

**THE EFFECT OF PRODUCT INNOVATION ON THE FINANCIAL
PERFORMANCE OF MOBILE TELEPHONY FIRMS IN KENYA**

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DECLARATION

This Research Project is my original work and has not been presented for a degree in any other university.

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This Research Project has been submitted for examination with my approval as the candidate's University Supervisor.

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DEDICATION

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ABSTRACT

An organisation which is competing in fast changing markets with fast changing technology must make things happen, it must innovate. If it does not innovate it risks being overtaken by competitors. Sometimes a business underestimates the competitive challenges it faces. The risk of this happening is high when competitors react to potential challenges in much the same way (Abernathy and Utterback, 2005). This research sought to investigate the effect of product innovation on the financial performance of mobile phone service companies in Kenya. This research adopted a cross sectional study through a census of all the four mobile phone companies operating in Kenya. Primary data was collected using a data collection sheet administered to the finance managers of the mobile companies. The data that was used for analysis were the return on assets (ROA), the percentage revenue generated from calls, the percentage revenue generated from SMS, the percentage revenue generated from mobile money transfers as well as the percentage revenue generated from data or internet. ROA was the dependent variable while the revenue from the four product lines were the independent variables. The data covered a period of five years from 2008 to 2012. Three out of four mobile phone service companies in Kenya successfully participated in the study giving a response rate of 75%. Regression analysis was performed on the quantitative data collected, with tables being used to summarize the results and facilitate comparison. The regression results showed that all the mobile companies recorded a positive relationship between ROA and revenue generated from calls and mobile internet. Contrary to this, all the companies yielded a negative relationship between ROA and revenue generated from SMS. As for revenue from mobile money transfers, they depicted a positive coefficient on one out of three companies considered for this study. All the companies had negative constant terms. The positive correlation between ROA, revenue from calls and mobile internet indicated that when revenue increases, so does the return on assets. The study concluded that mobile phone companies had employed various product innovations. Among them included calls, SMS, mobile money transfers and mobile internet. The study further concluded that product innovation had led to improved financial performance of mobile service companies in Kenya. These were through increased sales, profits increment and return on assets. The study recommends that for mobile phone companies to be highly competitive, they need to employ technology based innovations such as mobile money transfers.

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ABBREVIATIONS

ANT	-	Actor-Network Theory
CCK	-	Communications Commission of Kenya
DOI	-	Diffusion of Innovations
ICT	-	Information and communications Technology
IT	-	Information Technology
R & D	-	Research and Development
ROA	-	Return on assets
SIN	-	Systems Integration and Networking
SMS	-	Short message service
TIC	-	Technological Innovation Capabilities

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Firms compete successfully when they offer new, better, and /or cheaper products and services, which their customers can use to advantage, and which their competitors cannot provide. Competitive advantage therefore derives from the ability to make and do things more cheaply and better, or to make and do new things (Dodgson, Gann and Salter, 2008). According to these scholars, competitive advantage has two dimensions. Firstly, it has a relative dimension, in which advantage is found in the activities of firms compared to their competitors and secondly, competitive advantage also has an absolute dimension. In this case there must be a market for what the firm does.

In today's global and dynamic competitive environment, product innovation is becoming more and more relevant, mainly as a result of three major trends: intense international competition, fragmented and demanding markets, and diverse and rapidly changing technologies (Wheelwright and Clark, 1992). Firms that offer products that are adapted to the needs and want of target customers and that market them faster and more efficiently than their competitors are in a better position to create a sustainable competitive advantage (Calantone, Vickery and Droge, 1995). Competitive advantage is increasingly derived from knowledge and technological skills and experience in the creation of new products (Teece, 2003).

In many countries, the pace of change in telecommunication industry is dramatic. The services providers worldwide are becoming increasingly interrelated. New types of business and corporate strategies are being explored: better market segmentation,

industry consolidation, changed delivery channels and expanded product offerings. Information technology (IT) has been established as a key enabler and driver of change in this industry. It is no longer adequate to do things better, it's about doing new and better things. The ability to innovate is increasingly viewed as the single most important in developing and sustaining competitive advantage (Tidd, Bessant and Pavitt, 2001).

1.1.1 Product Innovation

According to Bloch (2007), product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. The innovation process includes a set of activities that contribute to increase in the capacity to produce new goods and services (product innovations) or to implement new forms of production (process innovations).

Innovation involves acting on the creative ideas to make some specific and tangible difference in the domain in which the innovation occurs (Davila, Epstein and Shelton, 2006). Innovation is defined as the successful implementation of creative ideas within an organization. The capability to innovate is evermore viewed as the single most vital factor in developing and supporting competitive advantage (Tidd et al, 2001). According to Davila et al, (2006) innovation is a necessary ingredient for sustained success and is an integral part of the business. Much weight has been accorded on building innovative institutions and the management of the innovation progression as necessary elements of institutional survival (Brown, 1997).

In today's knowledge economy, investments in intellectual assets are considered more and more to be key strategic elements to maintain a business' growth, profitability and competitiveness (Berry, 2000). Organizations in the telecommunication industry are operating in increasingly competitive market and innovation is often a condition for simple survival. The capability to innovate is ever more viewed as the single most vital factor in developing and supporting competitive advantage.

Traditionally, industrial economists break down the process of innovation into a sequence consisting of three phases: invention, innovation and diffusion. Furthermore, in a great deal of research, due to the availability of statistical data on research and development (R&D) spending, innovation is identified with research (pure and applied) and technological development (Roehm and Sternthal, 2001).

Robertson (1971) classifies innovations based on their impact on behavior and social structure into continuous, dynamically continuous, and discontinuous. Product innovations are most likely to fall into the discontinuous innovation category and can thus be regarded as knowledge intensive innovations. The growing importance of innovation to entrepreneurship is reflected in the numerous studies addressing the role and nature of innovation (Drucker, 1985). Studies on innovation are still necessary, especially for newly established industries and new markets, given that there will be different indicators of the innovativeness of the different products involved.

The ICT industry in many countries is one of the examples of a new industry with newly emerging product clusters, and it demands product innovation, which in turn creates new markets and stimulates industry growth. Porter (1990), defines innovation as an attempt

to create competitive advantage by perceiving or discovering new and better ways of competing in an industry and bringing them to market.

Technological change has been described by technology push (Schumpeter, 1939) and demand pull or their interaction as triggers of innovation. More recently (1990s), the theoretical analysis has moved towards the theory of technological innovation as an interaction within a network of companies identified in the systems integration and networking (SIN) model. Rothwell, (1992) argue that technology push is not enough because it can be constrained by the power of technological change in shaping the competitive dynamics of an industry. In other words, technology push is not stable because rapid technological changes create many alternatives from which firms choose their technology strategy. Hamel and Prahalad (1994) suggest that innovations come to be seen as a result of collaboration for integration of skills and capabilities when competing for the future market.

The innovations which will be considered for this study include; mobile calls, mobile messaging, mobile money, mobile banking and mobile internet. These will be measured by the percentage revenue that each independent variable generates. This information will be collected through the data collection sheet from the respondents who have access to the organization's financial information.

1.1.2 Financial Performance

Financial performance refers to the extent to which the organization performs in relative sales value, sales growth and gross profit / profitability, (Li, 2000). A firms' performance is as a result of all of the organization's operations and strategies (Venkatraman and

Ramanujam, 2001). Financial performance reports provide a financial summary for a firm, including assets, liabilities, capital, income and expense.

The financial performance of companies is usually measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget or a mix of these methodologies (Barley, 2000). Measuring and reporting financial performance can use various yardsticks. Two main items include the firms market share and its profitability. Profitability and more specifically, the return on assets will be used to measure the financial performance for the purpose of this study

1.1.3 Effect of Product Innovation on Financial Performance

Innovation is hypothesized as one possible mechanism by which organizations can gain a competitive advantage in the marketplace through unique organizational resources (Barney, 1991). The critical role of innovation in the development of a company and its contribution on the economic growth of firms has been widely documented. According to Abernathy and Utterback (2005), the primary role of technological innovation is to assure the survival of the entity, as well as the business ecosystem, which in turn is based on achieving sustainable financial performance.

Product innovation can be the source of competitive advantage to the innovator and at the same time can lead to a sustainable increase in firm profits (Geroski, Machin and VanReenen, 1993; Chandy and Tellis, 1998). Past research supports the argument that innovation serves as a key mediator between antecedents of innovation and performance (Conner, 1991; Han et al, 1998). In particular, innovation mediates the relationship between environmental uncertainty and performance. Firms faced with

intense competition and turbulent environments often rely upon innovation as the primary driver of organizational performance (Gronhaug and Kaufman, 1988).

Innovation provides organizations with a means of adapting to the changing environment and often is critical for firm survival. Additionally, the relationship between organization level variables and performance are also mediated by innovation. Organizational capabilities provide organizations with the inputs required for innovation that in turn can provide the organization with superior performance (Eisenhardt and Martin, 2000).

Despite the theoretical rationale underlying innovation's role as a mediator in the relationship between environmental and organizational antecedents and performance, it can also be the case that innovation does not act in this capacity. These environmental and organizational drivers of innovation are unique resources capable of creating a competitive advantage within their own right through a direct linkage with financial performance.

Threat rigidity theory would postulate that during times of turmoil, organizations are less likely to rely on innovation but rather will focus on the core competencies of the business and efficiency considerations (Palmer, Danforth and Clark, 1995). In addition, innovation is a very risky undertaking for organizations and requires the dedication of resources towards the innovation and away from other work activities within the business. These arguments constitute the competing perspectives between these two variables.

1.1.4 Mobile Telephone Firms in Kenya

Mobile phone service providers in Kenya are regulated by the Communications Commission of Kenya (CCK), all licensed telecommunication providers in Kenya are

required by law to file regular reports with the regulator. The telecom sector in Kenya is well developed having four mobile phone service providers – Safaricom, Telkom Kenya, Airtel and Essar. Safaricom is the clear market leader in the mobile services segment while Telkom Kenya is the major player in the fixed line telecom segment. Currently, there are over 19.4 million mobile phone users in Kenya which is about 50% of the population. Safaricom which has approximately 15 million subscribers, that is around 76%, BhartiAirtel has around 13% of the subscriber base, with Orange Telkom having around 8% and Essar(Yu) with 3% (www.africatelecomsnews.com, accessed 18.6.2013).

Safaricom limited is the leading mobile network operator in Kenya with its headquarters in Nairobi. It was formed in 1997 as a fully owned subsidiary of Telkom Kenya. Safaricom is a leading provider of converged communication solutions, operating on a single business driver that has a peerless understanding of voice, video and data requirements. Safaricom, with its countrywide network, can provide broadband high-speed data to its customers through its 3G network, Wimax and fibre. It is Kenya's current leading Mobile Telephone Operator which provides a comprehensive range of services under one roof: mobile and fixed voice as well as data services on a variety of platforms (CCK, 2012).

BhartiAirtel Limited commonly known as Airtel is an Indian telecommunications company that operates in over 19 countries across South Asia, Africa and in the Channel Islands. Airtel is the fifth largest telecom operator in the world with over 207.8 million subscribers across 19 countries as at the end of 2010. Airtel is the second largest GSM

service provider in Kenya after Safaricom Limited (CCK, 2012). It started its operations in Kenya in 2010 after it bought off ZainLtd's business interests.

EssarTelecom Kenya is Kenya's third mobile cellular network under the brand "YUmobile", launched in year 2008. YUmobile achieved the fastest network rollout speed in the region, by achieving countrywide coverage in approximately 10 months from launch and currently, the network has a base of 3 million subscribers and offers best in class rates (CCK, 2012). YUmobile offers several innovative product and service offerings all targeted at making the subscribers life easier and more convenient. They continue to build their network using the latest equipment that ensures clarity and reliability (www.yu.c.ke).

Telkom Kenya's partnership with France Telecom Group saw the launch of the Orange brand in Kenya in 2008. They provide integrated communications solutions in Kenya with the widest range of voice and data services as well as network facilities for residential and business customers. The Kenyan market saw some major developments in the second half of 2008, fixed operator Telkom Kenya launched a mobile network, and in the last quarter of the year, Econet Wireless finally managed to get up and running, more than five years after it was first awarded a license (CCK, 2012).

The mobile sector in Kenya still is in its infancy stage and there are growth opportunities especially in data traffic as well as voice services. This can be attested by the increased revenue and profits over the last five years among the mobile service providers. In addition, there is still a huge percentage of Kenyans still unbanked and with the money

transfer innovation; the providers can still capture this market and thus increasing their revenue base (CCK, 2012).

1.2 Research Problem

It is widely claimed that product innovation is positively correlated with financial performance of any organization. Spicer and Sadler-Smith (2006) argue that effective acquisition and utilization of new knowledge is a source of flexibility, adaptability and competitive advantage and hence associated with better organizational performance. Only those organisations that are able to adapt to the changing environment and adopt new ideas and ways of doing business that can be guaranteed hope of survival. Some of the forces of change that have greatly influenced the performance of mobile phone service providers include mainly product diversification.

The diffusion of the mobile phone technology in Kenya has revolutionized the way business is conducted, created new opportunities of business as well as promoting economic growth and social development. This is evident with the prevalent use of mobile calls, money and internet. Safaricom's mobile money transfer service, M-Pesa is a well-known innovation that has defied the old order and created a ripple effect and a new wave of innovation in financial services. Today, 50% of Kenya's GDP moves through mobile money, and M-Pesa reportedly handles \$20 million a day in mobile money transactions. Retrieved from <http://www.frontlinesms.com/2013/02/14>

Various scholars have performed empirical work to test this theory including; Duguet (2006) who analyzed French manufacturing firms, and found that R&D activities foster radical and incremental innovations but only radical innovations increased the firm

productivity. Koellinger (2008) analyzed the relationship between the usage of Internet-based technologies, different types of innovation, and performance at the firm level and showed that innovative firms are more likely to grow, but not necessarily more likely to be profitable. Diaz-Diaz et al. (2008) obtained that R&D expenditures had a negative direct effect on firm performance but the indirect effect through innovations was positive and significant.

Some studies done locally include, Kariuki (2011) and Kimingi (2010) who studied the relationship between the level of technological innovation and financial performance of commercial banks in Kenya. Both studies concluded that technological innovations had lead to improved financial performance of commercial banks in Kenya. Kihumba (2008) studied conducted a study on the determinants of financial innovation and its effects on banks performance in Kenya. He concluded that financial innovation influenced bank's performance positively.

The available literature shows that there exist a strong relationship between innovations and financial performance of various organizations. Due to contextual, sector, and managerial differences among the organizations, effects of innovations on financial performance gained from these studies may not be assumed to explain effects of innovations on financial performance of mobile phone service companies. None of the studies reviewed investigated the effects of product innovations on financial performance of mobile phone service companies despite their strategic positioning to adopt product innovations. This study therefore seeks to answer the following research question: what is the effect of product innovations on the financial performance of mobile telephony firms in Kenya?

1.3 Research Objectives

The objectives of this study were:

- i. To identify the product innovations adopted by mobile telephony firms in Kenya.
- ii. To investigate the effect of product innovations on the financial performance of mobile telephony firms in Kenya.

1.4 Value of the Study

This study is expected to benefit the management of the mobile phone service providers in Kenya as they would be able to know the effect of product innovations on the performance of the firms they manage. This in turn will assist the management to formulate product innovation strategies that can create competitive advantage in the industry as they seek to stay ahead of competition. The findings of this study would also be invaluable to researchers and scholars, as it would form a basis for further research. The students, consultants and other practitioners would use this study as a guide for purposes of learning, discussions, consulting and further research in the area.

The Communications Commission of Kenya (CCK) would also find the results of this study relevant, as it would be able to ascertain the extent of competition in the industry and the innovation strategies that mitigate the effect of such competition to an individual firm so as to determine whether such strategies adopted in the industry conform to the guidelines provided for the industry by the government. Firms in other industries, for instance banks will also find this study useful especially with regard to how they can collaborate with the mobile phone service providers to diversify their products and attract more customers.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews studies that have been done in the area of innovation and firm performance and reveals the gap to be closed by this study. The chapter is organized as follows: first a review of theories in relation to innovations, then a review of the empirical studies, and finally the conclusion.

2.2 Theoretical Framework

The theories discussed here are; diffusion of innovations theory, translation theory and actor – network theory.

2.2.1 Diffusion of Innovation Theory

Diffusion of innovation (DOI) is based on the notion that adoption of an innovation involves the spontaneous or planned spread of new ideas. Rogers (1995) stresses that it is the perception of change that is important; if the idea seems new to the potential adopter then it should be considered to be an innovation. In diffusion theory the existence of an innovation is seen to cause uncertainty in the minds of potential adopters (Berlyne, 1962), and uncertainty implies a lack of predictability and of information. Diffusion is considered to be an information exchange process amongst members of a communicating social network driven by the need to reduce uncertainty (Rogers, 1995). Uncertainty can be considered as the degree to which a number of alternatives are perceived in relation to the occurrence of some event, along with the relative probabilities of each of these

alternatives occurring. Those involved in considering adoption of the innovation are motivated to seek information to reduce this uncertainty.

Diffusion theory contends that a technological innovation embodies information, and so its adoption acts to reduce uncertainty. In illustration of this Rogers cites the innovation of solar panels as reducing uncertainty over future energy costs and reliability of energy supply. There are thus four main elements of any theory of innovation diffusion: characteristic of the innovation itself, the nature of the communication channels, the passage of time, and the social system through which the innovation diffuses (Rogers, 1995).

Rogers argues that the attributes and characteristics of the innovation itself are important in determining the manner of its diffusion and the rate of its adoption. Borrowing from the work of Thomas and Znaniecki (1927) he notes that it is what potential adopters perceive to be the attributes of an innovation that is the important thing. In the case of technological innovation, Rogers outlines two components to be considered: a hardware aspect consisting of a tool that embodies the technology as a physical object, and a software aspect comprising this tool's information base. Rogers notes that although the software component of a technology is sometimes not easy to observe technology almost always represents a mixture of hardware and software aspects. Rogers outlines five important characteristics of an innovation which, he argues, affect its diffusion: relative advantage, compatibility, complexity, trialability and observability.

The nature of the communication channel are a necessary part of any change process and an innovation can be seen as a special type of communication concerned with the

transmission of new ideas (Kaplan, 1991). Communication can be considered to consist of six elements: the source of the message, the content of the message, the channel used, the timing of the message, the purpose of the message, and the location where the message is received (Spann-Merchant, 1998). To reach a potential adopter the innovation must be diffused through a communications channel for instance mass media and interpersonal channels.

Rogers argues that time is involved in three aspects of innovation diffusion: the innovation decision process, the degree of innovativeness, and an innovation's rate of adoption. He outlines five main time-dependent steps in the innovation-decision process that the adopter must pass through as: knowledge, persuasion, decision, implementation and confirmation. In common with many other earlier researchers Rogers (1995) has found that different individuals in a social system do not necessarily adopt an innovation at the same time. Borrowing from the work of Deutschmann and Fals Borda (1962) he proposes that adopters can be classified in their degree of 'innovativeness' into five categories as: innovators, early adopters, early majority, late majority and laggards.

In the innovation diffusion paradigm diffusion occurs within a social system in which the social structure constitutes a boundary. It is inside this boundary that the innovation diffuses. Rogers argues that the system's social structure affects diffusion through the action of social norms, the roles taken by opinion leaders and change agents, the types of innovation decisions that are taken, and the social consequences of the innovation. This paradigm thus accepts concepts from the social construction of technology, and is based on the idea that technology is shaped by social factors. Technology is a product of society, and is influenced by the norms and values of the social system. (Rogers, 1995)

Rogers maintains that for an idea-only innovation which does not have a material referent, its social construction through interpersonal communication with others is especially important. Abrahamson and Rosenkopf (1997) argue that social network effects bear a measure of responsibility for the extent of innovation diffusions in many organizations.

2.2.2 The Theory of Innovation Translation

A common approach to researching innovation in Information Systems is to focus on the technical aspects of an innovation, and to treat 'the social' as the context in which its development and adoption take place. Approaches of this type which contend that only the most appropriate innovations are adopted, and that only those sensible people who make these adoptions go on to prosper, assume that all outcomes of technological change are attributable to the 'technological' rather than the 'social' (Grint and Woolgar, 1997).

At the other extreme social determinism holds that relatively stable social categories can be used to explain technological change (Law and Callon, 1988) and concentrates on the investigation of social interactions, relegating the technology to context; to something that can be bundled up and forgotten. This bundling means that fixed and unproblematic properties or 'essences' can then be assigned to the technology and used in any explanation of change. Innovation diffusion asserts that a technological innovation embodies 'information': some essential capacity or 'essence' that is largely responsible for determining its rate of adoption (Rogers, 1995).

The problems in adopting an essentialist position include anti-essentialism, which Chagani names as a characteristic of postmodern scholarship, rejects the idea of

categorisations like 'human nature' and denies the existence in human beings of essences, natures or any other universals that "place a grounded and constant meaning on existence" (Chagani, 1998). An essentialist position, according to Haslam (1998), would have it that forms of human diversity: 'human kinds' or 'social categories', can be understood in ways that relate to the natural domain. In a rather biological way different 'kinds of people' are then taken to have inherent, fixed, identity-determining essences, a view that few scholars now accept in relation to humans.

Most of the essentialist versus anti-essentialist debate has been about the presence, or otherwise of essences in humans, but this debate has also been extended to non-humans. Grint and Woolgar (1997) contend that most views of technology attribute an "essential inner core of technical characteristics" to the non-human elements, while portraying the human elements as secondary and transitory. Objecting to any implicit endowment of inherent properties in the technology they propose that many other factors need to be taken into account in order to understand the impact of technology.

The other aspects include; our attitudes towards technology, our conceptions of what technology can and cannot do, our expectations and assumptions about the possibilities of technological change, and the various ways in which technology is represented in the media and in organizations. (Grint and Woolgar, 1997). They contend that contemporary ideas of technology often still rely on the idea of an essential capacity within a technological entity which accounts for its degree of acceptance or rejection. Arguing for a social constructivist approach in which technology is attributed no influence that can be gauged independent of human explanation, they maintain that technology is best thought of as being constructed entirely through human interpretation. They also reiterate the

difficulty of sustaining the idea of a boundary between human and non-human actors, and note that it may be better to think in terms of the human and nonhuman aspects of technology being linked in some kind of network rather than as separate systems.

2.2.3 Actor-Network Theory

Actor-Network Theory (ANT) rather than recognising in advance the essences of humans and of social organisations and distinguishing their actions from the inanimate behaviour of technological and natural objects (Latour, Mauguin and Teil, 1992), adopts an anti-essentialist position in which it rejects there being some difference in essence between humans and nonhumans. ANT considers both social and technical determinism to be flawed and proposes instead a socio-technical account (Callon and Latour, 1981; Latour, 1986) in which neither social nor technical positions are privileged. In this socio-technical order nothing is purely social and nothing is purely technical (Law, 1992).

The utilisation of heterogeneous entities (Bijker et al, 1987) then avoids questions of: ‘is it social?’ or ‘is it technical?’ as missing the point, which should be: “is this association stronger or weaker than that one?” (Latour, 1986). Longenecker et al (1994) agree that regarding Information Systems as only technical entities is too simplistic. To address the need to treat both human and non-human actors fairly and in the same way, actor-network theory is based upon three principles: agnosticism, generalised symmetry and free association (Callon, 1986). The first of these tenets, agnosticism, means that analytical impartiality is demanded towards all the actors involved in the project under consideration, whether they be human or non-human.

Generalised symmetry offers to explain the conflicting viewpoints of different actors in the same terms by use of an abstract and neutral vocabulary that works the same way for human and non-human actors. Neither the social nor the technical elements in these 'heterogeneous networks' (Law, 1992) should then be given any special explanatory status. Finally, the principle of free association requires the elimination and abandonment of all a priori distinctions between the technological or natural, and the social (Callon, 1986; Singleton and Michael, 1993).

ANT was developed to analyse situations in which it is difficult to separate humans and non-humans, and in which the actors have variable forms and competencies, (Callon, 1999). According to Callon, the rule which we must respect is not to change registers when we move from the technical to the social aspects of the problem studied. (Callon, 1986). In actor-network theory, an actor is any human or non-human entity that is able to make its presence individually felt (Law, 1992) by the other actors. An actor is made up only of its interactions with these other actors (De Vries, 1995), and Law (1992) notes that an actor thus consists of an association of heterogeneous elements constituting a network. Callon (1986) argues that an actor can also be considered, at times, as a black box, as we do not always need to see the details of the network of interactions that is inside it. (Latour, 1988) argues that for every socio-technical imbroglio two dimensions are involved in the formation of its definition: the number of people who are convinced that it can be considered as an uncontroversial black box, and what sorts of translations it must undergo to convince still more people of this.

Callon (1986) further proposes that entities become strong and stable by gathering a 'mass of silent others' to give them greater strength and credibility. A network becomes

durable partly due to the durability of the bonds that hold it together, but also because it is itself composed of a number of durable and simplified networks. Callon (1986) propose that translation involves all the strategies through which an actor identifies other actors and arranges them in relation to each other.

Latour (1986) argues that the mere 'possession' of power by an actor does not automatically confer the ability to cause change unless other actors can be persuaded to perform the appropriate actions for this to occur. He maintains that in an innovation translation model the movement of an innovation through time and space is in the hands of people, each of whom may react to it in different ways. They may accept it, modify it, deflect it, betray it, add to it, appropriate it, or let it drop.

Latour (1986) stresses that it is not just a matter of each of the actors in the chain either resisting the innovation or transmitting it in the same form that they received it, but that their shaping of the innovation is essential for its continued existence. The key to innovation is the creation of a powerful enough consortium of actors to carry it through, and when an innovation fails to be taken up this can be considered to reflect on the inability of those involved to construct the necessary network of alliances amongst the other actors. The work of generating interest consists in constructing these long chains of reasons that are irresistible, even though their logical forms may be debatable (Latour, 1988).

2.3 Types of Mobile Phone Innovations

Mobile phone service providers in Kenya have developed new products that have influenced their financial performance. These include; mobile calls, mobile instant

messaging, mobile money remittances, mobile internet browsing, and mobile banking e.g M-kesho among others. All these product innovations contribute heavily in building customer base, capital base as well as enhancing their profitability which in turn influence their financial performance. (iHub/RSA Research, 2012).

There are various reasons why companies innovate; innovation is a means of survival and growth of industrial sectors, innovation is recognized as a major contributor of economic growth and a dominant factor of business success both in developed and developing countries (Pack and Westphal, 2006). One of the requirements for economic and industrial development of developing countries is their ability to innovate successfully. According to Tefler (2002), a company must innovate or die, the process of innovation is fundamental to a healthy and viable organization. Those who do not innovate ultimately fail.

Hill and Utterback (2009) identified technological innovation as a major agent of development and change in societies which has been linked to rising productivity, employment growth and a strong position in export markets, trade and improved quality of life. However, the inherent complexity of the process of technological innovation and its involvement in interaction with different environmental as well as industry-specific factors, made studies of the characteristics of technological innovation seem difficult to carry out.

2.4 Measures of Financial Performance

The financial performance of companies is usually measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget or a mix of these methodologies (Barley, 2000). The common assumption, which underpins much of the financial performance research and discussion, is that increasing financial performance will lead to improved functions and activities of the organizations. The subject of financial performance and research into its measurement is well advanced within finance and management fields. It can be argued that there are three principal factors to improve financial performance for financial institutions; the institution size, its asset management, and the operational efficiency (Bijker, Hughes and Pinch, 2007).

Many researchers use market measures (Alexander and Buchholz, 1978; Vance, 1975), others put forth accounting measures (Waddock and Graves, 1997; Cochran and Wood, 1984) and some adopt both of these (McGuire, Sundgren and Schneeweis, 1988). The two measures, which represent different perspectives of how to evaluate a firm's financial performance, have different theoretical implications (Hillman and Keim, 2001) and each is subject to particular biases. The use of different measures, needless to say, complicates the comparison of the results of different studies. Accounting measures capture only historical aspects of firm performance. They are subject, moreover, to bias from managerial manipulation and differences in accounting procedures. Market measures are forward looking and focus on market performance. The use of market measures suggests that an investor's valuation of firm's performance is a proper performance measure (McGuire et al, 1988).

Kaplan and Norton (1992) proposed that financial performance measures should be complemented by those of an operational nature to obtain a better understanding of a firm's performance. Ittner and Larcker (2003) indicated that firms are measuring non-financial factors such as customer loyalty and employee satisfaction with the expectation that they may have an effect on future profitability. According to Schiff and Hoffman's (1996), most managers do not focus exclusively on financial or nonfinancial measures when making performance evaluations, but instead utilize both types of measures to some extent. There are many different measurement frameworks, including the balanced scorecard, activity based costing, competitive benchmarking, and shareholder value added.

2.5 Empirical Studies

Antonio et al, (2010) set out to determine the subtle links between innovation capabilities and business performance. The period under review was 2007 to 2009. Empirical data was acquired through a survey study of 200 manufacturing firms in the Hong Kong/Pearl River Delta region. Structural equation modelling was employed to examine the relationships among Technological Innovation Capabilities (TIC's) and various performance indicators. Pearson correlation and regression analysis were employed to examine the relationship between TIC and innovation performance. The results revealed that different TICs have different impacts on different performance measures. Organization capability was found to have the most influential impact. The response rate of 17.7% was too low for this study.

Koellinger (2008) analyzed the relationship between the usage of Internet-based technologies, different types of innovation, and performance at the firm level. The study period was year 2003, with the objective being to find out how much innovation is enabled by IT, as well as how innovation are related to different measures of performance. Data for the empirical investigation originated from a sample of 7302 European enterprises. He then applied regression model to obtain the results. The empirical results showed that Internet-based technologies were an important enabler of innovation in the year 2003. They also showed that innovative firms are more likely to grow, but not necessarily more likely to be profitable. Furthermore, it was found that firms that rely on Internet-enabled innovations are at least as likely to grow as firms that rely on non-Internet-related innovations. The study period should have been extended in order to allow for comparison of results among various years.

Gunday et al (2009) carried out a study to explore the effects of the organizational, process, product, and marketing innovations on the different aspects of firm performance, including innovative, production, market, and financial performances, based on an empirical study covering 184 manufacturing firms in Turkey. The study period was year 2006 to 2007. Multivariate statistical analyses were conducted in order to validate the research framework. The findings support the claim that innovations performed in manufacturing firms have positive and significant impacts on performance. When objective firm data was considered, they observed that innovative firms have higher market share, total sales and exports. The findings support the expected theoretical relationship between innovation and performance.

Mascia and Luca (2010) performed an empirical analysis of the innovation – performance relationship among 4,325 Italian Manufacturing firms during the years 2004 to 2006. The study aimed at explaining the link between innovation and performance. Data was obtained from Unicredit Group Survey, to which linear modeling was used to explain return on asset in terms of innovation strategies. The results revealed a weak but significant relationship between return on asset and innovation. The study sample is representative for the purpose of this study, but the period under review could be extended so as to explore a longer period .

Hanen et al (2010) analyzed the impact of the innovation activities on the performance of the Tunisian service firms. The sampled was drawn from 71 Tunisian service firms, having significant value-added services for the period 2007 to 2009. The study aimed at analyzing the impact of the innovation activities on the performance of firms. Data were collected through a questionnaire. They used the Heckman's two-stage econometric model in order to identify the contribution of service innovation to enhance the firms' performance (productivity, sales growth and employment growth). The results showed that innovation has a positive and significant effect on the productivity and on the employment growth. However, innovation has no effect on the sales' growth. The sample may have been too small given there are numerous service firms.

Kariuki (2011) examined the relationship between the level of technological innovation and financial performance of Kenyan commercial banks. The study covered the years 2001 to 2010, with the objective of establishing the level of innovations and determining the relationship between the two variables. The study gathered both qualitative and quantitative data which was analyzed using content analysis and SPSS version 17

respectively. The findings revealed that commercial banks have continuously employed various technological innovations which have led to increased financial performance through bank sales, return on equity and profits. The sample was representative since it consisted all the commercial banks and therefore the results could be generalized.

Kimingi (2010) did a study on the effects of technological innovations on financial performance of commercial banks in Kenya. The period under study was 2001 to 2009, with the objective being to identify the technological innovations and investigate their effects on the financial performance of commercial banks in Kenya. This study used a descriptive survey with a population of 43 commercial banks in Kenya. Data for this study was both quantitative and qualitative hence both descriptive and content analysis techniques were employed. The study concluded that the banks had employed various technological innovations, further it concluded that technological innovations had lead to improved financial performance of commercial banks. The study period was adequate to help reveal the possible impact of technological innovations on financial performance.

Kihumba (2008) conducted a study on the determinants of financial innovation and its effects on banks performance in Kenya for the year 2000 to 2007. The objective of the study was to investigate the determinants of financial innovation as well as the relationship between financial innovation and financial performance of Kenyan commercial banks. An analytical model was used to analyze data and diagnostic tests were done to determine the relationship between the variables. The findings of the study were that financial innovation was beneficial and influenced the performance of the banks positively. The findings support the theoretically expected relationship between the two variables.

2.4 Conclusion

The available literature shows that there exist a strong relationship between innovation and financial performance of various organizations. As noted by Ayres (2008) technology affects the wealth of companies. There is, however, need to investigate the specific effect of product innovation with specific reference to mobile phone service companies. This is due to the research gap that exists as no study has been done to investigate the effect of product innovation on financial performance of mobile phone service companies despite their strategic positioning to adopt such innovations.

The available literature provided insights on how different technological innovations are adopted in different contexts. Due to contextual, sector, and managerial differences among the organizations, the effect of innovations on financial performance gained from these studies may not be assumed to explain the effect of product innovation on financial performance of mobile phone service companies. It is in this light that the researcher carries out a study on the effect of product innovation on financial performance of mobile phone service companies in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the technique and the design that the researcher used in carrying out the research. It includes various sections namely; an introduction, research design, study population, data collection and data analysis techniques.

3.2 Research Design

This research adopted a cross sectional study through a census of mobile phone companies operating in Kenya. According to Denvir and Millett (2003), research design provides the glue that holds the research project together. A design is used to structure the research to show how all of the major parts of the project work together to try and address the central research questions. The study was used to provide a comparative analysis of how various product innovations contributed to the return on assets of mobile phone companies in Kenya. This made it possible to tell generally how the various innovations affected profitability in the said firms.

3.3 Population of Study

The population of interest in this study comprised mobile phone service providers in Kenya. There were 4 mobile phone service providers in Kenya as of December 2012 (CCK Report, 2012). The study conducted a census survey owing to the small number of mobile phone service providers in Kenya. The firms had their head offices in Nairobi, hence the possibility to collect data from all four mobile telephony firms.

The researcher collected information on the annual return on assets as well as the percentage contribution of mobile calls, mobile messaging, mobile money transfers and mobile internet to the revenue for the period 2008 to 2012.

3.4 Data Collection

The study utilized primary data. Primary data was collected using a data collection sheet from four finance managers of mobile phone service providers, since they possessed relevant information on the performance of their respective firms. However, any finance officer with access to the data was useful.

3.5 Data Analysis

The researcher conducted a multiple regression analysis to establish the effect of product innovation on financial performance among mobile phone service providers. A multiple regression model allowed simultaneous investigation of the effect of two or more variables. The significance of the constants of regression was measured using T-statistics, while that of the whole regression was tested using the F-test. The strength of the association between the dependent and independent variables was assessed using the coefficient of determination. The T-tests and F-tests were done at 95% confidence level. The analysis of data was done using MS Excel version 2007.

3.5.1 Analytical Model

The model for this study was based on two major components namely; product innovation and financial performance measure, ROA. The study conceptualized that the

return on assets of mobile telephony firms is a function of mobile calls, mobile messaging, mobile money and mobile internet as follows;

$$ROA = f(X_1, X_2, X_3, X_4)$$

The following regression model was used for this study:

$$ROA = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

ROA = Return on Assets

The independent variables were;

X_1 = Percentage revenue generated from mobile calls

X_2 = Percentage revenue generated from SMS

X_3 = Percentage revenue generated from mobile money transfers

X_4 = Percentage revenue generated from data/ mobile internet

β_0 = Defines the value of return on assets without inclusion of predictor variables

β_1 - β_4 = Regression coefficients – they define the amount by which ROA is changed for every unit change in predictor variables

ε = error term representing all other factors that influence the return on assets but are not captured in the analytical model

The data on return on assets as well as that of the independent variables was gathered through the appended data collection sheet.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter focuses on the presentation of data and interpretation. The first part presents the descriptive statistics, the second is the regression analysis results of the data for each company, while the third part deals with the summary and the interpretation of the findings. Out of the 4 respondents that the researcher aimed to achieve, 3 were able to correctly fill and return the data collection sheet hence achieving a 75 percent response rate. This is considered reasonable to form a basis of conclusion.

Table 4.1 Variable definitions and measurements

Variable	Description	Measurement
Y	Return on assets (ROA) measuring the financial performance	Percentage
X ₁	Percentage revenue generated from mobile calls	Percentage
X ₂	Percentage revenue generated from SMS	Percentage
X ₃	Percentage revenue generated from mobile money transfers	Percentage
X ₄	Percentage revenue generated from data/ mobile internet	Percentage

Source: Research data 2013

The table 4.1 above simply describes the variables of the model.

4.2 Descriptive Statistics

This section describes the basic features of the data in this study. It provides simple summaries about the sample and the measures.

Table 4.2 Summary of statistics of the study variables

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Y	15	-17.9	26.3	-49	21
X ₁	15	74.9	5.3	64	86
X ₂	15	5.6	1.68	3	8
X ₃	15	4.7	4.68	0.1	16
X ₄	15	4.4	1.35	2	7

4.3 Regression Analysis Results

Regression analysis was done using Microsoft Excel 2007 and results presented in the Table 4.3 to Table 4.5 below.

Table 4.3 Regression Model Results for Safaricom Limited

Regression Statistics	
R Square	0.3037
Standard Error	2.0651

ANOVA			
	Significance F		
Regression	0.7117		
	Coefficients	t Stat	P-value
Intercept	-1.6529	-0.111	0.9155
X ₁	0.3149	1.0154	0.3565
X ₂	-1.5613	-0.9251	0.3973
X ₃	-0.0369	0.0461	0.9651
X ₄	1.8637	0.9550	0.3834

Source: Research data 2013

Table 4.3 above shows the multiple regression analysis results for Safaricom Limited in which ROA was the dependent variable, while the percentage revenue generated from calls, SMS, mobile money transfers and mobile internet were the four independent variables. The constant term was -1.6529 indicating that this percentage of ROA did not at all depend on the revenue from the predictor variables. The coefficient of revenue from calls was 0.3149 showing a positive relationship between ROA and revenue from calls. The relationship between ROA and revenue from sms was negative as shown by the coefficient -1.5613, the revenue from mobile money transfers is correlated negatively with ROA as shown by coefficient -0.0369, while that between ROA and mobile internet is positive as indicated by the coefficient 1.8637.

From the ANOVA statistics, which are the population parameters, there was a significance level of 71%. The standard error which measures the standard deviation of financial performance around its fitted value was 2.065. Since the p-values were not less than 0.05 the researcher did not reject the null hypothesis that the regression parameters are zero at a significance level of 0.05. The R^2 , also called the coefficient of multiple determinations, is the percentage of the variance in the dependent variable explained uniquely or jointly by the independent variable. This means that 30.3% of variations in ROA was explained by variations in revenue from the predictor variables.

Table 4.4 Regression Model Results for Airtel Networks Kenya Limited

Regression Statistics	
R Square	0.7527
Standard Error	3.241

ANOVA	
	Significance F
Regression	0.0877

	Coefficients	t Stat	P-value
Intercept	-17.013	-1.4403	0.2093
X ₁	0.0451	0.1643	0.8759
X ₂	-2.8347	-1.9015	0.1156
X ₃	-2.724	-1.1796	0.2912
X ₄	4.0759	2.1349	0.0859

Source: Research data 2013

Data findings for Airtel Networks Kenya Limited were presented in Table 4.4 above. The proportion of ROA explained by revenue from predictor variables was 75%. The standard error which measures the standard deviation of financial performance around its fitted value was 3.241. The constant term was -17.013 indicating that this percentage of ROA did not at all depend on the revenue from calls, sms, mobile money transfers and mobile internet. The coefficient of revenue from calls was 0.0451 showing a positive relationship between ROA and revenue from calls. The relationship between ROA and revenue from sms was negative as shown by the coefficient -2.8347, the revenue from mobile money transfers is correlated negatively with ROA as shown by coefficient -2.724, while that between ROA and mobile internet is positive as indicated by the coefficient 4.0759.

From the ANOVA statistics, there was a significance level of 8.7%. The p-values were not less than 0.05 therefore the researcher did not reject the null hypothesis that the regression parameters are zero at a significance level of 0.05. The R^2 was 75% meaning three quarters of variations in ROA was explained by variations in revenue from calls, sms, mobile money transfers and mobile internet.

Table 4.5 Regression Model Results for Essar (YU) Limited

Regression Statistics	
R Square	0.8248
Standard Error	2.2933

ANOVA	
	Significance F
Regression	0.0393

	Coefficients	t Stat	P-value
Intercept	-20.5129	-1.5408	0.1839
X ₁	0.0543	0.1349	0.8979
X ₂	-0.8114	-0.4409	0.6776
X ₃	10.6902	2.0782	0.0923
X ₄	0.9053	0.3961	0.7084

Source: Research data 2013

Table 4.5 above shows the multiple regression analysis results for Essar (YU) Limited. The constant term was -20.5129 indicating that this percentage of ROA did not at all depend on the revenue from calls, sms, mobile money transfers and mobile internet. The

coefficient of revenue from calls was 0.0543 showing a positive relationship between ROA and revenue from calls. The relationship between ROA and revenue from sms was negative as shown by the coefficient -0.8114, the revenue from mobile money transfers is correlated positively with ROA as shown by coefficient 10.6902, while that between ROA and mobile internet is positive as indicated by the coefficient 0.9053.

The population parameters from the ANOVA statistics indicate that there was a significance level of 4%.The standard error which measures the standard deviation of financial performance around its fitted value was 2.2933. All the p-values were greater than 0.05, therefore the researcher did not reject the null hypothesis that the regression parameters are zero at a significance level of 0.05.The R^2 is 82 % representing variations in ROA which were explained by variations in the independent variables.

4.4 Discussion

An analysis of the four revenue lines for mobile phone companies revealed a downward trend in the revenue generated from calls for Safaricom, Airtel and Essar. This decline is allocated to the other revenue items, which are mobile money transfers and mobile internet. The revenue from SMS is observed to have fewer variations, while that of mobile money transfers and mobile internet are on the increase.

From the regression analysis, taking all factors constant (independent variables) at Zero, financial performance as measured by return on assets in all the companies under study was negative. That is Safaricom had -1.6529, Airtel with -17.013 and Essar -20.5129. The data findings analyzed showed that a unit increase in revenue from calls for Safaricom Limited led to a 0.3 increases in ROA, for Airtel a unit increase in revenue

from calls led to a 0.04 increases in ROA, while for Essar a unit increase in revenue from calls led to a 0.05 increases in ROA. Further, the data findings analyzed also showed that a unit increase in revenue from mobile internet for Safaricom Limited led to a 1.8 increase in ROA, for Airtel a unit increase in revenue from mobile internet led to a 4.07 increases in ROA, while for Essar a unit increase in revenue from mobile internet led to a 0.9 increase in ROA.

4.5 Summary

This chapter looked at data analysis and hence the research findings. The data collected was analyzed and interpreted in line with the objectives of the study which was to investigate the effect of product innovation on the financial performance of mobile phone companies in Kenya. As a measure of profitability, return on assets data for 5 years was used while the percentage revenue from calls, sms, mobile money transfers and mobile internet were the predictor variables.

From the regression equations for the period 2008 to 2012, profitability was directly related to revenue generated from calls in all the companies under consideration. On the contrary, ROA was inversely related to revenue from SMS for Safaricom Limited, Airtel Networks as well as Essar. The revenue from mobile money transfers inversely related to ROA in the case of Safaricom Limited and Airtel, whereas it related directly for Essar. The revenue from mobile internet was directly related to the return on assets in all the companies analyzed. The research results showed that innovation of products had a positive effect on profitability of mobile phone service companies in Kenya.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study set out to establish the effect of product innovation on the return on assets among mobile phone service companies in Kenya. All of the companies that participated in this study had positive coefficients of revenue generated from mobile calls. This indicated that there is a positive effect on the return on assets by increasing the revenue from calls among mobile companies in Kenya. Increased revenue from mobile calls therefore leads to increased returns among all of the mobile companies in Kenya.

The effect of revenue from mobile messaging on the ROA was also analyzed and found that all of the companies had negative coefficients of revenue from SMS. This indicated that there is a negative effect on ROA through revenue generated by SMS. The negative coefficient showed that increase in revenue from SMS led to a decrease in the return on assets among mobile companies in Kenya.

Further the study sought to establish the effect of revenue from mobile money transfers on the ROA and also found that Essar had a positive coefficient of mobile money transfers while Safaricom and Airtel had negative coefficients. This also indicated that there is a positive effect on ROA through revenue generated from mobile money transfers. The positive coefficient showed that increase in revenue from mobile money transfers led to increase in the return on assets for Essar, but led to decrease in return on assets for Safaricom and Airtel.

The effect of revenue from mobile internet on the return on assets was also analyzed and found that all of the companies had positive coefficients of revenue from mobile internet.

This also indicated that there is a positive effect on ROA through revenue generated from mobile internet. The positive coefficient showed that increase in revenue from mobile internet led to an increase in the return on assets among mobile companies in Kenya.

The study further revealed that a majority of the companies had a significant relationship between ROA, mobile calls, SMS, mobile money transfers and mobile internet. The indication is that revenue from product innovation is closely connected to the profitability of mobile companies as they reap higher ROA. Therefore return on assets among mobile companies in Kenya can be appropriately expressed as function of revenue from calls and mobile internet. Increase in the two lines of revenue results in increased return on assets.

5.2 Conclusions

This study sought to answer the following research question: what is the effect of product innovation on the financial performance of mobile telephony firms in Kenya? It was to achieve this through investigating the effect of revenue from calls, sms, mobile money transfers and mobile internet on the return on assets among mobile companies in Kenya. This study achieved that objective by finding that there is a positive relationship between ROA and calls as well as mobile internet. This is due to the fact that all of the companies had their F- statistics showing that the regressions were significant.

According to the regression analysis, all of the companies had negative constant terms. Also all the companies had positive coefficients of revenue from calls and mobile internet, while they had negative coefficients of revenue from sms. This also indicated that when revenue from calls and internet increases, return on assets increase too. It was concluded from this research that, not only is product innovation positively correlated to

returns on assets among mobile companies in Kenya, but that the relationship is strong. Increasing revenue from product innovations increased returns on assets.

The study concludes that mobile companies had employed various product innovations. These included calls, SMS, mobile money transactions and mobile internet. The study further concludes that product innovations had led to improved financial performance of mobile companies in Kenya. These were through increased sales, profits increment and return on assets. Product innovation may be linked to performance and growth through improvements in efficiency, productivity, quality, competitive positioning and market share, among others. The study also found that product innovation is positively related with performance.

5.3 Recommendations

The study recommends that for mobile companies to be highly competitive, they need to employ innovation in products such as mobile money transfers. This means that they need to continuously assess consumers needs, tastes and preferences, and come up with suitable products to meet these needs. Product innovation largely relies on technology which is one of the key elements that define a society or civilization. Therefore investment in current technology would go a long way in helping the companies to gain a competitive advantage.

Mobile companies should therefore create an environment in the organization that fosters product innovation. This can be done through investing more resources in market researches that study market needs and come up with the appropriate and innovative

responses , for instance in form of new products. This inturn will raise the customer base and increase profitability as well.

5.4 Limitations of the Study

The researcher encountered various limitations that tended to hinder access to information sought by the study. These included: The researcher encountered problems of time as the research was being undertaken in a short period which limited time for doing a wider research. However the researcher countered the limitation by carrying out the research across all the mobile companies in Kenya which enabled generalization of the study findings.

The respondents approached were reluctant in giving information fearing that the information sought would be used by their rivals. The researcher handled the problem by carrying with him an introduction letter from the University and assured them that the information they gave would be treated confidentially and it was to be used purely for academic purposes.

The researcher also experienced delayed feedback from the respondents on the basis that they work within strict work schedules and limited time was available to complete the data collection sheet. However, the researcher sought to win management backing for the study through a cover letter prior to data collection for the respondents to see the meaning of the whole exercise.

5.5 Suggestions for Further Research

The study has explored the effect of product innovation on financial performance of mobile companies in Kenya. The telecommunications industry in Kenya however is much larger. This warrants the need for another study which would ensure generalization of the study findings for all the telecommunication companies in Kenya and hence pave way for new policies.

More studies could also be carried out on other aspects that affect financial performance apart from revenue. These could include for instance the market share aspect of the mobile companies since it substantially affects the financial performance. Since financial performance can also be measured using various ratios, the new studies could use for instance return on equity.

A future research can be carried out on the same topic but covering a longer period of time. This is with the assumption that the longer period will provide results that are better than those provided by the five year period used in this study. The possible time – based bias issues may be settled by using data covering over five years. The comparison would also be better over a longer time span.

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APPENDICES

Appendix 1: Introduction Letter to the Respondents



UNIVERSITY OF NAIROBI SCHOOL OF BUSINESS MBA PROGRAMME

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE 30/7/2013

TO WHOM IT MAY CONCERN

The bearer of this letter MUCHOKI ELIZABETH WACHUKA

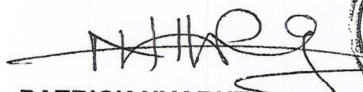
Registration No. D61/64047/2011

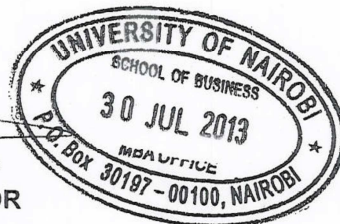
is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.


PATRICK NYABUTO
FOR: MBA CO-ORDINATOR
SCHOOL OF BUSINESS



Appendix 11: Data Collection Sheet

Name of the company

Year	ROA percentage	Percentage revenue generated from mobile calls	Percentage revenue generated from SMS	Percentage revenue generated from mobile money transfers	Percentage revenue generated from mobile data/internet
2012					
2011					
2010					
2009					
2008					

THANK YOU!!

Appendix III: List of Mobile Phone Companies in Kenya

1. Airtel Networks Kenya Limited
2. Essar Telecom Kenya Limited
3. Safaricom Limited
4. Orange (Telkom) Kenya

Source: CCK, 2012

Appendix IV: Data Collected and Used for the Analysis

Safaricom Limited					
Year	ROA percentage	%Revenue from calls	%Revenue from SMS	%Revenue from mobile money	%Revenue from mobile internet
2012	15	64	7	16	5
2011	16	67	8	12	6
2010	21	77	6	9	4
2009	11.5	81	7	6	3
2008	19	86	7	3	2
Airtel Networks Kenya Limited					
2012	-23	74	3	6	7
2011	-44	75	4	6	5
2010	-36	75	5	5	5
2009	-42	76	6	4	4
2008	-49	78	8	3	3
Essar Limited					
2012	-18	71	3	0.5	6
2011	-34	72	4	0.4	5
2010	-29	73	4	0.3	4
2009	-39	77	6	0.1	3
2008	-37	78	6	0.2	4