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The Role of Information and Communication Technology on the Service Quality of Commercial Banks in Tanzania: the Case of NBC Bank Plc

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ABSTRACT

ICT plays a huge role on the improvement of business processes in businesses, particularly in the banking sector. However, the extent to which ICT is employed is still questionable. This research examines the impact of ICT on the service quality of commercial banks in Tanzania. Thematic Content Analysis (TCA) was used for data analysis. The study revealed that ICT has a positive impact on the service quality of commercial banks. Three dimensions of services, namely Internet Banking, Automated Teller Machines, and Mobile Banking, were used for benchmarking. The findings of this study will provide valuable insights for NBC Ltd and other commercial banks in Tanzania to improve their service quality through the effective use of ICT. Policymakers may use the study findings to develop strategies that can make service delivery more effective and less costly.

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1 Introduction

The demand for technology-enabled services is increasing rapidly among customers of financial institutions, and it has become an essential factor for the success of banks. In Tanzania, the adoption of ICT in service delivery has intensified the competition among financial institutions [2]. "Customers now require practical and reliable technology solutions from their banks, not just low rates [3]. To remain competitive, financial institutions are focusing on improving the quality of their services through the use of information technology, which can reduce operating costs and meet customers' needs more efficiently. Failure to provide electronic banking services may result in customers switching to competitors who offer such services [4]. Internet banking is one such service that banks are offering to enhance customer satisfaction [5].

However, despite the various efforts made by commercial banks in Tanzania to promote digitization and mobilize customers to use more electronic/Digital channels by even reducing the cost of transacting through these channels compared to manual channels, there has been a very low pace for customers to accept this and many of them have continued using the manual channels. Digital banking has not been utilized fully by customers in accessing banks' products and services [6].

According to the Financial Sector Supervision, Annual Report 2020 as published by BOT, from the data collected in five consecutive years, that is, from 2016 to 2020, it indicates that the rate of growth of transaction volumes for digital channels, that is, internet banking, mobile banking and ATM, was at the average of only 15% year on year. In light of this challenge, the study sets out to investigate how ICT has impacted service quality at Tanzania's commercial banks with a focus on NBC as our case study. The findings of this study will provide valuable insights for NBC Ltd and other commercial banks in Tanzania to improve their service quality through the effective use of ICT.

The main objective of the study is to assess the impact of ICT on service quality of commercial banks in Tanzania. Specifically, the research assess the contributions of Internet banking on service quality, the contributions of ATMs to service quality and the contributions of mobile banking on service quality.

The rest of this paper is organized as follows: Section two discusses the literature review followed by section three which discusses the research methodology employed in this research. Section four presents the research findings and section six is a conclusion.

2 Literature Review

The service quality of banks can broadly be explained by the delivery of services through internet banking, ATMs and mobile banking.

2.1 Internet Banking and Service Quality

Internet banking is one of the more specialized e-services available in the virtual world, but it's still a useful tool. The emergence of Internet banking has revolutionized traditional branch-based banking. For banks, customer retention and acquisition are highly dependent on the quality of online banking services. This is because there are no geographic restrictions and his one-to-one interactions between bank customers and bank employees [7, 8].

Previous studies on online banking service quality have used several e-service quality scales to reveal different aspects of service quality. Some researchers used this SERVQUAL scale in these studies, others used this WebQual 4.0 scale, and still others used the e-SERVQUAL scale in the context of online banking. bottom. Internet banking service quality can be classified into three categories: However, this is a relatively new classification [11]. Previous research has also shown that reliability, timeliness, trust, web interface efficiency, security, and compliance are important aspects of online banking quality [10]. Study after study showed that multiple dimensions and measurement scales were taken into account. There are several frameworks for evaluating the quality of e-services, and scholars are currently discussing the framework that best captures the nature of e-service quality in online banking [10, 11].

2.2 Automated Teller Machines and Service Quality

Research in 1889 proved that technology may lower operational costs and eliminate uncertainty in service organizations. Automated teller machines (ATMs) are provided to consumers by financial institutions to meet the needs of the general public without the requirement for human resources such as a cashier, Clerk, or management. Managing Director of De La Rue Instruments Johan Shepherd Barron introduced the first automated teller machine in 1960. Cash withdrawal, cash transfer, cash enquiry, and utility bill payment were some of the features of the ATM. Banks' ability to compete on the quality of their service. When assessing the situation immediately, swiftly responding, and providing excellent service to ensure customer satisfaction, competitiveness is stored. Having a loyal customer base helps a company get a larger proportion of the market than its rivals [6].

Scholars and bankers alike consider the automated teller machine (ATM) to be one of the most cutting-edge financial tools ever developed. Banks may use this method to give clients with high-quality services that meet their needs. In addition to its self-service delivery feature and improved autonomy in conducting transactions, the growing number of bank clients adopting this approach is due to the variety of financial services it provides [9].

As a result of today's fierce competition in the business world, ATM service quality is critical to customer happiness and customer loyalty. Bank profitability and market share are key indicators of a bank's success, thus boosting both is critical. Customer satisfaction is positively impacted by ATM services; banks that assure effective operation will see an increase in customer satisfaction.

2.3 Mobile Banking and Service Quality

When it comes to the delivery of financial services, banks in particular have a history of being early adopters of new technology. Thanks to the implementation of mobile banking technologies by banks, customers can now access financial services

at any time, from anywhere. The M-banking paradigm (mobile phone, smartphone, and tablet) enables all of a customer's banking requirements to be satisfied through the use of a mobile device [9]

M-banking is a feasible choice as a service delivery channel that is becoming more accessible and localized. Because mobile banking is so popular, customers can access financial services at any time and from any location. M-capacity banking's ability to detect a customer's exact position and offer services specific to that location is another characteristic that sets the technology apart. According to [8], M-banking can provide users with information on local currency exchange rates, ATM accessibility, and available money transfer methods. Compared to conventional banking practices like internet banking, m-banking is more flexible, convenient, and mobile. Measures used to evaluate the level of service in conventional banking environments, such as brick-and-mortar branches and internet banking, are inadequate due to the special peculiarities of M-banking.

3 Research Methodology

Qualitative interviews have been gathered in terms of collecting information for this research. This study adds to the existing body of knowledge to determine the impact of information and communication technology on service quality of commercial banks in Tanzania by doing empirical research. Thematic content analysis was used to analyze the interviews, and similar themes were found flowing throughout the study narrative. This research was conducted in Tanzania. The participants have been given complete freedom to choose where they wish to conduct the interviews.

This study has adopted a purposive sampling technique. A purposive sampling approach has been used to identify a study sample. With the purposive sampling, the researcher uses personal judgment to select cases that best meet the research objectives and questions [12]. Purposive sampling technique is employed to select respondents. They have been selected on the ground that they are knowledgeable regarding the study topic. This research has been consisting of 100 NBC long-standing customers by which both structured and semi-structured questionnaires.

Microsoft Excel has been used for the procedure, and each interview transcript has been assigned a unique code as it was entered. A word processor has been used in the course of completing the project. Thematic Content Analysis (TCA) is employed to complete the data analysis procedure effectively prepared.

4 Results and Discussions

4.1 Demographic Information

The results revealed that out of 100 respondents 55% were men and 45% were women. This indicates that there was near gender balance in participating in our study. The results further indicates that the respondents below the age of 20 years were 1%, with the age between 21-30 years were 47%, between 31-40 years were 36%, while 12% of the respondents were between the age of 41-50 years, and the ones above 50 years were 4%. The findings reveal further that out of the total respondents, 1% of the respondents were below secondary school, while 5% had secondary school level, 20% of the respondents had Ordinary Diploma, 64% had Bachelor degree and 10% had masters and above. The results indicates that huge percent of the respondents have education level between Ordinary Diploma, Bachelor degree and Masters degree, this imply that huge number of respondents had ability to provide meaningful responses to the questionnaires which increased data clarity and confidence in analysis. Also, it was revealed that 98% of the respondents were using all the three channels i.e. internet banking, mobile banking and ATMs.

4.2 Customer Satisfaction

The three channels offer several benefits, one of which is the ease with which transactions and business in general may be completed. In this part, I examine how satisfied respondents are in using internet banking services, mobile banking services as well as ATMs.

Table 1: Customer Satisfaction Summary

Value label	Value	IB	MB	ATM
Very Satisfied	1	30	33	31
Somewhat Satisfied	2	42	39	47
Neutral	3	11	6	12
Somewhat Dissatisfied	4	11	15	2
Very Dissatisfied	5	3	4	5
Total		97	97	97

As shown in Table 1 above, it is evident that customers of the National Bank of Commerce Ltd are satisfied with the quality of service they get from internet banking. 30.93% of the respondents are very satisfied, 43.30% are somewhat satisfied, while 11.34% are just ok, however 11.34% are somewhat dissatisfied and 3.09% are very dissatisfied. The majority of respondents appear to be satisfied with the service of internet banking. Also it can be evident that 34.02% of the respondents are very satisfied with the mobile banking service, 40.21% are somewhat satisfied, while 6.19% are just neutral, in contrary 15.46% are somewhat dissatisfied and 4.12% are very dissatisfied. The majority of respondents are satisfied with the quality of service they get from the mobile banking application. With regard to the ATMs, as can be seen from the table majority of respondents are satisfied with the service they get in using the ATMs whereby 31.96% are very satisfied, 48.45% are somewhat satisfied, while 12.37% appeared to be neutral, on the other hand 2.06% are somewhat dissatisfied and 5.15% are very dissatisfied.

4.3 Factors influencing satisfaction of ICT

Regarding the factors which influence satisfaction, various aspects were evaluated as seen in Table 2.

Table 2: Factors influencing satisfaction of ICT services

Value label	Value	Frequency	Percent
Accessibility	1	27	27.84
Convenience	2	23	23.71
Security	3	22	22.68
Tracking Records	4	16	16.49
User Friendly	5	9	9.28
Total		97	100

The views of the respondents on the level of satisfaction of using internet banking, mobile banking and ATMs as shown in Table 2. Twenty-seven consumers (27.84%) of NBC's total number of customers cited ease of access to financial and monetary services as the primary advantage of utilising the channels. 23

23 (23.71%) mentioned convenience of accessing the services. In contrast, 22 (22.68%) brought up safety, 16 (16.49%) stated how internet banking, mobile banking and ATMs makes it easier to keep track of financial data, and 9 (9.28%) indicated that their level of satisfaction is due to the fact that the channels are user friendly. The majority of respondents said that the convenience of using the channels is the main reason why they prefer using them.

Based on the number of transactions made using mobile banking technology and ATMs that utilise the Master and Visa Cards platforms, it was disclosed in an interview with the bank IT personnel that NBC digital services has increased the bank's sales volume.

4.4 Role of ICT in Banking Sector

4.4.1 The Role of ICT in Smoothing the Financial Activities and Daily Business

Here, respondents share their thoughts on how much easier it is to do business and manage money. The respondents were asked to indicate how much they agreed with the assertion that using internet banking, mobile banking and ATMs has made their regular business and financial dealings easier.

Table 3: The role of ICT in smoothening financial activities

Value label	Value	Frequency	Percent
Strongly Agree	1	17	17.53
Agree	2	46	47.42
Neutral	3	16	16.49
Disagree	4	14	14.43
Strongly Disagree	5	4	4.12
Total		97	100

As seen in Table 3, 46 respondents (47.42%) agree with the statement that internet banking, mobile banking and ATMs play a crucial role in making routine business and financial transactions easier, while 17 respondents (17.53%) strongly agree with the statement. The opinions of 16 respondents (16.49%) were split. However, 14 (14.43%) disagree and 4 (4.12%) strongly disagree with the assertion that the said channels serves a crucial role in facilitating normal business and financial transactions. Evidence from the field shows that internet banking, mobile banking and ATMs are helpful in making transactions management and doing business easy.

4.4.2 The Role of ICT in the Daily Transaction Activities

Some of the prior literatures have advised the usage of electronic channels as the technique of minimizing dangers surrounding transaction activities, despite the fact that ICT has been criticized for insecurity of transaction activities.

Table 4: Role of ICT in Performing Daily Transactions

Value label	Value	Frequency	Percent
Strongly Agree	1	30	30.93
Agree	2	40	42.24
Neutral	3	3	3.09
Disagree	4	16	16.49
Strongly Disagree	5	8	8.25
Total		97	100

According to Table 4 which provides summarized form of the responses from customers on how safe they feel when using internet banking, mobile banking as well as ATMs, 40 (41.24%) of the NBC customers who took part in the survey agree that they feel safe when transacting using the channels and 30 (30.93%) strongly agree with the statement, while 3 (3.09%) have no opinion. Meanwhile, 16 (16.49%) disagree and 8 (8.25%) strongly disagree with the statement implying that they do not feel secure when transacting using the channels. The majority of respondents, according to the field data, saw that internet banking, mobile banking and ATMs as being crucial in protecting their regular financial transactions. According to one IT staff interviewed at NBC, security measures are in place to protect customers' financial data. In addition, procedures and legislation in Tanzania's regulatory framework prevent cybercriminals from jeopardizing an individual's safety when they transact online".

4.4.3 Availability of ICT services

Many professionals now advise switching to digital channels to guarantee that customers are receiving high-quality financial services despite geographic and environmental barriers that jeopardize the profitability of banking. A summary of the responses from respondents about the accessibility of ATMs, internet banking, and mobile banking services is provided in the table below (Table 5).

Table 5: Availability of ICT Services

Value label	Value	Frequency	Percent
Strongly Agree	1	19	19.59
Agree	2	43	43.33
Neutral	3	17	17.53
Disagree	4	8	8.25
Strongly Disagree	5	10	10.31
Total		97	100

According to Table 5, 43.43% of all NBC survey respondents agree with the statement that they can access the banking services through the channels whenever they want to i.e. high degree of banking service availability, while 19.59% strongly agree and 17.53% are unsure. Ten respondents (10.31%) strongly disagree and eight respondents (8.25%) dispute that the channels guarantees a good standard of banking service. The majority of NBC customers surveyed in the research agree that access to banking services is guaranteed thanks to the convenience of ICT.

5 CONCLUSION

This article presents research on investigating various aspect on ICT usage in Tanzania Commercial Banks with a special focus on the National Bank of Commerce. ICT was investigated in its three aspects in the Banking sector which are internet banking, ATM and mobile banking. Among others, this research explores the role of ICT in delivering services and processing key banking activities. Future research can focus on testing service models in consideration of key Tanzanian aspects.

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