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## HOW PERCEIVED USEFULNESS OF MOBILE BANKING AFFECTS FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN NAIROBI CITY, KENYA

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### ABSTRACT

*The shift from traditional branch banking to mobile banking has seen banks employ mobile banking. Use of mobile banking seeks to attract new customers while retaining existing ones minimize operational and management costs and sustaining competition. The Kenyan banking sector has seen significant advances in technology, but investment in technology is expensive and still not monetized to contribute to financial performance outcomes. This study sought to assess how perceived usefulness (PU) on mobile banking affected the financial performance of commercial banks in Nairobi County, Kenya. The study was anchored on technology acceptance model (TAM). The survey was based on descriptive research design and targeted 200 customers from the top-five rated banks on performance of mobile banking. The sample size was 133 after applying the Yamane formula and these respondents filled the questionnaire. The quantitative data was analyzed using descriptive, correlation and regression analysis. The descriptive analysis results show that perceived usefulness had mean score of (M=3.94) and financial performance (M=4.191). The correlation analysis show that perceived usefulness was closely associated to financial performance as  $r = 0.699$  and the two variables were positively and significantly related based on regression beta coefficient of  $\beta = .545$ . The findings showed that 62.9% of financial performance was influenced by perceived usefulness of mobile banking application. The study concluded that financial performance with aspects like increased customer numbers, profit margins and cash flows was improved by perceived usefulness of mobile banking. The study recommended upgrading of the mobile banking apps so as to perform services such as financial transactions, speedy processing of transactions and provide multiple services to users.*

**Key words:** Perceived usefulness, Mobile banking; Financial performance

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## INTRODUCTION

Advancing technologies has been embraced by players in different sectors of the economy. Mobile banking is one such technology that has been embraced by the financial and banking sector players. Mobile banking is a transaction performed on electronic gadgets such as a mobile phone (Singh & Srivastava, 2018). In addition, Alalwan, Dwivedi and Rana (2017) characterize mobile banking as an exchange initiated and completed by a mobile application. Mobile banking is categorised into two categories, the transformation m-banking and the new m-banking. Under transformation m-banking, it is seen as allowing people to transact using the mobile phones even if they do not have a bank account. The new m-banking is based on modifications made on the applications and the systems. Mobile banking has become a global trend with a high number of m-banking users especially in nations like Kenya, Brazil and China. The other nations to adopt it include the United States, Sweden and United Kingdom (Oluwatayo, Osabuohien, Okafor & Osabohien, 2022).

Banks have dramatically switched from traditional banking to a branchless type of banking among these institutions. This gave banks the opportunity to build a customer base, making mobile banking the biggest leap forward. Al-Husein and Sadi (2015) found that the quality of internet connection, usefulness and ease of use as perceived by the users significantly affected mobile banking in terms of its adoption and use. Okombo (2015) noted that at the Commercial bank of Africa the adoption of mobile banking services by its customers largely relied on their perceptions of the application and systems. Maore (2019) noted that bank customers used mobile banking systems and applications because they were aware about them, they did not experience disruptions from their works, they could get 24/7 services and efficiency in getting banking services.

Adoption and utilization of advanced technologies is based on perception of the customers and the markets. This is informed by linking the product on needs, demands and expectations of either the customers, the market or both. The social and financial factors also come to play in forming perception about products, services and brands (Baabdullah, Alalwan, Rana, Kizgin & Patil, 2019). When it comes to mobile banking consumer perception on its adoption is based on usefulness in terms of speed of accessing information, resolution of issues, quick and efficient transactions and handling financial matters.

In using the mobile banking applications, the banks expect better financial performance in terms of generation of higher revenues, sales and earnings. Financial performance as a term is also utilized as a general evaluation of company's overall financial position in a specific timeframe and is often used to analyse comparable companies in similar companies as a whole or departments. There are numerous methods utilized to estimate financial performance, but all actions must be done in a conglomerate. Details such as income from all individual transactions and tasks, wages, income from activities, etc. are available (Mohamed, 2019). Several ratios are utilized to quantify profits, the utmost significant including return on equity (ROA), return on investment (ROI), and net interest margin. The performance of banks is based on the capacity of the institution to attain an acceptable return level and cut risks (Khravish, 2011). Thus, measured as profit margins from sales, customer base based on customer numbers and cash flows.

Kenya has a protracted public transaction history and the need for transformational arrangement to support the financial agenda. This is the reason as to why some of the banks are investing large resources to mobile banking. This is because of the need to reach more clients, give support anytime, anywhere, and reduce the cost of giving support (Boro, 2017). Alternatively, there is a shift of customer interests to high-quality, versatile financial services that are fast, secure, and ultimately address banking insights and monetary execution (Muia, 2017). The long queues in the bank hall, suggesting that customers may not be utilizing mobile banking. Some customers, and some critics of mobile banking, say it is unstable and unreliable due to system failures, pointing to its perceived risks and fears. Furthermore, according to Boro (2017) the banking industry still has a strong negative image, with almost one out of every five customers doubting its integrity.

There are also negative insights on m-banking environment because of restrictions on financial exchanges for large volumes of funds. Majority of Kenyans do not utilize M-banking as a payment mechanism, indicating

that M-banking usage is rising at a slower rate than the population that is qualified to use it (Mbiti & Weil, 2015). Although several banks have been shown to use mobile banking extensively, the perception of the platform has not been seen to translate into bank performance, which forms the focus of the present study. Therefore, the study sought to link mobile bank use and financial outcomes in the banks.

### **Study Objective**

The objective of the study was to investigate the influence of customers perceived usefulness of mobile banking on the financial performance of commercial banks in Nairobi County, Kenya

## **LITERATURE REVIEW**

### **Theoretical Literature Review**

#### ***Technology Acceptance Model (TAM)***

The model was formulated by Davis (1989) to describe the behaviour that leads to technology acceptance. These metrics are extremely useful for system engineers and enterprises as an instrument for determining technology adoption and ensuring that these features are incorporated in the products. The TAM model accepts that the reception is intentional, but this depends on the degree of control over the singular's current situation. Perceived benefits and ease of use have long been recognized as key variables in people accepting a new innovation. Therefore, there was seen the TAM model to design study interactions and support information about the utilization of mobile banking in this survey. Different levels of identification are also considered. Much research on data frames relies on TAM. In mobile banking, thinking about the model has had a positive impact on the potential of the goal. TAM is well-studied, and TAM's ability to understand perspectives on the use of information sketches is superior to other models (Mathieson, 1991).

Davis (1989) recommends predicting approvals and denials of development for the use of TAM. This emphasizes the relationship between beliefs, spirituality, and reasons for action. Davis (1989) noted that TAM, which comprise of two elements; perceived usefulness, and perceived ease of use. Perceived usefulness (PU) hints at how much one accepts that a particular framework will improve the presentation, and with a particular innovation, the body as perceived ease of use (PEOU). It hints at how much you accept to reduce physical and mental exertion. Chung and Kwon (2009) observed that the construction of PUs and PEOUs was associated with behavioural expectations of including portable banking in later studies. Nonetheless, according to Mathieson (1991), focusing solely on the two developments of perceived usefulness (PU) and perceived ease of use (PEOU) based on the perception of customer innovation. However, this paper focus was on the first concept of perceived usefulness.

Perceived Usefulness (PU), it is the extent to which one believes that the adoption of a particular technique improves job performance is called perceived usefulness (Davis, 1989). As studies on receiving data frames suggest, frameworks that do not help individuals fulfil their obligations are very unlikely to be welcomed (Nysveen, et al., 2005). Another word that looks useful is hope of execution. This is seen as a solid and constructive result in that it expects employers to use the development. Several studies demonstrated that PU has an important impact on the value and usage of IS (Wang, et al. 2003; Chan, 2004). Davis (1989) stated that PU consistently wins when assessing convenience and normal framework usage. Customers need to be aware of the framework because of the importance of PU given its power, and it must be said that ease of use alone is not enough to offset innovations that do not meet the required value. Users need to embrace electronic financial frameworks if they accept that innovation helps them.

### **Review of Past Literature**

The recognition of usefulness is an individual's belief that leveraging new innovations enhances or enhances presentations. It is characterized that perceived usefulness as how much we accept frameworks that help people get better at work. In a survey by Akturan and Tezcan (2012), the analysts found that shoppers'

mentalities about versatile banking were impacted by apparent utility and that this demeanour affected customers' arrangements to acknowledge and embrace the portable financial framework. Another analyst found that apparent utility was the most basic component in deciding if to use versatile banking in Malaysia in the survey by Bakri (2020). The evolution in banking has led to development of financial innovation and inclusion. Mobile banking services was linked to client perception and acceptance on the usefulness and benefits accrued. The study found significant link between perceived usefulness of the app and customer acceptance and adoption of mobile banking. The study concluded that other factors included cost, security, and ease of use and usefulness that affected customer acceptance of mobile banking.

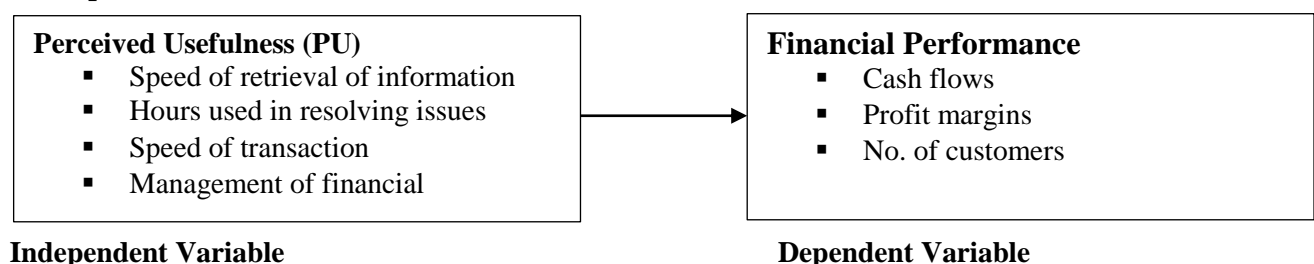
The perceived usability mobile financial services (MFS) strongly influenced MFS inquiries and pick-ups and supported previous research. In areas where the population has difficulty accessing banks and money services, the use of eclectic banks to provide convenience in the face of difficulties is considered high as justification for the highly valued advantages of MFS (Dhingra & Mudgal, 2019). The survey also states that a longing for more useful banking and cash management contributes to MFS's reputation. Many urban dwellers make a living far from their city had to send cash to their relatives. MFS is beneficial, safe and secure for these customers as the locals spend very little money when traveling via mobile phones.

As shown in Raza, Umer and Shah (2017) in the survey study on perceived ease of use and usefulness of mobile banking adoption in Pakistan. There is little acceptance of mobile banking based on uncertainties, risks and insecurity of the application. The customers can use it if they understand the obvious benefits of convenience and productivity when using a bank.

The information from a review studied in Germany supported this case and revealed that apparent value is a key variable influencing the perception of sustainable financial management. For the TAM model established that the obvious benefits had an important impact on the decision to use multipurpose banking. As you can see from the information, saw utility is an important indicator of customer enjoyment and enthusiasm for using portable financial management. As reported by Thaker *et al.* (2019) showing that support willingness is an important variable in determining customer sales in Islamic mobile financial services. Customers need a basic, simple and fast-moving bank exchange process.

Mobile banking has in the recent past been fronted by banks as a modern means of serving its clients. The traditional and physical interaction between customer and bank agent has shifted to digital technologies. Prastiawan, Aisjah and Rofiaty (2021) in assessing adoption of mobile banking as mediated by the attitude towards its usage and other factors, shared that usefulness expected and gained entice many bank staff to shift to mobile banking. Findings showed that perceived usefulness had direct link to m-banking adoption in Indonesian banks. Usefulness of the application influenced its acceptance and adoption by the customers. Kurniawan, Mugiono and Wijayanti (2022) research on perceived usefulness and intention to use application as mediated through trust. Awareness, information sharing and expectations of efficiency and quick resolution of issues, would attract customers to try the mobile banking.

### Conceptual Framework



**Figure 1: Conceptual Framework**

## METHODOLOGY

In seeking information on how perceived usefulness affects financial performance of banks, there was use of descriptive research design. This design gave an opportunity to the respondents to answer questions on what, when, where and how of a phenomenon. According to Lewis (2015) the design is ideal as it reports findings as they are without any manipulation, hence appropriate for use in this research.

The study targeted 200 customers from the top five performing banks in using mobile banking, which included Equity Bank (Eazzy Banking app), Barclays Bank (Barclays Mobile App), SBM Bank (Mfukoni App), Family Bank (Pesa Pap) and NIC Bank Kenya (NIC NOW App). The survey used non-probabilistic sampling technique, that of convenience sampling and Taherdoost (2017) noted involves taking samples from a population that is close by or available. The sample size of 133 respondents was obtained by adopting the Taro Yamane's (1973) formula. These respondents were given structured questionnaires to fill, as part the data collection process.

The produced data was quantitative in nature, and later it was entered into IBM SPSS version 25.0 for analysis. The analyses were descriptive (getting means, standard deviation, frequency and percentages) Pearson correlation (obtaining the association between variables) and regression analysis (examining the strength and direction and association). The adopted regression model is as:

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

Y = Financial Performance

X<sub>1</sub> = Perceived Usefulness

The findings were presented in tables and prose form for its discussions.

## FINDINGS AND DISCUSSIONS

The study's response rate was 75.94% after 101 questionnaires were filled and returned. The data obtained was analysed and here are the findings.

### Descriptive Analysis Results

**Table 1: Perceived Usefulness**

| Statements   | Mean        | SD       | D        | N       | A        | SA       | SD          |
|--|-------------|----------|----------|---------|----------|----------|-------------|
|  |             | Freq. %  | Freq. %  | Freq. % | Freq. %  | Fred (%) |             |
| Using mobile banking is advantageous to me   | 4.199       | 0        | 11(10.9) | 4(3.9)  | 41(40.6) | 45(44.6) | .456        |
| I would be able to complete my tasks more easily and quickly if I used mobile banking. | 3.867       | 2(1.9)   | 17(16.8) | 8(7.9)  | 40(39.6) | 34(33.7) | .682        |
| Using mobile banking enhances faster transactions.                                     | 4.003       | 0        | 0        | 10(9.9) | 28(27.7) | 63(62.4) | .554        |
| Mobile banking allows me to better manage my financial resources.                      | 3.691       | 21(20.8) | 9 (8.9)  | 3(2.9)  | 51(50.5) | 17(16.8) | .973        |
| <b>Aggregate</b>   | <b>3.94</b> |          |          |         |          |          | <b>.666</b> |

In general, the results in Table 1, show that the respondents agreed to a great extent at an aggregate mean of M=3.94 and SD=.666 on perceived usefulness of mobile banking. The perceived usefulness encouraged respondents to use mobile banking which led to improved financial performance of the banks. Raza, *et al.* (2017) shared that convenience and productivity of mobile banking and its understandability by users enhanced utilization of these services and improved outcome. The value of mobile banking is important in

financial management. In addition, Prastiawan, *et al.* (2021) noted that perceived usefulness had direct effect to mobile banking adoption.

**Table 2: Financial Performance**

| Statements  | Mean         | SD<br>Freq. % | D<br>Freq. % | N<br>Freq. % | A<br>Freq. % | SA<br>Fred (%) | SD          |
|---|--------------|---------------|--------------|--------------|--------------|----------------|-------------|
| There is increase in number of customers using mobile banking | 4.239        | 0             | 7(6.9)       | 0            | 31(30.7)     | 63(62.4)       | .347        |
| The bank has seen improved profit margins                     | 4.134        | 0             | 0            | 12(11.8)     | 45(44.5)     | 44(43.6)       | .44         |
| The bank has sufficient cash flows                            | 4.201        | 0             | 0            | 0            | 59(58.4)     | 42(41.6)       | .425        |
| <b>Aggregate</b>  | <b>4.191</b> |               |              |              |              |                | <b>.404</b> |

Table 2 shows that perceived usefulness of mobile banking led to increased financial performance of the banks, as based on high aggregate mean score of  $M = 4.191$  and  $SD = .404$ . The findings echo what the researcher Jha (2018) shared that increased returns and earnings show an organization is using its resources effectively and can measure its performance index. Banks can measure incomes through profits earned, cash in-flows and revenue streams from its expanded customer portfolio. Mohamed (2019) noted that more customers mean more revenues collected from individual transactions conducted in a span of time.

### Correlation Analysis Results

**Table 3: Correlation Analysis**

|                              |                     | Financial Performance | Perceived Usefulness |
|------------------------------|---------------------|-----------------------|----------------------|
| <b>Financial Performance</b> | Pearson Correlation | 1                     |                      |
|                              | Sig. (2-tailed)     |                       |                      |
|                              | N                   | 101                   |                      |
| <b>Perceived Usefulness</b>  | Pearson Correlation | .699*                 | 1                    |
|                              | Sig. (2-tailed)     | .000                  |                      |
|                              | N                   | 101                   | 101                  |

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the results from the conducted correlation analysis and indicates there is a significant association between perceived usefulness and financial performance of the banks based on  $r = .699$ . It is therefore evident that increasing perceived usefulness of mobile banking directly influenced adoption and utilization and improve financial performance outcomes of the banks in Nairobi City County.

### Linear Regression Analysis

This was done to show the cause-effect relations that perceived usefulness has on financial performance of the banks. The analysis conducted included model summary, goodness of fitness for the ANOVA and regression coefficient.

**Table 4: Model Summary**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .803 <sup>a</sup> | .644     | .629              | 0.149884                   |

a. Predictors: (Constant), Financial Performance, Perceived Usefulness,

Table 4 indicate that adj. R square (0.629) show that 62.9% of changes in financial performance is due to the effects of perceived usefulness of mobile banking. The results show presence of 37.1% residual effect for perceived factors that influence financial performance of the banks that are outside the scope of this study.

**Table 5: ANOVA**

| Model |            | Sum of Squares | Df  | Mean Square | F      | Sig.              |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1     | Regression | 134.152        | 1   | 134.152     | 79.508 | .000 <sup>b</sup> |
|       | Residual   | 167.039        | 99  | 1.687       |        |                   |
|       | Total      | 301.191        | 100 |             |        |                   |

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Perceived Usefulness

Table 5 presents ANOVA test results that were calculated at 0.05 levels of significance. The F calculated = 79.508 and F critical = 2.466, showing the overall regression model is fit and significant since  $F_{\text{calculated}} > F_{\text{critical}}$  ( $79.508 > 2.466$ ). Thus, it could be used in predicting that perceived usefulness of mobile banking has a significant influence to financial performance of the banks in Nairobi City County

**Table 6: Regression Coefficient**

| Model |                      | Unstandardized Coefficients |            | Standardized Coefficients | T     | Sig. |
|-------|----------------------|-----------------------------|------------|---------------------------|-------|------|
|       |                      | B                           | Std. Error | Beta                      |       |      |
| 1     | (Constant)           | 4.516                       | 2.635      |                           | 1.714 | .000 |
|       | Perceived Usefulness | .545                        | .404       | .37                       | 1.349 | .000 |

a. Dependent Variable: Financial Performance

The computed data presents the resultant regression equation as:

$$Y = 4.516 + .545X_1$$

Where:

Y= Financial Performance of the banks in Nairobi City County;

$X_1$ = Perceived Usefulness

Table 6 indicate that when all elements are held constant, financial performance of the banks in Nairobi City County would stand at  $\beta = 4.516$ . The regression coefficient results also show positive and significant association for perceived usefulness and financial performance of the banks. This is based on beta results of  $\beta = .545$  and p-values of 0.000. The findings are also echoed by Akturan and Tezcan (2012) who found that apparent utility was the most basic component in deciding to use alternative banking like mobile banking. In addition, Dhingra and Mudgal (2019) shared that convenience in mobile banking and other added value is one of the justifications for use of mobile financial services. While Prastiawan, *et al.* (2021) agree by revealing that the expected usefulness and benefits of the mobile banking led to adoption of mobile banking. Okombo (2015) shared that enjoyment of mobile banking services is an enticement for adoption and use of mobile financial services.

## CONCLUSIONS AND RECOMMENDATIONS

The survey measured financial performance in the banks using parameters such as increased number of customers on mobile banking platforms, profit margins and sufficiency of cash flows. The study showed perceived usefulness enhanced performance which improved the banks' financial outcomes. Thus, the study concludes that perceived usefulness led to improved financial performance. The advantages of using the

application included the capacity to manage finances, completion of many tasks and faster transaction speeds while using mobile banking improved financial outcome.

The followings recommendations were made to improve financial performance of the bank; the banks working with information technology companies are requested to develop mobile banking applications that are useful to customers. As part of improving perceived usefulness, there mobile banking apps must be upgraded. There is also need to invest in advancing technologies for better serving the customers. The app should be able to manage finances, allow quick transaction speeds and offer multiple tasks to users.

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