THE RELATIONSHIP BETWEEN FINANCIAL INNOVATIONS
AND FINANCIAL PERFORMANCE OF
TELECOMMUNICATION FIRMS IN KENYA

BY

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DECLARATION

This research project is my original work and has not been presented for the award of a degree or any other qualification in any other university.

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DEDICATION

My loving family

Your unconditional love, moral and emotional support, encouragement is immeasurable.

My Friends

Your support and encouragement has been immense. I will forever be indebted to you.
ABSTRACT

Globally, financial innovations are heavily used by telecommunication companies to remain profitable against the backdrop of increased regulation, globalization and stiff competition. The study investigated the relationship between financial innovations and financial performance of telecommunication firms in Kenya. In this study, descriptive research design was applied. The study target population was the four telecommunication companies operating in Kenya for at least 10 years. The study used secondary data. Quantitative secondary data was obtained from published annual financial statements for the firms studied and reports published by the Communication Authority of Kenya (CAK). The study used descriptive statistics to analyse the quantitative data. In this case the mean, standard deviation, percentage and frequencies were used to show the trend of the results over the ten-year period (2007-2016). In addition, multiple regression analysis was used to ascertain the nature, magnitude and direction of the relationship. From the findings, the study concludes that; there was an increased financial performance of telecommunication firms in Kenya over the period 2007 to 2016. The mobile money transfer, agency services and financial strategic alliances as financial innovations by telecoms in Kenya significantly contributed to their financial performance. The mobile money transfer as a financial innovation contributes most to the financial performance followed by mobile money agency services and financial strategic alliances respectively. The most significant financial innovation influencing financial performance of telecommunication firms is mobile money transfer followed by mobile money agency services and financial strategic alliances respectively. The management of the telecommunication firms should continuously invest in cutting edge technology that support the mobile money transfer to ensure minimal interruption and its scale up and security. The management of the telecommunication firms should regularly review the agency policy to make it more attractive to existing and prospective agents for their signing up. The management of the telecommunication firms should expand financial strategic alliances with other sectors of the economy as it has proved beneficial in creating their competitive advantage and in enhancing their financial performance.
# TABLE OF CONTENTS

DECLARATION .................................................................................................................. ii
ACKNOWLEDGEMENT ..................................................................................................... iii
DEDICATION ..................................................................................................................... iv
ABSTRACT ....................................................................................................................... v

TABLE OF CONTENTS ....................................................................................................... vi
LIST OF TABLES ................................................................................................................ viii
LIST OF ABBREVIATIONS AND ACRONYMS ................................................................. ix

CHAPTER ONE .................................................................................................................. 1
INTRODUCTION ............................................................................................................... 1
  1.1 Background of the Study ............................................................................................. 1
    1.1.1 Financial Innovation ............................................................................................. 2
    1.1.2 Financial Performance ......................................................................................... 3
    1.1.3 Financial Innovations and Financial Performance .............................................. 3
    1.1.4 Telecommunication Industry in Kenya ............................................................... 4
  1.2 Research Problem ......................................................................................................... 5
  1.3 Research Objective ....................................................................................................... 7
  1.4 Value of the Study ......................................................................................................... 7

CHAPTER TWO .................................................................................................................. 9
LITERATURE REVIEW ...................................................................................................... 9
  2.1 Introduction .................................................................................................................. 9
  2.2 Theoretical Review ..................................................................................................... 9
    2.2.1 Schumpeter’s Theory of Innovation ..................................................................... 9
    2.2.2 Constraint-Induced Financial Innovation Theory ............................................... 10
    2.2.3 Transaction Cost Theory .................................................................................... 11
  2.3 Determinants of the Financial Performance of Telecommunication firms............. 12
    2.3.1 Leverage ............................................................................................................. 12
    2.3.2 Liquidity ............................................................................................................. 13
    2.3.3 Solvency ............................................................................................................. 14
    2.3.4 Capital Structure ............................................................................................... 14
**LIST OF TABLES**

Table 2.1 Analytical Model .................................................................27

Table 4.2 Return on Asset (ROA) .........................................................29

Table 4.3 Mobile money transfer .........................................................30

Table 4.4 Mobile money agency services ............................................31

Table 4.5 Financial strategic alliances ................................................33

Table 4.6 Model Summary .................................................................34

Table 4.7 ANOVA (Analysis of Variance) ............................................35

Table 4.8 Coefficients of Determination .............................................35
LIST OF ABBREVIATIONS AND ACRONYMS

CAK  Communication Authority of Kenya
EPS  Earnings Per Share
FI   Financial Innovation
MFI  Micro-Finance Institution
MVA  Market value added
NMP  Net Profit Margin
R&D  Research and Development
ROA  Return on Assets
ROE  Return on Equity
SACCO  Savings and Credit Cooperative Organization
SMEs  Small-to-Medium Enterprise
SPSS  Statistical Package of Social Sciences
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Over the last decade, the telecommunication sector has underwent reorientation emanating from technology, financial system, legal frameworks and customer needs shift. Most of the telecommunication giants that did not keep up with the innovations to meet the changing customer needs are no longer in existence and the current telecommunication giants are only a decade old. This reflects the role of financial innovations in ensuring firm survival, competitiveness and optimal financial performance at the backdrop of the global financial crisis (Kimani, 2016; Anthony & Harry, 2015).

According to Korir (2014) the major impetus for financial innovations in the telecommunication sector has been competition, globalization, deregulation, technological advancement and it is highly dynamic. Major telecoms world over have become obsolete while new entrants that are about a decade have emerged and dominated the sector. The survival in this sector has been majorly driven by financial and technological innovations adopted by each of the telecoms. With these financial innovations, the firms have significantly enhanced their service quality to meet the changing needs of the customer, hence their profitability. Given that adoption of financial innovations is capital intensive, and its failure rate very high, telecoms greatly struggle in designing and implementing the best suited financial innovation in their markets (Lawrence, 2010).
The Kenyan telecommunication industry has been undergoing changes including changing customer need, innovation, technological advancements, deregulation, globalization and stiff competition (Kimenyi & Ndung'u, 2009; Communication Authority of Kenya, 2016). To cope with these market forces that threaten the survival, competitiveness and profitability and growth of telecommunication companies in Kenya, telecoms are implementing various financial innovations (Communication Authority of Kenya, 2016).

1.1.1 Financial Innovation

Financial innovation (FI) developing advanced financial tools and technologies (Tufano, 2002) to enhance firm competitive, risk management and respond to the market changes (Laeven & Levin, 2010). Financial innovations are majorly categorized into three, namely institutional innovation, product innovation, and process innovation (Lawrence & Scott, 2011; Mosoti & Masheka, 2010). Institutional innovations relate to structural and legal and supervisory changes. Product innovations entail introduction of goods or services with improved characteristics. Process innovations deal in business processes for efficiency, expansion of market and data management (Maleto, 2016; Frame & White, 2014).

A number of measures of financial innovations have been applied by different authors. Loof (2000) measured financial innovation as a function of the value of transactions made out of using the new products. On the other hand, Mabrouk and Mamoghli (2010) measured financial innovations as a ratio of revenue generated upon adoption of each financial innovation to operating profits during the study period.
Similarly, Nader (2011) measured financial innovation as the ratio of capital expenditure for each of the financial innovations to the firm operating profits for the given period.

### 1.1.2 Financial Performance

Financial performance (FP) is a measure of how well a firm can utilize resources from its essential method of business and produce incomes (Bessler et al., 2008). FP is the general measure of a company's general financial wellbeing over time frame, and can be utilized to look at comparative firms over a similar industry or to think about enterprises or sectors in aggregation. There are a wide range of approaches to quantify financial performance, which are perceived in conglomeration terms (Business Dictionary, 2011).

Utilizing authoritative objectives as a premise, diverse techniques are received by various firms to quantify their general execution. Companies, in any case, like to embrace financial indicators to quantify their execution (Grant et al., 2008). The ROE and ROA are portion of the most common measures of financial performance of a given organization (Bagorogoza and Waal, 2010). Firm performance is the results accomplished in meeting interior and outside objectives of a firm (Lin et al., 2008).

### 1.1.3 Financial Innovations and Financial Performance

FI would show up in item, process, market, factor and association (Kao, 1989), however the initial three measurements are more well-known in the development writing (Johne and Davies, 2000). Crepon et al. (1998) utilized a four-condition show, to connect the advancement choice of firms to their execution through the effect of development contribution on advancement yield and the advancement yield on
profitability and better execution. Their discoveries affirm the positive connection between development exercises and efficiency at the firm level and give additional proof on the connection amongst size and innovation activities.

1.1.4 Telecommunication Industry in Kenya

The telecommunication industry in Kenya comprises of five companies namely; Safaricom, Airtel, Orange-Telkom, Equitel and Liquid Telkom whose market share stands at 65.6%, 17.5, 12.5% 4.4% and 0.4% respectively. This industry has been going through profound changes including; technological advancement, increased competition, changes in regulatory frameworks, restructuring, changing customer needs, takeovers and new entrants among others (CAK, 2016).

The product innovations adopted by telecoms in Kenya include mobile money transfer services like MPESA, and Airtel Money, data and voice services, and online banking platforms. On the other hand, the process innovations being used by telecoms in Kenya include office automations, use of agents in the company value chain and sharing ICT infrastructure among the industry players. Similarly, the institutional innovations being implemented by telecoms in Kenya include company restructuring and turnaround initiatives, compliance with legal frameworks and strategic alliances such as M-Shwari and M-Benki (CBK, 2016). One of the product innovations being used by telecommunication firms in Kenya is mobile money transfer technology such as; Airtel money, Orange money, M-Pesa and Equitel Money. Similarly, all telecommunication firms have been offering their services through agents which is an example of process innovation. In terms of institutional innovations, telecommunication firms have heavily relied on strategic alliances among themselves
and with firms in other sectors of economy. Examples of intra-strategic alliances by telecommunication firms include sharing of ICT infrastructure while examples of extra-strategic alliances include; M-Benki (between Safaricom and Kenya Commercial Bank) M-shwari, (between Safaricom and Commercial Bank of Africa) CSR partnerships practiced by all telecommunication firms in Kenya (Leiro and Letting, 2012).

Mutuva (2014) notes that the implementation of structural adjustment and subsequent market liberalization though beneficial brought about stiff competition which resulted to closure of YU and takeover of Zain by Airtel. It is expected that by adopting financial innovations, telecoms will improve their growth both financially or non-financially. Deloitte (2016) explained that unlike other well-established industries in Kenya such as the banking and manufacturing, the telecommunication industry is still in its formative stages. Therefore, financial innovations in the telecommunication industry is a new concept with no role models and best practices to benchmark with (CAK, 2016).

1.2 Research Problem

Globally, financial innovations are heavily used by telecommunication companies to ensure their positive financial outlook against the backdrop of deregulation, globalization, pressures from new and existing contenders, quickly propelling data innovation, and consistently changing client needs (World Bank, 2016; Schmit, 2004). According to strategists like Porter (2003) financial innovation is an important determinant of firm financial performance, growth and competitiveness. A study by
Frame (2004) on developed and emerging economies revealed that financial innovation relates well with firms’ financial performance. Financial innovations seem to favor industry leaders in enhancing their market share than the late adopters of the innovations (Tufano, 2009).

The Kenyan telecommunication industry has been undergoing changes including changing customer need, innovation, technological advancements, deregulation, globalization and stiff competition (Kimenyi & Ndung'u, 2009; Communication Authority of Kenya, 2016). To cope with these market forces that threaten the survival, competitiveness and profitability and growth of telecommunication companies in Kenya, telecoms are implementing various financial innovations. In this sector, only Safaricom has maintained a positive financial while Airtel Kenya and Orange Telkom have been undergoing restructuring and takeovers to turnaround their financial performance (Mutuva, 2014).

Previous international empirical studies on financial innovations and development of firm uncover mixed results. Pooja and Singh (2009) reasoned that banking technological innovations had slightest effect on bank execution, Muganda (2011) presumed that managing an account mechanical developments had noteworthy commitment on bank execution. As per Word bank (2014) the key mainstays of financial innovations is product innovation, competition, regulations and security.

Local studies also exist on financial innovations and growth of firm. Maleto (2016) focusses on the savings and credit cooperatives in Kenya while Kimani (2016) limited the study to SMEs. Kibugo (2016) investigated on the microfinance institutions in Nakuru; Karanja (2011) focused on insurance companies while Korir (2014) reviewed
the banking sector. There were methodological and industry contextual differences between the highlighted local and international studies and the current study where none of the highlighted studies focused on the Kenyan telecommunication sector. This knowledge gap was the motivation behind this study. The question under review was “what is the connection between financial innovations and financial performance of organization in the telecommunication industry in Kenya?”

1.3 Research Objective

To establish the relationship between financial innovations and financial performance of telecommunication firms in Kenya.

1.4 Value of the Study

The research findings may chip in the advancement of hypothesis on financial innovation. The findings may offer new insights on whether the current theories are highly generalized to all industries or they effectively describe financial innovation adoption in technology driven industries like telecommunication sector.

This study is of great value to the policy makers in the telecommunication industry by confirming the current financial innovations in place and their importance in determining the financial performance of the industry. Through the findings of the study, the policy makers may better understand emerging financial innovations hence informing policy formulation that in tandem with new trends to ensure growth of the sector which is a key pillar of the economic development of Kenya.
The investigation discoveries may help the administration of telecommunication organizations in assessing the significance of financial innovation on their financial performance to bolster their profitability. The telecommunication firm management may acquire insights on the significance of financial innovation and thus the examination includes stimulus to learning the connection between financial innovation and financial performance of firms in the telecommunication industry.

To the researchers, the examination may increase the value of the information on financial innovations. The assessment may along these lines be a decent source of reference materials to future researchers.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter exhibits the hypothetical audit of the examination. It additionally talks about the determinants of financial performance. The chapter likewise gives the local and international empirical studies on relationship between financial innovations and financial performance of firms in the telecommunication sector. The chapter is a literature review.

2.2 Theoretical Review

The investigation looked into various hypotheses on the financial innovation and firm performance. The examination depends on Schumpeter's hypothesis of development, requirement instigated financial innovation hypothesis and exchange cost development hypothesis. A detailed clarification of every hypothesis, with its significance to this investigation is talked about in the consequent areas.

2.2.1 Schumpeter’s Theory of Innovation

The Schumpeter's hypothesis of Innovation focuses on innovations as the impetus of economic growth. The theory argues that opposition between market players instigates research on better ways of partnering for profitability prompting development of firms. Schumpeter (1934) contended that business thinkers as works to develop new ways of creating new profits by their innovations. Thus, gatherings of
IMITATORS PULLED IN BY SUPER-BENEFITS WOULD BEGIN A RUSH OF VENTURE THAT WOULD DISINTEGRATE THE PROFIT MARGIN FOR THE DEVELOPMENT (LI ET AL., 2006).


2.2.2 Constraint-Induced Financial Innovation Theory

AS PROPOSED BY DEYOUNG (2007) CONSTRAINT-INDUCED FINANCIAL INNOVATION HYPOTHESIS INNOVATIONS ARE MEANT FOR PROFIT. THE HYPOTHESIS SHOWS THAT ORGANIZATIONS SEEK TO ADDRESS THE INTERNAL AND EXTERNAL IMPEDIMENTS VIA FI TO REMAIN PROFITABLE. THE HYPOTHESIS ADDITIONALLY HYPOTHESIZES THAT FI HELPS TO REDUCE CONSTRAINTS THAT BREAKING POINT THE COMPANY'S GAINING LIMIT, IN THIS MANNER FIRMS IMPROVE TO UPGRADE THE PROFITS ON CAPITAL IN THE LIGHT OF THE ORGANIZATIONS' OBJECTIVES (FRAME AND WHITE, 2008).
As per Anthony et al. (2015) these confinements and constraints ensure the security of administration, as well as diminish the proficiency of financial institution, thus financial institutions endeavor toward throwing these confinements and restrictions off. In any case, it stressed development in affliction exorbitantly. As per Tufano (2009) people and firms developed to go around these limitations to diminish the cost of obtaining, lessen costs and enhance speculation alternatives. Innovation additionally tries to handle the financial investment limitations. The pundits of Constraint-Induced Financial Innovation Theory including Kemp et al (2003) and Lawrence (2010) contend that separated from augmentation of benefits, firms exist to add to the social prosperity of their social orders.

2.2.3 Transaction Cost Theory

The theory as proposed by Hicks and Niehans (1983 proposes that the financial innovation is prevalent determined by the associations have to lessen exchange cost. Along these lines, the diminishing in exchange cost additionally empowers the progressively outstretching influence of embracing a given financial innovation perceived as far as enhanced administration quality advertised. The intention of financial innovation is to decrease the exchange cost and subsequently the hypothesis clarifies that when first rate, financial innovation enhances financial performance of firms (Anthony and Harry, 2015). Transaction cost hypothesis clarifies the institutions financial expenditure decisions, considering the relative benefits of directing intra firm exchanges as opposed to inter-firm market transactions (Black, 2002). In transaction cost hypothesis, the unit of the examination is the unit of movement – the transaction, with its members. For this situation, the firm needs to choose whether to
put resources into a specific financial innovation or not, given that it is capital intensive (Bakar and Ahmad, 2010).

The commentators of TCA contend that remedies drawn from this hypothesis are probably going to be wrong as well as unsafe for corporate directors as a result of the suspicions and rationale on which it is grounded. Associations are not minor substitutes for organizing effective transactions when markets fall flat; they have one of a kind points of interest for overseeing certain sorts of economic activities through a rationale that is altogether different from that of a market (Roberts and Amit, 2003 and Batiz-Lazo and Woldesenbet, 2006).

2.3 Determinants of the Financial Performance of Telecommunication firms

In this segment, the chapter talks about the distinctive determinants of financial performance of telecommunication firms. The determinants of intrigue incorporate leverage, liquidity, solvency, capital adequacy and internal factors affecting the telecommunication firm. As proposed by various specialists, these are the most key determinants of financial performance in the service industry like telecommunication sector (Honjo & Harada, 2006; Audretsch & Elston, 2002; Shyam-Sunder & Myers, 1999).

2.3.1 Leverage

Leverage ratios are expected to address the company's long-term ability to meet its obligations. At the point when a firm has debt, it has the commitment to reimburse the interest. Holding debt will expand the association's hazard. The level of financial
leverage demonstrates the capacity of recorded firm to deal with their economic exposure to unexpected losses (Adams and Buckle, 2013).

Organizations initially utilize internal financing at startup. At the point when this is drained, they utilize debt financing, and when they can't get any capital any longer through debt financing, they raise capital by searching for external equity (Shyam-Sunder and Myers, 1999). In this way, the likelihood for youthful organizations to develop are frequently restricted. Raising capital through debt financing is troublesome for a new business since the banks don't have any past budgetary track records of the organization. The startup proprietors additionally looks to hold control of the business consequently their decision of financing (Lawrence, 2010).

2.3.2 Liquidity

Mateev and Anastasov (2010) measured the level of short term liquidity by the current ratio. This proportion was a piece of the firm particular qualities, which may influence the organization development. The current ratio is calculated by dividing the current assets by the current liabilities. An expansion in the current ratio will fortify an association's liquidity position. Organizations with a lower level of liquidity will have more money imperatives and will have more challenges in reimbursing providers. A decent money cycle starts with solid working capital and great associations with providers. An organization that is not ready to hold a specific level of liquidity will battle to keep its head above water (Beekman and Robinson, 2004; Laveren and Van Hoof, 2004).
2.2.3 Solvency

The solvency of an organization demonstrates its financial health. Solvency ratio is ascertained through isolating shareholders’ equity by the total assets. The greater this proportion, the more beneficial an organization is. A company with a small solvency ratio has little shareholders’ equity compared to its liabilities. An organization confronting this circumstance has a higher danger of bankruptcy than an organization which has a healthy ratio. The solvency ratio become smaller thus the negative relationship between solvency and firm growth as a company grow (Verbakel, 2005).

2.3.4 Capital Structure

As Anthony and Harry, (2015) says capital structure is an essential factor that decides the execution of a firm. Capital structure alludes to the ratio of debt and equity financing. On the off chance that if more debt financing the organization needs to confront certain bankruptcy risk, however there are likewise some tax and monitoring benefits related with obligation financing (Su and Vo, 2010).

As argued by Lewellen and Lewellen, (2004) firm ned to retain benefits to influence shareholder trust, since it would some way or another have been appropriated as dividend. Dividend reports significantly affect share costs (Akbar and Baig, 2010). Be that as it may, they do even now have certain costs like interest payments and it is broadly acknowledged that the cost of external funds is specifically relative to the measure of these assets additionally while getting the capital structure arrangement of the firm must be remembered (Kemp et al., 2003).
2.3.5 Ownership Structure

 Division of ownership into sorts lays on the measurement that is detachment of proprietorship and control. Berle and Means (2003) built up a polarity of proprietorship and recognized two sorts in particular, Owner-controlled firms and managerially controlled firms.

 McEachern (2001) observed it to be deficient for clarification of proprietorship structure and its effects, so he recognized three sorts including externally controlled firms (Ugurlu, 2000). Owner controlled firms are where the managers are the dominant shareholders. Externally controlled firms are where the supervisors are not predominant investors. Managerial controlled firms are the ones in which no dominant shareholder exists.

2.3.6 Management Efficiency

 Sound management is the most vital pre-requisite for the quality and development of any financial institution; since indicators of Management quality are fundamentally particular to individual institutions. Management Efficiency is one of the key interior factors that decide the bank profitability. However, it is one of the buildings subject to catch with financial ratios. In addition, operational proficiency in dealing with the working costs is another measurement for administration quality. Some financial ratios of the financial statements go about as an intermediary for administration proficiency (Beck, Chen and Song, 2012).
2.3.7 Firm size

Agiomirgiannakis (2016) FS relates to firm’s capacity to deliver innovatively. Such markets are provided by couple of contenders and are along these lines, more beneficial. Thus, larger firms have access to the most profitable market segments. The exact connection between an association's size, structure, and profitability has discovered that size is emphatically corresponded with profitability (Gichura, 2011), with the profit rate of the market decidedly related with the concentration ratio and adversely connected with the marginal concentration ratio (Adams and Buckle, 2000).

Amato and Amato (2014) demonstrate that the positive relationship between firm size and profitability originates from executing greater differentiation and specialization strategies. Further studies also suggest that larger firms are able to leverage on economies of scale (Geroski, 2013).

2.3.8 Firm Age

Loreder and Waelchili (2009) make an experiential investigation to catch the immediate connection amongst age and firm execution, seeing the absence of flexibility to innovations as an immediate impact of aging. By parting the factors, for example, level of specialization and size, these authors reason that organizations tend to confront major issues with aging that have a negative effect and a positive concavity. The authors demonstrate productivity disintegration because of aging which brings about expanding costs and slimmer profit margins. They presume that, all in all, organizations recorded at the stock trade for more than 15 years can't stay aware of good outcomes appeared by more youthful firms.
Ariff, Ibrahim and Othman (2007) make a comparative report about factors identified with governance reporting of firms in Malaysia. In spite of the outcomes demonstrating a solid connection between levels of governance and firm size, firm age is decidedly related with governance. Firms with history of good notoriety and experience have more noteworthy abilities to isolate great and terrible governance practices. Almeida and Santos (2008) considered 101 Brazilian firms and discover the impact of company's size and age in the levels of governance, which was predictable to the discoveries by Ariff, Ibrahim and Othman (2007).

2.4 Empirical Studies

Maleto (2016) considered the impacts of financial innovation on development of savings and credit cooperatives in Kenya. The examination embraced a descriptive research design. The number of inhabitants in the examination was 150 SACCOs authorized by Sacco Societies Regulatory Authority (SASRA) and that have been in operation amid the period 2011 to 2015. Statistics testing was utilized and optional information was from distributed money related reports of the SACCOs. Quantitative information was investigated through descriptive statistics while regression helped to decide the connection among factors. The examination found that the five financial innovations add to 78.1% of development of SACCOs. The study focused on the banking sector but the current study focuses on the telecommunication sector.

Kimani (2016) looked into on impact of adoption of financial innovation on execution of little and medium enterprises in Kenya. The number of inhabitants in the examination was the enrolled SMEs in Nairobi County. Essential information was
gathered utilizing self-administered semi-structured questionnaires. Secondary information was gathered from finance journals and periodicals. Data analysis was done using multiple regressions. A positive relationship between adoption of financial innovation and performance is present. The examination discoveries require approval as there is relevant distinction between SME area and telecommunication sector.

Kibugo (2016) concentrated on impact of financial innovations on execution of microfinance establishments in Nakuru Town, Kenya. The investigation particular objectives included examining the effect of institutional innovation, product innovation, and process innovation on performance of microfinance institutions. The objective populace included all employees working with MFIs enrolled with AMF-Kenya and the open populaces were 187 workers working with MFIs enlisted with AMF in Nakuru town, Kenya. Tests of 70 respondents were drawn from the investigation populace utilizing stratified random sampling technique. The examination utilized survey as the instrument for essential information gathering. Secondary data was collected using a data collection sheet. The examination presumed that there is a supervisory system that monitors MFIs. The examination concentrated on micro-finance sector while the present investigation focuses on telecommunication sector to take into account correlation of the prior investigation.

Karanja (2011) researched the connection between FI and development of insurance agencies. The objective populace was senior administrators in marketing, underwriting, ICT, and finance from the 44 licensed insurance companies as at end of December 2009. A sample of 44 respondents comprising of one respondent from every insurance agency was utilized for this examination. A semi-structured
questionnaire was utilized to gather information. Information was broke down utilizing descriptive statistics and regression analysis. Most insurance agencies were found to survey their items as and when require emerges. Their items are both tailor made and new. The regression analysis demonstrated that there is no critical connection between financial innovation and development in premium of the insurance agencies. The investigation concentrated on the insurance sector, yet the present examination focusses on the telecommunication sector.

Korir (2014) reviewed the effect of financial innovations on FP of banks. The objective populace incorporated all the 44 commercial banks in Kenya. It embraced a registration study where all the 44 banks were utilized. Regression and correlation was utilized to relationships. The investigation discovered that there is a solid connection between FI and FP. The investigation surveyed the banking industry however the present examination is constrained to the telecommunication industry in Kenya.

DeYoung et al. (2007) did an examination on how the internet influences yield and execution at community banks in India. The secondary data for a period in the vicinity of 2000 and 2007 was gathered among a specimen of 10 community banks in India chose through census sampling technique. Regression analysis was utilized to dissect the information. The results demonstrated that endeavors on IT added to expanded profit (ROA) and lessened non-performing loans. The examination mirrors the circumstance in the Indian banking sector while the current study is based on Kenya telecommunication sector hence a knowledge gap exists.
Tufano (2009) did an examination on financial innovation and first mover advantages in USA. The information was gathered from an example of 1,944 publicly traded securities. The examination was directed over the period 1994-2009 utilizing secondary data from published statements. Regression analysis was utilized to break down the information. Be that as it may, these advancements underwritten more open offerings than they improved, than they did the imitating rivals. The examination was directed in USA which is produced economy and Kenya is a developing country subsequently an investigation is expected to approve the before discoveries.

Nader (2011) examination was 20 commercial banks while the specimen estimate was 15 banks that were chosen utilizing purposive sampling technique. The study used secondary data which was analyzed using regression analysis. There exist relevant contrasts amongst banking and telecommunication sector and therefore a study on telecommunication sector imperative. This examination mirrors the USA market which is well progress in financial innovations while Kenya is battling in receiving financial innovation. Along these lines, an examination is important to approve the USA study findings.

An examination by Frame and White (2004) concentrated on advancement among the American banks where 10 banks were purposively inspected and secondary data gathered for the period between 2001 to 2015. The regression analysis was utilized to break down the information. The investigation uncovered that the quantity of branches of a bank actuates centralization in this way requiring for the reception of creative innovation to energize better basic leadership. Regulation does spur financial innovation. The welfare effects of financial innovation appear to be generally
positive. Moreover, this study targeted the American banking sector which is somehow different from Kenyan telecommunication sector.

2.5 Summary of Literature Review

The examination by Maleto (2016); Kibugo (2016) and Korir (2014) concentrated on the banking sector in Kenya. Their discoveries are not thusly generalizable to different parts of the economy particularly the telecommunication industry in Kenya. Then again, Karanja (2011) and Kimani (2016) concentrated on the insurance and SMEs separately. Along these lines, their discoveries would require approval given that logical contrasts exist between insurance firms and SMEs on one hand and telecommunication firms then again. Akram and Allam (2010) show that developments have positive effect on development of Jordanian banks. They have concurred on the transformation impacts of innovations on firm financial and operational performance. In any case, while the industry market leader in the telecommunication sector has been eminent for being effectively associated with financial innovations to keep their market share, no conclusive empirical evidence exists on whether market followers in the industry stand to benefit or are at risk of practicing “me-too” endeavors in financial innovations no conclusive empirical evidence exists on whether market followers in the industry stand to benefit or are at risk of practicing “me-too” endeavors in financial innovations. Onay (2008) focused on Turkey’s internet banking and profitability that require approval as the present examination is not on banks but rather the telecommunication firms. The examinations by DeYoung et al. (2007); Tufano (2009); Nader (2011); Shirley and Sushanta (2006) and Frame and White (2004) reflects period earlier and amid the
2007-2009 worldwide financial crisis, however the present investigation is a post worldwide financial study thus a knowledge gap exists. A large portion of the financial innovations were received because of decreasing financial performance due to the global financial crisis. This investigation consequently would set up in the event that they decidedly affected on the financial performance. Accordingly, this examination tries to research the set up the connection between financial innovations and the growth of firms in the telecommunication industry in Kenya.

2.6 Conceptual Framework

A conceptual framework is a succinct portrayal joined by a graphical or visual presentation of the real ideas of the investigation and the hypothesized relationships and linkages among them (Mugenda and Mugenda, 2008). The conceptual framework introduced here demonstrates the association between financial innovations (i.e. product innovation, process innovation and institutional innovation) as the autonomous factors and financial performance of telecommunication firms in Kenya being the dependent variable. Each of the independent variables (product innovation, process innovation and institutional innovation) relates well with FP depending on how telecoms firms utilized them in their operations.
**Figure 2.1 Conceptual Framework**

Source: Author, 2017
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter covers research design, population, data collection, validity and reliability and data analysis.

3.2 Research Design

In this study, descriptive research design was applied. This research design seeks to describe the characteristics of the telecommunication companies in Kenya, estimate the extent to which financial innovations affect financial performance and make predictions. The design define variables without manipulation of study pre-determined variable (Kothari, 2004). The design also allows use of qualitative and quantitative data which are complementary and allows for triangulation (Nsubuga, 2006).

3.3 Population

The study target population was the four telecommunication companies operating in Kenya for at least 10 years. These companies included; Safaricom, Airtel, Orange Telkom and Liquid Telkom (Communication Authority of Kenya, 2016).

3.4 Data Collection

The study used secondary data. Quantitative secondary data came from published reports published by the Communication Authority of Kenya (CAK) the regulator of
telecommunication sector in Kenya as well as from databases of the four telecommunication companies for the period of ten years between 2007 to 2016.

For the independent variables, secondary data was extracted as follows; data on product innovations entailed the revenue generated upon investment in mobile money transfers platforms like MPESA, Airtel Money, Wananchi telecom (Zuku) for the ten-year period (2007-2016). Similarly, data on process innovations included the revenue generated upon investment in mobile money agency services. In addition, data on institutional innovations entailed the revenue generated upon introducing financial strategic alliances.

3.5 Data Analysis

Data analysis was handled using SPSS that was helpful for data manipulation. The study was based on quantitative data from secondary data sources. Once collected, the quantitative data was coded and entered into SPSS (Version 22) for further manipulation and analysis.

The study used descriptive statistics to analyse the quantitative data. In this case the mean, standard deviation, percentage and frequencies showed the trend of the results over the ten-year period (2007-2016). In addition, multiple regression analysis was used to ascertain the nature, magnitude and direction of the relationship between study variables. Tables and charts were used to demonstrate the results with explanations in prose after each presentation.
3.5.1 Analytical Model

One of the product innovations being used by telecommunication firms in Kenya is mobile money transfer technology such as; Airtel money, Orange money, and M-Pesa. Similarly, all telecommunication firms have been offering mobile money transfer services through agents which is an example of process innovation. In terms of institutional innovations, telecommunication firms have heavily relied on financials strategic alliances among themselves and with firms in other sectors of economy, particularly the financial services industry to facilitate lending and repayment. Examples of intra-strategic alliances by telecommunication firms include sharing of ICT infrastructure while examples of extra-strategic alliances include; M-Benki (between Safaricom and Kenya Commercial Bank) M-shwari, (between Safaricom and Commercial Bank of Africa) and CSR partnerships practiced by all telecommunication firms in Kenya.

Regression model indicated the relationship of variables. The dependent variable (ROA) while the independent variables were; product, process and institutional innovations. The measurement of the three financial innovations mobile money transfer; mobile money agency services and financial strategic alliances was measured in absolute figures in Kshs Billion. The study used data on revenue generated upon introducing each of the three financial innovations over the ten-year period. The equation applied was as indicated below; The following were examples of financial innovations that telecommunication firms in Kenya have introduced over the last 10 years.
Financial Performance = α (Financial Innovation)

\[ Y = \alpha + \beta_1 X_1 + \beta_1 X_2 + \beta_1 X_3 + \beta_1 X_4 + \beta_1 X_5 + \epsilon \] where

Table 2.1 Analytical Model

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Financial performance</td>
</tr>
<tr>
<td>X₁</td>
<td>Mobile money transfer</td>
</tr>
<tr>
<td>X₂</td>
<td>Mobile money agency services</td>
</tr>
<tr>
<td>X₃</td>
<td>Financial strategic alliances (Banking related partnership between telecoms &amp; Banks such as Mshwari and M-Benki)</td>
</tr>
<tr>
<td>X₄</td>
<td>Age</td>
</tr>
<tr>
<td>X₅</td>
<td>Size</td>
</tr>
<tr>
<td>ε</td>
<td>error term</td>
</tr>
<tr>
<td>β</td>
<td>regression coefficient</td>
</tr>
</tbody>
</table>

Source: Author, 2017

3.5.2 Test of Significance

The study was interpreted at 95% confidence level and 5% significance level. The results were significant within the range of 0 to 0.05 level of significance.
CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

Data analysis, results and discussion are given in this section. The main objective of the study was to establish the relationship between financial innovations and financial performance of telecommunication firms in Kenya. Data was gathered from the annual reports of the four telecommunication firms in Kenya over the ten year period (2007-2016) based on the study variables where financial performance was the independent variable while the independent variable was financial innovations including; mobile money transfer; mobile money agency services and financial strategic alliances. The data collected was secondary in nature.

4.2 Descriptive Statistics

The study independent variable was financial innovations which specifically referred to; mobile money transfer; mobile money agency services and financial strategic alliances used by telecommunication companies.

4.2.1 Financial performance

Financial performance was measured using Return on Asset (ROA) which was a ratio of net income to total assets for the ten-year period.
Table 4.2 Return on Asset (ROA)

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4</td>
<td>0.041</td>
<td>.83378</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>0.051</td>
<td>.85687</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>0.056</td>
<td>.98867</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>0.062</td>
<td>.68225</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>0.068</td>
<td>.70711</td>
</tr>
<tr>
<td>2012</td>
<td>4</td>
<td>0.071</td>
<td>.84807</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>0.076</td>
<td>.83378</td>
</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>0.081</td>
<td>.85687</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
<td>0.083</td>
<td>.98867</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>0.087</td>
<td>.68225</td>
</tr>
</tbody>
</table>

The ROA indicated telecommunication firms’ efficiency in using their assets to create revenue flow with a positive change in ROA implying firm’s increased efficiency in utilizing their assets in creating revenue. The average ROA value for the four firms was 0.041 in 2007 while the highest average ROA value was 0.087 in 2016. Detailed descriptive statistics for ROA values for the specific firms is provided in the Appendix 2. Over the ten-year period between 2007 and 2016 there was a steady increase in ROA average values by 112.1%. The increase in ROA values as the measure of financial performance of telecommunication imply increased financial performance which could be attributed to among other firms’ investment in financial innovations to drive their market share. Depending on each firm’s investment in financial innovations, there was significant variation on their financial innovations as represented by the standard deviation.
4.2.2 Mobile money transfer

The mobile money transfer was measured using revenue generated upon introducing mobile money transfer in absolute figures (Kshs Billions) for the ten-year period (2007-2016). This was expressed as natural logs ($10^9$).

Table 4.3 Mobile money transfer

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Natural logs ($10^9$) of mobile money transfer</th>
<th>Std. Deviation (mean=3.46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4</td>
<td>0.565</td>
<td>3.073</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>0.592</td>
<td>3.065</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>0.603</td>
<td>3.060</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>0.892</td>
<td>4.055</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>0.978</td>
<td>4.054</td>
</tr>
<tr>
<td>2012</td>
<td>4</td>
<td>1.123</td>
<td>4.074</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>1.225</td>
<td>4.067</td>
</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>1.384</td>
<td>3.066</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
<td>1.460</td>
<td>3.065</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>1.521</td>
<td>3.014</td>
</tr>
</tbody>
</table>

The highest value of revenue generated upon introducing mobile money transfer was valued at Kshs 1.521 billion in year 2016 while the lowest value was Kshs 565 million in year 2007. This implies steady increase in revenue generated upon introducing mobile money transfer by the telecommunication firms in Kenya over the ten year period of 2007 to 2016. This points to the fact that mobile money transfer was a critical tool that telecommunication firms applied to grow their revenues which had a trickle-down effect on the FP of the respective telecommunication firms. The
high standard deviation of mean 3.46 shows high variation of revenue generated upon introducing mobile money transfer among the four telecommunication firms in Kenya with Safaricom on the top and liquid telecom on the bottom.

4.2.3 Mobile money agency services

The mobile money agency service was measured using revenue generated upon introducing mobile money agency services in absolute figures (Kshs Billions) for the ten-year period (2007-2016). This was expressed as natural logs ($10^9$).

**Table 4.4 Mobile money agency services**

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Natural logs ($10^9$) of mobile money agency services</th>
<th>Std. Deviation (mean=3.83)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4</td>
<td>0.125</td>
<td>4.005</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>0.254</td>
<td>4.571</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>0.289</td>
<td>4.362</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>0.314</td>
<td>4.024</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>0.395</td>
<td>3.641</td>
</tr>
<tr>
<td>2012</td>
<td>4</td>
<td>0.589</td>
<td>4.312</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>0.746</td>
<td>3.554</td>
</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>0.886</td>
<td>3.654</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
<td>0.957</td>
<td>3.871</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>1.023</td>
<td>2.332</td>
</tr>
</tbody>
</table>

The highest value of revenue generated upon introducing mobile money agency services was valued at Kshs 1.023 billion in year 2016 while the lowest value was Kshs 125 million in year 2007. This indicates that there was a significant increase in
revenue generated upon introducing the agency services by the telecommunication firms in Kenya over the ten year period of 2007 to 2016. This indicates that the agency services as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it gave them steady growth in customer satisfaction as customers can access customer care and most of the other services through agents. It further points to the fact that mobile money agency services was a critical tool that telecommunication firms applied to grow their revenues that subsequently enhanced their financial performance. The high standard deviation of mean 3.83 shows high variation of revenue generated upon introducing mobile money agency services among the four telecommunication firms in Kenya with Safaricom on the top and liquid telecom on the bottom.

4.2.4 Financial strategic alliances

Financial strategic alliances entailed collaboration between telecommunication firms and financial institutions towards increasing their market share such as Mshwari and M-Benki among others. The financial strategic alliances were measured using revenue in absolute figures (Kshs Billions) generated upon introducing financial strategic intermediations on lending and saving for the ten-year period (2007-2016). This was expressed as natural logs (10^9) as indicated in Table 4.5.
Table 4.5 Financial strategic alliances

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Natural logs (10^9) of financial strategic alliances</th>
<th>Std. Deviation (mean=3.63)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4</td>
<td>0.058</td>
<td>4.066</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>0.079</td>
<td>4.056</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>0.096</td>
<td>4.057</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>0.123</td>
<td>3.059</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>0.189</td>
<td>3.058</td>
</tr>
<tr>
<td>2012</td>
<td>4</td>
<td>0.215</td>
<td>4.121</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>0.324</td>
<td>3.985</td>
</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>0.396</td>
<td>3.542</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
<td>0.413</td>
<td>3.221</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>0.502</td>
<td>3.102</td>
</tr>
</tbody>
</table>

The highest value of revenue generated upon introducing financial strategic intermediations on lending and saving was valued at Kshs 0.502 billion in year 2016 while the lowest value was Kshs 58 million in year 2007.

This indicates that there was a significant increase in revenue generated upon introducing financial strategic intermediations on lending and saving by the telecommunication firms in Kenya over the ten year period of 2007 to 2016.

This indicates that the financial strategic alliances as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it allowed them to access resources outside their firm which was made possible by their partners in the strategic alliance like banks. It further points to the fact that financial strategic alliances was another useful financial innovation adopted by
telecommunication firms to gain competitive advantage and eventually increase their financial performance. The high standard deviation of mean 3.62 shows high variation of revenue generated upon introducing financial strategic intermediations on lending and saving among the four telecommunication firms in Kenya with Safaricom on the top and liquid telecom on the bottom.

4.3 Multiple Regression Analysis

In assessing the significance of financial innovations, the multiple regression analysis was used.

4.3.1 Model Summary

The regression model summary is presented in Table 4.6.

Table 4.6 Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>R</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.899a</td>
<td>.8082</td>
<td>.796</td>
<td></td>
<td>0.0014</td>
</tr>
</tbody>
</table>

In light of the findings in Table 4.6 over, the three free financial innovations studied, are 80.82% of FP of telecommunication firms as R² depicts. Other innovations not studied contribute, 19.18% of financial performance of telecommunication firms in Kenya.
4.3.2 ANOVA (Analysis of Variance)

Table 4.7 ANOVA (Analysis of Variance)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.323</td>
<td>3</td>
<td>.202</td>
<td>8.66</td>
<td>.004a</td>
</tr>
<tr>
<td>Residual</td>
<td>5.408</td>
<td>36</td>
<td>.246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.898</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study ANOVA results shown in Table 4.7 above established that the significance value is 0.004 is less than 0.05, thus the model is statistically significant in predicting how FI influence FP.

Table 4.8 Coefficients of Determination

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.039</td>
<td>.729</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.425</td>
<td>.000</td>
</tr>
<tr>
<td>Mobile money transfer</td>
<td>.861</td>
<td>.131</td>
<td>.716</td>
<td>6.552</td>
</tr>
<tr>
<td>Mobile money agency services</td>
<td>.426</td>
<td>.187</td>
<td>.246</td>
<td>2.271</td>
</tr>
<tr>
<td>Financial strategic alliances</td>
<td>.342</td>
<td>.102</td>
<td>.003</td>
<td>.029</td>
</tr>
</tbody>
</table>

From the regression coefficients of determination realized in this study as shown in Table 4.8 above, the regression equation:

\[ Y=\alpha+\beta_1X_1 + \beta_2X_2+ \beta_3X_3 + \varepsilon. \]

Translates to:
\[ Y = 1.039 + 0.861X_1 + 0.426X_2 + 0.342X_3 + \epsilon. \]

Based on the above regression equation, it is evident that taking all factors (mobile money transfer; mobile money agency services and financial strategic alliances) as constant and at zero, financial performance will be 1.039. Similarly, taking all other independent variables at zero, a unit increase in mobile money transfer will lead to a 0.861 increase in financial performance; a unit increase in mobile money agency services will lead to a 0.426 increase in financial performance while a unit decrease in financial strategic alliances will lead to a 0.342 increase in financial performance. This infers that Mobile money transfer as a financial innovation contributes most to the financial performance followed by mobile money agency services and financial strategic alliances respectively.

The significance values for the three-financial innovations were as follows; mobile money transfer (0.001), mobile money agency services (0.030) and financial strategic alliances (0.042). The significance values obtained indicate that the most significant financial innovation influencing financial performance of telecommunication firms in Kenya is mobile money transfer followed by mobile money agency services and financial strategic alliances respectively.
5.1 Introduction

The chapter provides the summary, conclusion and recommendations of the study on relationship between financial innovations and financial performance of telecommunication firms in Kenya.

5.2 Summary of Findings

The study established that ROA the measure of FP of telecoms was 0.041 in 2007 while the uppermost ROA value was 0.087 in 2016. This was a steady positive change on the ROA mean values of 112.1%. The increase in ROA values designates that increased FP of telecommunication firms over the period 2007 to 2016 which coincided with their continuous heavy investment in financial innovations hence the positive financial outlook could be attributed to growing investment in financial innovations. Depending on each firm’s investment in financial innovations, there was significant variation on their financial innovations as represented by the standard deviation.

It was also revealed that the highest value of revenue generated upon introducing mobile money transfer was valued at Kshs 1.521 billion in year 2016 while the lowest value was Kshs 565 million in year 2007. This implies steady increase in revenue generated upon introducing mobile money transfer by the telecommunication firms in Kenya over the ten year period of 2007 to 2016. This points to the fact that mobile
money transfer was a critical tool that telecommunication firms applied to grow their revenues which had a trickle-down effect on FP. The high standard deviation of mean 3.46 shows high variation of revenue generated upon introducing mobile money transfer among the four telecommunication firms in Kenya with Safaricom on the top and liquid telecom on the bottom.

The study further established that the highest value of revenue generated upon introducing mobile money agency services was valued at Kshs 1.023 billion in year 2016 while the lowest value was Kshs 125 million in year 2007. This indicates that there was a significant increase in revenue generated upon introducing the agency services by the telecommunication firms in Kenya over the ten year period of 2007 to 2016. This indicates that the agency services as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it gave them steady growth in customer satisfaction as customers can access customer care and most of the other services through agents. It further points to the fact that mobile money agency services was a critical tool that telecommunication firms applied to grow their revenues that subsequently enhanced their financial performance. The high standard deviation of mean 3.83 shows high variation of revenue generated upon introducing mobile money agency services among the four telecommunication firms in Kenya with Safaricom on the top and liquid telecom on the bottom.

The study further established that the highest value of revenue generated upon introducing financial strategic intermediations on lending and saving was valued at Kshs 0.502 billion in year 2016 while the lowest value was Kshs 58 million in year 2007. hence, there was a significant increase in revenue generated upon introducing
financial strategic intermediations on lending and saving by the telecommunication firms in Kenya over the ten year period of 2007 to 2016.

Therefore, financial strategic alliances as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it allowed them to access resources outside their firm which was made possible by their partners in the strategic alliance like banks. It further points to the fact that financial strategic alliances was another useful financial innovation adopted by telecommunication firms to gain competitive advantage and eventually increase their financial performance. The high standard deviation of mean 3.62 shows high variation of revenue generated upon introducing financial strategic intermediations on lending and saving among the four telecommunication firms in Kenya with Safaricom on the top and liquid telecom on the bottom.

From the regression analysis, the study revealed that the three free FI explain 80.82% of FP. Taking all factors (mobile money transfer; mobile money agency services and financial strategic alliances) as constant and at zero, financial performance will be 1.039. Similarly, taking all other independent variables at zero, a unit increase in mobile money transfer will lead to a 0.861 increase in financial performance; a unit increase in mobile money agency services will lead to a 0.426 increase in financial performance while a unit decrease in financial strategic alliances will lead to a 0.342 increase in financial performance. This infers that Mobile money transfer as a financial innovation contributes most to the financial performance followed by mobile money agency services and financial strategic alliances respectively.
The significance values for the three-financial innovations were as follows; mobile money transfer (0.001), mobile money agency services (0.030) and financial strategic alliances (0.042). The significance values obtained indicate that the most significant financial innovation influencing financial performance of telecommunication firms in Kenya is mobile money transfer followed by mobile money agency services and financial strategic alliances respectively.

5.3 Conclusion

The study concludes that there was a increased FP of telecommunication firms over the period 2007 to 2016 which coincided with their continuous heavy investment in financial innovations hence the positive financial outlook could be attributed to growing investment in financial innovations.

There was a steady increase in revenue generated upon introducing mobile money transfer by the telecommunication firms in Kenya over the ten-year period of 2007 to 2016. The mobile money transfer was a critical tool that telecommunication firms applied to grow their revenues which had a trickle-down effect on the FP.

It is further concluded that there was a significant increase in revenue generated upon introducing the agency services by the telecommunication firms in Kenya over the ten-year period of 2007 to 2016. It is evident that the agency services as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it gave them steady growth in customer satisfaction as customers can access customer care and most of the other services through agents. It further points to the fact that mobile money agency services was a critical tool that telecommunication
firms applied to grow their revenues that subsequently enhanced their financial performance.

There was a significant increase in revenue generated upon introducing financial strategic intermediations on lending and saving by the telecommunication firms in Kenya over the ten-year period of 2007 to 2016. Therefore, financial strategic alliances as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it allowed them to access resources outside their firm which was made possible by their partners in the strategic alliance like banks. It further points to the fact that financial strategic alliances was another useful financial innovation adopted by telecommunication firms to gain competitive advantage and eventually increase their financial performance.

The study also concludes that mobile money transfer as a financial innovation contributes most to the financial performance followed by mobile money agency services and financial strategic alliances respectively. Similarly, the most significant financial innovation influencing financial performance of telecommunication firms in Kenya is mobile money transfer followed by mobile money agency services and financial strategic alliances respectively.

5.4 Recommendations

The study confirmed that mobile money transfer as a financial innovation contributes most to the financial performance. The management of the telecommunication firms should continuously invest in cutting edge technology that support the mobile money transfer to ensure minimal interruption and its scale up and security.
The study established that agency services as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it gave them steady growth in customer satisfaction as customers can access customer care and most of the other services through agents. The management of the telecommunication firms in Kenya should regularly review the agency policy to make it more attractive to existing and prospective agents for their signing up.

The study revealed that financial strategic alliances as a financial innovation by telecoms in Kenya significantly contributed to their financial performance as it allowed them to access resources outside their firm which was made possible by their partners in the strategic alliance like banks. The management of the telecommunication firms in Kenya should expand financial strategic alliances with other sectors of the economy as it has proved beneficial in creating their competitive advantage and in enhancing their FP.

5.5 Limitations of the Study

In CAK Annual Reports, consolidated financial statements were recorded to the nearest one billion Kenya shillings. This might have somewhat limited the accuracy of the data used in the study. Besides, current study objective and that of the CAK reports were different. The CAK reports therefore did not provide enough details on financial innovations.

For the purpose of this study, the model used was quite simplified and might not have captured every important aspect that relates to the financial innovations of the telecoms. The use of descriptive research design also has inherent limitations.
5.6 Areas for further Studies

The three free financial innovations studied, explain 80.82% of financial performance of telecommunication firms in Kenya as $R^2$ depicts. Other innovations not studied contribute, 19.18% of FP of telecoms. It is important to establish these other financial innovations contributing the 19.18% of financial performance of telecoms.
REFERENCES


Edward Elgar Publishing.

APPENDICES

APPENDIX I: LIST OF TELECOMMUNICATION COMPANIES IN KENYA

i. Safaricom

ii. Airtel

iii. Orange Telkom

iv. Liquid telecom

v. Wananchi telecom (Zuku)

vi. Access Kenya

vii. Finserve

viii. Equitel

ix. Sema Mobile Services

x. Mobile Pay Limited

Source: Communication Authority of Kenya, 2017
APPENDIX II: DETAILED DESCRIPTIVE STATISTICS

Return on Asset Values

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