

## **Factors Affecting the Adoption of New Products amongst Customers of Commercial Banks in Kenya**

<sup>1</sup>Danstan Marube Ndubi, <sup>1</sup>Gladys Rotich (PhD)

<sup>1</sup>Jomo Kenyatta University of Agriculture and Technology

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**Abstract:** *Successful new product/service introductions are important for a firm's long-term performance. This holds especially for industries in which firms invest heavily in innovative products, an example of which is the banking industry. The purpose of this study was to establish the factors affecting adoption of products by customers of commercial banks in Kenya. It sought to examine the influence of product complexity, technology, communication and Pricing on product adoption. A descriptive research design was adopted. The study population comprised of the three tiers of commercial banks in Kenya where data was collected from nine banks. The study findings indicated that product adoption and product complexity were negative and significantly ( $\beta = -0.423, p < 0.05$ ) and accounted for 17.5% of the variations in product adoption. The results also indicated that technology and product adoption were positively and significantly related ( $\beta = 0.429, p < 0.05$ ) and it accounted for 21.5% of the variance in product adoption. The results further indicated that communication, had a positive and significant relationship ( $\beta = 0.512, p < 0.05$ ) with product adoption at 5% and that it accounted for 24.2% of the variations in product adoption. The results also indicated that pricing and product adoption were significantly and negatively related ( $\beta = -0.608, p < 0.05$ ) and that it accounted for 26.1% of the variations in product adoption. From the findings the study therefore recommended that commercial banks should endeavor to develop products that are not too complex for the customer to comprehend. In so doing commercial banks will thus be able to increase the uptake among their customers. It was also recommended that the technology used should not be too technical for the customers to comprehend as this would have an adverse impact product adoption. It was also concluded that commercial banks should price their products competitively and in line with the benchmarks within the industry as this impacts the rate of adoption of products.*

**Key Words:** *Product Adoption, Product Complexity, Communication, Technology*

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### **I. Introduction**

The banking industry globally has undergone a substantial change over the years and the impact has been evident in changes in the way financial services are delivered to customers (Agarwal, Rastogi & Mehrotra, 2009) and as a result there has been a significant increase in the number of alternative channels available for the delivery of financial services. Traditional delivery methods have given way to new delivery technologies which include e-banking products such as Internet banking, mobile banking and various Automated Teller Machine (ATM) products (Agarwal, Rastogi & Mehrotra, 2009).

According to Reid and De Brentani (2004), consumers go through a process of knowledge, persuasion, decision and confirmation before they are ready to adopt a product or service. The adoption or rejection of an innovation begins when "the consumer becomes aware of the product (Reid & De Brentani, 2004)". In a study on the banking sectors of 11 Latin American countries, Yildirim and Philippatos (2007) stipulate that rivalry between banks pushes the banks to engage in a differentiation processes of the products they supply, and can stimulate financial innovation.

In a study in Germany, Singh (2006) and Im et al. (2003) posit that innovation has become one of the most attention-grabbing subjects, drawing the interest of business and economic researchers due to its ability to give firms a competitive advantage. Innovation is important for the survival of every business sector, and financial services are no different. Indeed, research confirms that innovation affects a firm's performance positively (Damanpour et al., 2009). The extent to which the financial sector can make contributions to the economy depends, to a large extent, on the quality and quantity of the products and services it offers customers. Business entities wishing to restore customer confidence need to focus on innovative products that meet their customers' needs (Reinartz, Dellaert, Krafft, Kumar & Varadarajan, 2011).

#### **1.1 Statement of the Problem**

Studies on product banking adoption analyses the factors that influence the evolution of e-banking, (Balachandher et al., 2000) and factors influencing Internet banking adoption (Sohail & Shanmugam, 2002; Gerrard & Barton Cunningham, 2003). Balachander et al. (2000) in his study analyzed the evolution of e-banking in Malaysia; Sohail and Shanmugam (2002) in their study revealed that demographic factors in particular income level is found to be a significant factor that affect the adoption of Internet banking. Gholami et

al. (2013) in their study examined the influence of perceived ease of use and perceived usefulness on product adoption and found that it has a significant influence. Despite these studies having been conducted in developing countries, the findings may not be applicable in Kenya owing to certain environmental differences. A good number of studies have been done on various aspects in the banking sector in Kenya. Examples of these studies include Ali (2008), Otunya (2006), Kisia (2006), Kisingu (2007), and Kinuthia (2008). Ali (2008), determined the strategic issue management practiced by commercial banks in Kenya, whereas Otunya (2006), surveyed consumer adoption of mobile phone banking in Kenya, and Kisia (2006) determined factors affecting provision of services by commercial banks in Kenya to international business, however these studies did not analyse the factors that come into play to influence the adoption of the products offered by commercial banks. This research therefore seeks to fill this knowledge gap by establishing how product complexity, technology, communication and pricing affect adoption of new products by customers of commercial banks in Kenya.

## **1.2 Research objectives**

The objective of the study was to determine the factors affecting new products adoption amongst customers of commercial banks in Kenya. In particular, the specific objectives were;

- i. To find out the effect of product complexity on adoption of new products by customers of commercial banks in Kenya
- ii. To establish the effect of technology on adoption of new products by customers of commercial banks in Kenya
- iii. To find out how communication affect adoption of new products by customers of commercial banks in Kenya
- iv. To determine how pricing affect adoption of new products by customers of commercial banks in Kenya.

## **II. Literature Review**

Butler and Sellbom (2002) proved that many factors and predictors affect users' decisions and the rate of adoption, including an innovation's characteristics and economic, sociological, organizational, and psychological variables. According to Shih and Venkatesh (2003), a positive attitude toward the consequences of technology use results in a high rate of adoption.

Kalish and Lilien (2006) postulated that the price of the new products would affect its market potential. However, Jam and Rao (2000) contended that prices affect the rate of adoption rather than the market potential. In an earlier study, Kamakura and Balasubramanian (2008) had suggested that prices of new products affect the timing of adoption and not whether consumers would adopt the product or not.

## **III. Methodology of the study**

The study adopted descriptive research design and it customers of 43 commercial banks in Kenya. To obtain a representative sample of the study adopted simple random sampling and stratified sampling. Stratified sampling involved the classification of banks into three strata; that is Tier I, Tier II and Tier III banks. Within each of the strata, simple random sampling was done to identify individual respondents who were issued with a questionnaire to respond to research statements. After classifying banks into the three strata he study used simple random sampling technique to get 50 respondents for the study. The data for the study was collected through administration of a questionnaire. In order to achieve the study objectives the study adopted a bivariate regression analysis where the dependent variable (product) adoption was modelled as a linear function of the independent variables, that is, product complexity, communication, technology and pricing.

## **IV. Results and Discussion of Findings**

### **4.1 Reliability of Research Instrument**

Reliability assesses the degree of consistency between multiple measurements of a variable (Hair et al, 2006). In this study Cronbach's alpha was used to assess the reliability of the scales. To achieve this, the Cronbach's alpha values of the scales measuring each construct were computed in order to ascertain whether these values are within the acceptable limits. Even though many authors have suggested that the lower limit of acceptability for Cronbach's alpha value is 0.7, in exploratory research 0.6 is also acceptable (Robinson, Shaver & Wrightsman, 1991). All the measures; Product complexity, Technology, Communication, Pricing and Product Adoption constructs have acceptable Cronbach's alpha values as all the values were in excess of the 0.7 threshold as asserted by Nunnally (1978). The results of reliability are indicated in Table 1.0 below.

**Table 1.0: Reliability of Measurement Scales**

	Cronbach's Alpha	No. Items
Product complexity	.828	6
Technology	.892	4
Communication	.882	4
Pricing	.765	4
Product Adoption	.852	4

**4.2 Effect of Product Complexity on Product Adoption**

Analysis into the effect of product complexity on product adoption indicated that product adoption and product complexity were negatively correlated ( $r=-0.419$ ) and was established to be at 5%. The results also indicated that the estimated bivariate model was significant ( $F(1, 34) = 7.227, p<0.05$ ). The results also indicated that product adoption that explained 17.5% ( $R\text{-square}=0.175$ ) of the variations in product adoption. Regression estimates on the other hand indicated that product complexity has a significant negative beta coefficient ( $\beta=-0.423, p<0.05$ ). This findings is consistent with the findings of Copper and Zmud (2002) who indicated that complexity of technology creates greater uncertainty for successful implementation and increases the risk in the adoption decision. They further asserted that complexity acts as an inhibitor to adoption.

**Table 2.0: Effect of Product Complexity on Product Adoption**

	$\beta$	Std. Error	t	Sig.
(Constant)	2.448	0.641	3.819	0.001
Product Complexity	-0.423	0.157	-2.688	0.011
R	-0.419			
R Square	0.175			
Adjusted R Square	0.151			
F-Statistic	7.227			
Prob (F-stat)	0.011			

**4.3 Effect of Technology on Product Adoption**

On the effect of technology on product adoption, the study results indicated that there exist a positive correlation of 0.464 between technology and product adoption. The results of bivariate analysis further indicated that the estimated model was significant as indicated by ( $F(1, 34) = 9.317, p<0.05$ ). The results further indicated that 21.5% ( $R\text{-square}=0.215$ ) of the variations in product adoption was accounted for by the variations in technology. The regression estimates also further indicated that technology use has a significant positive beta coefficient ( $\beta=0.429, p<0.05$ ). These findings are consistent with the findings of Butler and Sellbom (2002) who asserted that the level of technology use has a significant effect on product adoption.

**Table 3.0: Effect of Technology on Product Adoption**

	$\beta$	Std. Error	t	Sig.
Constant	2.388	0.585	4.083	0.00
Technology	0.429	0.14	3.052	0.004
R	0.464			
R Square	0.215			
Adjusted R Square	0.192			
F-Statistic	9.317			
Prob (F-stat)	0.004			

**4.4 Product Adoption and Communication**

To establish the influence of communication on product adoption the study carried out correlation and regression analysis. The results indicated that communication was positively correlated with product adoption as indicated by a correlation coefficient of 0.492. The regression analysis indicated that the estimated model was significant as was indicated by ( $F(1, 34) = 10.86, p<0.05$ ) as shown in the Table 4.0 below. The results also further indicated that 24.2% ( $R\text{-square}=0.242$ ) of the variations in product adoption was accounted for by the variations in communication and further that it had a significant positive effect ( $\beta=0.512, p<0.05$ ) on product adoption. It can thus be asserted that effective communications act as a promoter to adoption of new commercial banks products.

**Table 4.0: Effect of Communication on Product Adoption**

	$\beta$	Std. Error	t	Sig.
Constant	2.101	0.629	3.341	0.002
Communication	0.512	0.155	3.295	0.002
R	0.492			
R Square	0.242			
Adjusted R Square	0.22			
F-Statistic	10.86			
Prob (F-stat)	0.002			

#### 4.5 Effect of Pricing on Product Adoption

The results of the analysis indicated that pricing has a negative correlation with product adoption of commercial banks as indicated by a correlation coefficient of -0.511. The results further indicated that pricing explained 26.1% (R-square=0.261) of the variations in product adoption as indicated in Table 5.0 below. The results of regression analysis further indicated that pricing has a significant negative beta coefficient ( $\beta = -0.608$ ,  $p < 0.05$ ). This findings are consistent with those of Lichtenstein et al. (2003), who also asserted that price represents the amount of economic outlay that a person has to give up in exchange for a good or service.

**Table 5.0: Product Adoption and Pricing**

	$\beta$	Std. Error	t	Sig.
Constant	1.741	0.702	2.482	0.018
Pricing	-0.608	0.176	-3.465	0.001
R	-0.511			
R Square	0.261			
Adjusted R Square	0.239			
F-Statistic	12.003			
Prob (F-stat)	0.001			

### V. Conclusions and Recommendations

The results provide some evidence of a significant influence of product complexity, communication, technology and pricing on the rate of uptake of products among commercial banks in Kenya. Based on these findings, the study also concluded that the pricing of a product has a significant negative effect on product adoption implying therefore the existence of an inverse relationship between product adoptions and pricing. The study also concluded that communication has a positive significant link with product adoption. This therefore means that an aggressive communication and ensuring that customers get to know of the products being offered would imply a higher product adoption as they are well informed. From the findings it is concluded that technology has a positive impact on product adoption and lastly, the study concluded that there is a diminishing product uptake among consumers resulting from product complexity as observed by the inverse relationship that exists between product complexity and product adoption.

Based on the study findings and conclusions above the study thus recommends that the following should be taken into consideration by commercial banks so as to increase the uptake of their products and/or services; Given that product complexity was established to significantly affect product adoption commercial banks should therefore endeavor to develop products that are not too complex for the customer to comprehend. In so doing commercial banks will thus be able to increase the uptake among their customers on the products they offer. Alternatively, they should sensitize members on the products despite their complexity in nature and ensure that customers get oriented well on these products. The study also recommended that the technology should also be made available to customers so that they can effectively utilize the products and services offered by commercial banks with efficiency. As a result a boost in technology and sensitization on the use of these facilities would thus increase uptake of products and services offered by commercial banks. Finally, the study recommended that since pricing was established to be a significant determinant of product/service adoption it is thus recommended that commercial banks should price their products and services at customer friendly rates. Thus an optimal price level should be set after consultative processes has been conducted and agreed by the customers and the management of commercial banks.

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