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Influence of Mobile Banking on Uptake of Products and Services in Family Bank Limited, Kenya

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***ABSTRACT*:** *Mobile banking is a products and services distribution strategy the bank offers to its customers. It enables customers to access the bank products and services remotely using mobile phones. The study investigated the influence of mobile banking on the uptake of bank products and services in Family Bank Limited, Kenya. Primary data was collected using questionnaires and secondary data was acquired from Family Bank and Central Bank of Kenya annual reports. The study was guided by technology acceptance theory. The study adopted correlation and descriptive research designs. A sample of 384 customers was chosen using Fischer's formula. The quantitative data was analyzed using descriptive and inferential statistics. The study found that mobile banking had a statistically significant positive effect on the uptake of products and services. Simple univariate regression was applied and generated a beta coefficient of 0.962. The study concluded that mobile banking is a good product and service distribution strategy. The study recommends that once customers are registered in mobile banking, they are trained on the services available. Also, the bank should be more aggressive in mapping new niches to boost uptake. A further study may be carried out on the influence of products knowledge and training on the uptake.*

KEYWORDS: *Distribution, Mobile banking, products and services, strategy, Uptake*

I. INTRODUCTION

1.1Background information

A distribution strategy, also known as a marketing strategy, is a network of individuals or organizations involved in delivering products and services to consumers. They are categorized into direct and indirect distribution strategy .In the direct distribution strategy, the manufacturer sells products and services directly to the end-users without involving intermediaries. Some intermediaries are wholesale distributors, dealers, retailers, consultants, and manufacturers' representatives [1].Distribution of banking services entails providing bank products and services to customers through various strategies. Different distribution strategies seek to enhance convenience, embrace technology, curb costs of operations, and influence uptake [2] According to [3], the distribution of bank products is concerned with how the products and services are delivered to customers ensuring availability at the right time, place, and in a form that is appropriate and convenient to the customers.

There is stiff competition among institutions offering banking services to win customers and make profit. These institutions embark on customer centrism to ensure retention and on-boarding of new customers. Although not fully embraced, commercial banks have adopted digital distribution strategies to enhance service delivery and customer satisfaction [2] Information Communication and Technology (ICT) revolutionalised distribution strategies adopted by financial services providers. The physical branches have been enhanced by ICT-based methods of distribution [4] Customers require a financial institution to meet their needs, including

cash deposits, cash withdraws, funds transfers, utility bills and loan advances among others. Financial institutions are using multi-channeling to address customers' demands ensuring security, privacy, convenience, accessibility, reliability, and speed of service to drive up products and services uptake and deepen competitiveness.

Mobile Banking is a distribution strategy offered by a bank to its customers in cooperation with the network providers to enable them to access bank products via mobile phone handset. The portable line gets linked to the bank account to facilitate the operation of the customer account remotely without visiting the branch [5] Mobile banking services are provided when a financial institution and a mobile network provider partner to work together. The customer, therefore, accesses these products and services through self-service in their mobile phones. In this distribution strategy, customers transact with convenience and enjoy low-cost. According to [6] mobile banking is essentially any financial transaction that is based on wireless handsets. Electronic Data Interchange (EDI) is the technology that supports computer-to-computer communication protocol that forms the foundation of mobile banking. The mobile banking strategy enables banks to offer clients 24-hour access to banking products and services. Mobile banking was considered a key pillar and enabler of an appropriate banking environment as early as 2002. According to [6], the increase in mobile phone penetration in Kenya since the early 2000s and the invention of mobile money transfer in 2007 created a market niche for services over mobile phones.

In Kenya, majority of the Banks and financial institutions have embraced a growth trajectory based on transformation driven by mobile solutions [7]. Stiff competition for market share has prompted banks to liaise with multiple mobile telecommunication companies to widen their reach within this market niche. Family Bank has embraced this status quo to create retail mobile banking products and services. It leverages Unstructured supplementary service data (USSD), Pesa pap app, Pay bill numbers and money transfers to other bank accounts, mobile phone loans, credit cards and debit cards to encourage uptake. USSD interface is accessible to all mobile subscribers through USSD code *325# or the Pesa pap application. Currently, the main drivers of mobile banking are the rise in internet usage among the population. Therefore, a synergy between banks and telecommunication companies is significant to mobile banking technology developments.

In Kenya, 25 percent of the populations perceive this synergy to be very high, 50 percent perceive it to be high, and 25 percent view it as medium [7]. It is apparent that mobile banking is highly rated and thus a potential competitive advantage to any bank that leverages it appropriately. The uptake of mobile banking to access bank products and services face several challenges. According to [8], the best experience in mobile banking is limited to those using higher-end smartphones. The lower-end alternative of unstructured supplementary service data (USSD) is often cumbersome and lacks aesthetics. Further, Mobile banking is susceptible to cyber-crimes compromising security features such as PIN and two-factor authentication. It is also a challenge to educate users on current risks and security threats since it is a dynamic process and new vulnerabilities manifest over time.

1.2 Statement of the Problem

The banking sector has become more competitive over the years. This has propelled commercial banks and other financial institutions to compete for customers. Commercial banks have devised numerous distribution strategies and invested resources to improve uptake, efficiency, convenience, and competitiveness. Innovations and improvements in ICT-based systems are fundamental to maintaining a good customer relationship. These dynamics have seen commercial banks aggressively compete for sales, market share, and customer retention [9]. Distribution strategies adopted by banking institutions are very crucial to products and services uptake. According to [10] digital distribution strategies enable customers to easily and conveniently access banking services and products. As a result, more products and services can be accessed around the clock as opposed to the traditional branch distribution, where services are available approximately eight hours a day.

Electronic banking affects the mixture of financial services offered by financial institutions, how they are distributed to customers and how they are likely to impact [11]. According to [12], who researched the influence of ICT-based distribution strategies on bank financial performance in Kenya established that

commercial banks adopt ICT- based distribution strategies to improve customer satisfaction and grow their profitability through increased uptake. Despite Family bank offering mobile banking, customers prefer visiting banking halls to access products and services at relatively high costs, with shorter opening hours and sometimes long queues. This, therefore, leads to customers' deferring transactions that could have been accessed through mobile banking.

1.3 Objective of the study

To determine the influence of mobile banking on uptake of bank products and services in Family Bank Limited, Kenya.

1.4 Research hypothesis

H_0: There is no statistically significant influence of mobile banking on uptake of bank products and services in Family Bank Limited, Kenya.

II. LITERATURE REVIEW

2.1 Theoretical review

The Technology Acceptance Model (TAM) has been applied in this study. The theory was put forth by Fred Davis in 1985[13]. It seeks to explain the reasons for individuals accepting and using various technologies. The model states that acceptance of technology is not by default, but three main factors influence its acceptance. The Theorist posits that an individual's behavioral intention and attitude are fundamental for technology to be embraced. Behavior intention looks at what the person wants the technology for. However, in this case, one's attitude may not be fixed and may vary depending on social, political and even economic factors. The social attitude may be influenced by skill and even literacy levels. Once there is an identified need, the individual in question looks at the perceived ease of use [14].

Perceived usefulness of technology looks at whether the technology can help an individual perform better in a given task. Perceived ease of use is the other factor conceived. This factor looks at how much effort one requires to operate a given technology. Most individuals prefer technologies that require less effort. The attitude of an individual towards technology also plays a key role according to Technology Acceptance Model. However, in this case, one's attitude may not be fixed and may vary depending on social, political and even economic factors. The skill and even literacy levels may influence the social attitude. Political attitude is influenced by the political atmosphere, and the economic factor is mainly a question of affordability and costs.

Technology Acceptance Model borrows from the Theory of Reasoned Action Model, which was proposed in 1975 by Fishbein and Ajzen[15].The theorists explained that an individual's behavior is determined by their intention. Their intention is directly linked to what they intend to achieve. As a result, they act in a way that helps them achieve their intended outcome. Therefore, an individual can act or fail to act in a certain way depending on the purpose, their actions or inactions will serve. All this is also influenced by an individual's attitude towards the end result of a behavior. The model was relevant to this study because it explained how technology is accepted by various users and expounds on the factors that trigger acceptance. The model explained how mobile banking technology gets accepted and consequently contributes to uptake of products and services in family bank limited.

2.2 Empirical literature review

[16] Investigated how the financial performance of deposit-taking microfinance institutions in Kenya was influenced by electronic banking. The study used a descriptive research design and targeted nine registered micro finances as of June 2013. The questionnaires were used to collect primary data, and the secondary data was drawn from the financial statements and other annual reports. The study established that all the microfinance institutions had adopted electronic banking. The study further demonstrated that adopting e-banking platforms boosted the institution's performance. [17] Investigated the influence of mobile banking on the performance of tier one commercial institutions in Kenya. The study employed a descriptive research design

and a target population of 8 tier one commercial banks. The study utilized secondary data from published financial statements. The study established that mobile banking M-pesa withdrawals influenced the mobile banking platform's usage, which led to higher financial returns. It further established that mobile banking loans significantly influenced the performance of commercial banks in Kenya.

[18] Evaluated the impact of mobile baking on the performance of commercial banks in Kapsabet town. A descriptive survey design was chosen for the study. The study population comprised the Management teams, bank customers, Heads of departments, and bank employees. The stratified random sampling method was adopted. It was established that banks' financial performance and mobile banking were closely correlated at ($p<0.05$). The study further established that sending and receiving money was made much easier by the establishment of the mobile banking platform.

A study on the influence of perceived risk of mobile banking and uptake of Mobile Banking in Kenya was carried by Luvanda [19]. The study established that most customers were concerned with the ease of use of mobile banking platforms as opposed to the associated security risks. The study also found that increased mobile banking use positively correlated with risk issues because of cyber-crimes. It further established that most users were unaware of the potential risks before the attacks. [20]Researched on the impact of mobile banking on the performance of financial institutions in Kenya. The study further investigated the level of usage of mobile banking in commercial banks in Kenya. The investigation involved 30 financial institutions. It established that commercial banks had the highest usage rate of mobile banking services among the financial institutions. The study's findings further concluded that the SACCOs were slowly adopting mobile banking while microfinance institutions had not fully adopted internet banking.

2.3 Conceptual framework

This relationship between the independent and the dependent variables is conceptualized in Fig. 2.1 as shown below. Mobile banking was conceptualized as having influence on uptake of products and services. The dependent variable (Uptake of products and services) was measured using the number of products and services accessed while the independent variable (Mobile banking) is measured by reliability, security, convenience, partnerships and handset availability.

Independent variable **Dependent variable**

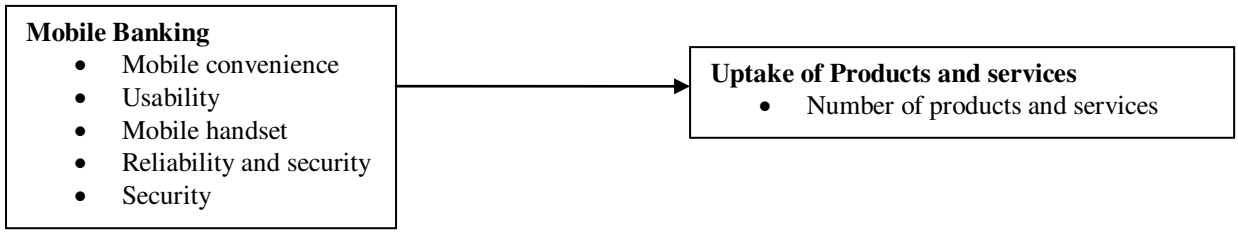


Figure 2.1: Conceptual framework

III. METHODOLOGY

Research methodology entails the methods used by the researcher in the study. They are research philosophy, research design, the sampling procedure, validity, reliability, data collection instrument, target population, analysis and presentation, and ethical considerations. This study made reference to positivism research philosophy. The philosophy posits that knowledge is based on facts. According to [21] the facts that make up knowledge are gathered from objective reality and analyzed numerically to give conclusions or relationships between variables and not based on the subjective nature of a person. The study used descriptive and correlation research designs. The research was carried out in Family Bank Limited in Mt Kenya region comprising of 23 branches. This region was chosen because it consists of customers who are engaged in various income-generating activities ranging from agriculture business and employment. Many customers come from an interior place and visiting banking halls was cumbersome and hence need to use technology to access bank products and services. The target population comprised of 177,950 customers. A sample of 384 respondents was chosen from the target population using Fischer formula. Primary data was collected by use of a questionnaire and secondary

data was collected from Central Bank of Kenya (CBK) and Family Bank Annual reports and the websites. To ensure validity, the instrument was submitted to Murang'a University of Technology supervisors for evaluation and feedback. Further, the instrument was presented to 10% of the respondents to pretest the validity, and editing was done where errors were noted to ensure content and construct validity.

The reliability test was carried out using the test re-test method over a period of time so that the results of asking the same questions are consistent. It evaluated the instrument to ensure it had all essential items and eliminated the unwanted ones. The Cronbach's alpha was used to test the internal consistency of a data collection instrument. The Cronbach's alpha value of 0.705 was generated indicating acceptable reliability [22]. Ethical issues such as confidentiality, rights to withdraw from research and explanation of the purpose of the research to respondents were considered. This study analyzed data using version 26 of Statistical Package for Social Sciences to answer the research questions. This helped to understand frequencies, mean, descriptive, and inferential statistics. Descriptive statistics were represented using percentages, and standard deviation, while inferential statistics adopted correlation and regression analysis to explain the relationship between the dependent and independent variables.

IV. RESULTS AND DISCUSSIONS

4.1Response rate

Table 1: Response rate

Response	Frequency	Percentage
Responded	354	92%
Not responded	30	8%
Total issued	384	100%

The research administered 384 questionnaires on drop and pick for some respondents and others administered in terms of interview. The questionnaires which were fully responded were 354, making a response rate of 92% (Table 1) and according to [23] that any response rate above 80% is good enough for research work.

4.2Mobile banking usage

Table 2: Mobile banking usage

Total response rate	Respondents	Percentage of mobile banking
354	110	31%

The mobile banking was used by 31% of users which represented 110 of 354 total respondents'. This finding shows that mobile banking strategy has not reached the climax of adoption among the customers and ways to improve on uptake of this strategy should be formulated. Once adoption of the strategy is improved, it would significantly increase uptake of products and services offered in this technology.

4.3Descriptive statistics for mobile banking

Table 3: Descriptive statistics

	Mobile banking statement	n	Mean	Standard Deviation
1	Mobile banking service is always available	110	4.46	0.065
4	Mobile banking is convenience	110	4.54	1.16
5	Mobile banking is cost effective	110	4.65	0.81
3	Mobile banking is reliable	110	4.78	0.571
6	Mobile banking is user friendly	110	4.78	0.59
7	Mobile Banking is secure	110	4.96	0.197
Aggregate mean score		**110**	4.7	0.485

The findings presented in Table 3 summarize the mean and standard deviations of the statements responded to under mobile banking strategy. They are arranged from the smallest to the largest mean. The statement that had the highest average rating was the security of mobile banking with a mean score M= 4.96 and a standard deviation of 0.197. The parameter with the least mean was availability of mobile banking with M=4.46. The aggregate mean score computed in the Table 3 above was 4.7. This implied that the respondents strongly agreed that mobile banking strategy influenced the uptake of products and services. The results coincided with the study by Laukkanen and Pasanen who researched on the influence of mobile banking costs on the uptake of mobile banking strategy and established that the prices of the services and products had a significant effect on the uptake of services through the strategy [24]. It was also in agreement with [25] who researched on the factors that contribute to the usage of mobile banking strategy and found that supportive regulatory framework influenced usage of mobile banking by the general public.

4.4Inferential statistics

Table 4: Regression Model

Mobile banking simple regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.992[a]	.983	.983	.38826

a. Predictors: (Constant), mobile banking services

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.010	.054		.006	.995
	mobile banking services	.204	.003	.962	80.518	.000

a. Dependent Variable: Mobile banking usage
b. Independent variable :products and services uptake

The objective of the study was to evaluate the influence of mobile banking on uptake of products and services in Family Bank in Kenya. A null hypothesis (H_0) was; there was no statistical significant influence of mobile banking on uptake of the bank products and services in Family Bank Limited. The results of Table 3 indicate that R =98.3. % indicating that there is direct linear relationship between the mobile baking and uptake of bank products and services in Family Bank. The results further establish from the coefficient of determination (R2) that mobile banking influenced 98.3 % of variations in products and services uptake.

The regression results for hypothesis indicated that the beta coefficient of mobile banking was 0.962 with a P<0.05 (Table 4). The model was fitted as: $Y=0.010+0.962X_1 + u$….. (1).This implies that a unit increase in influence of mobile banking results to 96.2 % increase in product and services uptake. Therefore, at $P < 0.05$ level of significance, the null hypothesis was rejected implying that mobile banking had a positive and statistically significant influence on the uptake of the bank products and services in Family Bank Limited. The study agrees with Maina and Mungai (2019) investigated the influence of mobile banking on the performance of tier one commercial institutions in Kenya. The study established that mobile banking M-pesa withdrawals and loans influenced the mobile banking platform's usage, which led to higher financial returns.

V. Conclusions

The study objective was to determine the influence of mobile banking on uptake of products and services in Family bank limited. The study established from descriptive analysis (Table, 2) that mobile banking strategy was used to access products and services by 31% of the respondents. The major products and services offered through mobile banking were balance enquiry, statement requests, M-pesa withdrawal and Funds transfer among others. While uptake of services via mobile banking was high, the average effect of its convenience was lower in several services. These were airtime purchase, M-pesa withdrawals via ATMs and mobile agency withdrawals. The study concludes that mobile banking is very effective strategy that can drive up products and services uptake. The regression coefficient on mobile banking was positive with a beta coefficient of 0.962 indicating that for every unit increase in mobile banking led to 96.2% increase in products and services uptake. This was in agreement with Maina and Mungai (2019)[17] who investigated the influence of mobile banking on the performance of tier one commercial institutions in Kenya. The study established that mobile banking M-pesa withdrawals influenced the mobile banking platform's usage, which led to higher financial returns. Atavachi (2013)[17] investigated how the financial performance of deposit-taking microfinance institutions in Kenya was influenced by electronic banking. The study used a descriptive research design and targeted nine registered micro finances as of June 2013. The study established that all the microfinance institutions had adopted electronic banking. The study further established that adopting e-banking platforms boosted the institution's performance.

The study concluded that all the parameters under mobile banking had a mean average above 4. The respondents strongly agreed that mobile banking influenced the level of products and services uptake. The services with a mean less than four was only use of mobile banking to change pin, payment of KRA services and zuku/Go tv bills. The study also concluded that on the security of the platform, all the respondents agreed that the strategy was secure and felt all the services accessed through this strategy was well secured. This was the same case for reliability of the strategy except for tax payment service. The study also concluded that not all Family Bank products and services were accessed by customers through mobile banking strategy. The reason was that the customers were unaware of some of the products and services offered.

The study recommends that the institution should increase products and service awareness through customer sensitization across different regions. Existing customers should be informed through posters in Agent shops, advertisements in mainstream and social media and direct small message services (SMSs) in their mobile devices. The institution may conduct a survey to investigate customer perception of the security of the mobile banking strategy to ascertain the level of acceptance of the strategy in the society. If the customers perceive the strategy as not secure, they will probably be reluctant to use it. This should be followed by enlightening the customers on the security measures that the bank has taken to ensure that all services delivered through mobile banking are secure and also there is data integrity to ascertain that the customers' data is not used for unintended purposes. The regression analysis generated a beta coefficient of 0.962, indicating that a unit increase in mobile banking strategy increases products and services uptake by 96.2%. This indicates that mobile banking is a good strategy to increase the uptake. The bank should aggressively map target markets and develop a penetration plan to onboard more customers on this platform. The reliability of mobile banking is essential because it gives customers confidence that whenever they need a service, they will get it. Therefore, the bank should endeavor to keep the system network uptime at 100% always.

5.1 Gaps for further studies

This study recommends that a study may be conducted to investigate the influence of bank products and services digital distribution strategies on non-financial performance. The study has noted the area as key because other factors such as good customer service and turnaround time among others can significantly influence products and services uptake and has been left out by this study. A study may be carried out to investigate influence of product and service knowledge on products and services uptake in commercial banks. This has been recommended because in many instances customers do not know of the existence of some services offered in

mobile banking. This would help the lenders improve on important parameters such as deposit mobilization and profitability as a result of increased uptake.

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