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INSTITUTIONAL INNOVATIONS AND FINANCIAL INCLUSION AMONG RURAL HOUSEHOLDS IN UGANDA,

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ABSTRACT.
This study was carried out to ascertain the impact of institutional innovations by commercial banks on financial inclusion in the Kabale district. The specific goal was to ascertain the relationship between institutional innovations and financial inclusion, among rural households. The study used both descriptive and cross-sectional research designs combined qualitative and quantitative methods for data collecting and analysis. Using questionnaires and interviews, data was gathered from a sample of 396 respondents as well as additional important informants. Microsoft EXCEL and SPSS Version 21.0 were used to analyze the data and produce both descriptive and inferential statistics. The study also found a correlation between institutional innovations and financial inclusion, including interbank funds transfer systems (rs = 0.683, p= 0.002), partnerships with different financial intermediaries (rs = 0.288, p= 0.004), legal frameworks (rs = 0.878, p= 0.001), and liquidity availability (rs = 0.956, p= 0.000). The study's findings support the statistically significant link between commercial banks' institutional innovations and rural families' access to credit. As more clients choose mobile banking, the report advises banking institutions to develop measures to improve security in the platform. The report also advises making these platforms straightforward and simple to use in order to attract more users to the business. Additionally, because mobile banking has an impact on financial inclusion, banks should make sure to support mobile banking services by incorporating mobile phone usage as one of their innovations.

Key words: Institutional Innovation, Financial Innovations, Financial Inclusion, Commercial Banks.

1. INTRODUCTION

According to Shabani, Zahra, and Rouhollah (2019), institutional innovations in the financial system include alterations to the corporate structure, the creation of new categories of financial intermediaries, and modifications to the regulatory and legislative framework. According to Dzombo, Kilika, and Maingi's (2017) hypothesis, financial inclusion and organizational innovation are positively correlated. It has been observed that organizational innovation did in fact improve firm performance. Conclusion: If a company understands customer demands, competitor behavior, and technological advancement and acts accordingly to remain competitive, innovations can be a source of competitive advantage.

According to Gemechu (2014), innovation generally accounts for more than 50% of the variation in business performance via facilitating access to and utilization of financial services. Therefore, it can be inferred that institutional innovation is what propels financial inclusion and financial innovation among commercial banks. It has been seen locally that commercial banks' inventiveness, as seen in mobile banking, collaborations, financial training, branch networking, and building up additional branches, promotes company growth. Furthermore, it is established that institutional innovation enables commercial banks to benefit from economies of scale through redesigning the institutions to strategically serve the target market. Further, using technology enables the institutions to lower costs and lower interest rates (Yawe, & Prabhu, 2015).

How many people own and use formal financial instruments is a common way to gauge financial inclusion (Bara and Mudzigiri, 2016). According to the Uganda Bankers Association (2017), there are four factors that determine financial inclusion: access, which makes financial services available; usage, which makes financial services affordable and accessible; quality, which makes financial services tailored to the needs of the population; and barriers, which include distance, cost, paperwork requirements, and a lack of trust. Evidence suggests that financial inclusion has a multiplier impact, increasing overall economic production at the national level (CGAP, 2016). This provides a strong argument in favor of embracing the drive for financial inclusion. By providing people with fundamental financial services, it seeks to include everyone in society, regardless of their level of income or savings. It focuses on offering financial assistance to those who are economically disadvantaged. Financial inclusion fosters economic and social development while supporting the goals of financial stability, integrity, and consumer protection. To encourage financial inclusion, a wide range of high-quality financial goods, including pensions, payments, insurance, and credit, should be made available to everyone. All adults must find these to be suitable, timely, and affordable.

Commercial banks under the direction of the Bank of Uganda started experimenting with new technologies and innovations to help promote financial inclusion in the area. The Bank of Uganda signed the Agency Banking Regulations at the beginning of 2017 to officially launch agency banking (Uganda Bankers Association, 2018). This study was necessary because, despite commercial banks having implemented a number of financial innovations (including mobile banking, online banking, agency banking, etc.), it was still unknown how these innovations had benefited financial inclusion in Kabale district.

Even though the western region of the country has better financial access than other regions, some areas, especially the Kabale district, still have work to do to increase access to financial services. This is because about 45% of the population is still completely excluded and because the touch points for financial services are typically found outside of areas with high levels of poverty. For instance, 69% of all financial access touch points are found in areas with the lowest levels of poverty.Similar to this, cybercrime poses a genuine and serious threat to people, banks, and other online financial service providers and users, resulting in losses for both banking customers and the banks themselves.

In Kabale, different commercial banks have promoted financial inclusion by coming up with different innovations as per the guidelines of bank of Uganda that is mandated to supervise and regulate all the operations of commercial banks (Mugume *et al*., 2019). Much as there has been a number of innovations introduced and implemented by institutions, these innovations remain invisible to the people for example the reports show that a large percentage of the rural population (68%) remain financially excluded from formal banking compared to 23% in urban areas (Financial Sector Deepening [FSD] Uganda, 2018). Only 32% of the population have access to formal banking services compared to 77% in urban areas (Uganda National Financial Inclusion Strategy 2017-2022 report). The proportion of rural financial exclusion in Kabale is high (68%) compared to 15% of the total population of Uganda who are economically excluded from formal banking (Intermedia Uganda, 2016; Fin Scope Survey Uganda 2018). This operation state raises a question of whether the financial innovations implemented by commercial banks are visible to the people or not, and if they are, have they promoted inclusion. Existing literature indicates that financial innovation is associated with financial inclusion (Uganda Bankers Association, 2017). If financial inclusion remains low in the Cabal's rural areas, people may continue to practice risky savings practices such as: B. In pots that can increase poverty in the region. This study examines the impact of commercial banking financial innovation on the financial inclusion of rural households in Kabale district, Kigezi region, southwestern Uganda.

The objective of the study was to determine the relationship between institutional innovations and financial inclusion among rural households in Uganda,

2. LITERATURE REVIEW

In this study, we reviewed relevant studies on institutional innovation, product innovation, process innovation and performance in the microfinance sector in that order. Bara, & Mudzigiri, (2016) explored financial innovation and economic growth in Zimbabwe. The study found that institutional innovation improves business performance by significantly reducing administrative and transaction costs, reducing service costs, and improving labor productivity. The study found institutional innovations in MFIS firms to be organizational partnerships, strategic alliances with commercial banks, and new branch networks. Institutional innovation has been found to have a positive impact on firm performance. However, the study was limited to the insurance sector rather than focused on performance.

Lumsden (2018) conducted a study on the future of mobile.Financial inclusion and innovation in emerging markets. The results concluded that investor protection law was the most important factor influencing financial innovation. He also found that the lack of automated trading systems as a technical factor affected innovation. Furthermore, he hypothesized that financial competition and consolidation would influence financial innovation, and that increased financial competition among financial institutions would have the greatest impact on innovation. Borsa Istanbul Review, an empirical study on the impact of digital finance on financial inclusion and stability, was conducted (Ozili, 2018). The focus was the Savings and Credit Cooperative (SACCO) in Mombasa, Kenya. The primary objective of this study was to determine the impact of organizational innovation, process innovation, and product innovation on his SACCO performance. Institutional innovation was found to have a small but positive impact on performance.

The impact of financial innovation on operational performance is also discussed in terms of the efficiency of financial institutions, preferably bank-based financial institutions such as Tuesta. (2015) investigated financial inclusion and its determinants. Data envelope analysis was applied to obtain conclusive evidence. The findings reveal that foreign banks operating in Romania are more efficient than domestic banks. They hypothesized that the efficiency of foreign banks depends on diversifying their financial products and services, creating a customer-centric business. Further evidence relates to financial performance driven by financial innovations observed in a study by Ozili (2018). This study found a positive association between financial innovation and operational performance in Kenyan bank-based financial institutions. Similar results on the performance of Kenyan banks with financial innovation were found in (Jaabi, 2015). A key goal of financial inclusion should be to benefit the poor and worthless without formal financial services. This means drawing the unbanked into the formal financial system and giving them access to financial services such as savings, deposits, lines of credit and insurance. An inclusive financial system promotes the development of propensity to save, capital accumulation, productive investment, and entrepreneurship that contribute to raising the living standards of society (Jaabi, 2015). In addition, an inclusive financial system also reduces the likelihood that informal sources of credit will emerge in the economy. Thus, an inclusive financial system ensures institutional efficiency, safe savings and investment by enabling a full range of efficient financial services. Implementing financial inclusion effectively and efficiently can therefore observe sustainable financial development in the economy.

Institutional regulations and innovations may limit the penetration of mobile he money accounts by restricting operators' freedom in building business models and delivering services. Globally, Kenya has the highest reach for mobile money accounts with approximately 60% of the population (Dzombo *et al.,* 2017). MPESA's growth is largely due to deregulation, with the central bank allowing his Safaricom to operate his M-PESA outside of banking law (Dzombo et al. , 2017).

The research was conducted in order to contribute to the ongoing discussion on financial inclusion and financial innovation because there is a dearth of literature on the relationship between the two characteristics. Due to gaps in the literature, the current study looked at how different financial innovations in the commercial banks of the Kigezi region affected financial inclusion among rural families.

Financial innovations, according to literature, are various innovative activities carried out by commercial banks in strategic decision making, system arranging, institutional setting, personnel preparation, mode of management, business flow and financial products, and so on, in order to adapt to economic development, by bringing in new technologies, applying new methods, expanding new markets, and establishing new organizations. Financial inclusion, on the other hand, is defined as attempts to make financial products and services accessible and cheap to all individuals and businesses, regardless of personal net worth or company size, according to the literature. Financial innovations such as product innovation, process innovation, and institutional innovation are linked to financial inclusion in rural families. Product innovation, for example, is critical in a firm because it protects it against market risks and competitors. It has a large and favorable impact on financial inclusion as well as overall organizational success. Furthermore, process innovation improves entire quality management in the firm. It improves speed and quality, resulting in greater flexibility and cost effectiveness.

3. METHODS

3.1 Research Design

The research design for this study was cross-sectional research design. A cross-sectional study is a style of research design in which you gather information from a large number of individuals all at once(Turyahebwa *et.al*, (2023); Agaba &Turyasingura (2022). The study's intention was to choose participants from various banks in order to collect their opinions and compare them, so this design was chosen to reflect that. For the collection and analysis of data, the design used both quantitative and qualitative methods. Key informant interviews were used in the qualitative approach to record views and opinions on the topic, while questionnaires were used in the quantitative approach to ask respondents for quantifiable information(Marus, *et al*, 2019) and Turyasingura & Agaba (2023)

3.2 Population and Sample Size

In order to determine how many units of sampling should be surveyed and interviewed, one must determine the sample size, which is the number of items to be chosen from the universe to make up the sample ((Agaba & Emenike, 2019, Agaba *et al*, 2022 & Agaba *et.al*, 2023). The target commercial banks (Centenary Rural Development Bank, Stanbic Bank, Equity Bank, and Post Bank) provided services to over 80,000 clients in the area, according to preliminary results from

August 2021. Using Slovenes' sample determination formula from 1965, the researcher selected a target sample from this group, with a tolerable error of 5% and a level of confidence of 95%.

$$n = \frac{N}{1+N(e)^2}$$

Where n= sample size, N= Estimated convenient number of respondents, e=marginal error or level of significance and it ranged from 1%-5% which is 0.01-0.05.

Substituting the values into the formula: n

$$n = \frac{N}{1+N(e)^2}$$

$$= \frac{80{,}000}{1+80{,}000\,(0.05^2)} \qquad = \frac{80{,}000}{1+(80{,}000*0.0025)}$$

$$= \frac{80{,}000}{1+200} \qquad = \frac{80{,}000}{201}$$

$$= 396 \text{ respondents}$$

Table 1: Target sample and procedure

Category	**Population**	**Target sample**	**Sampling procedure**
Managers	8	4	Purposive selection
Product and marketing managers	40	16	Purposive selection
ICT officers	24	8	Purposive selection
Customers	80,000	368	Simple random
Total		396	

The study sample was comprised of 4 bank managers, 16 product and marketing managers, 8 ICT officers and 368 customers across the four target banks.

3.3. Sampling strategy

Respondents were chosen for the study using stratified random sampling. A sampling technique called stratified sampling divides the population into strata or groups (Arinaitwe *et al*, 2021). In this instance, respondent groups were created based on a shared branch and attributes. The population was divided into groups (branch managers, product and marketing managers, ICT officers, and customers), and the target sample was selected using simple random sampling methods with a purpose. Branch managers, product and marketing managers, and officers in charge of ICT were chosen using a purposeful sampling process, whereas bank customers were chosen using a simple random sampling method. In this instance, a random sample of 89 respondents from each of the four (4) chosen commercial banks—including one manager, four product and marketing managers, two ICT officers, and 92 customers—was chosen, for a total of 396 respondents. To more broadly apply the research findings on the phenomenon being studied, this method was chosen for this study.

3.4 Data Collection instruments

A questionnaire is a collection of questions based on the subject of interest to the researcher and completed by respondents (Agaba & Kanyesiime ,2019, Mbabazi & Agaba (2021). A standardized structured questionnaire with closed ended questions was used to generate data from the respondents. The researcher administered interviews to the key informants with the help of an interview guide reflecting the study objectives.

3.5. Data Analysis

Data was analyzed under two major principles, quantitative and qualitative analysis
The appropriate data cleansing, processing, and analysis were applied to the collected data, in that order. Statistical Package for Social Sciences (SPSS) Version 21 software was used to simplify data processing and analysis. The development of themes (headings) or sub themes, which were derived from the study objectives, was used to analyze the qualitative data. The information was verbatim transcribed from the recording.

4. RESULTS

4.1 Response rate

Three hundred ninety-six (396) respondents received questionnaires, with instructions to complete and return them by January 31st 2023. There was a 100% response rate for all 396 questionnaires that were completed and returned**.**

4.1 Socio-economic characteristics of farmers

This sub-section presents the demographic features of 392 sampled respondents. The key demographic characteristics captured for the study included gender, age, marital status, education level and experience in farming. These features were found to be of great help in terms of clearly depicting the diverse background of farmers.

Table 2: Bio-demographic characteristics of the households

Household Characteristics	**Total (*n*=396)**
Gender of respondents ***(%)***	
Female	206 (52%)
Male	190 (48%)
Age bracket ***(%)***	
20 - 25	84 (21.2%)
26 - 31	101 (25.5%)
32 – 37	118 (29.8%)
38 +	93 (23.5%)
Marital status ***(%)***	
Single	103 (26.1%)
Married	260 (65.6%)
Others	33 (8.3%)
Education level ***(%)***	
None	43 (10.8%)
Primary	69 (17.4%)
Secondary	189 (46.9%)
University	95 (23.9%)
Position in the bank ***(%)***	
Managers	4 (1%)
Product and marketing managers	16 (4%)
ICT officers	8 (2%)
Customers	368 (92.9%)
Years of being a customer *(mean ± Std. D)*	3.23 ± 2.129

Table 2's findings show that male and female respondents made up, respectively, 52 and 48 percent of the sample. The agricultural sector, which has attracted more women than men in part, reflects the participation of more men than men. 29.8% of respondents were between the ages of 32 and 37, 25.5% were between the ages of 26 and 31, 23.5% were between the ages of 38 and over, and 21.2% were between the ages of 20 and 25. The sample respondents' marital status was also broken down as follows: 65.6% were married, 26.1% were single, and 8.3% were either widowed or separated. The majority (46.9%) of respondents had completed their secondary education, followed by 23.9% who had completed their undergraduate degrees, 17.4% who had finished their primary education, and 10.8% who had not completed any formal education. Ninety-two percent (92%) of respondents were study bank customers, 4% were product and marketing managers, and 2% and 1%, respectively, were ICT officers and managers. With a minimum of 1 and a maximum of 14, the average number of customers at a particular bank was 3.232point129.

4.4 Relationship between institutional innovations and financial inclusion

This section addresses research objective two which sought to determine the relationship between institutional innovations and financial inclusion among rural households in Kabale district. The connotation between institutional innovations and financial inclusion was analyzed on Univariate (using average mean and standard deviation) and bivariate correlation (using spearman's rho) as presented in tables below.

Table 3: Variable statements for the relationship between institutional innovations and financial inclusion

Variable statement	Mean ± Std. Dev.
The banks have ensured security of agency banking services hence more confidence and subsequently higher inclusion	4.53 ± .836
Commercial banks have adopted advanced technologies like biometric access system which gives security of customer accounts	4.65 ± .517
Commercial banks have partnered with various financial intermediaries which allows them to extent services to customers in hard-to-reach places	4.67 ± .668
Commercial banks are guided by a clear legal framework that protects customer interests hence promoting inclusion	4.59 ± .687
The interbank funds transfer systems allow customers to make transactions at any point of any bank	4.58 ± .738
Agency banking has enabled the bank to outreach the remotest areas increasing geographical coverage hence financial inclusion	4.69 ± .466
Agency banking eases transaction time which has seen more customers embrace the service leading to increased financial inclusion	4.05 ± 1.224
Agency banking enables availability of liquidity for more customers and hence increased financial inclusion	3.78 ± 1.287

Results for the variable statements for the relationship between institutional innovations and financial inclusion were presented in table 6. From the analysis, an average score of 4.53 ± .836 revealed that respondents were in agreement that banks assure the security of agency banking services, resulting in increased confidence and, as a result, higher inclusion. An average score of 4.65 ± .517 also showed that respondents were in agreement that commercial banks have adopted advanced technologies like biometric access systems which gives security of customer accounts. More so, a Mean ± Std. Dev (4.67 ± .668) reveal that respondents were in a strong agreement with the statement that commercial banks have partnered with various financial intermediaries which allows them to extent services to customers in hard-to-reach places. Furthermore, a mean of 4.59 ± .687 indicated that respondents were in agreement that commercial banks are guided by a clear legal framework that protects customer interests, hence promoting inclusion. An average score of 4.58 ± .738 implied that respondents were in a strong support that interbank funds transfer systems allow customers to make transactions at any point of any bank. A Mean ± Std. Dev postulate that respondents strongly supported the fact that agency banking enables the bank to outreach the remotest areas increasing geographical coverage hence financial inclusion. Likewise, an average mean of (4.05 ± 1.224) revealed that respondents were in agreement that agency banking eases transaction time which has seen more customers embrace the service leading to increased financial inclusion. Respondents were further in agreement that agency banking enables availability of liquidity for more customers and hence increased financial inclusion (3.78 ± 1.287). In an interview with one of the managers of Centenary Rural Development Bank, he stated;

"……………………as Centenary, we are guided by a clear legal framework that protects customer interests, we also have advanced technologies like biometric access system which guarantees security on customer accounts, we have interbank funds transfer system allow customers to make transactions at any point of any bank. Our agency banking system has enabled us to attract and increase on the number of customers".

Table 4: Correlation matrix between institutional innovations and financial inclusion

	Financial inclusion	
Institutional innovations	Spearman's rho (r_s)	p-value
Interbank funds transfer systems	0.683	0.002
Partnership with various financial intermediaries	0.288	0.004
Adoption of advanced technologies	0.861	0.353
Agency banking services	0.389	0.239
Legal framework	0.878	0.001
Availability of liquidity	0.956	0.000

Results of bivariate analysis in table 4 show the relationship between institutional innovations and financial inclusion. From the analysis, interbank funds transfer systems presented a strong correlation with financial inclusion (r_s = 0.683, p= 0.002), partnership with various financial intermediaries had a weak relationship with financial inclusion (r_s = 0.288, p= 0.004), Legal framework (r_s = 0.878, p= 0.001) and availability of liquidity (r_s = 0.956, p= 0.000) had strong correlations with financial inclusion respectively. However, adoption of advanced technologies and agency banking services presented no significant associations with financial inclusion. In an interview one of the managers of Centenary Rural Development Bank stated;

"……………………it is of no doubt that having a well articulate legal framework would attract more customers to bank. Well it's not all about having an articulate legal framework only, banks must move a step ahead and advance on technology as well as provide agency banking services to more customers".

5. DISCUSSION

In this section, we examined the connection between institutional innovations and financial inclusion among rural households in Uganda's Kabale district for the case study. We used spearman's rho to examine the relationship between institutional innovations and financial inclusion. Financial inclusion (access to and use of bank financial services) was statistically related to interbank funds transfer systems (rs = 0.683, p= 0.002), partnership with different financial intermediaries (rs = 0.288, p= 0.004), legal framework (rs = 0.878, p= 0.001), and liquidity availability (rs = 0.956, p= 0.000). For instance, interbank funds transfer systems, joint ventures with different financial intermediaries, and simplified legal frameworks were found to promote inclusivity in the financial systems, which over time attracted a propensity for saving, capital accumulation, profitable investment, and entrepreneurial growth that helped to raise living standards in rural communities. Comparable results have been found by Dzombo *et al.*, (2017) and Dunne, et al, (2018) who claimed that enhancing financial inclusion and development requires institutional reforms in areas like rule of law, regulatory quality, political stability, and legal origin. Financial inclusion, however, is not always a byproduct of financial development. These studies have a significant flaw in that they use country-level proxies like stock market capitalization, credit to the private sector, and bank liquid liabilities to measure different aspects of financial deepening Sekhar, *et al*, (2018).

6. CONCLUSION AND RECOMMENDATION

6.1. CONCUSION

The study confirmed a statistically significant association between institutional innovation and financial inclusion. Innovations such as interbank transfer systems, partnerships with various financial intermediaries, legal frameworks and the availability of liquidity have improved access and use of financial services and improved financial inclusion.

6.2 .RECOMMENDATION

As more customers adopt mobile banking, the study advises banking institutions to develop measures to strengthen security in the platform. In order to attract more customers to the service, the study also suggests that these platforms be made straightforward and simple to use.

According to a study on agency banking, financial institutions should devise policies to improve outreach to the most rural regions and broaden their geographic reach. The study also advises banking institutions to implement measures to improve platform security, giving customers greater assurance.

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