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**INFLUENCE OF ELECTRONIC BANKING ON FINANCIAL PERFORMANCE OF DEPOSIT TAKING MICROFINANCE  
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## INFLUENCE OF ELECTRONIC BANKING ON FINANCIAL PERFORMANCE OF DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN KENYA

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### ABSTRACT

*The purpose of this study was to assess the influence of electronic banking on financial performance of deposit taking microfinance institutions in Kenya. The objectives of the study were to: establish influence of operational efficiency, market outreach, customer service management, new products and accessibility on financial performance of deposit taking microfinance institutions in Kenya. Descriptive research design was applied in this study. The study population consisted of 12 DTMs that had been licensed to operate in Kenya. The study found out that to a great extent operational efficiency, customer relationship management, market outreach, new products and services impacts, accessibility to banking services have positively influenced financial performance of DTMs. The study also found out that operational efficiency, market outreach, customer relationship management, new products and services and accessibility to banking services were significantly related to financial performance of DTMs. The study concluded that there is evidence for the direct effect of e-banking on financial performance of DTM as suggested by the literature. Accessibility to banking services, new products and services and market outreach emerged as a stronger predictor of financial performance of DTM. The study further concluded that the established regression model was significantly good for forecasting and could be used for prediction of financial performance of DTM in Kenya. The study recommended that whereas there is a strong relationship between electronic banking and financial performance of deposit taking microfinance institutions in Kenya, the relationship may not be one of cause and effect hence there is therefore room for isolating all these factors in order to generate better predictive model. The study further recommended similar studies need to be done in other sectors in the financial industry in the country and the results be compared so as to establish whether the models are consistent among the various groups.*

**Keywords:** Operational Efficiency, Market Outreach, Customer Service, New Products and Services, Accessibility, Financial Performance

## INTRODUCTION

Electronic banking (e-banking) is considered to have a substantial impact on financial institutions as it has opened new frontiers for customers to access financial services. E-banking has enabled institutions to automate repetitive tasks which may result into greater efficiency and effectiveness, better time usage and enhanced controls. This has helped the institutions to control their overheads and operating costs hence may become more profitable in the future (Sumra et al., 2011).

The recent advances in technology have created a surge in technology-based self-service and have revolutionized banking (Dabholkar, Bobbitt, & Lee, 2003). E-banking is defined as the use of electronic and telecommunication networks to deliver a wide range of value added products and services to bank customers. It includes delivering banking services using tablets, Automated Teller Machines (ATM), debit cards, point of sale (POS) devices and cell phones (Waterfield, 2004). Both financial institutions and customers are seeking for products that are convenient in terms of accessibility and cost and e-banking offers some of these benefits. Moreover, Epstein (2004) notes that the era of e-banking indicates that a customer can perform banking transactions electronically without visiting the physical branch.

Adoption of e-banking by commercial banks and micro finance institutions has the potential to revolutionize access to financial services and there is a growing consensus that e-banking offers a unique opportunity to address mainstream bank's two major barriers to serving the low-income market; the need for a physical branch and managing high volumes of low value transactions. In Kenya adoption of e-banking has picked from when ATMs were introduced, and Kenya now is a leader in mobile banking (Ala & Ngugi, 2013). E-banking has a huge

potential to enable microfinance institutions who deal with many low transaction clients to serve their customers better and hence improve on their bottom-line.

Sumra et al. (2011) note that e-banking has the capacity to enable banks to enhance their performance. This is due to the ability of e-banking to provide banks with access to new horizons and scenarios for retail banking. The growth of e-banking has made institutions to automate repetitive tasks which may result into greater efficiency and effectiveness, better time usage and enhanced controls. This has helped the institutions to control their overheads and operating costs hence may become more profitable. Moreover, Aduda and Kingoo (2012) observe that e-Banking has helped to reduce institution's paperwork. E-banking and has enabled financial institutions to leverage on robust ICT platforms rather than recruiting corresponding number of employees to serve the increasing number of customers hence reducing the payroll cost. This has enabled banks to be more efficient.

E-banking can also enhance MFI performance through enhancing accessibility of their products. MFIs have a problem of accessibility. Though MFIs have reached a wider audience than traditional banks, the cost of reaching even more people can be prohibitive. MFI loan officers can only administer so many loans at a time, but these loan values are much lower than traditional loans, meaning that to cover costs of operations, the interest rates they charge clients must be higher than a traditional bank charges. The poorest potential clients may also live out of reach of an MFI branch, and therefore not have access to microloans. The automation of e-banking could increase MFI efficiency and the accessibility of loans to a broader, more poor or rural clientele (Gant, 2012).

This study focused on how electronic banking on financial performance of deposit taking microfinance institutions in Kenya. Formal financial institutions in Kenya failed to cater for the credit needs of smallholders mainly due to their lending terms and conditions. The rules and regulations of formal financial institutions created the myth that the poor were not bankable because they could not afford the required collateral and, hence they were considered not creditworthy. The poor therefore tended to be locked out of the formal financial system (Katwalo & Muhanji, 2014). However, the situation changed with entry of microfinance. The lack of financial services to the rural poor saw the emergence of MFIs such as Kenya Women Finance Trust (KWFT), K-Rep Bank, Faulu-Kenya, as well as Family Bank and Equity Bank.

MFIs in Kenya provide services to rural or otherwise very unreachable clients, even at great cost. They provide financial services that are tailored to the unique needs and limitations of the poor. They have generally been more flexible than commercial banks, more forgiving and typically offer training and education to their customers. Few of these MFIs require borrowers to put up collateral hence enabling individuals seeking to become entrepreneurs to attain small loans to start their businesses. Although the 2006 Microfinance Act in Kenya allowed deposit taking MFIs (DTMs), such MFIs in Kenya appeared in 2009 when two of the pioneering MFIs (Faulu Kenya and Kenya Women Finance Trust) transformed to deposit takers (Central Bank of Kenya - CBK, 2013). DTMs are licensed by the CBK to mobilize savings from and offer credit services to the general public, thus promoting competition, efficiency and access. The microfinance industry plays a pivotal role in deepening financial markets and enhancing access to financial services and products by majority of the Kenyans. Currently, CBK has licensed 12 DTMs with importance being placed on savings and credit facilities for the poor hence putting emphasis on the sound development of microfinance institutions as

vital ingredients for investment, employment and economic growth (CBK, 2015).

### **Statement of the Problem**

Central Bank of Kenya (2016) banking supervision reports depicts that out of the 12 registered microfinance banks, only five reported a profit in the year 2016. Seven of the microfinance banks reported losses. If this loss making in the microfinance banking sector continued unabated, it would have led to sustainability issues for the deposit taking MFIs which could make them unable to serve the small businesses and poor households who have little access to commercial banks. The SME sector has a major role to play towards poverty alleviation in Kenya. However, their capacity to create employment and optimal performance will depend to an extent on the accessibility of credit facilities provided by deposit taking MFIs. The poor performance by the deposit taking MFIs hence posed a threat to sustainability of SMEs and thus also challenged the economic progress of the country (Financial Sector Deepening, 2011). E-banking provides MFIs with an opportunity to reduce transaction costs and the other disadvantages by replacing costly labor with less expensive, automated technology and decreasing transportation costs associated with disbursing loans and collecting payments. This is expected to have a trickle-down effect and translate to better performance. The current study hence assessed how well deposit talking MFIs were leveraging on e-banking to enhance their performance.

### **Research Objectives**

The purpose of this study was to assess the influence of electronic banking on financial performance of deposit taking microfinance institutions in Kenya. The specific objectives were:-

- To establish influence of operational efficiency on financial performance of deposit taking microfinance institutions in Kenya

- To determine effect of market outreach on financial performance of financial performance of deposit taking microfinance institutions in Kenya
- To assess effect of customer service management on financial performance of deposit taking microfinance institutions in Kenya
- To establish effect of new products and services on financial performance of deposit taking microfinance institutions in Kenya
- To determine effect of accessibility on financial performance of deposit taking microfinance institutions in Kenya

## LITERATURE REVIEW

### Theoretical Orientation

#### Competitive Advantage Theory

The competitive advantage theory was fronted by Porter (1985). Competitive advantage arises from the differential among firms along any dimension of firm attributes and characteristics that allows one firm to better create customer value than do others (Porter, 1985). The conventional source of competitive advantage according to this theory include having assets or resources which other firms do not have access to; having access to exclusive distribution channels or having expert and exclusive knowledge which is applied in the business operations to have an edge over other businesses. To achieve and sustain competitive advantage, a firm needs to creatively and proactively exploit the three generic sources, preempt rivals and/or pursue any combination of proactive and preemptive efforts. This theory indicates that a firm must have some resources which are not accessible to other firms for it to be successful.

The pursuit of competitive advantage is an idea that is at the heart of much of the strategic management and it entails the drive of every organization towards having an edge in the market. Bansal (2005) argues that though there are different definitions of strategy and competitive advantage, all of them agree that firms seek competitive advantage so that they can

survive and thrive in a turbulent and competitive market place. As such, firms seek to be better than their peers in their areas of operations. Many DTMs seek for competitive advantage to excel in their areas as they are faced with the challenges of competing with SACCOs and commercial banks (Beaver and Prince, 2004). Jones (2003) suggests that micro finance institutions should focus more on serving their customers and meeting their needs so that they can have a competitive advantage despite facing stiff competition. They should focus on being creative and innovative in delivering value to customers. This perspective is in line with the perspective of sustainable competitive advantage that is focused on meeting demand as advocated by Adner and Zemsky (2006). Kumar, Malathy and Ganesh (2011) advocate that financial institutions should seek to have a personal relationship with customers and meet their wants competitively and better than other players in the market.

The importance of quality to the market is highlighted and categorized into four types of resources (Wilcox, 2009). The first type of resources is process resources which are the resources with ability to lower production costs of the firm. The second type is product resources which are resources that are capable of improving productivity or profitability of the firm. Third are timing resources which are valuable to the firm as they are pioneers in the market and lastly are innovation resources which provide technology that is valuable to the firm. More research is called that focuses upon firm actions that shape value creation in the development of competitive advantage (Jones, 2003). In this study, the researcher hypothesizes that use of electronic banking by DTMs lowers the service costs and provides better services to customers and thus creating competitive advantage for the DTMs. This theory therefore was applied since it informs the study on how technology through electronic banking can be applied by financial institutions to enable



them improve on their performance through efficiency and provision of quality services.

### **Technology Acceptance Model**

Technology acceptance model (TAM) by Davis (1989) explains the process through which users accept and adopt a technology. The model establishes that there are many factors that come into play when users of a certain new technology or innovation make a decision on whether or not to start using the technology. These factors influence the adoption of the technology and whether it will be a success or not. These factors include perceived usefulness and perceived ease of use. Perceived usefulness depicts the ability of the technology or innovation to be able to contribute positively to a user's performance objectives and productivity. Perceived ease of use is the perception on the part of the user on the ability of the technology to require minimal effort to use. Perceived ease of use and perceived usefulness are important factors determining whether users will adopt a technology or not. Factors influencing the users' perception about a technology's ease of use and usefulness include security concerns, cost, convenience, and satisfaction (Lawson et al, 2003). Viehland and Leong (2007) cited that perceived ease of use and perceived usefulness together determines the attitude of the potential user of an innovation or technology towards the technology and they eventually influence the user's decision on whether to adopt the technology or not.

Electronic banking is a form of technology whose adoption is expected to be based on the technology adoption model. Its level of use and adoption is therefore explained by how useful and easy to use the electronic systems and applications are perceived by the users. Studies like Khodawandi, Pousttchi and Wiedmann (2003) have empirically established that contextual factors influencing the ability of users to apply and utilize electronic banking is a crucial factor in determining whether electronic banking applications will be largely adopted both by the DTMs

and their customers. This adoption is then expected to affect the performance of these DTMs. The usefulness of electronic banking applications in improving lives of people and enabling conduct of business are major determinants on how users perceive and adopt them. This study focuses on how adoption of electronic banking by DTMs influences their business performance.

TAM has been widely used in various studies that aim at determining usability and adoption of an innovation or technology based on value derived by the users from the technology (Ndubisi, 2007). The TAM is selected as one of the models to guide this study and the major factors determining application of electronic banking such as convenience, low cost, support provided, and perceived security are considered. The influence of these factors on the actual adoption of electronic banking and how this influences performance of DTMs was accessed.

### **Resource Based View**

Resource based view (RBV) theory is based on the notion that organizations with resources that cannot be imitated, that are rare, cannot be substituted and which are valuable can be able to sustain the firm's superior performance in the market (Wernerfelt, 1984). Such resources according to the RBV theory can enable a firm to have superior performance and eventually obtain sustainable competitive advantage. The RBV theory therefore indicates that good performance from an organization is influenced by the resources that it has on its disposal and how it applies these resources to be competitive in the market.

RBV theory is applied as an explanation into how firms are able to have superior performance in the market and be able to sustain that competitiveness for long. RBV theory presumes that a firm commanding tangible and intangible resources and its ability to employ these resources effectively leads to its competitive advantage. Therefore, the RBV stresses that a firm must have an effective strategy

on how to combine the different resources at its disposal in the product markets to gain an edge against its competition. The management of the organization also has the responsibility according to this theory to ensure that it continues to acquire, develop and utilize valuable resources as it continues to operate in the market.

Electronic banking has been touted as an important service and resource to businesses. This study will apply the RBV theory to establish how electronic banking can be used as a resource by DTMs to improve their service provision and internal operations and hence gain sustainable superior performance.

### **Empirical Review**

#### **Electronic banking and Operational Efficiency**

A study by Agboola (2012) in West Africa noted that business today is conducted in an age of highly complex technology imposing on banking officials the need to implement sophisticated banking systems which accord with present day needs. Consequently, paper-based transactions are now being replaced by electronic based transactions. This has been observed to enable the financial institutions to lower their operation costs as most of their products can be accessed electronically thus reducing operational and labour costs.

#### **Electronic Banking and Market Outreach**

Questions regarding the business value of electronic banking and IT related processes have perplexed researchers and managers for a number of years. Businesses, including banks, have continued to invest huge sums of money in computers and related banking technologies, presumably expecting substantial returns. Yet a variety of studies provide evidence to the contrary (Brynjolfsson, 1993). There is evidence in the research both for and against the productivity of electronic investments. One such investment that has revolutionized banking is ATMs. ATMs represent a very important technology

investment by financial institutions. Kumar, Malathy and Ganesh (2011) sought to understand technology diffusion in the banking sector in India by analyzing ATM technology and its replacement of the teller (labor). The study established that the rapid diffusion of the ATM was clearly large from 1998, nine years after it was first adopted. This was also a time when the number of tellers was falling and the wage bill for tellers increasing. The estimate from the study showed that the degree of substitutability of the teller by the ATM is high. The study further noted that ATMs had enabled financial institutions to serve customers outside their branch reach and hence expanding their market reach.

#### **Electronic Banking and Customer Service Management**

A primary purpose of electronic banking is to develop a competitive advantage and improve the financial institution's profitability sustainably. Zineldin (2012) conducted a study to theoretically and empirically develop a better understanding of quality and customer relationship management (CRM) impact on banking competitiveness in Sweden. The study examined the product and service quality and customer relationship factors that influence the customer selection and image of the principal banks. The results indicated that a bank has to create customer relationships that deliver value beyond that provided by the core product. This involves added tangible and intangible elements to the core products, thus creating and enhancing the product surrounding. One necessary condition for the realization of quality and the creation of value added is quality measurement and control. This is an important function to ensure the fulfillment of given customer requirements. The study by Zineldin (2012) revealed that key ways to building a strong competitive position are through CRM, product and service quality and differentiation. These are enabled by electronic banking which financial institutions are adopting. This improved level of customer service has

resulted to more satisfied customers which has led to performance improvements.

### Electronic banking and New Products

In US, Kegan et al. (2005) conducted a study on internet banking and performance of community banks while examining the impact of online banking applications on community banks performance. The study used a structural equation model to create an online banking index and an econometric model to evaluate bank performance. A survey of ten community banks was conducted. The results indicated that banks that provide extensive online banking services tend to perform better than those who lag behind. In addition, online banking helps community banks improve their product offering and earnings ability as measured by return on equity and improve asset quality.

### Electronic Banking and accessibility of products

A study by Aduda and Kingoo (2012) investigated the relationship between e-banking and performance of Kenyan banking systems. The study used secondary data which was collected from annual reports of the target banks and they used both descriptive and inferential statistics to analyze the data. The study revealed that there exists a positive relationship between e-banking and bank performance since e-banking has enabled banks to bring services closer to bank customer's hence improving banking industry performance. Since the study was confined to commercial banks that operated mostly in urban areas, it would be important to extent the study to microfinance institutions since modern innovations are aimed at marginalized areas and customers who are not served by commercial banks. The current study will investigate whether electronic banking services offered DTMs have affected their financial performance.

### Conceptual Framework

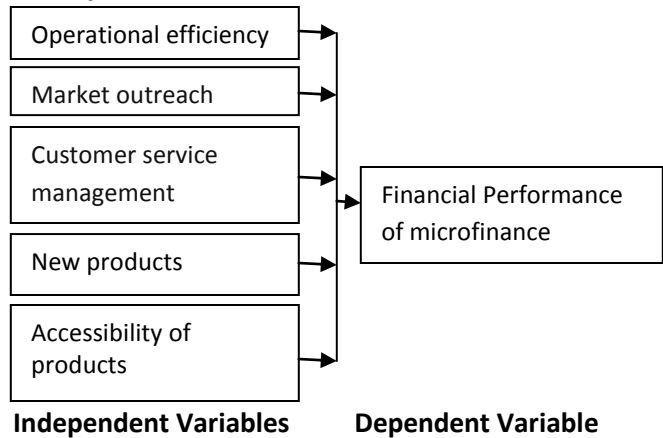


Figure 1: Conceptual Framework

Source: Author (2018)

### METHODOLOGY

Descriptive survey design was applied in this study. Thomas (2011) observes that descriptive design in business studies is important as it provides a detailed analysis of what is happening which can provide important information for decision making. The study population in the current research was 29 respondents from 12 DTMs that had been licensed to operate in Kenya (CBK, 2016). A questionnaire was utilized to collect data in this study. Gillham (2008) observes that use of questionnaire brings several advantages including efficiency, standardized responses and ease of analysis of the data therein.

The regression equation was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

Where, Y= Financial Performance of DTM

$B_0$  = Constant

$\beta_i$  = Independent variable coefficients

$X_1$  = Operational Efficiency

$X_2$  = Market Outreach

$X_3$  = Customer relationship management

$X_4$  = New products

$X_5$  = Accessibility of products

$\epsilon$  = Error term



## RESULTS

### Operational Efficiency

This section covered the respondent's level of agreement on the statements in regard to e-banking

adoption in DTM and how it had influenced operational efficiency and financial performance. Descriptive statistics (mean) and Pearson correlation were used to determine the significance of e-banking adoption on operational efficiency and financial performance.

**Table 1: Rating of Variables E-Banking Adoption in DTM and How It Has Influenced Operational Efficiency And Financial Performance**

| Statements  | Mean          | p-value      |
|---|---------------|--------------|
| Time required to service each customer has been reduced by e-banking channels                         | 3.5857        | 0.01         |
| Electronic banking channels have enabled reduction in cost of service per customers                   | 3.6124        | 0.02         |
| E-banking has enabled reduction in teller costs in this DTM   | 4.0857        | 0.002        |
| E-banking that has been adopted by this DTM has enabled it increase return on investment per customer | 3.8857        | 0.000        |
| Customer are able to receive service from a central location thus reducing customer service costs     | 3.3429        | 0.002        |
| Operation and administration costs have relatively reduced in the DTM due to e-banking channels       | 3.9143        | 0.003        |
| <b>Overall</b>  | <b>3.7373</b> | <b>0.007</b> |

According to the finding above to a great extent; E-banking has enabled reduction in teller costs in this DTM (mean of 4.0857), Operation and administration costs had relatively reduced in the DTM due to e-banking channels (mean of 3.9143), E-banking that had been adopted by this DTM and had enabled it increase return on investment per customer (mean of 3.8857), Electronic banking channels had enabled reduction in cost of service per customers (mean of 3.6124 and time required to service each customer had been reduced by e-banking channels (mean of 3.5857). These findings conformed to those of Eun Ju Lee and Schumann (2015) which found that e-banking can increase efficiency through the use of automated systems easing application verification and decreasing approval time. These findings are also in line with those of Donner and Tellez (2012), that is, electronic banking platform offers a less costly and convenient additional method for managing money without handling cash. The findings further indicated that operational efficiency statistically significantly influences financial performance of DTM. Specifically

the individual measures of operational efficiency had P-values<0.05: E-banking has enabled reduction in teller costs in this DTM (p-value=0.002<0.05), Operation and administration costs have relatively reduced in the DTM due to e-banking channels (p-value=0.003<0.05), E-banking that has been adopted by this DTM has enabled it increase return on investment per customer (p-value=0.000<0.05), Electronic banking channels have enabled reduction in cost of service per customers (p-value=0.02<0.05) and time required to service each customer has been reduced by e-banking channels (p-value=0.01<0.05).

### Customer Relationship Management

This section covered the respondent's level of agreement on the statements in regard to e-banking adoption in DTM and how it has influenced customer relationship management and financial performance. Descriptive statistics (mean) and Pearson correlation were used to determine the significance of e-banking

adoption on customer relationship management and financial performance.

**Table 2: Rating of Customer Relationship Management**

| Statements  | Mean   | p-value |
|---|--------|---------|
| E-banking has enhanced the DTM’s ability to offer other personal services to customers such as birthday wishes, anniversaries and notifications | 4.3313 | 0.002   |
| The DTM has been able to customize customer service to appeal to the diverse needs to our clients   | 4.2114 | 0.001   |
| The DTM has improved its customer relations through its application of e-banking  | 4.2212 | 0.001   |
| The DTM is enabled to serve customers better through e-banking channels   | 3.5345 | 0.006   |
| Overall   | 4.0746 | 0.004   |

As shown in table 2, e-banking had enhanced the DTM’s ability to offer other personal services to customers such as birthday wishes, anniversaries and notifications has the highest influence on customer service (mean of 4.3313) followed by DTM had improved its customer relations through its application of e-banking (mean of 4.2212), DTM had been able to customize customer service to appeal to the diverse needs to our clients (mean of 4.2114) and The DTM was enabled to serve customers better through e-banking channels (mean of 3.5345). The result supports those of Zineldin (2012) which revealed that a bank has to create customer relationships that deliver value beyond that provided by the core product. This involves added tangible and intangible elements to the core products, thus creating and enhancing the product surrounding. One necessary condition for the realization of quality and the creation of value added is quality measurement and control. The findings are further supported by the study of Zineldin (2012) which revealed that key ways to building a strong competitive position are through CRM, product and service quality and differentiation. These are enabled by electronic banking which financial institutions are adopting. This improved level of customer service has resulted to more

satisfied customers which has led to performance improvements. Pearson correlation further revealed that there exists a significant relationship between customer support relationship and financial performance of DTM (P-value=0.002<0.05). More so; DTM’s ability to offer other personal services to customers such as birthday wishes, anniversaries and notifications has the highest influence on customer service (P-value=0.001<0.05), DTM has improved its customer relations through its application of e-banking (P-value=0.001<0.05), DTM has been able to customize customer service to appeal to the diverse needs to our clients (P-value=0.006<0.05) and DTM is enabled to serve customers better through e-banking channels(P-value=0.004<0.05).

**Market Outreach**

This section covered the respondent’s level of agreement on the statements in regard to e-banking adoption in DTM and how it had influenced market outreach and financial performance. Descriptive statistics (mean) and Pearson correlation were used to determine the significance of e-banking adoption on market outreach and financial performance.

**Table 3: Rating of Variables Relating to Market Outreach and Financial Performance at DTM**

| Statements   | Mean   | P-value |
|--|--------|---------|
| The DTM has managed to increase its market share due to its e-banking channels | 3.3145 | 0.001   |
| The DTM has been able to attract customers even in regions it does not have    | 3.9045 | 0.000   |

physical branches due to e-banking channels

E-banking has enabled the DTM to increase transactions per customers which has improved profitability

E-banking has enabled the DTM to reach more customers

Overall

|        |       |
|--------|-------|
| 3.8267 | 0.001 |
| 3.7895 | 0.000 |
| 3.7088 | 0.002 |

The respondents' rating on market outreach at DTM to a great extent; The DTM had been able to attract customers even in regions it did not have physical branches due to e-banking channels (mean of 3.9045), E-banking had enabled the DTM to increase transactions per customers which had improved profitability (mean of 3.8267) and e-banking has enabled the DTM to reach more customers (mean of 3.7895). The results are supported by the findings Okiro & Ndungu, (2013) "the mobile banking channel is a critical channel for banks to offer their services and which can enhance their financial performance".

The results confirmed that market outreach influences financial performance at DTM (P-value =0.002<0.05). Specifically; The DTM has been able to attract customers even in regions it does not have

physical branches due to e-banking channels (P-value=0.000<0.05), E-banking had enabled the DTM to increase transactions per customers which had improved profitability (P-value=0.001<0.05), e-banking has enabled the DTM to reach more customers (P-value=0.000<0.05) and The DTM had managed to increase its market share due to its e-banking channels (P-value=0.001<0.05).

### New Products

This section covered the respondent's level of agreement on the statements in regard to e-banking adoption in DTM and how it has influenced new products and financial performance. Descriptive statistics (mean) and Pearson correlation were used to determine the significance of e-banking adoption on market outreach and financial performance.

**Table 3: Rating of Variables Relating to New Product and Financial Performance at DTM**

| Statements  | Mean   | p-value |
|---|--------|---------|
| E-banking platforms have enabled the DTM to offer new and innovative products to its clients                        | 4.1245 | 0.000   |
| The range of products that the DTM offers due enabled by e-banking has led to the bank attracting new customers     | 3.9415 | 0.001   |
| E-banking has enabled the DTM to offer new products to its customers  | 3.8745 | 0.003   |
| E-banking has enabled the DTM to provide clients with notifications after transactions which has increased security | 3.9735 | 0.003   |
| Overall   | 3.9785 | 0.000   |

The results above indicated that to a great extent; E-banking platforms have enabled the DTM to offer new and innovative products to its clients (mean of 4.1245), E-banking has enabled the DTM to provide clients with notifications after transactions which has increased security (mean of 3.9735), The range of products that the DTM offers due enabled by e-banking has led to the bank attracting new customers

(mean of 3.9415) and E-banking has enabled the DTM to offer new products to its customers (mean of 3.8745). These findings conform to those Kegan et al. (2005) which acknowledged that banks that provide extensive online banking services tend to perform better than those who lag behind. In addition, online banking helps community banks improve their product offering and earnings ability as measured by

return on equity and improve asset quality. The findings further indicated that new products statistically significantly influences financial performance at DTM Specifically the individual measures of market outreach had P-values<0.05: E-banking platforms have enabled the DTM to offer new and innovative products to its clients (p-value=0.000<0.05), E-banking has enabled the DTM to provide clients with notifications after transactions which has increased security (p-value=0.003<0.05), The range of products that the DTM offers due enabled by e-banking has led to the bank attracting new customers (p-value=0.001<0.05) and E-banking has enabled the DTM to offer new products to its customers (P-value=0.003<0.05),

### Accessibility to Banking Services

This section covered the respondent's level of agreement on the statements in regard to e-banking adoption in DTM and how it has influenced accessibility to banking services and financial performance. Descriptive statistics (mean) and Pearson correlation were used to determine the significance of e-banking adoption on accessibility to banking services and financial performance. The results are in line with those of Aduda and Kingoo (2012) which revealed that there exists a positive relationship between e-banking and bank performance since e-banking has enabled banks to bring services closer to bank customer's hence improving banking industry performance.

**Table 4: Rating of Variables Relating to Accessibility To Banking Services And Financial Performance**

| Statements   | Mean   | P-Value |
|--|--------|---------|
| E-banking has increased accessibility of the DTM's products throughout   | 3.5141 | 0.000   |
| The DTM has enabled to improve on its market share due to the increased accessibility and convenience through multiple electronic channels | 3.5456 | 0.001   |
| The number of transactions outside conventional banking hours have improved the revenues of the DTM  | 3.6526 | 0.005   |
| The convenience brought by e-banking has increased account activity and product usage  | 3.8427 | 0.000   |
| Overall  | 3.6388 | 0.001   |

When asked to rate statements relating to accessibility to banking services and financial performance, the respondents unanimously agreed/strongly agreed that; The convenience brought by e-banking has increased account activity and product usage (mean of 3.8427), The number of transactions outside conventional banking hours have improved the revenues of the DTM (mean of 3.6526), The DTM has enabled to improve on its market share due to the increased accessibility and convenience through multiple electronic channels (mean of 3.5456) and E-banking has increased accessibility of the DTM's products throughout (mean

of 3.5141). In overall accessibility to banking services rating was a mean of 2.7865.

### DTM performance

When asked to rate statements relating to accessibility to banking services and financial performance, the respondents unanimously agreed/strongly agreed that; Attracting new customers (mean of 3.7455), Increasing market share (mean of 3.6215), Satisfying customers (mean of 3.7225), Introduction of new products (mean of 3.8145) and Profitability (mean of 3.7115).The findings further indicated that financial performance was statistically significantly. Specifically the

individual measures of financial performance had P-values<0.05: Attracting new customers (p-value=0.001<0.05), Increasing market share (p-value=0.002<0.05), Satisfying customers (p-value=0.000<0.05), Introduction of new products (p-value=0.000<0.05), Profitability (p-value=0.005<0.05),

**Table 5: Rating of Variables Relating to financial Performance at DTM**

| Statements                   | Mean   | p-value |
|------------------------------|--------|---------|
| Attracting new customers     | 3.7455 | 0.001   |
| Increasing market share      | 3.6215 | 0.002   |
| Satisfying customers         | 3.7225 | 0.000   |
| Introduction of new products | 3.8145 | 0.000   |
| Profitability                | 3.7115 | 0.005   |
| Overall                      | 3.7231 | 0.000   |

**Table 6: Pearson Correlation**

|                                   | Operational efficiency | Market outreach | Customer relationship management | New products and services | Accessibility to banking services |
|-----------------------------------|------------------------|-----------------|----------------------------------|---------------------------|-----------------------------------|
| Operational efficiency            | 1                      |                 |                                  |                           |                                   |
| Market outreach                   | 0.228                  | 1               |                                  |                           |                                   |
| Customer relationship management  | 0.345                  | 0.111           | 1                                |                           |                                   |
| New products and services         | 0.254                  | 0.334           | 0.058                            | 1                         |                                   |
| Accessibility to banking services | 0.154                  | 0.004           | 0.003                            | 0.128                     | 1                                 |

**Table 7: Model Summary**

| R       | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |     |     | Sig. Change | F |
|---------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|-------------|---|
|         |          |                   |                            | R Square Change   | F Change | df1 | df2 |             |   |
| .918(a) | 0.843    | 0.805             | 0.51038                    | 0.843             | 1.242    | 5   | 28  | 0           |   |

Predictors: (Constant), operational efficiency, market outreach, customer relationship management, new products and services, accessibility to banking services

Dependent Variable: DTM Financial Performance



**Table 8: ANOVA**

|            | Sum of Squares | df | Mean Square | F     | Sig. |
|------------|----------------|----|-------------|-------|------|
| Regression | 2.315          | 5  | 0.463       | 4.134 | 0    |
| Residual   | 2.576          | 23 | 0.112       |       |      |
| Total      | 4.891          | 28 |             |       |      |

Predictors: (Constant), operational efficiency, market outreach, customer relationship management, new products and services, accessibility to banking services

Dependent Variable: DTM Financial Performance

### Regression Equation

The established multiple linear regression equation became:

$$Y = 0.114 + 0.568X_1 + 0.615X_2 + 0.554X_3 + 0.667X_4 + 0.785X_5$$

### Where

$\beta_0 = 0.114$ , this is the level of the financial performance of deposit taking microfinance institutions in Kenya if operational efficiency, market outreach, customer relationship management, new products and services and accessibility to banking services were all rated as zero.

$\beta_1 = 0.568$ , one unit increases in operational efficiency, results in 0.568 units increase in the financial performance of deposit taking microfinance institutions in Kenya other factors held constant

$\beta_2 = 0.615$ , one unit increase in market outreach results in 0.615 units increase in the financial performance of deposit taking microfinance institutions in Kenya other factors held constant

$\beta_3 = 0.554$ , one unit increase in customer relationship management results in 0.554 units increase in the financial performance of deposit taking microfinance institutions in Kenya other factors held constant

$\beta_4 = 0.667$ , one unit increase in new products and services, results in 0.048 units increase in the financial performance of deposit taking microfinance institutions in Kenya other factors held constant

$\beta_5 = 0.785$ , one unit increase in accessibility to banking services results in 0.048 units increase in the financial performance of deposit taking microfinance institutions in Kenya other factors held constant

**Table 9: Coefficients of Regression Equation**

|                        | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig.  |
|------------------------|-----------------------------|------------|---------------------------|-------|-------|
|                        | B                           | Std. Error | Beta                      |       |       |
| (Constant)             | 0.114                       | 0.025      |                           | 4.560 | 0.231 |
| Operational efficiency | 0.568                       | 0.224      | 0.514                     | 2.536 | 0.001 |
| Market outreach        | 0.615                       | 0.269      | 0.608                     | 2.286 | 0.000 |

|                                   |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|
| Customer relationship management  | 0.554 | 0.222 | 0.511 | 2.495 | 0.002 |
| New products and services         | 0.667 | 0.314 | 0.645 | 2.124 | 0.000 |
| Accessibility to banking services | 0.785 | 0.354 | 0.744 | 2.218 | 0.000 |

Dependent Variable: DTM Financial Performance

In general, accessibility to banking services had the highest positive impact on DTM Financial Performance as a result of e-banking, followed by new products and services, market outreach, operational efficiency and customer relationship management respective. Further the study found out that each independent variable is statistically significantly linearly related to the dependent variable (P-Value<0.05)

### CONCLUSION AND RECOMMENDATIONS

The study found out that to a greater extent operational efficiency has influenced financial Performance of DTM, that is, E-banking has enabled reduction in teller costs in this DTM, Operation and administration costs have relatively reduced in the DTM due to e-banking channels, E-banking that has been adopted by this DTM has enabled it increase return on investment per customer, Electronic banking channels have enabled reduction in cost of service per customers. A positive and strong operational efficiency makes an average individual perform and achieve brilliantly whereas a negative and weak operational efficiency may demotivate an outstanding employee to underperform and end up with no achievement.

The study found that through customer relationship management; e-banking has enhanced the DTM's ability to offer other personal services to customers such as birthday wishes, anniversaries and notifications has the highest influence on customer service, DTM has improved its customer relations through its application of e-banking, DTM has been able to customize customer service to appeal to the

diverse needs to our clients and the DTM is enabled to serve customers better through e-banking channels. The result supports Homburg, Wieseke and Hoyer, (2009) argument that organizational performance is derived from customer satisfaction and loyalty created by employee Engagement creates greater productivity, which can impact profitability and creates energy and momentum. Vibrant relationship allows people to be valued and expresses themselves hence creates a very real energy. That positive energy will permeate the organization and create a new momentum for success.

It was noted in terms of market reach; the DTM has been able to attract customers even in regions it does not have physical branches due to e-banking channels, E-banking has enabled the DTM to increase transactions per customers which has improved profitability and e-banking has enabled the DTM to reach more customers.

The study showed that to a great extent new products and services impacts on financial performance; E-banking platforms have enabled the DTM to offer new and innovative products to its clients, E-banking has enabled the DTM to provide clients with notifications after transactions which has increased security, The range of products that the DTM offers due enabled by e-banking has led to the bank attracting new customers and E-banking has enabled the DTM to offer new products to its customers. Hence it is very important for DTM to focus on products and service development. This can be achieved through innovation and e-banking.

The study found out that accessibility to banking services influences financial performance in that; the convenience brought by e-banking has increased account activity and product usage, the number of transactions outside conventional banking hours have improved the revenues of the DTM, the DTM has enabled to improve on its market share due to the increased accessibility and convenience through multiple electronic channels and E-banking has increased accessibility of the DTM's products throughout

Regression and correlation analysis indicated that operational efficiency, market outreach, customer relationship management, new products and services and accessibility to banking services were significantly related to financial performance of DTM, that is, 84.3% of the variation in financial performance of DTM could be explained by the changes in operational efficiency, market outreach, customer relationship management, new products and services and accessibility to banking services. It was also found that operational efficiency, market outreach, customer relationship management, new products and services, accessibility to banking services were individually linearly related with bank financial performance ( $P\text{-value} < 0.05$ ). The established model was good for forecasting that is, the five predictor variables accounted for 84.3% of the variation in the response variable hence a five predictor variable model could be used in forecasting financial performance of DTM.

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## Conclusions

In line with the objectives, the study concluded that the proposed framework of the study was able to demonstrate strong explanatory power. Notably, the study provided evidence for the direct effect of e-banking on financial performance of DTM as suggested by the literature. Accessibility to banking services, new products and services and market outreach emerged as a stronger predictor of financial performance of DTM. The study further concluded that the establish regression model was significantly good for forecasting and could be used for prediction of financial performance of DTM in Kenya

## Recommendations

Whereas, there is a strong relationship between electronic banking and financial performance of deposit taking microfinance institutions in Kenya, the relationship may not be one of cause and effect. There could be random fluctuation in the variables. Whenever the random fluctuation occurs, then the value of the test statistic will increase this will lead to significant difference between the estimate and actual. There is therefore room for isolating all these factors in order to generate better predictive model. Similar studies need to be done in other sectors in the financial industry in the country and the results be compared so as to establish whether the models are consistent among the various groups.

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