive statistic mean and standard deviation was used while in inferential statistic correlation and regression analysis was done.

4.0 Key result and findings

4.1 Response rate

The researcher intended to reach a number of 92 as a sample. No questionnaires returned without being filled, meaning that all of them were filled by respondents and the response rate was 100% as summarized in Table 1

Table 1: Rate of responses

Number	Returned questionnaires	Responded questionnaires	Rate
92	0	92	100%

4.2 Demographic Data

The demographic information includes education level, work experience and position held.

4.2.1 Education level

The summary of the educational level of the respondents is presented in Table 2**.**

Table 2: Educational level

	Frequents	%	Valid %	Cumul. %
Primary	15	16.3	16.3	16.3
Secondary	12	13.0	13.0	29.3
Diploma	6	6.5	6.5	35.9
Bachelor's	48	52.2	52.2	88.0
Post graduate and high level	11	12.0	12.0	100.0
Total	92	100.0	100.0	

According to the results presented in Table 2, 52.2% of the respondents have a bachelor's degree, 13% finished only secondary school, 16.3% finished primary school while 6.5% have diploma and 12% hold a masters' degree.

4.2.2 Work experience

The summary of work experience of the respondents with I&M Bank is presented in Table 3

Table 3: Work experience with I&M Bank

		Frequents	%	Valid %	Cumul. %
Valid	1-3 years	48	52.2	52.2	52.2
	4-6 years	24	26.1	26.1	78.3
	Over 6 years	20	21.7	21.7	100.0
	Totals	92	100	100	

As indicated in Table 3, 52.2% of those who responded work with I&M bank 1-3 years, 26.1% have an experience of 4-6 years and 21.7 are more than 6 years. According to the research findings, respondents have different experiences working or getting financial services from I&M Bank Rwanda.

4.2.3 Position held

The summary of the position held by the respondents is depicted in Table 4

Table 4: Position held

	Frequents	%	Valid %	Cumulative %
Branch manager	2	2.2	2.2	2.2
Loan officer	3	3.3	3.3	5.4
Teller	15	16.3	16.3	21.7
Others	72	78.3	78.3	100.0
Total	92	100.0	100.0	

The results in Table 4 indicate that 2.2% are branch managers, 3.3% are loan officers, 16.3% are tellers and 78.3% are customers. Thus, people questioned have different positions or roles in I&M Bank.

4.3 Presentation of Findings

The following are findings from primary and second resources. The following are details.

4.3.1 Financial performance of I&M Bank

As published by I&M Bank in The New Times of 26 March 2020, I&M Bank Rwanda earned Rwf 22 billion for the financial year of 2019 while in 2018 this was 20.2 billion, meaning an increase of 8% of net interest revenue. For the period ended 31 December 2020 as published in The New Times No 5499 of March 30, 2021, Net Interest income was 22.412 billion.

From the published financial statements of I&M Bank for the period ending in 2018, 2019 and 2020, ROA and ROE are calculated as following to measure the financial performance of I&M Bank.

Table 5: Financial performance of I&M Bank

	2018 (In Frw'000)	**2019 (In Frw'000)**	**2020 (In Frw'000)**
ROA $= \frac{\text{Net profit}}{\text{Total Assets}}$:	$\frac{20,226,290}{294,165,633} = 6.8\%$	$\frac{21,865,985}{317,899,026} = 6.9\%$	$\frac{22,412,747}{417,203,688} = 5.4\%$
ROE $= \frac{\text{Net profit}}{\text{Total Equity}}$:	$\frac{20,226,290}{39,567,498} = 51.1\%$	$\frac{21,865,985}{42,786,882} = 51.1\%$	$\frac{22,412,747}{54,476,853} = 41.1\%$

As it is indicated Table 5, Return on Assets shows how efficiently I&M Bank utilised the assets. It is the aptitude of I&M Bank to create enough net profit on the assets employed. From 2018 the ROA increased but in 2020 decreased because of Covid 19. As it is for ROA, the ratio decreased in 2020 because of Covid 19. However, all those ratios indicate that I&M Bank stands in a good position to manage its asses and generate profits. According to I&M Bank report (2017), the bank was ranked the most performing bank in the sector with a ROE of 22.17% as end of September 2016.

4.3.2 Financial innovation and financial performance

The findings presented in Table 6 below specify the level to which financial innovation influence the financial performance.

Table 6: Financial innovation and financial performance

	Mean	Std. Deviation	SD	D	N	A	SA
Financial innovation facilitates the access to bank accounts.	4.6739	0.6811	0%	2.2%	5.4%	15.2%	77.2%
Financial innovation helps to reduce costs leading to cost savings.	4.75	0.586	0%	2.2%	1.1%	16.3%	80.4%
Usage of credit cards influences the financial performance	4.663	0.7453	1.1%	2.2%	3.3%	16.3%	77.2%
ATM and MPAY have significant influence on the performance	4.8370	0.4978	0%	1.1%	2.2%	8.7%	88%
Financial innovation increases services improvement	4.7826	0.5512	0%	2.2%	0%	15.2%	82.6%
The main purpose of financial innovation is to decrease unit costs	4.7826	0.5098	0%	1.1%	1.1%	16.3%	81.5%
Mobile money enables excluded people to do financial activities	4.63	0.7662	1.1%	2.2%	4.3%	17.4%	75%

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As indicated in Table 6 respondents at 77.2% strongly agreed with a score of 4.67 that financial innovation facilitates the access to bank accounts. They agreed also that financial innovation helps to reduce costs leading to cost savings by the score of 4.75 and the level of strong agreement at 80.4%. I&M Bank has a partnership with telecommunication companies for the benefit of its customers to improve access to financial services. Those companies are MTN Rwanda, Tigo & Airtel Rwanda, through push and pull, the customers of I&M Bank customers have their Mobile Money, Tigo cash and Aitel money.

4.4 Relationship between financial inclusion strategies and performance of commercial banks

I&M Bank's financial performance measurement used was ROA and ROE for the period of 2018-2020. Efficiency ratios were also calculated. For ROA, it is 6.8% in 2018, 6.9% in 2019 and 5.4% in 2020 while for ROE is 51.1% in 2018, 51.1% in 2019 and 41.1% in 2020.

To assess whether financial performance is a function on agency banking, financial innovation and loan products and independent variables, regression analysis was used. The section comprises of model fitness, analysis of variance and regression of coefficient. The results presented in Table 7 indicate the model fitness.

Table 7: Model summary

Model	R	R Square	Adjusted R Square	Change Statistics				
				R Square Change	F Change	df 1	df 2	Sig. F Change
1	.771[a]	.594	.580	.594	42.918	3	88	.000

The results presented in Table 7 establish that agency banking and financial inclusion are satisfactory in explaining the performance of commercial banks. The coefficient of determination, also known as the R square, is 0.594 (59.4%). This implied that agency banking and financial inclusion strategies explain 59.4% of the variations in the performance of commercial banks.

The regressions of coefficient results are presented in Table 8

Table 8: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.799	.502		-1.592	.115			
	AB	.364	.127	.275	2.862	.005	.599	.292	.194
	FI	.558	.160	.416	3.482	.001	.738	.348	.236

The results from Table 8 shows that agency banking is positively and significantly related to performance (profit) (β=.364 p=0.005). This was supported by a calculated t-statistic of 2.862 that is larger than the critical t-statistic of 1.96. Moreover, it was found that financial innovation is positively and significantly related to performance (profit) (β=.558 p=0.001). This was supported by a calculated t-statistic of 3.482 that is larger than the critical t-statistic of 1.96. The resulting regression equation is;

$Y = -0.799+0.364AB+0.558FI$

Where Y =Performance (Profit), AB = Agency banking, FI = Financial innovation

5.0 Summary and Conclusion

The study indicated that the use of agency banking is an important driver of financial performance of commercial banks in Rwanda to facilitate people to get banking services form banks. With agency banking, systems are spread to different customers and locations, services are accelerated and activities of financial institutions are tracked. In the analysis, financial innovation was found to be the main strategy for commercial banks to increase its financial performance. For financial innovation, ATM and e-banking were adopted to increase the access to banking services to the unbanked, facilitated the payment on real time and the movement of the money, money transfer and informal borrowing through mobile money transfer. Mobile banking can be used even as a strategy to improve the sustainability of financial institutions like I&M Bank. The study established that loan products increase the financial performance of commercial banks in Rwanda. For the case of I&M Bank, it was found that the bank has a strategy of attracting customers in order to increase a number of its clients. Different types of loans are provided by I&M Bank to its clients such as mortgage loan, construction loan, business loan, salary loan and salary overdraft. The bank reduced the requirements from 10 documents to 3 documents as well as reduced the time to approve loans. Concerning mortgage, I&M bank extended the loan tenure to 25 years repayment

The study concluded that Automated Teller Machine (ATM) is important and very effective because it facilitates the customers the access of their accounts to withdraw or deposit money as it is for digital banking (mobile phone banking, internet banking (e-banking)/online banking), debit cards and smart cards. This enables banks to increase sales and influence its financial performance. For loan product, it is concluded that this is an important strategy of I&M Bank to attract customers thus affect the financial performance of the bank

6.0 Recommendations

The study recommended that I&M Bank has to improve its agency banking by increasing their number and location. SPENN ambassadors have also to be increased in number in order to facilitate the increase of the customers. I&M Bank has to extend its branches to remote areas and increase the number of ATMs so that people in remote areas get different financial services easily because in some districts, it is difficult to get I&M Bank services. It is better for I&M Bank to reduce the interests on loans borrowed by customers in order to facilitate them getting more benefits from the loan received. There is a need for commercial banks to collaborate with telecommunication companies in order to reduce or remove charges used in some transaction and enhance mobile banking. The online banking system of I&M Bank needs to be improved by investing in internet connectivity to increase access to online banking.

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