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Electronic Banking and Financial Performance of Commercial Banks A Case of DFCU Bank, Mukono Branch

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Abstract: *The study set out to find out the impact of e-banking on performance of commercial banks in Uganda, with a case study of DFCU bank, Mukono branch. The study was guided by the following objectives: to find out the forms of e-banking used in financial institutions in DFCU, Mukono; to find out the relationship between e-banking and performance of financial institutions in DFCU, Mukono; and, to find out the effect of e-banking on performance of financial institutions in DFCU, Mukono. In their efforts to provide cheap, reliable, flexible, fast and convenient financial services, financial institutions resorted to e-banking which relies on FinTech tools, However, the provision of e-banking products in financial institutions may heighten operational vulnerability due to network failure, initial high investment technological infrastructure, cyber- attacks, risking customer data confidentiality all of which may affect performance of financial institutions. The study adopted a descriptive research design and survey designs, which helped in collecting and analysing qualitative and quantitative data. The study used both structured and unstructured questionnaires, and an open-ended interview guide to collect data. Descriptive statistics (percentages) were used to examine the forms of e- banking, while inferential statistics were used to assess the relationship and the impact of e- banking on performance of financial institutions. The results showed internet banking as the most used form of electronic banking. The study found a significant moderate relationship (r =.761; sig. <.05) between electronic banking and performance of financial institutions. Electronic banking was found to account for 74.5% of the performance of financial institutions, with electronic cards alone predicting about 61.6% for any unit-change in the use of electronic cards. The study concluded that electronic banking has a significant impact on performance of financial institutions. As a recommendation, financial institutions should promote e-banking workshops and training to their customers to make them user-friendly.*

Keywords: Electronic Banking ; Financial Performance ; Commercial Banks DFCU Bank ; Mukono Branch; Banking

Introduction

Before the Evolution of Electronic Banking, banking transactions were done manually, which slowed down the settlement of transactions (Kainga, 2014). This involved posting one transaction from one ledger to another by human beings. The evolution of technology enabled financial institutions to offer Electronic Banking (Kakuru, 2013). This was done through new technologies such as Personal Computer Banking (PC-Banking), Automated Teller Machines (ATM), Electronic Funds Transfer, internet banking, mobile banking, account-to-account transfer, paying bills online, getting online statements, credit cards, among others, which replaced the traditional service delivery methods (Mwaura, 2013).

While the first Automated Teller Machine (ATM) in the world was introduced by Barclays Bank (UK) in 1967, IBM also introduced the magnetic stripe plastic cards in 1969. These innovations together marked the birth of electronic banking. These systems were initially aimed at using the computational power of transaction-processing capabilities to provide regular reports and analyses of business activity. In this way, Management Information Systems (MIS) offered managers of banks the possibility to increase the scope for monitoring, controlling, and planning of operational procedures (Batiz-Lazo & Wood, 2001)

According to Franklin, James & Philip (2008), E-banking had great potential to improve the quality and scope of financial services, expand opportunities for covering trading risks, and widen access to financial services for a much greater set of retail and commercial clients by offering more cost-effective services.

Globally, the financial industry experienced remarkable evolution in the delivery of services as a result of increasing digitization. Digitization, the capacity to convert, store, transfer, and process information in computer-readable formats, played a fundamental role in the financial industry, enhancing information processing capacity, speed, and connectivity, consequently improving efficiency both for the customer and the back-office processing in the delivery of financial services (Bank of Uganda, 2019). The way and manner in which financial services were delivered to customers changed over the years. There was significant change and improvement in the structure of the banking industry even though the financial institutions' traditional functions remained the same. Adewali and Afolabi (2013) asserted that there had been increased access to financial services through various channels. It was argued by Ovia (2001) that electronic banking emerged from e-commerce in the field of banking and financial services. It could be said that the driving force of electronic banking in every country was the use of Information and Communication Technologies (ICT). There was an improvement in the way financial institutions rendered services of money transfers, depositing, withdrawing, checking account balances, and checking on loan balances by the customers since the introduction of electronic banking (Stephen, 2002). The financial industry in any country, including Uganda, could not do without information systems because these played an important role in the financial industry. All the cash flows of almost any financial institution were linked to information systems within that particular institution. This became a very important issue and of great concern in the financial industry, as well as the necessity for both local and international competitive financial services.
Indeed, the use of the internet as a new alternative channel for the distribution of financial services became a competitive necessity instead of just a way to achieve a competitive advantage with the advent of globalisation and fiercer competition (Flavián, Torres, & Guinalíu, 2004). Banks used online banking as it was one of the cheapest delivery channels for banking products (Pikkarainen et al., 2004).

In July 1999, the Bank of Uganda issued a policy statement that classified financial institutions into four tiers: Tier IV: financial institutions which were not regulated by the Bank of Uganda and were not authorised to take in deposits from the public but could offer collateral or non-collateral loans; Tier III: Microfinance and Deposit-taking Institutions (MDIs); Tier II: Credit institutions; Tier I: Commercial banks. Commercial banks were authorised to hold current, savings, and fixed deposit accounts for both retail and corporate business in local and international currencies. In addition, Commercial banks were authorized to transact the business of foreign exchange in all currencies (Fredrick, 2014).

The transactions cost innovative theory was introduced by Hicks and Niehans (1983) who championed and stated that the foremost aspect of financial innovation was to be able to reduce the cost of transactions in response to the advancement in technology, which resulted in the reduction of transaction costs. The ability to lower the cost of transactions brought about innovation in financial services and the upgrading of financial services, and the same held that money-related innovations decreased the costs involved in making transactions (Kurgat and Charles, 2018). Transactions Cost Innovative Theory was relevant as regards the impact of e-banking on the performance of financial institutions in DFCU, Mukono since the use of the internet, electronic cards, and mobile phones to carry out financial transactions facilitated the improvement in the quality and cost of financial transactions for financial institutions in Uganda and DFCU, Mukono in particular, especially on the part of financial institutions due to downsizing staff. However, customers of the financial institutions in DFCU, Mukono, still incurred high costs of transactions, especially when depositing, withdrawing, and sending cash.

There were various measures of organisational performance. However, the most commonly used was profitability. Profitability was the degree to which a business created profit from the factors of production: labour, management, and capital. A deeper focus on profitability revealed the relationship between profits and expenditure compared to the magnitude of capital outlay (Gilbert and Wheelock, 2007). There were many different ways to measure a financial institution's performance. This could be reflected in the financial institution's return on investment, return on assets, value-added, among others, and was a subjective measure of how a financial institution could use assets from its primary mode of business and generate revenues (Schon, 2008). According to Kaplan and Norton (2004), performance could be assessed by using the balanced scorecard (BSC). It addressed other aspects that did not incorporate financial measurements but rather intangible and intellectual assets such as high-quality services or loyal customers, which were more critical to the success of the business.

2.0 Literature Review

Literature on Key Study Variables

The History and Evolution of Electronic Banking
According to Wright and Raison (2002), Internet Banking provided clear advantages to both the financial institutions and the customers because, from the banks' perspective, Internet banking had very low-cost transactions compared to human teller banking, which implied that commercial banks adopted this platform because of the benefits that accrued to the banking operation.

ICEB Beijing (2004) noted that e-banking reduced customer service staff as customers used more self-service functions, there was less cheque processing costs due to an increase in electronic payments, costs of paper and mail distribution were reduced as bank statements and disclosures were presented online, and there was less data entry as applications were completed and processed online by customers. However, this came with its own costs, such as the installation of the system and marketing.

On the other hand, according to KPMG (1998), banks' revenue increased from Internet Banking due to increased account sales, wider market reach, new fee-based income, new market opportunities, improved customer satisfaction, and the customers enjoyed convenient, lower service charges, more accessible information about bank accounts, and an attractive option for busy people since it saved time to go to the bank branches and gave 24 hours access (Lee and Lee, 2000). Nyangosi et al. (2009) argued that in Uganda, the majority of banks introduced Internet banking, mobile banking, and other e-banking facilities to enhance delivery channels to their customers. However, it was important that the introduction of these products be accompanied by programs to educate consumers on the new and more innovative ways of conducting banking business. For example, while Internet banking was a fast and convenient mode of conducting banking transactions, it also came with problems like the lack of their own banking machines; online banks relied on having customers use one or more ATM networks, such as those from All Point and Cirrus.

Financial Performance

Wanjiku (2014) defined financial performance as a measurement result of the firm's financial policies and operations in terms of monetary reflection on return on investment, return on equity, return on investment, and liquidity levels. The primary reasons to measure financial performance were to show external investors and/or lenders why a company would be a good investment and for internal analysis to better understand a business's strengths and weaknesses. While external and internal stakeholders might have had different objectives, both examined a company past financial performance metrics and compared them to relevant industry metrics and competitors' financial performance to glean insight into a business's financial strength.

What emerged from that analysis were patterns in cash flow, profitability, liquidity, growth, and other critical metrics. External investors and lenders could use these patterns to set expectations for potential return on investment or creditworthiness. For internal analysts and managers, financial performance could help illustrate what went wrong and what went right over a specific time period. A small business might have found that "back-of-the-envelope" calculations were more than enough to maintain success, but as a company grew, it required more sophisticated analysis—with more data than could fit on an envelope—to take them to the next level. Financial performance gave decision-makers the information they needed to implement intentional and focused improvements and grow their business (David Luther, 2024).

Relationship Between ATM Banking and Financial Performance of Commercial Banks in Uganda

The evolution of electronic banking started with the use of automatic teller machines (ATMs) and passed through telephone banking, direct bill payment, electronic fund transfer, and the revolutionary online banking (Alter, 2002). The future of electronic banking, according to some, was the acceptance of WAP-enabled banking and interactive TV banking (Petrus & Nelson, 2006). However, it was forecasted that among all the categories, online banking was the future of electronic financial transactions. The rise in e-commerce and the use of the Internet in its facilitation, along with the enhanced online security of transactions and sensitive information, were the core reasons for the penetration of online banking into everyday life (Papers4you.com, 2006). According to the latest official figures from the Office of National Statistics (ONS, 2006), subscriptions to the Internet grew by more than 50%, from 15 million in 2000 to 35 million in 2005 in the UK. It was also estimated that 60% of the population in the UK used the Internet in their daily lives. The fundamental shift towards the involvement of the customer in financial service provision with the help of technology, especially the Internet, helped reduce costs for financial institutions and helped clients use the service at any time and from virtually anywhere with access to an Internet connection. According to theorists (Walfried et al., 2005), customer evaluation of electronic services was influenced by attributions of success and failure in interpersonal service situations. The use of electronic banking removed the banking personnel that facilitated the transactions and placed additional responsibilities on the customers to transact with the service.

In the banking industry, most customers were motivated by the accuracy of records and timely service delivery they received. This not only made the banking industry sophisticated but also dynamic and ultimately becoming complex in nature with the introduction and invention of the Automated Teller Machine (ATM). Thus, many studies investigated the effect of the ATM payment system on the banking industry. Adewoye (2013), for instance, observed that the ATM was an innovative customer delivery service tool that offered diversified services such as cash withdrawals, funds transfer, payment of bills, etc. The use of ATMs as a customer service delivery strategy enabled bank customers to transact banking business using a coded ATM card. Wherever an ATM facility was located, customers could access their accounts at any hour of the day.

Relationship Between Mobile Banking and Financial Performance of Commercial Banks in Uganda

Mobile banking was an application of m-commerce that enabled customers to access bank accounts through mobile devices to conduct and complete bank-related transactions such as balancing checks, checking account statuses, transferring money, and selling stocks (Kim et al., 2009). Luo et al. (2010) defined mobile banking as an innovative method for accessing banking services via a channel whereby the customer interacted with a bank using a mobile device.

According to Dr. Lennart Soderberg (2008), m-banking was the term used to describe financial services delivered via mobile networks using mobile phones. Normally, such services included depositing, withdrawing, sending, and saving money, as well as making payments. According to Owen, mobile banking referred to the provision and availing of banking and financial services with the help of mobile telecommunication devices, such as a mobile phone, which was most used in developing countries, or a Personal Digital Assistant (PDA). For many consumers, mobile banking meant 24-hour access to cash through an Automated Teller Machine (ATM) or Direct Deposit of pay checks into checking or savings accounts. However, mobile banking now involved many different types of transactions. Mobile banking, also known as electronic fund transfer (EFT), used computer and mobile technology as a substitute for checks and other paper transactions. EFTs were initiated through devices like cards or codes that let you or those you authorized access your account. Many financial institutions used ATM or debit cards and Personal Identification Numbers (PINs) for this purpose. Some used other forms of debit cards, such as those that required, at most, your signature or a scan. The federal electronic fund transfer Act (EFT Act) covered some mobile consumer transactions.

Relationship Between Internet Banking and the Financial Performance of Commercial Banks in Uganda

Internet banking, also known as online banking, e-banking, or net banking, was a facility offered by banks and financial institutions that allowed customers to use banking services over the Internet. Customers did not need to visit their bank's branch office to avail themselves of every small service. Not all account holders got access to Internet banking. If you would like to use Internet banking services, you had to register for the facility while opening the account or later. You had to use the registered customer ID and password to log into your Internet banking account.

Lower Banking Costs: Alon (2014) argued that banking relationships and costs were often based on resource requirements. Businesses that placed more demands on banking employees and needed more physical assistance with wire transfers, deposits, research requests, and other banking activities often incurred higher banking fees. Opting for e-banking minimized business overhead and banking expenses.

Activity Review: According to Nakauka Kalanzi (2009), business owners, accounting staff, and other approved employees could access routine banking activity, such as deposits, cleared checks, and wired funds, quickly through an online banking interface. This ease of review helped ensure the smooth processing of all banking transactions daily, rather than waiting for monthly statements. Errors or delays could be noted and resolved quicker, potentially before any business impact was felt.

Productivity: According to Laura Acevedo and John Kel. M (2007), e-banking led to productivity gains. Automating routine bill payments, minimising the need to physically visit the bank, and the ability to work as needed rather than on banking hours might decrease the time involved in performing routine banking activities. Additionally, online search tools, banking actions, and other programs could allow staff members to research transactions and resolve banking problems on their own, without interacting with bank employees. In some cases, month-end reconciliations for credit card transactions and

Summary and Gap in the Literature

Electronic Banking had a greater impact on the economy and the banking sector as well. Making financial services available to the poorest people was recognized as an important part of poverty reduction strategies. Technological innovation offered significant hope, although it resulted in fundamental changes to banking delivery mechanisms as well as to the very role of banking service providers and their relationships with customers.

3.0 Methodology

Research Design

This study used a cross-sectional survey research design where data from respondents were collected at a single point in time without repetition from the representative population. The design was chosen because it was economical to conduct in terms of time (Patrik & Ugo, 2019). It was also used because it helped the researcher capture information based on data gathered for a

specific point in time. Moreover, through the use of the cross-sectional research design, the research findings helped in removing assumptions and replacing them with actual data on the specific variables studied during the time period.

A quantitative research method was used as it emphasised objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques (Babbie, Earl R. 2010). Quantitative research focused on gathering numerical data and generalising it across groups of people or to explain a particular phenomenon. Therefore, it was used to gather statistical data from DFCU bank employees with the help of questionnaires.

Study Area

The study was carried out at DFCU Mukono branch located in the central division, Mukono municipality, central Uganda, near Mukono Kiko market. Employees and customers at DFCU Mukono were chosen for this study because they represented a critical demographic that could significantly benefit from enhanced financial performance through mobile banking services, given their use of the banking systems.

Study Population

The study population comprised the staff working at DFCU Bank Mukono branch. According to Adèr et al. (2008), sampling is part of the statistical practice concerned with the selection of individual observations with the intention of yielding some knowledge about a population of concern, especially for the purposes of statistical inferences. According to Kitavi (2014), a sample is a small group obtained from the accessible population. The study sample was selected using Slovin's formula:
\[n = \frac{N} {1 + Ne^2} \]

Where:
- n is the sample size in the study
- N is the Accessible Population
- e is the marginal error set at 0.05

N = 30
n=30/ (1+〖30(0.05)〗^2)
n=30/ (1+30(0.0025))
n=30/ (1+0.075)
n=30/1.075
n = 27.91
n=28 employees
Therefore, the sample size of the study was 28 employees

Sampling Method

A simple random sampling method was used to select a sample from the 30 employees of DFCU Bank Mukono branch. This method involved randomly selecting individuals from a complete list of all eligible individuals in the bank, where each employee had an equal chance of being chosen. This approach was suitable for this study as it allowed for a fair and transparent selection process, enabling meaningful statistical analysis and generalisation of findings.

Data Collection Method

Questionnaire Survey

A questionnaire is a research tool featuring a series of questions used to collect useful information from respondents. These instruments include either written or oral questions and comprise an interview-style format (Cint 2022). This method involved collecting information from a sample of respondents who were the employees of DFCU Bank Mukono branch in a systematic way. A questionnaire survey was used because it provided a high level of general capability in representing the population. Because of the high representativeness brought about by the questionnaire survey method, it was often easier to find statistically significant results than other data gathering methods. The questionnaire survey was also used for this category of individuals.

Data Collection Instrument

Questionnaire

According to Pod Górecki (2023), a questionnaire survey is a set of questions designed by the researcher for the purpose of collecting data. The questionnaire included open-ended questions which required the respondent to give more details about the subject matter and allowed them the opportunity to express their opinion in a free-flowing manner, giving them time to think before answering questions since it avoided personal contact. Semi-structured or closed-ended questions where answers were provided were also used, and the respondents were only required to tick the most suitable answer about the subject matter (Ikart, 2019). Since the researcher used questionnaires, she was involved in the process of guiding the respondents to ensure that the right information was collected from them. The questionnaires were measured using a Likert scale where 5 (Strongly Agree), 4 (Agree), 3 (Not sure), 2 (Disagree), and 1 (Strongly Disagree). The questionnaires were used to collect data from the 20 selected employees at DFCU Bank Mukono branch.

Validity and Reliability of the Data Collection Instruments

In order for the study to be sound, it had to be free of bias and distortion. Reliability and validity are two concepts important for defining and measuring bias and distortion. The following subsections explain how validity and reliability were determined in this study.

Validity

Validity is the extent to which an instrument, a survey, measures what it is supposed to measure. Validity is an assessment of its accuracy, which was ensured by choosing an appropriate scale, ensuring adequate resources for the required research to be undertaken, selecting an appropriate methodology for ensuring the research questions, avoiding having too long or too short an interval between pre-test and post-test, ensuring standardised procedures for gathering data or for administering tests, and tailoring the instruments to the concentration span of the respondents. Validity was assessed to determine whether the questions were capable of capturing the intended data. Experts in research reviewed the questions to see whether they were capable of capturing the intended response. A Content Validity Index (CVI) was calculated to establish the validity of the research instrument.

Reliability

Research reliability refers to whether research methods could reproduce the same results multiple times. If the research methods produced consistent results, then the methods were likely reliable and not influenced by external factors. This valuable information could help determine if the research methods accurately gathered data that could be used to support the following work in the field (Lisa Lagace, 2023). Using Cronbach's alpha coefficient, the internal consistency or reliability of a set of survey items was measured. This statistic helped to determine whether a collection of items consistently measured the same characteristic. Cronbach's alpha quantified the level of agreement on a standardised 0 to 1 scale.

Data Analysis

Quantitative Data Analysis

Variables were assigned names and coded for computer entry. Secondly, all the responses were coded to facilitate computer data input. Thirdly, after data entry was completed, negatively worded scales were recorded and assigned new values. Fourthly, in order to get composite scores for items on a scale, target variables were computed. Fifthly, data was screened to minimise data entry errors. Quantitative data was analysed using descriptive statistics and Pearson Correlation to examine the relationship between the independent and the dependent variable in the study.

Ethical Considerations

According to Dzastina Ayenew (2022), ethical considerations in research refer to guidelines and principles that researchers must adhere to as they conduct their research. Research often involves face-to-face interaction with people as researchers study behaviours and test the effects of certain phenomena on a target population. Ethical considerations dictate the nature of such interactions to ensure research is done according to the set rules and principles. The researcher exhibited a high level of ethical behaviour during the implementation of the study, ensuring confidentiality where the information obtained from the field was only

used for academic purposes. There was also anonymity of the respondents, which allowed them the freedom to express themselves. Moreover, informed consent was obtained from all respondents before including them in the study.

4.0 Data Analysis and Interpretation

Response rate

Table 1 shows that only 21 completed questionnaires—or 75% of the total—were returned out of the 28 that were distributed. As a result, the response rate was 75% overall. The response rate obtained exceeded the suggested threshold of 2/3 or 67% (Amin, 2005; Mugenda & Mugenda, 1999). This rate unmistakably shows that the researcher was successful in gathering sufficient information for an in-depth report.

Table 1: Response rate

Research instrument	Targeted number	Actually conducted	Percentage (%)
Questionnaire	28	21	75
Total	28	21	75

Bio data

This study examined different background characteristics of participants, namely gender, age, experience with the bank and level of education.

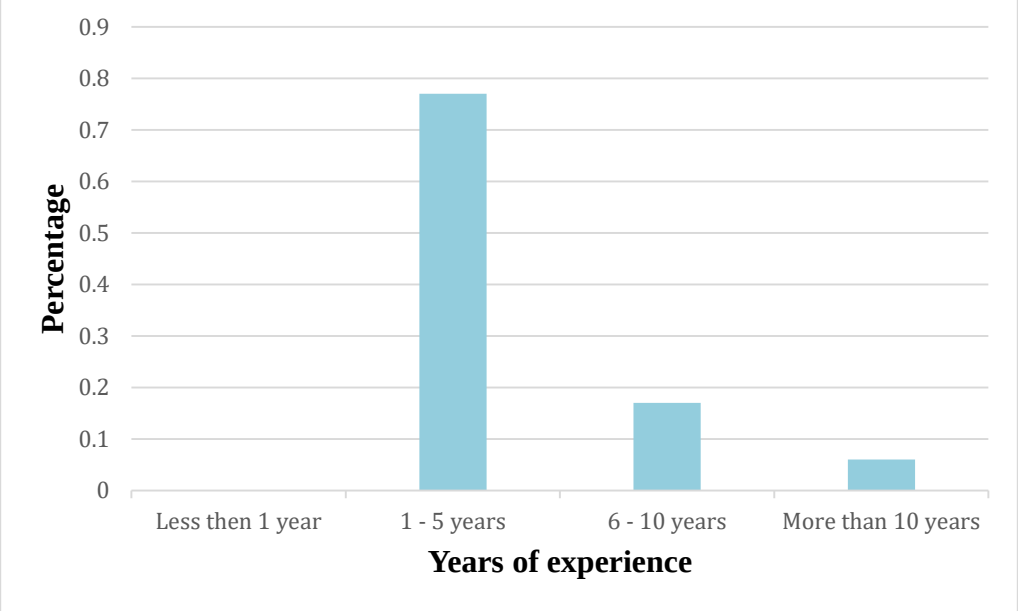
Table 2: Gender of participants

Gender	**Frequency**	**Percentage**
Male	13	62%
Female	8	38%
Total	21	100%

Source: primary data

According to the gender data, 62% of respondents were men and 38% were women. These numbers suggest that there were more male participants in the study than female participants. This suggests that a greater proportion of men than women use the financial institutions' electronic banking services in DFCU, Mukono. This is partially due to DFCU, Mukono's low rate of female participation in financial services.

Figure 1: Years in the bank



Source: primary data

Figure above highlights that 77% of the respondents have been in operation for a period of 1 – 5 years in their roles at DFCU bank. This was followed by 17% respondents that have been in operations in their respective roles for 6–10 years. Lastly, very few respondents operated in their departments at DFCU bank for more than 10 years giving a total percentage of 6%. These results revealed that most of the respondents have been operating in DFCU bank in their roles for a period of 1 – 5 years.

Analysis of the research problem

The research problem was analysed based on research questions. Consequently, the techniques of analysis varied according to the research questions. Research questions were analysed using descriptive statistical techniques (percentages) while research questions two and three were analysed using inferential statistical techniques

Extent of E banking tools adoption at DFCU bank

Extent	Frequency	Percentage (%)
Not at all	0	0
Partially	7	33
Mostly	10	48
Fully	4	19
Total	21	100

According to the above statistic, a larger percentage of DFCU banks implemented electronic banking, accounting for (freq. 10, 48%) of all responses. Partial adoption of electronic banking was made up of (freq. 7, 33%) and complete adoption was made up of (freq. 4, 19%). Finally, the table showed that nobody thinks that electronic banking hasn't been accepted at all. This suggests that the study's results were dependable because it was evenly dispersed among DFCU Bank respondents.

5.0 Summary of Findings, Conclusions and Recommendations

How has the use of internet for banking affected the financial performance of dfcu bank

The study investigated the forms of E-electronic banking used in the financial institutions, and found internet banking. The use of internet banking has close relationships with the promotions of ‘get out of the line and get online’, which are

popular in the financial institutions, especially commercial banks. This is facilitated by the availability of smart phones and personal computers among the customers of financial institutions in DFCU, Mukono. However, in a section of financial institutions such as the SACCOs, the most popular according to the study was Mobile Banking especially with the introduction of MSACCO by Future Technologies Inc.

This study is consistent with previous studies that have established the importance of internet banking in making payments like buying tickets, consumer bills and settlement of goods and services (Littler, 2006; Deutsche Bundesbank, 2000). The fact I s that Mukono is surrounded by tourist attractions such as forest vegetation and waterfalls Tourism requires booking online for hotels, reservations, tracking days, etc. all these must be paid in advance, and the best mode of payment is online. The findings are consistent with Post Bank (2018) who established that with internet banking, customers perform routine transactions, bill payments, balance inquiries and account transfers. This is true from the study carried out in financial institutions in DFCU, Mukono as clients use the e-banking services to making online payments, making account-to-account transfers and performing routine transactions.

The findings, however, seem to disagree with Siddik (2015) in as far as popularity of internet banking is concerned. In his study in Bangladesh, the author established that ATMs and mobile banking are the most popular. In DFCU, Mukono, it was established that internet Banking is popular among a section of participants in the study especially the Bank staff. This study further established that electronic fund transfer is not popular among clients of financial institutions. It is possible that participants found EFTs not commonly cherished in Mukono because of their level of education, and perhaps the amount of money they normally transact. The selection of participants was not judgmental and, therefore, it might have been possible to purposively target those who use EFT. The findings seem to contradict with Bank of Uganda (2019) who implemented EFT to facilitate fast, convenient, reliable and secure domestic payments and collection of funds. Since the system is commonly used for payment of salaries by government and corporates, it is not surprising that the participants who were not from corporates or government could find the service very important to them. This study has come out with findings that disagree with Bank of Uganda (2018) who documented that EFT transactions were rising by 21.7% from UGX 19.1 trillion to 23.3 trillion. The rise in EFT transactions implies its popularity in some circles of bank customers. This partly is attributed to the compulsory introduction of EFTs by Bank of Uganda in August 2003 for both credit transfers and direct debits migrating from the traditional Cheque system where cheques of over 20 million shillings were stopped in 2007 in Paying government suppliers and employees making it less popular in DFCU, Mukono.

How has the use of ATM banking services impacted the financial performance of dfcu bank

This study established strong and positive significant relationship between electronic banking and performance of financial institutions. The findings generally inform that changes in electronic banking are associated to a strong change in performance of financial institutions. This is because of the improvement in customer base, reduction in transaction costs and reduced customer service time. Given the fact that e-banking rests on reliable and adequate data communication infrastructure (Gruber, 2011), most of the financial institutions investigated in Mukono appear to have the infrastructure. The positive association between e-banking and performance of financial institutions supports Windrum and De-Berranger (2003) who viewed the benefits of e-banking in the following areas: expanding banking coverage, improving efficiency in service delivery, improving customer communication and management, reducing barriers to new market entrants and facilitating development of products and new business models for generating revenues in different ways. In DFCU, Mukono, atm banking has expanded banking coverage, improved service delivery, customer communication through SMS and new products such as School Pay, Agent Banking which has improved the performance of financial institutions. The findings further support Mudiri (2014 and Akindele (2010) who observed that it is no longer necessary to access bank accounts by waiting for the bank's opening hours and hanging in long queues in the banking halls. However, experiences in financial institutions in DFCU, Mukono indicate that customers still find themselves queuing in meandering lines in banking halls. This, therefore, suggests that the positive association that exists between electronic banking and the performance of financial institutions cannot be generalized to all financial institutions.

The appeal for the increase in customers' take-up of electronic banking rests on the convenience that the system creates for the customer that is devoid of print information, forms, and conducting banking outside the branch. However, most customers have not appreciated this wealth of services and they keep glued to bank branches. Consistently, Njenga (2009) points out that multiple outlets across the country increase contact points between the customers and the bank. While this might be profitable, banks have to incur very high capital to set up outlets across the country, which is likely

to affect the level of profitability and capital level (Goddard et al., 2004).

The results of the study offer results that contradict Josefowicz and Novarica (2011) who found that investment in e-banking is associated with low economic growth, excess branch capacity, and pressure from regulatory authorities. These costs are likely to reduce the bank's profitability. This is because in DFCU, Mukono, financial institutions have not faced such challenges as a result of electronic banking apart from money transfer limits put by different telecom companies, the maximum that can be withdrawn using an electronic card.

How has mobile banking affected the financial performance of dfcu bank

This study established a significant quantitative effect of e-banking on performance of financial institutions. The portion of the performance predicted by electronic banking alone is very large, which is suggestive of either increased e-banking application or customer take-up of the same. The study provides evidence that the adoption of electronic banking in financial institutions might be one channel of building their performance. In terms of economic growth, the number of jobs e- banking (mobile banking and agent banking) have provided to people in communities is inestimable. The findings are in line with Monyoncho (2015) who investigated mobile banking and its effect on performance of commercial banks. The author found that mobile banking has a significant impact on financial performance of commercial banks as it reaches the unbackable. This is true in DFCU, Mukono as e-banking services have attracted many players who serve as agents of different financial institutions in what is called 'Agent Banking'. These agents are widely distributed geographically reaching the previously unbackable populations which has increased the number of customers subscribing to e-banking services.

In a related study, Okibo and Wario (2014) examined the impact of e-banking on growth of client base. Their findings show that e-banking influenced the development of client base for the banking institutions in Kenya. This is also true in DFCU, Mukono as the use of Mobile banking and electronic cards has attracted more customers to the financial institutions because of flexibility in Banking and access to their accounts almost anytime and anywhere. This study presents consistent results with Taiwo (2017) who studied the role of e-banking on operational efficiency of banks in Nigeria. The author concluded that e-banking was significant in the banks' general performance. This is because financial institutions in Mukono were able to downsize staff, and automate transactions thus reducing the customer service time and the cost per transaction resulting is better operational efficiency.

The findings on the impact of e-banking on performance of financial institutions in Mukono disagree with Bank of Uganda Financial Stability Report 2015 - 2016) which revealed an 11.4% decline in customer base, 7% decline in customer deposits, a 12% total credit slowdown and customer decline of 6.3% due to electronic fraud in Centenary Bank. Electronic fraud suffocates financial institutions more than the customers. This is because of the loss in revenue to the financial institutions while trying to maintain customer balances. If it happens on the customer side, it leads to frustration and inability to transact with such a financial institution in case measures are not put to track the source of Fraud. Electronic Fraud in general reduces the volume of transactions customers make with the financial institutions and the deposits they make as well as general loss of financial trust in electronic Banking

Summary of findings

Of the forms of E-electronic banking used in the financial institutions, internet banking, which was confirmed by 42.9% of the participants, is mostly used while Electronic Funds Transfer confirmed by only 3.4% of the participants is the least used. A strong significant relationship ($r = .761$; sig. $< .05$) exists between electronic banking and performance of financial institutions. In terms of significant impact, electronic cards have the greatest impact on performance of financial institutions, predicting 61.6% of changes in performance for every unit-change. Overall, electronic banking accounts for 74.5% of variations in performance levels of financial institutions.

Conclusions

This study investigated the impact of electronic banking on performance of financial institutions in Uganda: A case of DFCU, Mukono. Among the electronic banking forms used in financial institutions in Mukono, internet banking, electronic card and mobile banking scored high. These forms offer great customer satisfaction to both local and modern customers. However, their firm usage is likely to be limited by accessibility and network issues. The reported cyber-attacks on some financial institutions, ATM fraud, mobile money fraud pose frustration to some clients of the financial institutions which may negatively influence subscription to these e-banking services.

The strong relationship observed between electronic banking and performance is important to the practice of financial institutions. When financial institutions increase the usage of electronic banking and or introduce new electronic banking

products on market, the chances of the institutions increasing their performance to greater height are eminent. Electronic banking leads

to greater access to banking even by the previously un bankable populations and the customer needs for flexibility even after official banking hours is fulfilled. This percentage, however, should not blind bankers to ignore the other factors that are likely to influence the relationship between electronic banking and performance.

There is a significant effect of electronic banking on performance, with electronic cards contributing the most. This is because electronic cards (debit cards, Credit cards, and ATM cards are held by most customers of financial institutions according to the Financial Stability report 2019 and they attract transaction charges which prove the profitability of financial institutions. Much as all the financial institutions in this study appeared to predominantly use internet banking, its impact on performance is low compared to electronic cards and EFT. This could be due to the fact that transaction charges on electronic Funds Transfers and electronic cards are higher fetching high inflows to financial institutions compared to internet Banking. This study has contributed to the existing knowledge on electronic banking and performance of financial institutions. Importantly, this has shown that mobile money and internet banking are marketing potentials. Similarly, it has been established empirically that electronic cards are very significant in influencing the performance of financial institutions. This study finds the results replicable and transferable to other contextual and theoretical applications.

Recommendations

Bank of Uganda which is responsible for financial regulation and the Ministry of Finance, Planning and Economic Development should encourage financial institutions to sensitize their customers on the e-banking products as can satisfy customer needs leave alone increasing efficiency in business operations -- for example, Internet Banking and ATM Cards in SACCOs.

Financial institutions should promote e-banking workshops and training to their customers to make them user-friendly. This will encourage many clients to buy e-banking products. Some e- banking services like Internet banking, EFTs, e-paymentsare not user- friendly for ICT beginners. This will promote trust in e-banking products and confidence as clients use such services.

Overall, electronic banking accounts for 74.5% of variations in performance levels of financial institutions. Therefore, financial institutions which have not adopted some e-banking tools should introduce them if their performance is to improve.

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