

## **Role of Digital Platforms as Financial Literacy Delivery Channels for Promotion of Financial Inclusion in Commercial Banks in Kenya**

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### **Abstract**

Kenya features high financial services availability and accessibility. However, the usage of these services is low and it remains a challenge for full-service banks who are the suppliers and the main players for inclusion within the financial markets. Against this backdrop, this study sought to evaluate the effect of digital platforms as a channel for providing financial literacy for financial inclusion of commercial banks. The study was guided by diffusion of innovation theory. Using descriptive research design, a sample of 384 respondents was randomly selected from a target population of 10,717 management staff of commercial banks in Kenya. The data collected were analyzed using descriptive, correlation, and regression analysis. Digital platforms channels were found to significantly affect financial inclusion in commercial banks in Kenya. The study concluded that commercial banks in Kenya had leveraged on the reachability of digital platforms like websites and online portals, social media pages, and online games and courses as channels of promoting financial literacy that significantly contributed to inclusion. The study recommended that the management of banks engaged in commercial activities should ensure the ICT department has a team dedicated to providing financial literacy training using digital platforms targeting loan applicants to improve their usage of financial services. The study expanded the utility of diffusion of innovation theory, to link the relationship between digital platforms as a channel for providing financial literacy for financial inclusion of commercial banks. Most of the existing research that adopted the theory used it in a different context, hence the study contributed by developing the utility of the diffusion of innovation theory.

**Keywords:** *Digital Platforms, Financial Literacy, Financial Inclusion, Commercial Banks, Kenya*

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## 1.0 Introduction

The supply of monetary services by banks and the demand by consumers enable financial inclusion to have enormous benefits, which include employment, economic growth, and poverty alleviation (Al-Smadi, 2018; Iddik *et al.* 2018; Sharma, *et al.* 2018; VO *et al.* 2019). The objectives and benefits of inclusion are realized through its three indicators; namely, access, availability, and usage (Demirgüç-Kunt *et al.* 2015; Nizam *et al.* 2020). These objectives are accomplished by banks, regulators, and consumers. Banks are engaged with four main tasks which enable them to achieve financial inclusion objectives. Firstly, they ensure that individuals and households obtain financial products and services at a reasonable cost (Al-Smadi, 2018). Secondly, they guarantee users' access to banks' financial facilities at their convenience (Muhammad *et al.* 2018).

The convenience implies availability at a reachable location and in good quality, and are easy to access by the population. Thirdly, they provide consumers' awareness relating to the products and services usage (Klapper *et al.* 2015). This consumer education refers to financial literacy or monetary literacy which comprise of financial knowledge, attitude, and behavior. Lastly, to comply with financial market regulations (Chaudhuri, 2018). Banks in both developed and developing economies have made tremendous efforts toward access and availability. However, usage remains a challenge mainly for the developing world (International Monetary Fund [IMF, 2020];

KNBS, CBK, and FSD, 2019). This challenge comes from financial consumers, and involves the usage of economic services provided by banks and making informed financial decisions. This has exposed banks to credit risk and liquidity risk from credit access that end in non-performing loans of microfinance services and digital loans (Lindahl, & Mokvist, 2020; Wamalwa *et al.* 2019). To counter these challenges, financial institutions have embarked upon promoting financial literacy.

*“Mobile banking and internet banking are samples of platforms employed by the banking sector players to serve customers and increase financial inclusion.”*

In Canada, the banking industry made immense contributions to financial literacy advancement for customers' usage of banking services. The Bankers Association, in collaboration with the government, developed Canada's financial literacy national strategy (FCAC, 2017; Zhang, 2019). Similarly, the banking sector in the United States partners with government, private and not-for-profit organizations to market financial literacy education (Yilmaz, 2020). The Spanish Bankers Association partnered with the Central Bank of Spain and launched the first financial literacy program in 2008 called “Finance for All” to develop

the citizens' financial decision-making skills (Bover *et al.* 2018).

For South Africa, financial literacy is promoted through sponsorship, but it is not binding. It is carried out in most organizations through individual institutions' initiatives. The banks fund financial literacy programs through their 2012 new Financial Sector Code (Garg & Singh, 2018; Sibanda & Sibanda, 2016). In Ghana, financial institutions being cognizant of financial illiteracy among financial facilitates users collaborated with the government and development partners to advance the population's financial decision skills.

Several financial literacy initiatives were undertaken across the country. The national forum on microfinance was launched in 2009 with three activities: a national financial literacy week, the development of educational materials, and financial literacy for loans, saving, insurance, and investment (Garg & Singh, 2018).

For Kenya, the government established the financial education and protection program for financial consumers' protection and education (Sindani, 2019). This monetary literacy initiative was intended to equip the financial services users with basic financial knowledge on credit, saving, and payment services provided by banks.

The use of digital platforms or digital financial platforms as a delivery channel by banks is for customers' digital financial knowledge for using digital monetary products and services. Digital financial platforms originate from digital technology. The technology surfaced in the 1960s and comprised of electronic tools, systems,

devices and resources that generate and process information (Ozili, 2018). The technology aims to enhance individual productivity, skills, abilities and expertise in human resource development (Kapur, 2018). For finance, the categories of digital technology are financial technology and digital banking. Both technologies are instruments for achieving financial inclusion. Fintech surfaced in the 1990s from innovation provides business models used for delivery of digital financial facilities, while digital banking introduced in the 1980s comprised of online digital platforms and electronic commerce. The platforms facilitate online activities and promote interactions between the commercial services providers and users.

Financial inclusion is the backbone of each nation. Kenya has benefited from inclusion but to have a greater impact on the inhabitants and the economy, its three global indicators; namely, access, availability, and usage, need to increase together. Studies showed that access and availability have increased concurrently in Kenya, while usage that refers to the number of people using monetary products and services is low and remains a challenge for the commercial banks who are the suppliers and the main players for inclusion in the financial markets (CBK, 2019; Demirguc-Kunt *et al.* 2015; Nizam *et al.* 2020).

Because of the low usage, less than 60% of the households and individuals within the population are using traditional banking services, electronic or internet banking services, pensions, digital loans, and

insurance products. The low usage of traditional banking; checking and saving accounts is at 30%, digital banking services, that is mobile bank accounts, 25% and 8% for digital app loans, insurance product usage, 29%, and pension is 12.2%. The usage of mobile money services is 79.4% but 23.3% of users have no accounts with formal financial institutions.

The usage of traditional banking and mobile money services also coincides with increasing non-performing loans of 9.4%, 12.3%, and 19.6% in 2016, 2017, and 2018 (CBK, 2018; Finaccess, 2019; KBA, 2019; Mwangi, 2019; Van Hove & Dubus, 2019). The Central Bank cautioned full-service banks to provide financial literacy to users of digital financial services. Despite the steps taken by CBK, usage remains an issue and the number of individuals without financial knowledge for financial services usage continue to rise. The percentage of the inhabitants without financial literacy knowledge increased from 62% to 69.3% from 2014 to 2019 (Finaccess, 2019; Klapper et al. 2015). The promotion of financial literacy through modern channels, such as digital platforms, have the potential to contribute significantly to financial inclusion and more specifically to the usage of financial services which may result in economic prosperity.

### ***Purpose of the Study***

The aim of the study was to determine the effect of digital platforms as a channel for providing financial literacy for financial inclusion of commercial banks in Kenya.

### ***Hypothesis***

**H<sub>0</sub>** There is no significant relationship between digital platforms and financial inclusion of commercial banks in Kenya.

### ***Literature Review***

Diffusion of Innovation Theory by Rogers (1962) highlighted the usefulness of innovation to society. Proponents argue that modern-day banks need digital transformation. Digital platforms are communication channels derived from innovation that use internet-based digital financial technology to communicate information between commercial bank management and customers (Son *et al.*, 2020). The platforms can allow users of financial services to perform online retail and digital banking tasks that include bill payment, review spending information, and purchasing of goods and services (Sonono & Ortstad, 2017). These electronic devices also permit end users to access bank digital financial products like checking and saving accounts, credit card, and lending products. The idea is extremely useful to financial institutions because nearly all banking services used financial technology. Mobile banking and internet banking are samples of platforms employed by the banking sector players to serve customers and increase financial inclusion.

The importance of digital platforms had been researched on by various scholars. Morgan and Trinh (2019) reported that individual advanced level of computer-based financial literacy knowledge has strong and positive influence on financial technology product

awareness. Improvement in financial education is important for quick use of banking services, and hence the promotion of inclusion. This result was supported by Shen *et al.* (2018) who established that boosting the digital financial literacy of people and increasing public use of the web can influence utilization of electronic financial products for optimal inclusion. In relation to this, Jaya's (2019) study on digital platforms used the life-cycle preposition for testing the impact of financial education for the provision of public services and found that financial technology influences financial inclusion but does not affect public financial services education.

A study by Kuchciak and Wiktorowicz (2021) reported that various forms of online platforms provide different financial literacy programs on banks activities. The findings confirmed of the study by Pranata *et al.* (2018) also showed that the intensity of social media activities complemented inclusion. The study concluded that the rapid growth in access and usage of digital technology in Indonesia has increased the utilization of digital financial services. Prasad *et al.* (2018), in their study on government initiative to reinforce digital financial knowledge for inclusion in India, found that male respondents were more familiar with digital financial platforms and aware of the products and services due to their level of digital financial knowledge than the female respondents. The study also reported that an individual's level of education is a significant determinant of digital platform awareness than it uses.

## 2.0 Materials and Methods

Descriptive survey research design was adopted in this study. The population comprised 10,717 management employees from commercial banks in Kenya. The unit of analysis was 40 commercial banks, while 10,717 managers at the branch level across the country were the unit of observation. The study was guided by the model proposed by Kothari (2004) to acquire the sample size. For the computation, the maximum variability of 0.5 was considered since the population comprised of 10,000 elements and more. Using the formula below, the sample size was determined as follows:

$$n = \frac{Z^2 * p * (1 - p)}{d^2}$$

Where: n = Sample size for large population  
Z = Normal distribution Z value score, (1.96)  
p = Proportion of units in the sample size possessing the variables under study, where for this study it is set at 50% (0.5)

d = Precision level desired or the significance level, which is 0.05 for the study  
The substituted values in determining the sample size for a large population are as follows.

n = 384

The sample size was 384 respondents. The study used both stratified and simple random sampling techniques to get a sample of 384 respondents comprising 199 from large banks, 120 from medium-size banks, and 65 from small banks. The study collected and analyzed primary data as well as secondary data. The former was gathered using semi-structured questionnaires to managers at the branch level in eleven counties, and the latter



from Kenya Central Bank and the Banking survey manuals. For data analysis, descriptive statistics were employed to compute mean and standard deviation, while inferential statistics involving regression and correlation were applied to work out the connection between the study variables using advanced SPSS computer software version 23.

### ***Piloting of Instruments***

A questionnaire was used as a measuring tool for data collection. The instrument was tested

for its accuracy through a pilot survey. Table 2 presents the results of the pilot test. The study used Cronbach's Alpha in table 1 to check for the reliability of the scale adopted to measure the study variables as suggested by Bolarinwa (2017).

### ***Reliability Statistics***

The Cronbach's Alpha was used for measuring the internal consistency of the variables owing to its firmness in enhancing the standard of the study.

**Table 1**

#### ***Summary of Reliability Test statistic***

| Variable         | Cronbach's Alpha | N of Items | Remarks        |
|------------------|------------------|------------|----------------|
| Digital Platform | 0.863            | 6          | Scale Reliable |

The findings in table 1 showed that the measuring scales were dependable and satisfactory as they exceeded the minimum Cronbach's alpha value of 0.7 as noted by

Nawi, et al. (2020). Cronbach's Alpha of 0.863 was achieved which confirmed that data collection instrument used a reliable scale.

**Table 2**

#### ***Explanatory Factor Analysis***

| Variables         | Factor Loadings Range | No. of Items |
|-------------------|-----------------------|--------------|
| Digital Platforms | 0.610-0.922           | 6            |

Extraction Method: Principal Component Analysis.

The minimum threshold of 0.40 was accepted by this study. The outcomes in table 2 showed that the factor loadings of constructs of digital platforms delivery channels range

between 0.610 and 0.922. Based on the threshold adopted by the study, all the constructs used to measure digital platforms' delivery channels were significant

### 3.0 Results and Discussions

The study administered a total of 384 questionnaires to the randomly selected respondents. A total of 274 questionnaires were collected representing a 71.4% return

rate. The high response rate was associated with the physical drop-and-pick methodology adopted during the survey.

**Table 3**

*Descriptive Results for use of Digital Platforms Delivery Channels*

|   | Obs. | Mean | Standard Deviation |
|---|------|------|--------------------|
| Our bank use websites and online portals in promoting financial literacy.   | 274  | 4.25 | 0.78               |
| Our bank has invested in online financial literacy teaching resources.  | 274  | 3.60 | 1.10               |
| Our bank social media pages are used to promote financial literacy.   | 274  | 4.00 | 0.91               |
| Our bank has developed mobile applications to help our customers with financial literacy.                           | 274  | 3.70 | 1.11               |
| Our bank used online games and courses for promoting customers' financial literacy.                                 | 274  | 2.58 | 1.05               |
| The use of digital platforms in promoting financial literacy by our bank has improved financial inclusion in Kenya. | 274  | 3.88 | 0.97               |
| Over all mean   |      | 3.67 |                    |

The results presented in Table 3 indicate that websites and online portals were the foremost used digital platforms by commercial banks in Kenya in promoting financial literacy as shown by the mean response of 4.25, followed by social media pages (m=4.00), while the use of online games and courses was the littlest amount adopted channels for financial literacy. The findings on the mixture indicated a mean of 3.67 for digital platforms. The finding implied that commercial banks in Kenya used digital platforms delivery channels in promoting financial literacy. The discovery was validated by Koori et al. (2020) who found

out that in Kenya, banks and their customers were satisfied with the utilization of digital platforms including websites and portals for timely provision of banking services involving branchless banking and banking hall transactions.

The study concluded that technological innovation and advancement allowed financial institutions to adopt strategies that enabled them to deal with their competitors within the financial sector. The study results concur with Rustomfram and Robinson (2017) who reported that in the United States government and institutions invest in online

financial literacy resources to teach parents, young adults, and others about banking activities such as saving, budgeting, investing, and making end-of-life financial decisions. Similarly, Leydier (2016) reported that the utilization of mobile technology in Kenya accelerated digital financial transactions and resulted in huge profits. Additionally, Musango (2018) acknowledged that mobile banking activities enabled quick payment for goods and services, checking account management, and credit facilitation. Bhuvana and Vasantha (2019) acknowledged that banks' mobile technology enhanced the financial inclusivity of consumers within the rural parts of India.

The findings agreed with those of Kuchciak and Wiktorowicz (2021), who found that banks are more active on the social network like Facebook, Twitter, YouTube, Instagram, GoldenLine, and LinkedIn. These banks pay more attention to financial education to enhance customers' financial knowledge. They added that the financial education activities of banks on each social network channel differ from one country to another.

### ***Correlation Analysis***

The study used Pearson correlation analysis to test the existing association between use of digital platforms and financial inclusion in Kenya; as shown in Table 4 below

**Table 4**  
*Correlation Matrix*

|                     |                     | Digital Platforms | Financial Inclusion |
|---------------------|---------------------|-------------------|---------------------|
| Digital Platforms   | Pearson Correlation | 1                 |                     |
|                     | Sig. (2-tailed)     |                   |                     |
|                     | N                   | 274               |                     |
| Financial inclusion | Pearson Correlation | .557**            | 1                   |
|                     | Sig. (2-tailed)     | 0.000             |                     |
|                     | N                   | 274               | 274                 |

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

The outcomes presented in Table 4 disclosed that there was a significant correlation between digital platforms and financial inclusion, with a p-value of 0.000 and a Pearson coefficient of correlation of  $r=0.557$ , holding all other independent variables constant. The results confirmed the findings of Arday (2017), who found out that the ownership and usage of mobile phones facilitated mobile banking platforms employed by the banked,

unbanked, and underserved population for online and internet financial services, which positively impacted financial inclusion.

The results are in accordance with the scholarly work of Senou et al. (2019) who said the coexistence of mobile money platforms and internet platforms as digital technology facilitated online financial transactions for banking and branchless



banking activities and this influenced positive changes in financial inclusion.

### ***Regression Analysis Results***

The study administered multivariate analysis for testing the power of the control variable(s) to predict an outcome within the measured variable where a linear relationship between the variables exists. The analysis of variance (ANOVA) can test such a relationship. Blankenship (2018), indicated that ANOVA are often employed to check the connection between the control

variables on financial inclusion of commercial banks in Kenya and test the goodness of fit of the regression model to determine if the model was suitable for the data. Changes within the outcome variable in the model were explained using the coefficient of determination (R<sup>2</sup>) and therefore the F –test was employed to look at the importance of the whole model and to interpret the relation between the result variable and control variables. The t-test was adopted for testing the importance of every control variable to the result variable.

**Table 5**

### ***Model Summary of the Regression Model***

| Model Summary              |         |
|----------------------------|---------|
| R                          | .557a   |
| R Square                   | 0.31    |
| Adjusted R Square          | 0.307   |
| Std. Error of the Estimate | 0.61662 |

The model summary findings in Table 5 revealed that the model had an R-square of 0.557 which indicated that, when other factors are held constant, digital platforms explained 55.7% of the variation in financial inclusion of commercial banks in Kenya. The findings confirmed the scholarly work of Mwanja (2018) who found out that the adoption of different types of platforms of digital technology in Kenya promoted growth

in micro-enterprises and this positively influenced financial inclusion. The study by Howell (2019) also confirmed that the adoption of digital platforms for online banking by low-income credit unions within America increased their assets size and financial markets transactions and this statistically and significantly influenced financial inclusion.

**Table 6**

### ***Analysis of Variance of the Regression Model***

| ANOVA      | Sum of Squares | df  | Mean Square | F       | Sig.  |
|------------|----------------|-----|-------------|---------|-------|
| Regression | 46.419         | 1   | 46.419      | 122.085 | .000b |
| Residual   | 103.419        | 272 | 0.38        |         |       |
| Total      | 149.838        | 273 |             |         |       |

The leads to Table 6 revealed the ANOVA. The F-statistic obtained was 122.08, with a p-value of 0.000. The results showed that the all-inclusive univariate model that linked digital platforms and financial inclusion was

significant. The results further indicated that digital platforms were an important predictor of financial inclusion of commercial banks in Kenya.

**Table 7**  
***Regression Coefficients of the Regression Model***

| Coefficients                       | B     | Std. Error | Beta  | t      | Sig.  |
|------------------------------------|-------|------------|-------|--------|-------|
| (Constant)                         | 1.561 | 0.198      |       | 7.865  | 0.000 |
| Digital Platform Delivery Channels | 0.58  | 0.052      | 0.557 | 11.049 | 0.000 |

The coefficient  $\beta = 0.58$  with p-value  $=0.000 < 0.05$  implied that the use of digital platforms as financial delivery channels significantly predicted the positive variations in financial inclusion in Kenya. The findings further confirmed that there was a significant positive linear relationship between digital platforms and inclusion of commercial banks. The findings also implied that the adoption of digital platforms in the promotion of financial literacy would significantly improve the level of financial inclusion in Kenya. This was in agreement with Mwanja (2018); Howell (2019); Leydier (2016) and Keli (2018) who argued that digital technology was behind the promotion and growth of micro-enterprises and therefore the lower services of using the technology brought greater benefit to the institutions and further benefited financial inclusion.

The results confirmed the findings of Arday (2017), who found out that the ownership and usage of mobile phones facilitated usage of mobile banking platforms employed by the banked, unbanked, and underserved population for online and internet financial

services, and it positively impacted financial inclusion. The results are in accordance with the scholarly work of Senou et al. (2019) who said the coexistence of mobile money platforms and internet platforms as digital technology facilitated online financial transactions for banking and branchless banking activities, which in turn influenced positive changes in financial inclusion.

#### **4.0 Conclusion**

Digital platforms channels were found to significantly affect financial inclusion in commercial banks in Kenya. The study concluded that commercial banks in Kenya had leveraged on the reachability of digital platforms like websites and online portals, social media pages, and online games and courses as channels of promoting financial literacy that significantly contributed to inclusion. The survey also deduced that with ever-increasing penetration of internet usage and access to digital platforms, digital channels are critical within the promotion of monetary literacy that the banks are embracing, and their role in increasing financial inclusion will remain crucial. The

increasing use of digital platforms therefore accord commercial banks a huge opportunity to promote financial literacy using these platforms to increase usability of the financial services and the products banks offer. The study expanded the utility of diffusion of innovation theory to link the relationship between digital platforms as a channel for providing financial literacy for financial inclusion of commercial banks. Most of the existing research that adopted the theory used it in a different context, hence the study contributed by developing the utility of the diffusion of innovation theory.

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## 5.0 Recommendations

The study recommends that the management of banks engaged in commercial activities should ensure the ICT department has a team dedicated to providing financial literacy training using digital platforms targeting loan applicants to improve their usage of digital financial services. Commercial banks currently use digital platforms mainly for marketing their services and responding to customers' concerns and complaints; therefore, they need to mainstream digital financial literacy training through their social media pages, websites, and application. On the policy level, the banking sector players, regulators, and government agencies must streamline existing policies to allow commercial banks to leverage digital platforms in promoting financial literacy.

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