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# Analyzing the Impact of Mobile Banking on Commercial Banks' Financial Performance: A Case of FNB Bank-Zambia

Mr. Kashale Chimanga<sup>1</sup>, Dr. Sidney Kawimbe<sup>2\*</sup>

<sup>1</sup>ZCAS University, School of Computing, Technology and Applied Sciences, Department of Computer Sciences-Lusaka Zambia

<sup>2</sup>ZCAS University, School of Business, Department of Banking & Finance, Lusaka Zambia

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\*Corresponding author: Dr. Sidney Kawimbe

ZCAS University, School of Business, Department of Banking & Finance, Lusaka Zambia

## Abstract

This study sought to analyze the analysis of the impact of mobile banking on commercial banks' financial performance. To this effect a descriptive research design was used on a sample of 101 respondents drawn from FNB Bank Zambia Lusaka Branch. The findings indicate that while there is a growing adoption of mobile banking, its full potential is yet to be realized. Commercial banks need to strategically integrate mobile banking services to optimize their financial performance, leveraging the opportunities presented by this technology. Based the conclusion, the study recommends that Commercial banks in Zambia should prioritize and invest in comprehensive financial literacy programs to educate the population about the advantages and functionalities of mobile banking and that Collaborative efforts with the Zambian government can amplify the impact of mobile banking. Banks should work closely with relevant government agencies to align their strategies with broader financial inclusion initiatives and leverage existing programs to reach underserved populations.

**Keywords:** Mobile banking, Innovations, Commercial Banks, Profit.

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## 1. INTRODUCTION AND BACKGROUND

The Banking Industry is one of the areas of business that has been influenced the most by technology. Banking operations have evolved from the mere exchange of cash, cheques and other negotiable instruments to the application of Information and Communications Technology (ICT) to banking transactions. Through technology, banks are now able to offer convenience services to their customers known as mobile banking (Ackah, D., & Agboyi, R. M. (2014).

The adoption of mobile banking has become a pivotal aspect of the financial landscape, reshaping the way individuals and businesses interact with banking services (Abdekhoda *et al.*, 2016). Mobile banking has grown to become the predominant mode of financial transaction in the banking industry world over, with an increasing proportion of consumers choosing to do business over the internet or the messaging technology offered by mobile phones.

Mobile banking, as the most widely used technological platform in the banking industry, has the potential to redefine the dynamics of financial services in

Zambia's commercial bank. The intersection of mobile banking and commercial banks' financial performance in Zambia is a subject that warrants careful examination and analysis. While mobile banking has proliferated, the extent of its influence on the key financial indicators of commercial banks remains a subject of inquiry and this study aimed to analyze the impact of mobile banking on commercial bank's performance.

### 1.1 Problem Statement

The problem of the study emerges that, the surge in mobile banking adoption has transformed the landscape of financial services, yet its implications on the financial performance of commercial banks in Zambia remain under explored. Despite being a widely adopted technology, the extent to which mobile banking influences the financial performance of commercial banks in Zambia remains unclear (Haabazoka, L., 2019). As mobile banking becomes increasingly prevalent, it is important to assess its impact on key financial performance. The lack of comprehensive research on this subject hinders the formulation of effective strategies for banks to capitalize on the opportunities presented by mobile banking while mitigating potential challenges.

This research aims to fill this gap by systematically analyzing the correlation between mobile banking adoption and the financial performance of commercial banks in Zambia, providing insights that can inform strategic decision-making in the evolving landscape of the country's banking sector.

## 1.2 Objectives of the Study

The following were the objectives of the research:

- i. To analyze the impact of mobile banking on commercial banks' financial performance.
- ii. To evaluate the Adoption Rate of Mobile Banking in Zambia's Commercial Banks
- iii. To assess the Financial Performance Indicators of Commercial Banks in Relation to Mobile Banking Implementation.

## 1.3 Significance of the Study

Considering the fact that mobile banking represents a dominant technology in the financial sector, understanding its influence on the financial performance of commercial banks in Zambia is crucial for strategic decision-making. Given the context of limited financial inclusion and adoption of mobile banking in Zambia, the study's findings offers insights into how leveraging mobile banking services can contribute to the growth and stability of commercial banks. In addition, by examining the relationship between mobile banking adoption and financial performance indicators, such as profitability, efficiency, and customer outreach, the study provide actionable recommendations for banks to enhance their operations and increase their impact on the unbanked population. This research thus contributes to the broader discourse on financial inclusion and technology adoption in emerging economies like Zambia, with potential implications for policymakers, regulators, and banking stakeholders.

## 1.4 Study Hypothesis

**Null Hypothesis (H<sub>0</sub>):** There is no significant relationship between the adoption of mobile banking and the financial performance of commercial banks in Zambia.

**Null Hypothesis (H<sub>0</sub>):** There is no significant relationship between mobile banking on the operational efficiency of commercial banks and improved financial performance.

**Null Hypothesis (H<sub>0</sub>):** There is no significant relationship between financial inclusion through mobile banking and the profitability of commercial banks in Zambia.

## 2. LITERATURE REVIEW

This section covers a number of related studies that have been conducted by other authors with regards to mobile banking. As an example, the study by

Another study by World Bank reviewed that Al-Smadi (2012) modeled his study by the use of technology acceptance model and the planned behaviour model. This

study was aimed at identifying and understanding factors that affect bank customers' use of electronic banking services.

The study integrated technology acceptance model (TAM) with the theory of planned behaviour model (TPB) and incorporated five cultural dimensions and perceived risk to propose a theoretical model. The primary data were collected from 387 valid questionnaires which were distributed to random banking customers in all 26 licensed banks in Jordan. Multiple regression analysis was employed to test the hypotheses. The main findings of the study are: uncertainty avoidance has a positive and significant impact on perceived ease of use and perceived usefulness. Perceived risk has the stronger impact on customers' attitude, which in turn influences customers' intention to use electronic banking services.

According to the Efficiency theory concept, the reason why some banks are able to generate big profits is because they are more efficient than other types of businesses. In addition to this, there are two separate methods for determining efficiency: the X-efficiency hypothesis and the Scale efficiency hypothesis. The X-efficiency method maintains that businesses that are more efficient enjoy more profitability as a direct result of their reduced overall expenses. Such companies have a greater propensity to acquire big market shares, which may be reflected in higher levels of market concentration; yet, there is no correlation between market concentration and profitability for these enterprises (Anthanasoglou.2006).

A study on e-commerce by Wenninger (2000) evaluated the emerging role of electronic commerce in banks. His main objective of the study was to understand the changes that had taken place with the introduction of electronic commerce. He found out that the Development of e-banking products such as electronic billing, establishing internet portals, electronic checks and ATM. had provided additional services to customers'. The author also emphasized upon the strategic and operational risks which arise in banking sector. These could be minimized with a cost efficient electronic process.

Mwiya, *et al.*, (2017) on Examining Factors Influencing E-Banking Adoption through an examination of TAM, used a regression analysis technique and correlation on a sample of 222 respondents. The study found that all the three antecedents, namely, perceived ease of use of e-banking services, perceived useful of e-banking services and perceived trust worthiness and safety of e-banking systems were significant and positively associated with attitude towards e-banking use.

In analysing the use of internet banking in New Zealand, Du (2011) conducted an empirical analysis. The

findings of his study revealed that User-friendly Website, Marketing Communications, Perceived Risks, Price, and Internet Access/Internet Familiarity have an impact on customers' decisions to adopt Internet banking. The results also reveal that the Young Age and the High Income Groups are more likely to adopt Internet banking. This result is consistent with the findings of Padachi et al. (2007).

In Zambia, Mushabati (2008) conducted a study on the effectiveness of Automated Teller Machines on financial service delivery by commercial banks in Kitwe. He study found that the ATM has benefited both the Bank and the consumers, he however noted that there were still challenges that remained unresolved. These included fault ATMs, long queues and delayed ATM queries which seemed to threaten the use of ATMs.

Further studies on the adoption of e-banking in Zambia were by Lusaya and Kalumba (2018) who investigated the challenges in the adoption of ebanking. Using a descriptive study with a sample size of 50 drawn randomly from banking customers in Kasama, the study rejected the null hypothesis that there is no association between e-bank usage and availability of e-banking information. Thus, the study found that there is dependence of e-banking usage on availability of e-banking information. On Education levels influence e-banking usage, their study found that since the p-value (0.002) was significantly lower than 0.05, the null hypothesis of no dependence was rejected, and thus, education level significantly influenced the use of e-banking

### 3. RESEARCH METHOD

#### 3.1 Research Philosophy

For the purpose of this study, a descriptive survey design was adopted. According to, Nteere *et al.*, (2012), and Creswell (2005), descriptive survey design enables the researcher to collect, analyze and link both qualitative and quantitative data in a single study. Through the use of this technique, the study investigated the present status of bank performance in addition to the acceptance, use, and investment of mobile technologies within the banking sector.

#### 3.2 Population and Sample Size

The participants of the study were drawn FNB Lusaka Main Branch Employees. It consisted of at least 136 participants who volunteered to take part in the study. These participants were accessible throughout the time period of the research and are the ones that were used to compile a random sample from which the study population was recruited using the raosoft sample size calculator (<http://www.raosoft.com/samplesize.html>).

#### 3.3 Instrument for data collection

The study used questionnaires for data collection. The questionnaires comprised of a five-point likert scale which comprised of scales represented as 1(Strongly disagree), 2(Disagree), 3(Neither Agree nor Disagree), 4(Agree) and 5(Strongly agree). The questionnaires used closed-ended questions and covered all the issues relating to the role of University Academic Innovations in Agriculture and ICT and how they can contribute to the country's economic transformation.

#### 3.4 Data analysis

The data collected was analyzed and coded using the statistical package for social sciences (SPSS) version 2.0 software by conducting an analysis using descriptive statistics, correlations, and linear regression analysis. SPSS is a windows based program that can be used to perform data entry and analysis; and to create tables and graphs among other things.

## 4. RESULTS PRESENTATION AND ANALYSIS

#### 4.1 Response Rate

For this study, 101 questionnaires were distributed to the targeted respondents. Out of the 101, 90 sample respondents filled in and returned the questionnaire while 11 did not return the questionnaires. The 90 represented a response rate of 89%. The response rate demonstrated the willingness of the respondents to participate in the study. Figure 2 below shows the response rate:

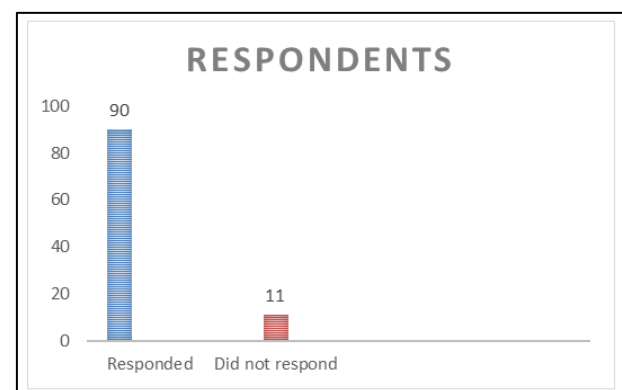


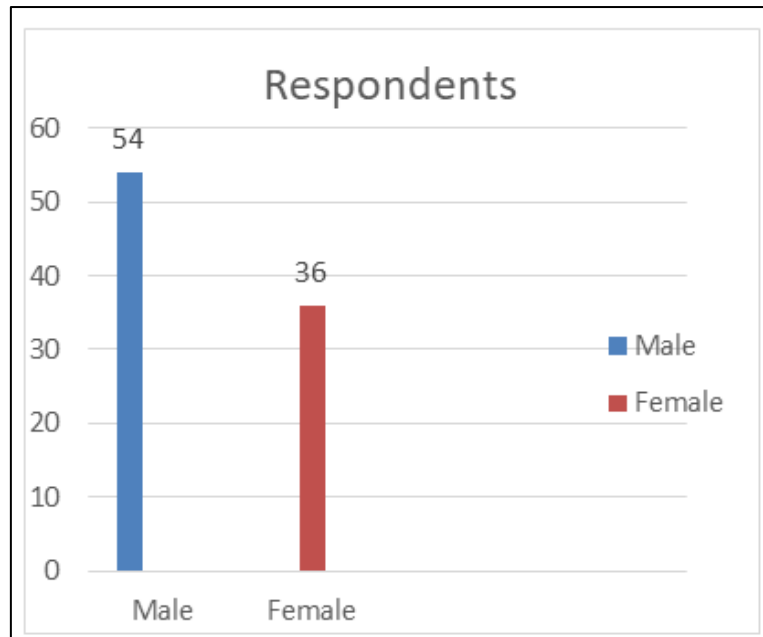
Figure 1: Response rate from respondents

#### 4.2 Demographic Information

The demographic questions sought to obtain general information from the respondents on their gender:

##### 4.2.1 Gender of the Respondents

The study sought to find out the distribution of gender of the respondents. According to the analysis, 54 (60%) respondents indicated that were male while 36 (40%) of the respondents indicated that were females. The results are shown in Figure 3 below. This implies that the study was not gender biased in terms of respondents.

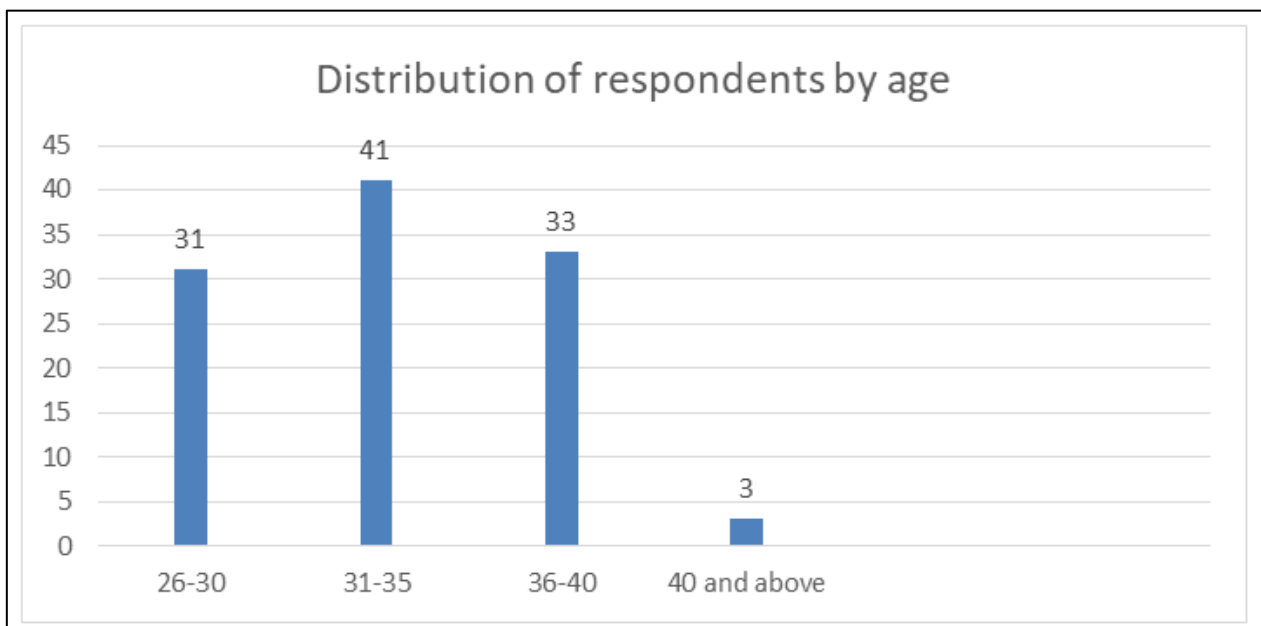


**Figure 2: Gender of Respondents**

#### 4.2.2 Age Distribution

The study sought to know the age distribution of the respondents. This was in a bid to ensure that the respondents are old enough to provide the need information. According to the results obtained and as

depicted in Figure 3 below, 13 (14%) respondents were between 26-30 years, 41(45%) respondents were between 31-35 years, 33 (36) respondents were between 36-40 years, 3 (3%) respondents were 40 years and above:



**Figure 3: Age distribution**

#### 4.2.3 Period of banking with FNB.

The study sought to understand how long the respondents have worked for FNB bank. According to the results obtained and as depicted in Figure 4 below; 38 (42%) respondents have been banking with FNB for

less than 5 years. However, 9 (10%) respondents have been with the bank for more than ten years, while 43 (47%) have worked with the firm for five to ten years: This implies that the respondents had worked long enough to provide the needed information.

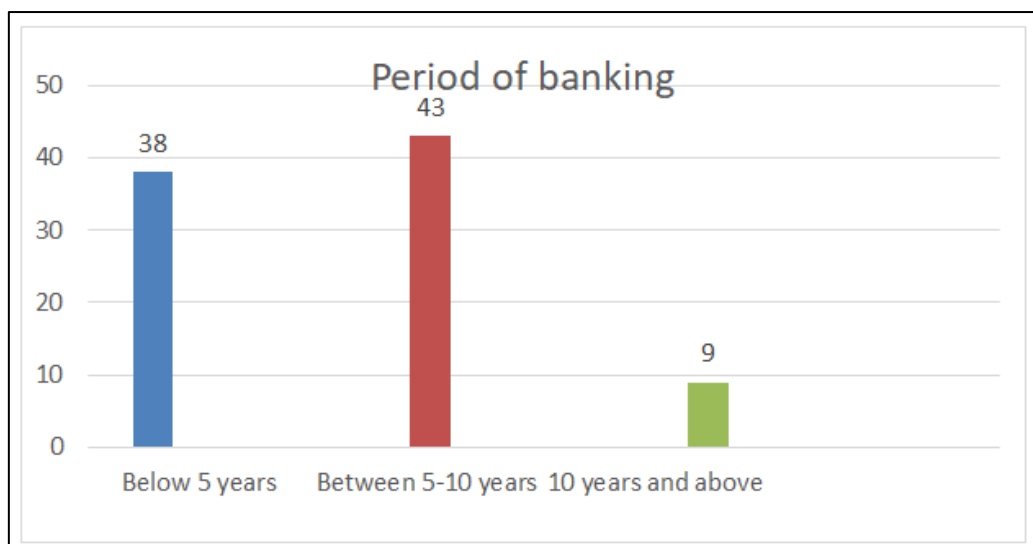


Figure 4: Period in Banking Sector

#### 4.3 Descriptive analysis of variables

This section presents the results of the descriptive statistical variables. The results are presented in line with the research objectives that are outlined in part-1 above.

**4.3.1 Objective One:** To analyze the impact of mobile banking on commercial banks' financial performance.

The study sought to analyze the impact of mobile banking on commercial banks' financial performance. Figure 5 below shows the results obtained:

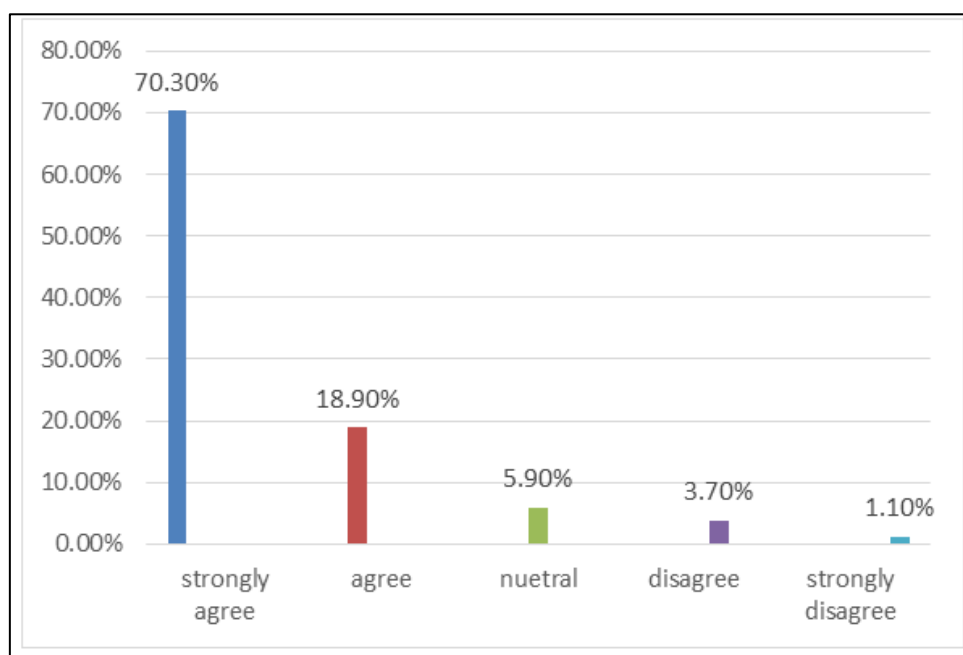


Figure 5

According to the table above, there were 9 respondents who gave a favorable verdict on the statement, with 70.3% agreeing strongly with the statement and 18.9% merely agreeing with it. 5.90% of respondents had no opinion, 3.70% disagreed with the statement, and 1.1% of respondents strongly disagreed with the statement. Considering the fact that the majority of respondents strongly agreed with this statement, it can be deduced that mobile banking transactions indeed have an impact on the performance of commercial banks. This

finding correlates with the study conducted by Bwalya Chungu and Lusaya (2020) who established that Electronic banking has seemingly improved bank services to customers thereby supporting hypothesis Alternative hypothesis ( $H_a$ ): that there is no significant relationship between the adoption of mobile banking and the financial performance of commercial banks in Zambia.

#### 4.3.2 Objective Two: To evaluate the Adoption Rate of Mobile Banking in Zambia's Commercial Banks

In the same manner the researchers sought to evaluate the Adoption Rate of Mobile Banking in Zambia's Commercial Banks. Figure 6 below shows the results obtained:

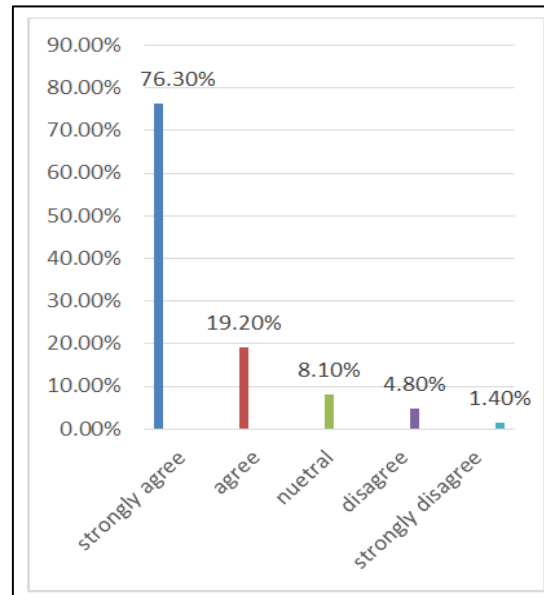


Figure 6

According to the Figure above, there was 76.3% agreeing strongly with the statement and 19.20% only agreeing with it. 8.10% of those who responded gave a neutral response, 4.80% of those who responded disapproved, and 1.4% of those who responded strongly disagreed. Because of these findings, researchers were able to draw the conclusion that mobile banking solutions has been adopted by commercial banks in Zambia. This is in agreement with the study made by Seokumar (2019) who established that Banking got a new dimension by the use of credit cards, Automated Teller Machines (ATM) and telephone banking with the camining in of mobile banking. This therefore support

(Ha) that There is no significant relationship between mobile banking on the operational efficiency of commercial banks and improved financial performance.

#### 4.3.3 Objective Three: To assess the Financial Performance Indicators of Commercial Banks in Relation to Mobile Banking Implementation.

Finally, the study sought to assess the Financial Performance Indicators of Commercial Banks in Relation to Mobile Banking Implementation. Figure 7 below shows the respondents view:

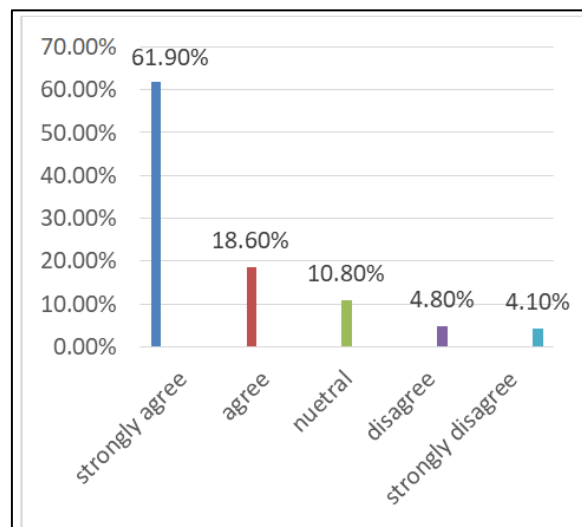


Figure 7



According to the results stated above, the majority of the respondents 61.9% strongly agreed to the statement and 18.60% merely agreeing with the statement. 10.8 percent of respondents had no position, 4.8 percent of respondents disagreed, and 4.1 percent of respondents strongly disagreed. Because of these findings, it was deduced that profitability of the bank is high since the introduction of mobile banking. This is inline with the study conducted by Kumar (2010) pointed out that in order for mobile banking to function, a technological platform is required; however, developing such a solution is both time-consuming and costly. This therefore support the: Alternative hypothesis (Ha) that there is a significant relationship between financial inclusion through mobile banking and the profitability of commercial banks in Zambia.

## 5. CONCLUSION

In conclusion, the analysis of the impact of mobile banking on commercial banks' financial performance in Zambia reveals a nuanced landscape. While mobile banking technology has become a cornerstone in the banking sector globally, its potential in Zambia is yet to be fully realized. Despite being the most widely used technology in the industry, there remains a significant gap in adoption and financial inclusion within the Zambian population. The statistics from the Bank of Zambia underscore the challenge, with a substantial portion of adults lacking access to formal financial services and a majority refraining from engaging with regulated financial products. As commercial banks continue to invest in mobile banking infrastructure, it is imperative for the Zambian government and financial institutions to collaborate in raising awareness and providing education about the advantages of mobile banking. Bridging this knowledge gap and addressing the barriers to adoption will not only enhance financial inclusion but also contribute to the overall improvement of commercial banks' financial performance in Zambia.

## 6. RECOMMENDATIONS

Based on the findings the study recommends the following:

- i. Commercial banks in Zambia should prioritize and invest in comprehensive financial literacy programs to educate the population about the advantages and functionalities of mobile banking. This can help dispel misconceptions, address concerns, and encourage wider adoption of mobile banking services.
- ii. Banks should invest in upgrading and expanding their mobile banking infrastructure. i.e ensuring robust security measures, user-friendly interfaces, and compatibility with a diverse range of mobile devices to enhance accessibility and user experience.
- iii. There is need for a collaborative efforts with the Zambian government can amplify the impact of

mobile banking. Banks should work closely with relevant government agencies to align their strategies with broader financial inclusion initiatives and leverage existing programs to reach underserved populations.

- iv. There is need for implementation incentive programs, such as reduced transaction fees, exclusive discounts, or loyalty rewards for mobile banking users, can motivate individuals to switch from traditional banking methods to mobile alternatives.

## 7. IMPLICATION OF THE STUDY

Examining the impact of mobile banking on commercial banks' financial performance in Zambia holds significant implications for both the financial sector and the broader economy. As mobile banking becomes increasingly prevalent, understanding its effects on commercial banks' financial performance is crucial for strategic planning and decision-making within the industry. Positive outcomes could include enhanced operational efficiency, expanded customer reach, and increased transaction volumes, contributing to improved revenue streams for banks. Conversely, negative impacts, such as potential security concerns.

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