

*Full Length Research Paper*

# Determinants of growth in the banking industry in Kenya

Wangira Fleria Akotch\* and Justus M Munyoki

University of Nairobi, Kenya.

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This study sought to establish the determinants of growth in the banking industry in Kenya. The research objectives were; to establish the determinants of growth in the banking industry in Kenya and to determine the indicators used to measure growth in the banking industry in Kenya. The study employed descriptive cross sectional survey design. The population was all the 43 commercial banks based in Nairobi County. The data was collected using a semi structured questionnaire. Descriptive statistics was used to analyze the quantitative data while regression was used to establish the relationship between the variables and growth in the banking sector in Kenya. The study found that firm size, profitability, product development, market penetration and innovation and technology significantly enhance growth in the banking industry in Kenya. Profitability affects growth in the banking industry to a great extent and contributes significantly to the growth in the banking industry. Market development was a significant determinant of growth in the banking industry. Through market development banks create new market, adopt suitable diversification growth strategy as well as create new products for existing markets. The market penetration significantly enhanced the growth in the banking industry in Kenya. Therefore, market penetration was a significant growth determinant in the banking industry as they readily penetrate local and foreign markets, increase their existing market share and respond easily to new market opportunities. Innovation and technology were found to significantly enhance the growth in the banking industry in Kenya. Through the innovation and technology banks gain competitive advantage as well as perform better than non-innovating firms in terms of growth. The most significant determinant of growth in the banking industry in Kenya is size of the firm followed by profitability, market penetration, product development, and innovation and technology respectively. The study recommends that banks must be focused in terms of their needs and using the right technology and innovation to achieve goals, rather, than investing in innovation and technology because other banks have it. The government's participation in ensuring focused telecommunication industry must be visible to reduce or remove avoidable costs of investing in innovation and technology by the banks. Slow market penetration is another major problem militating against the growth in the banking industry in Kenya. Government must make right policy to ensure fair competition in the banking industry in Kenya and promote market penetration by respective banks. The banking firms in Kenya should invest more in research to understand the changing trends in customer need to inform their product development. The banks should also reinvest in market expansion to increase the size of the firms and consequently spur their growth.

**Key words:** Growth, profitability, product development, market penetration, innovation, technology.

## INTRODUCTION

The banking sector acts as the life blood of modern trade and commerce to provide them with a major source of finance. This increasing phenomenon of globalization has

made the concept of efficiency more important both for the non-financial and financial institutions and banks are the part of them. Banks largely depend on competitive

marketing strategy that determines their success and growth. The modalities of the banking business have changed a lot in the new millennium compared to the way they used to be in the years bygone (Olweny and Shipho, 2011). Over the last two decades the banking industry has undergone substantial changes. Newly introduced elements, including deregulation, technological advances and intense competition, have transformed the structure and performance of banks. The main trends have been the strong growth in lending volumes, the high sustainable interest margins and the significant expansion of banks into the world, mainly through acquisitions (Aburime, 2005).

Banks and other financial intermediaries perform the economic functions of providing liquidity, transferring funds from savers to investors and collecting and diffusing information (Merton, 1995; Gorton and Winton, 2003). These functions involve value adding activities of facilitating payments and managing cash, selecting and monitoring borrowers and providing advice and consultation services. Banks use labor, capital and other inputs to perform these activities and earn revenues from interest rates differentials and fees. The level of efficiency in performing banking intermediation activities is a key factor for economic development (Buera et al., 2011; Mehra et al., 2011) and changes in the costs of intermediation will have important macroeconomic consequences for investment and growth (Bernanke et al., 1999; Hall, 2011; Christiano and Ikeda, 2011).

In the Kenyan context, the significant reforms initiatives undertaken, such as operationalization of credit reference bureaus, payments system improvements, operationalization of Microfinance Act and activation of horizontal repos presents opportunities for enhanced banking sector performance. These reforms are hinged on three key pillars of the Kenyan financial sector as espoused in the Vision 2030 (the Government Economic Blue Print) - Efficiency, Stability and Access. Thus, for Kenya to realise Vision 2030, the banking sector's efficiency is a critical element that remains the cornerstone of the targeted economic growth trajectory.

A number of studies have been carried out mainly on challenges of growth in the banking sector. A study by Doherty (2001) identified external environmental factors that hinder regional market entry as: management inexperience, unavailability of resources, weak organizations strategy and goals, internal competition, political instability, non-transparent legal atmosphere and in accessibility technological infrastructure. In his study Kimata (2001) established that infrastructure, political stability and economic growth potential of a country were major considerations in general without isolating specific

determinants. In her study, Esther (2004) identified political, legal, availability of financial resources, competitions and product brand strengths as some of the major influencing factors. In his study about growth strategies adopted by Barclays Bank in developing sustainable competitive advantage, Musyoka (2011) focused mainly on success factors such as brand superiority, robust distribution channels, government support and available mass markets in the east African and COMESA regions but did not outline the major determinants of growth in the banking sector. Consequently, there remain considerable debate surrounding determinants of growth in the banking sector as there is no major study that has been done to identify the determinants. The study had two objectives, namely, to establish the determinants of growth in the banking industry in Kenya, and to determine the indicators used to measure growth in the banking industry in Kenya

## LITERATURE REVIEW

The study was guided by two theories, namely; Penrose theory and Ansoff theory. Penrose's (1959) fundamentally dynamic vision of firms holds that firm growth is led by an internal momentum generated by learning-by-doing. Managers become more productive over time as they become accustomed to their tasks. Penrose's theory of firms' growth also indicates that firms are composed of idiosyncratic configurations of 'resources', which can play a role in ensuring durable competitive advantage if they are valuable, rare, inimitable and non substitutable (Eisenhardt and Martin, 2000). Economies of growth may emerge from exploiting the strengths associated with the unique collection of productive opportunities available to each firm.

On the other hand, Ansoff's Theory addresses the issues of strategies that are relevant for various market conditions, and its value lies in the support it offers managers to decide their market objectives and strategy. The basis of such decisions is in effect determined by choices that are dependent on four vectors of existing as well as new product and market development. The framework though offers additional benefits. These concern the degree of risk associated with each choice, the extent to which each choice leverages a company's core competence and offers synergies in resource and capability utilization. Thus the market planner is provided with a number of devices to help think through the choices (Rajan and Zingales, 2011). Ansoff's Product/Market Matrix is essentially a marketing planning tool. It has limited practical use but clearly highlights the

\*Corresponding author. E-mail: fwangira@gmail.com

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strategic options for a firm looking to expand. The matrix matches off the core components of existing or future strategies in terms of the nature of product (existing or new) and the market (existing or new)

There are many determinants of growth, which include size of the firm, profitability, Product development, and Innovation and Technology Marris and Wood (2012). Introduced a theoretical framework to understand growth and diversification of the firm. Marris followed Penrose's proposition that in the growth process of a firm the final size is unlimited, it is the growth rate that is restrained in the short run by what he called dynamic constraints or restraints. Financial means for expansion could be found through retained earnings, borrowing, and new issues of stock shares. Retained earnings are one of the most important sources to finance new projects in emerging economies where capital markets are not well articulated. However, firms in the startup period, when initial investments have not matured yet or with investment projects substantially larger than their current earnings will not have enough financial means from retained earnings and will reach a constraint in their growth project. Firms in this situation may seek external sources of financing; however, the extent of borrowing could be limited by internal factors like high debt-equity ratios that would expose both borrower and lender to increased risk. In other cases, financing of growth projects may be limited by lack of development of financial markets. Rajan and Zingales (2011) found that industrial sectors with a great need of external finance grow substantially less in countries without well developed financial markets.

Profitability and return on equity (ROE) determine the long-term growth prospects of a company. A high return on equity (ROE) creates a scope to invest and good investments lead to accelerated growth. Although it is not necessary for a firm to reinvest all of its profits, we assume that all firms will at least reinvest a minimum proportion of their profits. Some firms may choose to retain a proportion in the company funds and allocate some of the profit to the shareholders in the form of dividends.

According to Friedman (1953), the relationship between profitability and growth is explained by theoretical models which approve the above mentioned concept of conformity in investment budgets. Profitable firms will be more motivated to grow, because they will not only have the financial means to expand, but their ongoing profit creation will also make it possible to sustain growth (Nelson and Winter, 1982). However, the theoretical relationship between firm growth and profitability is not clear and has not been the subject of uniformity in empirical research (Coad and Hölzl, 2010). Product Development is based on the Product-Market model (Ansoff, 1957) and has been shown to be very useful in firm's strategy processes to determine growth opportunities. A firm may expand through market penetration (using existing product in existing market), market

development, (new customer groups are sought for a firm's existing products), Product development (creates new products for existing markets) or diversification (creating new products for new customer groups). This model has been used widely by other researchers (Boag and Dastmalchian, 1988; Chaffey et al., 2003; Claver et al., 2006; Constantinides, 2004; Watts et al., 1998) who adopted Ansoff's matrix in conducting research on growth strategies.

As far as innovation and technology is concerned, it is widely known that innovation is one of the most important drivers of firm growth. Companies can create a competitive advantage through investing in innovative products and better operating methods. Cainelli et al. (2006) have studied the relationship between innovation and economic performance of Italian companies which are active in the services sector. More recently, Le Bas et al. (2011) have performed an empirical study on the relationship between innovation and firm growth. They used data from French companies over the period 1992 to 2004. For the data analysis, the authors used different models and a new econometric method, namely a quartile regression. Their main findings are again that firms that innovate produce more growth than the firms that do not. Other authors have found the same results (Corsino, 2008; Geroski and Machin, 1992; Roper, 1997). However, Bottazzi et al. (2001) did not find any significant relationship between innovation and firm growth. The authors used data from large pharmaceutical companies over a period of eleven years. They measured innovation by the introduction of new chemical entities or by the proportion of the patented products in a firm's product portfolio. The result of their study is that neither has an impact on the firms' growth performance. Geroski and Mazzucato (2015) have examined the relationship between innovation and growth of US car manufacturers over the period 1910 to 1998. The result of their study indicates as well that there is no significant impact of innovation on firm growth.

Morttinen (2014) tried to contribute to the issue of measuring the output of banks, mainly based on the user cost of money approach, as she took into consideration the opportunity cost of deposits and loans. She used data from banks' financial statements and payment transactions and calculated Tornqvist-type indices for the output and labor productivity of six European countries (Finland, Sweden, United Kingdom, Germany, France and Italy) as well the TFP of Finland for a period of 11 to 20 years (1980-2000) depending on the data available for each country. The results showed that the productivity (labor and TFP) of Finnish banks increased mainly because of the drastic reduction of the number of employees, while the output increase was rather subdued. By contrast, for the remaining countries, there was a significant improvement in labor productivity, especially after mid-90's, which is however attributed almost solely to an increase in output.

Kolaskar et al. (2007) have studied the relationship between innovation intensity and growth with data from both SMEs and large firms in India for the periods from 2001 to 2002 and from 2005 to 2006. The authors made a distinction between the two sectors manufacturing and services. The results of their study showed that the innovation intensity was clearly higher in the case of manufacturing firms than for services firms (for both SMEs and large firms) (Becchetti and Trovato, 2002; Bergström, 2000). As noted by Merton (1992), the primary function of a financial system is to facilitate the allocation and deployment of economic resources, both spatially and across time, in an uncertain environment.

Guarda and Rouabah (2014) follow a similar empirical approach, classifying bank products as inputs or outputs according to the sign of the respective user cost. This classification is used for the calculation of output, input and TFP indices of the Tornqvist-type for 176 banks of Luxembourg for the period 1994-2006. Their estimations show that output increased at a much higher rate than that of inputs, which resulted in a commensurate improvement of TFP. In particular, TFP increased by 4% during the period under examination, while there was a clear differentiation according to the size of banks, with the larger ones tending to be more productive.

Obino and Kipyegon (2014) did a study on determinants of employee engagement in the banking industry in Kenya; case of cooperative bank, based on the study findings, it is palpable that employee engagement in Cooperative bank was high. Employee engagement was greatly influenced by performance management, personal development and growth, workplace recreation, and remuneration package. However, among the determinants, remuneration is the highest contributor of employee engagement with workplace recreation having the least influence. Low engagement and job satisfaction can contribute to multiple organizational problems and have been associated with increased levels of turnover and absenteeism, adding potential costs to the organization in terms of low performance and decreased productivity. It is important for bank management to be aware of the needs and make up of their workforce, as well as the impact of environmental factors, when developing their programmes and policies that have implications on engagement.

### **Effects of web technology in Internet marketing in banking sector**

Internet technology holds the potential to fundamentally change banks and the banking industry. An extreme view speculates that the Internet will destroy old models of how bank services are developed and delivered (DeYoung, 2012). The widespread availability of Internet banking is expected to affect the mixture of financial services produced by banks, the manner in which banks

produce these services and the resulting financial performances of these banks. Whether or not this extreme view proves correct and whether banks take advantage of this new technology will depend on their assessment of the profitability of such a delivery system for their services. In addition, industry analysis outlining the potential impact of Internet banking on cost savings, revenue growth and risk profile of the banks have also generated considerable interest and speculation about the impact of the Internet on the banking industry. Banking through internet has emerged as a strategic resource for achieving higher efficiency, control of operations and reduction of cost by replacing paper based and labour intensive methods with automated processes thus leading to higher productivity and profitability. However, to date researchers have produced little evidence regarding these potential changes. Nonetheless, recent empirical studies indicate that Internet banking is not having an independent effect on banking profitability, although these findings may change as the use of the Internet becomes more widespread.

Egland (2012) found that banks in all size categories offering internet banking were generally more profitable and tended to rely less heavily on traditional banking activities in comparison to non-Internet banks. An exception to the superior performance of Internet banks was the *de novo* (new start-ups) Internet banks, which were less profitable and less efficient than non-Internet *de novos*. The authors concluded that Internet banking was too small a factor to have affected banks' profitability. Sullivan (2010) found that click and mortar banks in the 10th Federal Reserve District incurred somewhat higher operating expenses but offset these expenses with somewhat higher fee income. On average, this study found no systematic evidence that banks were either helped or harmed by offering the Internet delivery channel. Similar to the results of Furst et al., this study also found that *de novo* click and mortar banks performed significantly worse than *de novo* brick and mortar banks.

Hasan (2014) did a study from banks in Italy and found that the internet banking institutions were performing significantly better than the non-internet groups. Additionally, the risk variables associated with the Internet group continued to be lower relative to the non-internet group. The asset-liability variables revealed that on average the banks in this internet group were larger and had significantly higher trading and investment activities and less dependent on retail deposits (both demand and saving deposits) relative to the non-Internet group. The only category where the Internet group showed a lower performance was the noninterest expense category. It found a significant and positive link between offering of Internet banking activities and banks' profitability and a negative but marginally significant association between the adoption of Internet banking and bank risk levels particularly due to increased diversification.

Hernando and Nieto (2014) examined the performance

**Table 1.** Influence of Size of firm on growth in the banking industry.

| <b>Statements on effect of size of firm on growth in the banking industry</b>   | <b>Mean</b> | <b>Std dev</b> |
|---|-------------|----------------|
| In the growth process of a firm the final size is unlimited   | 4.5         | 0.561          |
| In the growth process of a firm the final size is unlimited, it is the growth rate that is restrained in the short run by dynamic constraints or restraints | 4.4         | 0.853          |
| Financing of growth projects may be limited by lack of development of financial markets   | 4.1         | 0.566          |
| The leverage ratio of the firm affects the financial variables on growth  | 3.1         | 0.173          |

of multichannel banks in Spain between 2012 and 2013. The study found higher profitability for multichannel banks through increased commission income, increased brokerage fees and (eventual) reductions in staffing levels and concluded that the internet channel was a complement to physical banking channels. In contrast to earlier studies, the multichannel banks in Spain relied more on typical banking business (lending, deposit taking and securities trading). The adoption of the internet as a delivery channel had a positive impact on banks' profitability after one and a half years of adoption. It was explained by the lower overhead expenses and in particular, staff and its costs after the same period.

## METHODOLOGY

The study adopted a descriptive cross sectional survey design. The population of interest was all the 43 commercial banks based in Nairobi County. Data was collected using a semi structured questionnaire which was administered to the heads of strategy in the respective commercial banks. The data sources included financial statements, annual statements for a period of 3 years (2011-2013). This research study carried out a pilot study in 2 commercial banks in order to test for validity and reliability of the data collection instrument. Content validity was done to determine the accuracy, clarity and suitability of the instruments. It also assisted to classify scarce and ambiguous items such that those that were not evaluating the variables intended, were modified. To ensure validity, the supervisor also examined the instruments that were used in the study. Reliability of the instrument was estimated using Cronbach's Alpha Coefficient which is a measure of internal coefficient. A reliability of at least 0.70 at  $\alpha=0.05$  significance level of confidence was accepted. Adjustments were made accordingly in case a low co-efficient was obtained in order to improve on the instrument.

Descriptive statistics was used to analyze the quantitative data. Coding was done in SPSS, analyzed and the output interpreted in frequencies, percentages, mean scores and standard deviation. Inferential statistics such as, regression were also used to establish the significance of each variable and the relationship between the variables on growth in the banking sector in Kenya.

## FINDINGS

These findings are based on descriptive statistics about the determinants of growth in the banking industry in Kenya which included; size of the firm, profitability, product development, market penetration and innovation

and technology.

Foremost the study sought to know the effect of size and profitability on growth in the banking industry. The responses were rated on a five point Likert scale where: 1 - Strongly Disagree 2 - Disagree 3 - Neutral 4- Agree and 5- Strongly Agree. The mean and standard deviations were generated from SPSS and are as illustrated in Table 1

As shown in Table 1, majority of the respondents agreed that; in the growth process of a firm the final size is unlimited (Mean=4.5). Further, the respondents said that in the growth process of a firm the final size is unlimited, it is the growth rate that is restrained in the short run by dynamic constraints or restraints (Mean=4.4). Finally, the respondents said that the leverage ratio of the firm affects the financial variables on growth (Mean=3.1) . Thus, growth in the banking industry is in tandem with increase in size of firm and consequently in a positive relationship with size of firm.

As of the profitability of firm, majority of the respondents agreed that; return on equity (ROE) determine the long-term growth prospects of a bank (Mean=4.7), banks reinvest a minimum proportion of their profit for growth reasons (Mean=4.5), profitable banks will be more motivated to grow, because their ongoing profit creation will make it possible to sustain growth (Mean=3.7), a high return on equity (ROE) creates a scope to invest and good investments lead to accelerated growth (Mean=3.6), profitability determine the long-term growth prospects of a bank (Mean=3.4) respectively.

This implies that the profitability affects growth in the banking industry to a great extent and contributes significantly to the growth in the banking industry. Through the increased profitability of the bank, the banks could determine their long-term growth prospects, could reinvest their profits and could sustain their growth.

The respondents were requested to indicate their level of agreement on statements in relation to the effect of product development and penetration on growth in the banking industry.

The responses were rated on a five point Likert scale where: 1 - Strongly Disagree 2 - Disagree 3 - Neutral 4- Agree and 5- Strongly Agree. The mean and standard deviations were generated from SPSS and are as illustrated in Table 2 below.

From the study findings in Table 3, majority of the

**Table 2.** Influence of profitability of firm on growth in the banking industry.

| <b>Statements on effect of profitability on growth in the banking industry</b>   | <b>Mean</b> | <b>Std dev</b> |
|--|-------------|----------------|
| Profitability determine the long-term growth prospects of a bank   | 3.4         | 0.112          |
| Return on equity (ROE) determine the long-term growth prospects of a bank  | 4.7         | 0.725          |
| A high return on equity (ROE) creates a scope to invest and good investments lead to accelerated growth                        | 3.6         | 0.334          |
| Banks reinvest a minimum proportion of their profit for growth reasons   | 4.5         | 0.214          |
| Profitable banks will be more motivated to grow, because their ongoing profit creation will make it possible to sustain growth | 3.7         | 0.647          |

**Table 3.** Influence of product development and penetration on growth in the banking industry.

| <b>Statements on effect of product development and growth in the banking industry</b>                              | <b>Mean</b> | <b>Std dev</b> |
|--|-------------|----------------|
| Product-Market is useful in firm's strategy processes to determine growth opportunities                            | 4.1         | 0.197          |
| In market development, new customer groups are sought for a firm's existing products.                              | 4.6         | 0.285          |
| Product development creates new products for existing markets  | 4.2         | 0.261          |
| Diversification growth strategy leads a firm into creating new products for new customer groups                    | 4.3         | 0.508          |
| <b>Statements on effect of product penetration on growth in the banking industry</b>                               | <b>Mean</b> | <b>Std dev</b> |
| willingness and ability to respond to new market opportunities are a vital part of successful business development | 3.3         | 0.112          |
| market penetration indicates a growth direction through the increase of a firm's existing share of product-markets | 4.4         | 0.725          |
| growing firms in local locations remain active in extending their markets geographically                           | 3.6         | 0.334          |
| growth oriented firms are more likely to be involved in export markets   | 4.7         | 0.214          |
| growth oriented firms respond to new market opportunities easily   | 3.7         | 0.647          |

respondents agreed that; in market development, new customer groups are sought for a firm's existing products (Mean=4.6), diversification growth strategy leads a firm into creating new products for new customer groups (Mean=4.3), product development creates new products for existing markets (Mean=4.2), product-market is useful in firm's strategy processes to determine growth opportunities (Mean=4.1) respectively. This depicts that market development was a significant determinant of growth in the banking industry. Through market development the banks create new market, adopt suitable diversification growth strategy as well as create new products for existing markets.

As of product penetration, majority of the respondents agreed that; growth oriented firms are more likely to be involved in export markets (Mean=4.7), market penetration indicates a growth direction through the increase of a firm's existing share of product-markets (Mean=4.4), growth oriented firms respond to new market opportunities easily (Mean=3.7), growing firms in local locations remain active in extending their markets geographically (Mean=3.6), and that willingness and ability to respond to new market opportunities are a vital part of successful business development (Mean = 3.3)

respectively. This shows that market penetration was a significant growth determinant in the banking industry as it they readily penetrate local and foreign markets, increase their existing market share and respond easily to new market opportunities.

The respondents were requested to indicate their level of agreement on statements in relation to the effect of innovation and technology on growth in the banking industry. The responses were rated on a five point Likert scale where: 1 - Strongly Disagree 2 - Disagree 3 - Neutral 4- Agree and 5- Strongly Agree. The mean and standard deviations were generated from SPSS and are as illustrated in Table 3.

From the study findings in Table 4, the majority of the respondents agreed that; innovation is one of the most important drivers of firm growth (Mean=4.8), companies can create a competitive advantage through investing in innovative products and better operating methods (Mean=4.4), an innovation advantage may generate effects on one or more links of the product network (Mean=4.1) and that innovating firms perform better than non-innovating firms in terms of growth (Mean=3.9) respectively.

This shows that innovation and technology was

**Table 4.** Innovation and technology and growth in the banking industry.

| Statements on effect of innovation and technology on growth in the banking industry                                | Mean | Std dev |
|--|------|---------|
| Innovation is one of the most important drivers of firm growth   | 4.8  | 0.114   |
| Companies can create a competitive advantage through investing in innovative products and better operating methods | 4.4  | 0.331   |
| Innovating firms perform better than non-innovating firms in terms of growth                                       | 3.9  | 0.215   |
| An innovation advantage may generate effects on one or more links of the product network                           | 4.1  | 0.141   |

**Table 5.** Model summary and analysis of variance.

| Model     | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-----------|-------------------|----------|-------------------|----------------------------|
| dimension | .847 <sup>a</sup> | .7174    | .687              | .23655                     |

  

| Model      | Sum of Squares | df | Mean Square | F     | Sig.              |
|------------|----------------|----|-------------|-------|-------------------|
| Regression | .992           | 3  | .331        | 6.912 | .000 <sup>a</sup> |
| 1 Residual | 1.455          | 26 | .056        |       |                   |
| Total      | 2.447          | 29 |             |       |                   |

a. Predictors: (Constant), Predictors: size of the firm, profitability, product development, market penetration and innovation and technology  
b. Dependent Variable: growth in the banking industry

strategic in enhancing the growth in the banking industry. Through the innovation and technology banks gain competitive advantage as well as perform better than non-innovating firms in terms of growth.

### Regression Analysis

Regression analysis was carried out for all the factors in order to establish their relationship with growth as the dependent variable. Results of the regression analysis is shown in Table 5.

In this study, the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables)  $R^2$  equals 0.7174, that is, (size of the firm, profitability, product development, market penetration and innovation and technology) explain 71.7 percent of the variance in growth in the banking industry.

In this case, the significance value of the F statistic is 0.003 indicating that all the predictor variables (size of the firm, profitability, product development, market penetration and innovation and technology) explain a variation in growth in the banking industry and that the overall model is significant

Table 6 shows the beta values of the various independent variables.

Table 6 presents results of the multivariate regression

of determinants of growth in the banking industry in Kenya.

The study multiple regression model:

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

which became  $Y = 0.260 + 0.254 X_1 + 0.3 X_2 + 0.153 X_3 + 0.107 X_4 + 0.208 X_5 + \epsilon$

From the findings, the coefficients on growth in the banking industry are positive and significant in all the five variables, indicating that banks have improved growth when determinants of growth are catered for in terms of size of the firm, profitability, product development, market penetration and innovation and technology. The coefficient on size of the firm is 0.254 and is significant, profitability has 0.300, market penetration has 0.107, product development had 0.153 while innovation and technology had a coefficient of 0.208. This infers that the most significant determinant is profitability followed by size of the firm, innovation and technology, product development and market penetration respectively. At 5% level of significance and 95% level of confidence, all the determinants had a 0.000 level of significance implying all are significant.

### Summary of findings

The study found that firm size has significantly enhanced

**Table 6.** Regression coefficient results.

| Model                   | Unstandardized Coefficients |            | Standardized Coefficients | T      | Sig. |
|-------------------------|-----------------------------|------------|---------------------------|--------|------|
|                         | B                           | Std. Error | Beta                      |        |      |
| (Constant)              | .260                        | 0.046001   |                           | 5.6521 | .000 |
| size of the firm        | 0.875                       | 0.074601   | .254                      | 11.729 | .000 |
| profitability           | 0.823                       | 0.21784    | .300                      | 3.778  | .000 |
| product development     | 0.551                       | 0.248534   | .153                      | 2.217  | .000 |
| market penetration      | 0.670                       | 0.088007   | .107                      | 7.613  | .000 |
| Innovation & technology | 0.473                       | 0.084002   | .208                      | 8.214  | .000 |

a. Dependent Variable: growth in the banking industry

growth in the banking industry in Kenya. The study also revealed that; in the growth process of a firm the final size was unlimited, this shows that the growth rate is restrained in the short run by dynamic constraints or restraints, financing of growth projects may be limited by lack of development of financial markets, and that the leverage ratio of the firm affects the financial variables on growth respectively. Therefore, growth in the banking industry is in tandem with increase in size of firm and consequently in a positive relationship with size of firm.

The study further revealed that there was a sustained growth in bank profitability in the last three years from 2011 to 2013 which was indicative of growth in the banking industry in Kenya. The study established that there is a steady rise in product development in the last three years and significantly contributes to growth in the banking industry in Kenya from 2011 to 2013. This shows that the product development significantly enhanced the growth in the banking industry in Kenya.

The study further revealed that; in market development, new customer groups are sought for a firm's existing products, diversification growth strategy leads a firm into creating new products for new customer groups, product development creates new products for existing markets, and product-market is useful in firm's strategy processes to determine growth opportunities respectively. Thus, market development was a significant determinant of growth in the banking industry. Through market development the banks create new market, adopt suitable diversification growth strategy as well as create new products for existing markets.

The study revealed a rise in innovation and technology in the last three years in the banking industry in Kenya from 2011 to 2013 but this seems to influence growth negatively, perhaps because technology leads to contraction in terms of reduced manpower requirements. Fewer people are required to carry out various operations when sufficient technology in terms of equipment and other facilities are in place

The study showed that innovation is one of the most important drivers of firm growth, companies can create a competitive advantage through investing in innovative products and better operating methods, an innovation

advantage may generate effects on one or more links of the product network and that innovating firms perform better than non-innovating firms in terms of growth respectively. Therefore, innovation and technology was strategic in enhancing the growth in the banking industry. Through the innovation and technology banks gain competitive advantage as well as perform better than non-innovating firms in terms of growth.

The study revealed that the coefficients on growth in the banking industry were positive and significant in all the five variables, indicating that banks have improved growth when determinants of growth are catered for interms of size of the firm, profitability, product development, market penetration and innovation and technology. The most significant determinant of growth in the banking industry in Kenya is size of the firm followed by profitability, market penetration, product development, and innovation and technology respectively.

## Conclusion

From the findings of this study, it can be concluded that a number of factors influence growth in the banking industry. These include firm size, profitability and product development. The study further concludes that the innovation and technology significantly enhanced the growth in the banking industry in Kenya. Therefore, innovation and technology was strategic in enhancing the growth in the banking industry. Through the innovation and technology banks gain competitive advantage as well as perform better than non-innovating firms in terms of growth.

Thus, it may be concluded that the most significant determinant of growth in the banking industry in Kenya is size of the firm followed by profitability, market penetration, product development, and innovation and technology respectively.

## RECOMMENDATIONS

The study found out that innovation is one of the most



important drivers of firm growth. Therefore, the study recommends that banks must be focused in terms of their needs and using the right technology and innovation to achieve goals, rather, than investing in innovation and technology because other banks have it. The government participation in ensuring focused telecommunication industry must be visible to reduce or remove avoidable costs of investing in innovation and technology by the banks. Regulatory authorities like Central Bank of Kenya must stipulate standards for the banks to follow to avoid making Kenya Banking Sector a dumping ground for the outdated technological infrastructures.

Slow market penetration is another major problem militating against the growth in the banking industry in Kenya. The study recommends that the government must make right policy to ensure fair competition in the banking industry in Kenya and promote market penetration by respective banks.

The study established that diversification growth strategy leads a firm into creating new products for new customer groups. Therefore the study recommend that the banks in Kenya should invest more in research to understand the changing trends in customer need to inform their product development. This will also help the banks to predict emerging trends and prepare for future changes in the customer products and services thereby creating a competitive edge in the highly competitive industry.

The study revealed that financing of growth projects may be limited by lack of development of financial markets. The study now recommends that banks should also reinvest in market expansion to increase the size of the firms and consequently spur their growth. This should be coupled by offering their products and services at competitive rates to enhance their customer base.

### Suggestions for Further Research

This study was done only on the commercial banks in Kenya. The study can also be extended to other financial markets such as capital and insurance companies in order to understand the implication of size of the firm, profitability, product development, market penetration and innovation and technology on growth in the financial sector in Kenya. Dfinally, there is also need to identify and understand the changes that government regulations are causing in the banking sector.

### Conflict of Interests

The authors have not declared any conflict of interests.

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**Appendix I: List of Commercial Banks in Kenya.**

1. Barclays Bank
2. CFC Stanbic Holdings
3. Chase bank
4. Citi Bank
5. Commercial Bank of Africa
6. Consolidated Bank of Kenya
7. Co-operative Bank of Kenya
8. Diamond Trust Bank Kenya
9. Equatorial Commercial Bank
10. Equity Bank
11. Fina Bank
12. Guardian Bank
13. Kenya Commercial Bank
14. K-Rep Bank
15. National Bank of Kenya
16. NIC Bank Ltd
17. Oriental Commercial Bank
18. Standard Chartered Bank
19. Transnational Bank
20. African Banking Corporation Ltd
21. Bank of Africa Kenya Ltd.
22. Bank of Baroda (K) Ltd.
23. Bank of India
24. Charter House Bank Ltd
25. Credit Bank Ltd
26. Development Bank of Kenya Ltd
27. Dubai Bank of Kenya Ltd
28. Eco Bank of Kenya Ltd
29. Family Bank of Kenya Ltd
30. Fidelity Commercial Bank Ltd
31. First Community Bank Limited
32. Giro Commercial Bank Ltd
33. Gulf African Bank Ltd
34. Habib Bank A.G Zurich
35. Habib Bank Ltd
36. Imperial Bank Ltd
37. I & M Bank Ltd
38. Jamii Bora Bank Ltd
39. Middle East Bank (K) Ltd
40. Paramount Universal Bank Ltd
41. Prime Bank Ltd
42. Victoria Commercial Bank Ltd
43. UBA Kenya Bank Ltd

**SOURCE:** CENTRAL BANK, (2014)