THE EFFECT OF ORGANIZATIONAL INNOVATION AND INFORMATION TECHNOLOGY ON FIRM PERFORMANCE: A CASE STUDY OF SAFARICOM LIMITED

BY

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UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

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Project Submitted to the Chandaria School of Business in Partial Fulfilment for the Degree of Executive Masters in Organization Development (EMOD)

UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

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STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed: ___________________________  Date: ___________________________

Hellen Muthoni Makimi (ID 640659)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ___________________________  Date: ___________________________

Mr. Dalton Ndirangu

Signed: ___________________________  Date: ___________________________

Dean, Chandaria School of Business
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ABSTRACT

The general objective of this study was to determine effects of innovation on organizational performance. The specific objectives were: To establish whether organizational innovation has improves firm’s performance; to assess how innovative activities affect productivity in firms and finally to determine whether firm performance is improved through information technology and worker skills.

The population of the study was one hundred and twenty respondents drawn from Safaricom employees, customers, and agents within Nairobi. The sample frame was adopted from Safaricom Human Resources. Purposing sampling technique was used to ensure that only respondents with relevant information needed for the study were sampled.

As noted, the study adopted simple random sampling for both employees, customers, and agents. Data was collected using questionnaires, edited and entered into the Statistical Package for Social Sciences (SPSS) software version 21 to enable carry out descriptive analysis. A total of one hundred and twenty (120) questionnaires were dispatched and all one hundred and twenty (120) responses were received, giving a response rate of 100%. Descriptive statistics used included frequency distribution tabulation. This study used descriptive statistical indexes such as frequencies, percentages, and mean. For inferential statistics, correlation analysis was done to enable easy data interpretation, and to make sense of the data. The analyzed data was presented in form of tables, and figures according to the research questions.

The first specific objective looked at organizational innovation and organizational performance. 68% of the respondents indicated Safaricom modem to have highly contributed to organizational performance of Safaricom. 69.2% believed that M-Pesa strongly contributed to organizational performance. 46.7% highlighted that Safaricom wouldn’t perform well without M-Pesa. Most respondents cited M-Pesa, M-Shwari, and M-Banking as the most profitable innovations with a mean of 4.52 that have caused Safaricom to perform better. Other factors as global trends, competition, and customer care received the least mention as having effects on innovation and organizational performance.
The second specific objective looked at innovation activities and organizational performance. The study found that sound management and board strategies, product and service diversification, employee innovation autonomy, and innovative marketing strategies were identified as having the most effect on organizational performance. 60% of the respondents felt that innovation had resulted in organizational performance. 32% believed that product development the organization to profitable innovations. However, only 16.7% strongly indicated that Safaricom foundation had contributed to organizational performance. Other areas like product differentiation, employee dynamic capabilities least contributed to organizational performance.

The third specific objective improved performance due to improved I.T and worker skills. The study found that data bundle technologies, 3G technologies, M-Pesa and M-Shwari innovations, and Information technologies like the integrated human resources management system. 68.3% felt that I.T technologies had enhanced firm performance. 48.3% believed that Safaricom IHRS had improved employee performance while 63% indicated that IHRS had enhanced talent for Safaricom in the telecommunication industry. Employee credible benefits, and telecommunication competition in technologies were least identified to possess innovative effect that contribute to organizational performance.

In examining correlations between the independent variables and organizational performance, organizational innovations had the highest correlation of 0.698, followed by innovative activities at 0.511, and lastly by I.T and worker skills at 0.261.

The study concluded that there exists a strong positive correlation, and significant relationship between sound management and board strategies, product and service diversification, employee innovation autonomy, innovative marketing strategies and Safaricom’s performance. Other factors like quality of the innovations, steps of the innovations and employees and customer involvement contribute significantly to an organizational performance at Safaricom Ltd.

The study recommends that Safaricom enhance organizational innovations to develop a sustainable competitive advantage over other players in the market. On a strategic level, the study recommends that Management at Safaricom further corporate innovations by ensuring that strategic plans, steps of innovations, and the stimuli that triggers profitable innovations are well documented, and executed. Product differentiations for M-Pesa, and
M-Shwari should be enhanced to ensure that competitors aren’t able to imitate their products and services. Customer care must also be placed on the forefront to ensure customer satisfaction, which will translate into loyalty and enhanced organizational performance. Finally, the study recommended that further research should be conducted to determine how and why innovations like M-Pesa, and M-Shwari enhanced Safaricom’s performance.
ACKNOWLEDGEMENT

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DEDICATION

I dedicate this work to the Almighty God for giving me the strength and wisdom to make it this far. A special tribute also goes out to my family members who have stood by me throughout this study giving me the perseverance to make it to the end.
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ABBREVIATIONS

ASP  Application Service Provider
CAK  Communication Authority of Kenya
CBK  Central Bank of Kenya
CSP  Contents Services Provider
ICT  Information Communication Technology
ITU  International Telecommunication Union
NFP  Network Facilities Provider
WTSA World Telecommunication Standardization Assembly
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

The most critical issue facing companies in the world today is how to manage the future. The more uncertain and unstable the world is, the more companies must rely on innovation to create their desired futures. Successful innovation strategies demand creative efforts to understand and influence future conditions. These innovations in technology create new knowledge for both product and services for which companies enhance development (Nystrom, 1990).

A company’s competitiveness globally, depends heavily on innovation to meet the changing needs of customers. In addition to goods and services designed to meet their needs, today’s demanding consumers expect the latest technology which is of high quality, dependable and has competitive prices. The firm with a capacity to innovate is in a better position to compete in markets than one which lacks innovative capacity (Morrison, 2009).

Looking back on human affairs man has experienced three major transformations. The first was the Agricultural Revolution, characterised by the transition from a society based on hunting and gathering to one based on cultivation. The second great transformation was the Industrial Revolution. Its inception was the invention of the steam engine, electric power and steel chemical. Today, mankind is faced with its third great transformation, brought about by innovative ideas and Information Technology (Heidi & Lawrence, 1991).

Continuous innovation therefore, lies at the heart of sustained competitive advantage, and managing it effectively has a strong international business component. Most large firms in the world are involved in product/service development and process development i.e. activities that support the creation of new products and services that make more customers want them instead of those of rival firms. This means improving the way
products/services are produced, making them quicker, cheaper, and of better quality (Alan & Simon, 2009).

A firm’s performance greatly depends on how technologies are implemented. Successful establishment of innovative technologies require that organizations develop a human resource strategies for the same. Equally, firms have to overcome financing challenges that inhibit the acquiring new and unexplored technologies. Successful firms also requires quality controls to accompany innovations as a way of enhancing best technological practices (Baldwin & Sabourin, 2002). Generally, the effectiveness of innovative technologies is measured through environmental accountability such as productivity, cycle time, efficiency, waste reduction and regulatory compliance that enhanced a firm’s performance (Venkatraman & Ramanujam, 2001).

The dynamism and global competitiveness in today’s business environment has made innovation feisty and pertinent due to three crucial trends: overarching international competition, flagellant and dynamic markets, and varied and technologies encumbered by change overdrive (Wheelwright & Clark, 1992). They further argue that, the rate of change in telecommunication sector in many countries is dramatic and services providers on a worldwide scale are intertwined and interrelated while new business types and corporate objectives and strategies are under immense exploration. They concluded that efficient industry conglomeration, market mix and segmentation, plus varied delivery mechanisms will yield expanded product offerings.

Research studies on innovation have been prioritized in most developed and promising developing countries. However, it mainly deals with technological aspects, and the field has essentially focused on inputs and support instruments (Mothe et al., 2011). Innovation and technology have to go hand in hand to develop change in organizations that anticipate, create and respond effectively to change in the external and internal environments to maintain optimal profits. Change dynamics has greatly influenced most of the sectors that rely on technology innovation in Kenya. This include technological advancement regulation, and competition, (Letangule &Letting, 2012).
A study by Deloitte and Touché (2006) determined that the long-term success of companies in emerging markets depended on innovative product offerings and not minor adjustments to existing products. In the last decade, the Kenyan telecommunications industry has seen the economy of Kenya grow by leaps and bounds (Okiro & Ndungu, 2013). Being the market leader in terms of profitability, Safaricom Limited for instance attributes its success to innovation and information technology and has continued to reap huge profits over the last couple of years. Safaricom, looks for ways to delight their customers. They aim to be the best through innovative technology, products and services, launching exciting new promotions, and offering exceptional customer experiences (Safaricom Strategic Review, 2014). When it comes to innovation, more telecommunication firms are not only seeing the value of thinking outside the box, but also understand that innovation does not happen in isolation. (Hoffman, 2010).

Safaricom has more than 20 Million subscribers commanding 67% of the market share. On mobile technology, Safaricom equally commands the wisest coverage. As a result, Safaricom has great mobile tariffs that are attractive to a nationwide subscribers. Similarly, Safaricom has a massive network of product and service dealers, quality staff and management. Consequently, Safaricom has managed to hold to a leader’s role not only in Kenya, but in the region as a whole. As a way of developing an effective CSR program, Safaricom established Safaricom Foundation, which is charged with the mandate of community outreach and partnership. Safaricom foundation has disbursed over 2 billion shillings in varied initiatives towards fostering sustainable community based solutions, in communities it operates. (Safaricom Business Review, 2014).

Safaricom’s money transfer platform M-PESA has over 17 million clients. Safaricom equally has a network of over 79,000 agent’s outlets across the country. As a result, M-PESA has been voted as the world’s leading mobile money transfer platform. Safaricom similarly has a revolutionary product M-Shwari which is used to bank the bankless, and with options where members can save and borrow money. Digital technology has enabled shareholders to get information about Safaricom quickly and more cost effectively. This has ensured that there is a constant flow of information between Safaricom and investors enabling them work hand in hand and more effectively to build the brand and the nation at large (Safaricom Annual Report, 2014).
1.2 Statement of the Problem

It is widely regarded that product innovation and development allows companies to gain competitive advantage, retain existing customers, attract new customers while at the same time strengthen ties other partners (Kotler & Keller, 2006). The question that remains however is whether the Kenyan telecommunication industry has become so good at innovation to an extent of sustaining a competitive advantage and continue being profitable. The change in the telecommunication industry is taking place at a very fast pace, as a result of the advent of globalization that seems to leave everybody who does not adapt last. Furthermore new entrants have come into the market changing the status quo with major transformations and innovation capacity. As a result competition becomes an issue these mobile providers had to design innovative ways of surviving competition without necessarily involving themselves in malpractices (Xavier & Ypsilanti, 2008).

The world today has undergone massive changes. Both emerging and developed economies are focusing on innovation, competing globally for talent, resources, and market shares. Innovation in mobile service provision is becoming an everyday phenomenon in Kenya. Stiff competition among existing players has left firms with no option but to find ways to attain a competitive advantage through innovation. The telecommunication sector is going through re-packing of mobile service provision to satisfy the ever-increasing needs of customers and ward off competition from telecommunication companies. More service providers are increasingly offering new products (CCK, 2013).

Telecommunication firms are faced with globalization pressures, competition and volatile market dynamics are constantly seeking new ways to add value to their services (Soteriou & Zenios, 1999). This statement captures the prevailing environment in the telecommunication sector in Kenya. Jones (2005), states that the recognition of the relationship between diversity, creativity, innovation and competitive advantage has stimulated both academicians and business community.

Sarri, Bakouros and Petridou (2010), oppose that the ability of any organization to grow is dependent in the capability to generate new ideas and utilize them effectively for the long term benefit of the organization. They argue that innovation is regarded as the means
of gaining and sustaining a competitive advantage and to have an impact on employment rate and wealth creation.

Supporting this are Elmquist, Fredberg and Ollila (2009), who identify innovation as the main driver for firms to grow, prosper and sustain high profitability. The focus in academic literature is on how to innovate and how innovation processes are managed. According to Elmquist, Fredberg and Ollila (2009), the future portends an environment of intensified competition in the telecommunication sector arising from the introduction of new information technologies that enhance the processes and products. Telecommunication institutions will therefore be expected to redefine their business strategies while leveraging on innovative and affordable products so as to retain and capture new market segments.

This study therefore, sought to address the knowledge gap in how the innovation and competitive advantage affects the relative performance of mobile service providers. It identified the connection between organization innovation, information technology and its effect on firm performance, competitive advantage and profitability in the telecommunication sector and their implications. Houthold, Desmit and Fidalgo (2010) posit that the underlying motivation for this kind of study is the quest for those factors that may provide firms with a competitive advantage and hence drive firm profitability.

1.3 General Objective

The general objective for this study was to determine the effect of organizational innovation and information technology on firm performance in Kenya.

1.4 Specific Objectives

1.4.1 To establish whether organizational innovation has improved Safaricom performance.

1.4.2 To assess how innovative activities affect productivity at Safaricom Ltd.

1.4.3 To determine whether Safaricom performance has been improved through information technology.
1.5 Significance of the study

1.5.1 Telecom Industry
The findings of this research will be vital to any potential players wishing to enter the telecom industry as well as the current players in the telecom industry as it will provide information on how to remain competitive in the industry.

1.5.2 Researchers
The study will be significant to researchers who are keen in finding the extent to which innovation technologies influences organizational performance.

1.5.3 Investors, Business and Individuals
The research would shed light on customers and individuals who want to know what Safaricom is are offering and what is the best deal in the market. They would be informed on whether they are getting true value for their money and be able to choose exactly what they need.

1.6 Scope of the Study
This research was limited to Safaricom Ltd. Other organizations were not surveyed due to financial and time constraints. The population of the study was 120 respondents, drawn from Safaricom employee, agents, and managers. The study was conducted in a period of six month. The limitation of the study was demographic coverage. Only Nairobi County was covered by the study due to financial and time constraints.

1.7 Definitions of Terms

1.7.1 Innovation
Innovation can be viewed as the application of better solutions that meet new requirements, inarticulate needs, or existing market needs (Nelson, 1993).

1.7.2 Worker Skills
The technical abilities workers are endowed with to professionally perform a task (Black & Lynch, 2001).
1.7.3 Organizational Change
Organizational change involves planning, design, production, and management approaches to effective delivery of organizational objectives both internally and externally (Gera & Gu, 2004).

1.7.5 Information Technology
Information technology involves processes used in the creation, storage, exchange, and usage of information in its various forms so as to create awareness, enhance productivity, and innovation (Rouse, 2012).

1.7.6 Firm Performance
A general measure of a firm’s overall financial health over a given period of time, and can be used to compare similar firms across the same industry (Venkatraman & Ramanujam, 1986).

1.8 Chapter Summary
This chapter introduced the effects of innovation and information technology to organizational performance. The background of the study, statement of the problem, scope of the study, significance of the study and definition of terms have been covered in this chapter.

Chapter two will deal with literature review, chapter three will deal with research methodology, chapter four with findings, while chapter five will deal with discussions, conclusions, and recommendations.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter delved into the literature on specific objectives of how organizational innovation and informational technology affects firm performance in Kenya. The chapter presents a review of literature on the concept of whether firm performance is improved through information technology and worker skills. The chapter also establishes whether organization innovation has improved firm performance and lastly, the chapter assess how innovative activities affect productivity in organizations. The chapter also provides major summaries based on specific objective discussions.

2.2 Organizational Innovation and Firm Performance

2.2.1 Innovation and Profitable Growth
In the ever-changing world, innovative technologies are the only mechanisms through which organizations can enhance profitable and sustainable competitive advantage that leads to high performance. More organizations are realizing the importance of innovative technologies in gaining competitive advantage. As the business environment becomes more dynamic, market competition becoming more intense. Organizations have therefore resorted to developing products that add value to customers by enhancing their use of innovative technologies. Innovation is revolves around exploring untapped user needs through use of technology so as to enhance performance, while at the same time satisfy user needs. As a result, managing innovation has become priority in the global business fraternity (Business Knowledge Resource, 2015).

Maital and Seshadri, (2007) alluded that, the ability to innovate is a vital core competency, one that you, as a leader, entrepreneur or manager must possess, in order to build growing, profitable businesses. At the same time, managing innovation is one of the most difficult processes that you will guide and shape. It is this combination of high risk and high return, mission critical importance and Everest size challenge that makes innovation and innovation management so challenging. Innovation changed the
organization and this change can be initiated anywhere in an organization, even at the lowest levels. Successful innovations are often a portfolio of new ideas, with some of them focused on the product and some focused on the value chain supporting the product innovation. That is why a pervasive spirit of innovation is so necessary and so valuable.

According to the Business Knowledge Resource, (2015) innovation is shaping corporate life by helping organizations adopt to various strategic options. Organizations that have embraced innovation have seen a reduction in cost of production while at the same time, enhanced revenue output. Organizations with rich technology maintain efficient operating systems as well as accelerated profit product lines, which spur not only growth and productivity, but also employee skills development. Organizations with innovative technologies have R&D departments that enables the establishment and testing of new technologies for organizational development. Organizations with wide array of innovative technologies have a competitive advantage that helps them penetrate undeveloped markets with ease. To this organizations, successful innovations occur when the organization is able to utilize technology to cater to clients’ needs as maximize value and returns on the same. Innovation can spur growth not only in products, but in employees’ creativity, organizational leadership, process and organizational culture. For innovation to be effective, it has to be approached from a systematic enterprise manner, rather than piecemeal approach (Business Knowledge Resource, 2015).

Business Knowledge Resource, (2015) further highlights that, all innovations are good, however, innovations that fails are as a result of a myriad of issues ranging from financing, execution, and roll-out. For innovation to work, failures in the system should be identified and screened out in the design phase in order to mitigate eventual failure of the technology. Early screening helps avoids unsuitable prototypes devouring scarce resources that might be needed in enhancing the good ones. Since technological innovation has eventual purpose in organizational performance, failures and wastages can hurt the organizational performance. Therefore, an effective and efficient framework should be established to guide the merging of technological innovation and organizational objectives

2.2.2 Global Trends and Their Implications and Innovation
The Management review of MIT, (2015) provides the salient reality of benefits experienced by organizations participating in innovation projects. This projects mostly tested the essence as to why most people and organizations would participate in innovation technologies even when they were not being paid. The review found out that most people satisfaction was derived from the emergent of a new technology that they would eventually be associated with. In addition, those who took part in the process indicated that it was much fun learning from the innovation activities, and generating new knowledge. To quantify the significance of innovation related motives and their relativity to output motives, studies by researchers in determining the range of motivations indicates that individuals who were creating and modifying consumer services and products to better fit eccentric needs on their without any payments from consumer-innovators.

Ideally, the quest to identify and sort out factors that not only lead creativity, but also and inventiveness, U.S. researchers began studies in creativity and innovation in the mid-1900s. Consequently, numerous research, particularly in the 1960s, highlighted the importance of innovation in creating resilient organizations. Some of the identify characteristics in innovative organizations included autonomy for team creativity, and budgets for such actions (Pearson, 1925). Equally, Pearson (1925), being a renowned business analyst and former CEO of PepsiCo, in his presentation at Harvard Business Review meeting argued that consistent innovation that had the capacity to meet client’s needs were consistently the winning innovations. He contended that firms must engage the following activities if they hope to invoke innovation and creativity: First, the stablishing and enhancing of a business atmosphere that values innovation and performance; second, creating a corporate culture and structure where technological innovation are top priority; Third, developing organizational strategy that encourages innovations for market needs; fourth, finding innovative ideas and implementing them; fifth, enhancing companies support for innovative ideas.

The propensity of businesses innovation must be exhibited within the teams of employees within the organizations. As had been indicated earlier, organizations in which employees enjoy autonomy in decision making, project management, and expenditure autonomy have a higher degree of innovations compared to organizations where employees don’t enjoy such privileges. Similarly, the ability for an organization to identify matching sets
of skills for specific jobs sets that require high innovative skills contribute to ability of the organizations to successfully generate innovative ideas (Pearson, 1925).

2.2.3 Steps That Lead to Profitable Innovation

Holly Green, (2010) a renowned speaker and experienced business leader highlights five basic steps organizations should follow when developing new products and services that can lead to organization performance and profitability. The first step is disruptive vs. incremental innovation; In this step, the ethos of incremental innovation focuses on developing improvements to existing products and services in a small manner. The main concern is to add a few new whistles and bells, but not to significantly alter the product as it stands. Disruptive innovation on the other hand creates new products by completely disrupting the existing mechanisms for solving existing client’s problems by offering new ways of solving the problem. Fundamentally, disruptive innovation alters the customer’s perception of value. As a result, initiate a literal turn desire of the product in market. Often, disruptive innovation are developed to solve problems clients’ didn’t know they had or problems that weren’t clearly articulated.

Second step, is getting customers involved: in this step, getting clients involved in the creative/idea design phase of organizational innovation process may take longer and cost more. Involving clients increases the chance that the product you create will be successful as it keeps the organization in touch with the issues and problems their clients need to be solved. Most oft than not, clients’ represent a bountiful source of new innovative product ideas, and the process of engaging them is likely to produce other benefits like stronger working relationships and deeper loyalty as well.

The third step is managing the process; this stage deals with effective management of innovation process and systematic models that represent the objectives of the business. In this section, customer values and ideas, and desires must be identified, articulated, formulated into the design. Management teams have to be trained on how to handle particularly disruptive innovations that tend to threaten status quo.

The fourth step involves building a culture that supports innovation; to succeed, innovative technologies have to become an integral part of business evolution. Innovative culture must be on-going process in which you never stop looking
for new and better ways to add value. And that requires a culture that supports innovation for the long-term. Show employees how and where they fit into the innovation process. Ask for their ideas on how to improve products, processes and workflow, and keep the lines of communication open up and down the organization. Develop teams with diverse skills and analytical styles, and learn to get comfortable with contention, debate, and tension. Give people continuous feedback on their performance, and reward them (both publicly and privately) for their innovation efforts. Most of all, demonstrate your commitment to innovation through your actions as well as your words.

The fifth step involves looking outside the box; for most companies, innovation remains an internal process. Ideas are generated, developed, and brought to market using the talents, skills and resources that reside within the organization. In a world that doesn’t change very quickly, this approach will generally produce satisfactory results. But the world moves a lot faster these days, and relying solely on internally generated ideas may mean that faster, more agile competitors will beat you to market with new products or services. For this reason, forward-looking companies have begun experimenting with innovation models that combine internal and external resources. The next generation of market leaders will do more than just brainstorm their way to success. They will aim high, get customers involved, establish the right culture, and look beyond their borders for new product and service ideas. Most of all, they will manage the innovation process as if their very survival and sustainability of the company depends on it.

2.3.4 Commonly Occurring Stimuli in Innovation

Kuhn, (1987) in his research on innovation, identified five aspects of commonly occurring innovation stimuli. This includes; autonomy for duties and tasks execution; salient skills in project management, and the supervisor's ability to identify and mentor skilful employees; ability to galvanize sufficient resources and allocate them adequately; top management buy-in; affinity for risk taking and a corporate culture that likes to experiment with new things. Equally, recognition and feedback, create a climate conducive enough to create the dialogue for innovative ideas. Of significance to note, personality types of workers do promote and advance innovation in organizations. According to Kuhn, (1987), include risk takers, are highly ranked in innovative ideas compared to caretakers, and undertakers. However, each of the personality types have
significant part to play in organizational creative process. Most organizations usually lean toward one personality type at the expense of the others, but it is recommended that firms exhibit traits for all three categories (Rouse, 2012).

According to Rouse, (2012), risk takers are most often the innovators within organizations. The uniqueness of risk takers is that they possess creative ability that distinguishes them from the rest of other personalities. For instance, caretakers are those who wait for the risk takers to develop an idea, sell it, and make it safe enough before they get on board. They rarely see opportunities in threats, so they don’t try. On the other hand, undertakers are a group of employees, who are extremely resistant to any change and its related persuasions. They can bury projects or sabotage innovation just to maintain the status quo (Henry, 2006).

Kotler and Armstrong, (1996) gave an example of 3M company. This company introduced new products within the past years and made big profits. Its legendary emphasis on innovation consistently made 3M one of Americas most admired company. 3M knew that it must try on many ideas on which one must hit a big jackpot. It accepted blunders and dead ends as normal part of creativity and innovation. In fact its philosophy seemed to be “if you aren’t making mistakes, you probably aren’t doing anything.” But it turns out, “blunders” have turned into some of 3M’s most successful products. Innovation can be very risky, leading a company to anxiously learn how to improve their odds of innovation success. One way to identify successful products or services is to find out what they have in common e.g. high quality, new features, higher value in use etc. The other is that a company should carefully define and assess the target market, product/service requirements and benefits before proceeding. All in all, to create successful new products or services a company must understand its consumers, markets and competitors and develop products/services that deliver superior value to customers.

Innovation in the telecommunication industry has been breath-taking; there is every reason to believe that in the next ten years there will be major changes (Lyons Chatman & Joyce, 2007). This is reinforced by the fact that new technological advancements are being made every day and it continues to stir up innovation no matter what the sector. According to Schulz, (2006) new technologies are the driving force behind the telecommunication innovation; however, he acknowledges that it’s more difficult in the
manufacturing industry.

2.3 Innovation Activities and Firm Productivity

2.3.1 Innovation and Organization Success

The Boston Consulting Group (2014), asked nearly a thousand senior executives to rank companies by their innovativeness. The top 20 companies almost always lead their respective industries in return on equity, total return to investors and profit margins. The link between successful innovation and financial gain is almost a tautology (a self-evident truth). Innovative products that achieve market place success generally command higher process and higher financial advantage or benefit than competing products. Why innovate, someone would ask? The answer is to achieve high, sustained growth and profits. It is an empirical fact that companies that excel at innovation are also far more profitable than companies that don’t. Innovation is one of the best ways to build market share. And in turn, market share is directly related to Return on Investment. Successful innovation involves innovate, deploy, scale up and adapt locally (Maital & Seshadri, 2007).

For economists and corporate executives, developing new technologies and innovation is not a walk in the park. Return on their investments is their chief concern They check whether they will earn enough profit from using or selling X innovation to justify the money and time required to develop it. Innovation centrally involves problem solving. In other situations, problem solving is known to be valued by participants for the process itself. That is, people often engage in problem solving for the value of participating in the process independent of any value derived from the solution found (Management review of MIT, 2015).

A critical factor in introducing innovation into any organization is an awareness of the need to innovate and understand the benefits or success innovation can bring. Does the client want to innovate in order to develop their business or as a business advisor have you identified the need to innovate? It is important to spend time with your client to gain an understanding of their motivation for innovating and ensure that they are clear as to the potential benefits. SMEs often don’t see a clear link between innovation management and profitable growth. It is often worth using appropriate case studies of similar companies or industrial sectors to help put ‘innovation’ into context (Econ IT2, 2015).
The Business Knowledge Resource, (2015) allude that sometimes innovators face problems and challenges mainly in the areas of financial assistance and marketing of their innovation. In other words, it involves: securing the right kind of finance which is key to delivering innovation. Prevailing asymmetry between inventors requires to be bridged. Financing systems for backing up early-stage innovations with risk capital are required. Also, provisions for exiting from non-profitable innovations also need to be made. Hence:-

- Innovations created at the expense of considerable investment of resources, demand a matching Intellectual Property Rights (IPR) regime.
- The legal framework for protecting IPR is in place but the infrastructure for capturing and protecting IPR is still evolving in India.
- New approaches, programmes and policies are essential for unleashing India’s innovation potential.
- Competitiveness innovation cluster has emerged as a successful global concept, in which academia, research and industry partner under viable and equitable pattern, are the way forward.

2.3.2 Innovation and its Impact on Organization Sustainability

Econ IT2, (2015) states that, as a business adviser it is important to be aware of the impact of sustainability, benefits and risks in order to be better prepared with implementation of innovative solutions. Some benefits of innovation involve: Profit/Margins increase, product diversification, product differentiation, securing a market strategic position, increase in competitive advantage etc. while some risks to overcome include: the product not being accepted by the market, high investments that are not paid back during the product life cycle, excessive concentration of resources and attention on the new product at the expense of quality and marketing of the existing products, Company being overtaken by partners when the innovation is done in partnership / risk of transfer of know-how, and company becoming too dependent on the new product.

Every business has the same goal: to obtain financial advantage or benefit. If a business fails to do this it will have to shrink. If it fails for too long, it will die. This means that any
business action, such as innovation, that a business adopts of its own will must contribute directly or indirectly towards profitability. If it does the opposite, it is less than useless. It is dangerous to the continued existence of the company, and this is painful. Nevertheless, in our enthusiasm about innovation or any business trend, it is easy to forget that it is not about the trend. It is not about the activity. In business, it is about profitability and company sustainability (Baumgartner, 2013).

In theory, of course, business innovation is good for sustainability of a company and high financial yields or gains. It is the creation of new products that your customers want to buy thereby increasing income. It is the improvement of operational efficiency thereby reducing costs. It is the invention of new business models thereby increasing revenue streams. It is the creation of new marketing communications plans that drive new customers to buy your products again, increasing income (Baumgartner, 2013).

According to MIT, (2015) innovation products and services have the ability to create organization sustainability and competitive advantage. As a result, organizations that are able to create massive innovative products and services will always stay ahead of the rest in profitability, development, market share and performance. These argument is also based on the fact that innovation related benefits are distinct from any other benefits associated with normal products.

2.3.3 Innovation, Company Growth and Reputation

According to Henry, (2006) innovation is allowing companies to grow faster and have a richer product mix. The innovation in the American economy, achieved median profit margin growth of 3.4% a year since 1995, compared with 0.4% for the median standard and poor global 1200 company. Innovation does really deliver as can be evidenced by the fact that more than half of the top 25 with histories as public companies scored big, with better profit margins and higher stock process over the past decade. To add on to this thought Dundon, (2006) posits that, whatever got you to where you are today may not get you through the next few years, since we are all facing challenging pressures with the need for faster response time, volume growth, cost reduction, new products and services, stronger differentiation, more creative structures, and increased profitability. We need to take an innovate approach to our work. This rings especially true for mobile service
providers. Although Steel and Murray, (2004) recognize that innovation is key to delivering a competitive edge, they caution that it should be focused relating to the needs and objectives of the organization if sales growth and profits are to be improved as a result.

Any firm seeking to attain superior performance by use of innovation has to learn how to manage it. In this regard Lyon, Chatman and Joyce, (2007) state that whether manufacturing, technology or service leadership is fundamentally about managing and steering change. They explain that a systematic organizational approach to innovation in service goes beyond the core elements of leading a specific change. It anchors the competing innovation vision as a process and as a culture. Frame and White (2009) states that conditions that affect the streaming of innovation include; the market power of firms, the size of enterprises, technological and product market demand conditions. Philippas and Siriopoulos, (2009) contend that various market imperfections lead to financial innovation growth and force economic organizations to discover and develop effective innovative processes in order to meet market requirements.

Business Knowledge Resource, (2015) state that, firms which innovate tend to survive and grow to a greater extent. The most successful individuals, managers and team leaders in latest business world are the ones who are not only innovative in their own work, but who encourage and assist others to be innovative in every aspect of their work. Some of the key innovation areas are: product development and improvement; manufacturing processes; creating entirely new set of products; etc. In area of supply chain management, innovations help in making the supply chain more responsive, flexible and efficient. Supply chain innovation can be used to reduce costs, offer better assortment of customer centric products, decreasing time to market and driving growth.

Trott, (1998) state that the reputation of a company for innovation takes many years to develop. It is also strongly linked to overall performance. However, within a selection of successful companies there will inevitably be some that are regarded as more innovative than others. This may be due to several factors, including recent product launches; recent successful programmes of research; high levels of expenditure on R&D etc. Depending on topical media events at the time, some companies are able to achieve wide exposure of
new products or new research. Such exposure is often dependent on effective publicity but also serendipity.

2.3.4 Organization Innovative Growth and its Impact on Employees

Innovation solutions, (2013) states that in most organizations, employees take pride in their employer, share in its vision and genuinely wish it to prosper. At the same time, employees want to maximize their benefits via not only salary, but by taking on interesting responsibilities and receiving promotions. To what extent does an employee work and innovate to benefit the organization and to what extent does she work and innovate to benefit herself? Senior managers would like to believe that employees are a team of selfless workers who in exchange for a monthly wage and odd benefits work exclusively to the benefit of the organization. As the organization grows, the employee receives promotions, salary increases and additional benefits that encourage her to continue serving the company 100%.

Wilmshurst, (1995) stated that developing new products/services and launching them in the market place can be difficult, costly and even dangerous to a business. He then asks, so why do it? Also why not be content with the profit from existing products/services, concentrating effort on expanding sales of these products and finding new market for them? One reason which strongly comes out is that it’s important to seize new opportunities as they emerge so as to increase profit margins and to manage financial, social and environmental risks, obligations and opportunities and uphold a company’s sustainability. He further alludes that acquiring new products or services must meet certain criteria e.g. have adequate demand, make financial sense, fit into existing product/service etc.

The socialist cynic might argue that employees work solely to benefit themselves. Their interest is not in the organization’s prosperity, but in their salary and benefits. The truth, of course, falls somewhere in the middle. In most organizations, employees take pride in their employer, share in its vision and genuinely wish it to prosper. Employees want to fully maximize their benefits by taking on interesting responsibilities and acting in ways that benefit their progression up the organizational ladder (Innovation solutions, 2013).
Employees are a much under-estimated source of innovation. But companies’ today are devising ways of encouraging employee innovation. They encouraged the use of suggestion schemes that motivate and reward employees who come up with ideas for new products and services or devise improvements in production processes (Smith, 2010).

2.4 Firm Performance Improved Through IT and Worker Skills
2.4.1 IT and Firm Performance

Globalization has brought with it many challenges and forces during the last decade. The impact of information and communication technology on economic growth and firm performance has elicited substantial attention over the past few years (OECD, 2004). Evidence from empirical studies suggests that innovation envisaged in organizational changes raises economic performance of firms through their mutually reinforcing relationship with technology. IT for instance enables firms to bring in significant organisational changes in the areas of re-engineering, decentralisation, flexible work arrangements and outsourcing (OECD, 2002).

Multiple theoretical and empirical evidence suggests that IT offers benefits for a wide range of business processes and improves managing information and knowledge within the firm. This subsequently leads to better performance. In operations, efficiency increases an organizations ability to enhance its performance. This is embedded in the fact that operational costs are substantially reduced by through innovative technologies (Tachiki et al., 2004; OECD, 2003, 2004). In addition, IT based communication and the internet can also improve external communication, reducing inefficiencies resulting from lack of co-ordination between firms, and increasing the speed and reliability of information processing and transfer. In a broad sense, IT lowers transaction costs and costs due to coordination, which maximizes the value of the transactions (OECD, 2004).

Authors such as Lichtenberg, (1995) give empirical indication of the positive impact of IT on a variety of measures of firm performance. In any case, the notion that IT per se fails to generate sustainable competitive advantage has received important support in substantial researches Powell and Dent-Micallef (1997), giving rise to what has become known as the “strategic necessity hypothesis”. According to the Resource Based View by
Peteraf (1993), a resource must have certain characteristics to be fit as strategic. Specifically, in order to concurrently create, maintain and sustain competitive advantage over a period of time, a resource must be valuable, scarce and unable to imitate with other elements or resources of the firm.

Globalization has made it possible for technology to spread widely across the globe hence almost every organization can have access to the benefits of I.T. For most organizations, I.T creates team synergies, efficiencies, and effective work deliveries that would otherwise not be possible. The association between IT and a wide variety of complementary factors has recently been re-assessed in empirical research; Arvanitis and Loukis, 2009; Aral and Weill (2007), with a consensus emerging that, in order for IT to be properly utilised, it must be used in collaboration with complementary resources such as organisational structure, human resources or organisational resources (Bresnahan et al., 2002; Peppard & Ward, 2004; Aral et al., 2010).

Improved economic performance of firms has been as a result of organizational changes having a mutually-reinforcing relationship with IT as backed by empirical evidence. (OECD, 2002) argues that IT is key to facilitating effective and situational organisational approaches, from lean production to teamwork to customer relations. IT enables firms to bring into play significant organisational changes in the areas of re-engineering, decentralisation, flexible work arrangements and outsourcing. Firms are able to produce with greater flexibility and shortened product cycles to satisfy shifting consumer preferences. Premised on facts, organisational innovation and IT may be regarded as complementary factors. To be successful, firms typically need to adopt IT as part of a system of mutually reinforcing organizational approaches (Milgrom & Roberts, 1990).

Some studies argue that an explanation for the so-called productivity paradox can be attributed to an insufficient response of organizational innovation to adapt to changing business environment, to make better use of knowledge, technology and human resources, to respond to new demands from suppliers and customers, and to use ICT effectively (OECD, 2002; Sharpe, 1999). Other studies propose that, the extent of firm-level organizational change may be the difference between “old” and “new economy” (OECD, 2002).
2.4.2 IT and Innovation Today

Significant positive changes in various aspects of an organization have been attributed to information technology that has been used complementarily to change the way business is conducted. Using computer investment as a novel example, the kind of complementarities observed there present a number of implications for understanding the value of computer investment (Brynjolfsson & Hitt, 2000). To achieve significant growth, firms typically need to adopt technology as part of a cluster of mutually reinforcing organizational changes (Milgrom & Roberts, 1990). Perpetually increasing, either by making technological investments without organizational change, or only partially implementing some organizational changes, can bring in significant productivity losses as any benefits of technological innovations are more than outweighed by negative interactions with existing organizational practices (Brynjolfsson, Renshaw & Van-Alstyne, 1997).

Optimal levels of performance therefore require a concurrent re-enforcement from both technology and innovative organization practices which this study seeks to find out. The basic economic role of technology becomes clearer if one thinks about organizations and markets as information processors (Galbraith, 1977). Most of our economic institutions emerged in a time of relatively high communications cost and constrained computational capability. Information technology has the broad strength to reduce the costs of coordination, communications, and information processing. Thus, it is not surprising that the massive reduction in computing and communications costs has brought in a substantial restructuring of economies (Brynjolfsson et al., 2000).

However, as indicated according to the literature provided in the previous sections, I.T massively enhances organizational performance. For instance in the early 1980s and 1990s the advantages of information technologies were justified by proponents who later obtained contradictory empirical evidence, especially weak or with no link between IT and firm performance (Brynjolfsson, 1993; Davenport, 1994). Through substantial empirical evidence the productivity paradox was birthed which was well summarized by Nobel Prize Robert Solow (1987), who stated that computer age can be seen everywhere in productivity statistics.
Evidence from a number of Canadian studies finds substantial evidence of a relationship between the use of performance and IT technologies of firms. Baldwin and Sabourin (2002) link performance of manufacturing plants to technological innovations. They find that productivity growth is experienced when there is more use of advanced technologies where communications technology is associated with the best performance. However, plants that combine IT use with other advanced technologies tend to do better than those using only one or two isolated technologies.

Brynjolfsson *et al.*, (1996) argues in as much as technology has its benefits, mismanagement of technology has disadvantages to organizations. Some of this include security lapses that can be cause by information technology, loss of data, and loss of human touch in production. The challenge for most organizations is harnessing technology in a way that enhances organizational objectives while at the same time reducing the risks inherent within it (Dewan & Min, 1997).

According to firm-level theories of technical change, a firm’s innovativeness is an outcome of increases in its knowledge base (Pakes & Griliches, 1984; Henderson & Cockburn, 1996). Subsequently, a firm’s growth can be realized through a series of knowledge enhancing technological investments by the company over time, firms can also indirectly grow their productivity through acquiring or ‘grafting’ of external knowledge bases. However these knowledge bases ought to be in line with the companies practices to play a facilitative role. The overarching weakness that most studies seem not to address is the multiplicity of practices that collectively work to achieve effective firm performance and increased profits. A technology that increases the effectiveness and efficiency in performance practices of such kind of a firm aggregately has less been delved into (Huber, 1991).

Some studies in the retail industry of US found that IT alone has not produced sustainable performance advantages Powell & Dent-Micallef (1997). This study found that organizations that utilized optimum technologies enhanced competitive advantage compared to those that did not. Bresnahan *et al.* (2002) on the other hand contends that there exists a positive between I.T and organizational performance. Black and Lynch
(2001), collaborates such correlation in their studies on technology and organizational performance.

### 2.4.3 Worker Skills and Firm Performance

Empirical studies linking skills to organisational outcomes tends to resort mostly to evidence which uses qualifications or educational attainment as a proxy for skill because it is very difficult to measure or monitor skills per se. However, there is substantial significant evidence linking educational attainment to organisational performance. For instance, the most productive manufacturing organisations tend to have a more highly educated workforce than the least productive—equivalent on average, to an extra qualification level (Haskel & Hawkes, 2003). This kind of linkage has also been found in the US where it has been postulated that the equivalent of an extra year of schooling raised productivity by between 4.9 and 8.5 per cent in the manufacturing sector and between 5.9 and 12.7 per cent in services (Lynch & Black, 1995).

A series of influential and dynamic research projects have also evidently indicated a link between worker skills and business productivity. A number of well-known ‘matched plant’ studies (Keep et al., 2002) by the National Institute for Economic and Social Research (NIESR) considered the long term influence of workforce skills and development on firm performance alongside a range of other factors such as investment in capital equipment and maintenance practices for matched comparator establishments. Innovation and more sophisticated production processes have been associated and supported by higher skill (qualification) as intimated by Haskel & Hawkes (2003). These high skills have likewise been associated with the production of higher quality products. Green et al. (2003) also found a strong relationship between different levels of UK workforce skills and the sophistication of products.

Hackman and Lawler, (2012) alluded to the fact that job characteristic is an approach to job design which in itself is creation of tasks and work settings for specific tools. A plausible design is often the one that meets organizational requirements for high performance. Tracing back to history, up until 1960, the prevailing attitude was that jobs should be simplified in order to maximize production for optimal profits. However, in the wake of technological advancement, the benefits of simplification dissipated due to
worker dissatisfaction. In fact technology tends to bolster worker skills for high performance. The paradox that still exists particularly in developing countries is a seamless link between technology and worker skills which has accounted for the failure of most organizations in meeting up to their expected targets.

Empirical analysis of organizational innovation have shown the interaction between work organisation, skills and technology (Toner, 2009). Concepts such as job rotation, incentives to participate actively in innovation, and measures to monitor, evaluate, capture and diffuse improvements across work teams, are often used to coin new organisational practices and have been tested in a number of surveys (e.g. the European Working Conditions Survey).

2.4.4 Innovation and Worker Personality Types

Kuhn, (1987) argues that business innovation benefits are enhanced by a multiplicity of personality types and organizational cultures that can champion the cause for innovation processes within organizations. In innovation processes the idea generator usually hinges on personality types. Someone who is risk averse and can seek ideas, and champion them without fear of the inherent threats. Idea generators most often spur the generation of new technologies within organizations. Most often, innovative minds of idea generators enable them to work alone so as to think in abstraction (Kuhn, 1987). Champions, on the other hand, sell the ideas that are generated within the organization are sold by champions, their work is to ensure resources have been allocated to market the innovative ideas. (Kuhn, 1987).

Project leaders advance the third role in the process. They coordinate and organize activities such as leading teams, organizing projects, and ensuring that ideas are aligned resources and organizational needs. The effectiveness of the project leaders are a result of fostering group cohesion for performance. (Kuhn, 1987). Gatekeepers, on the other hand, are the external agents that connect organizational innovations to the outside world. Gatekeepers most often, have a wide array of networks that help to sieve and refine the ideas of an organization. Gate keepers are the masters of communications, and coordination within an organization. The gatekeeper role demonstrates the need for all personality
types within an organization. In as much as they are non-innovative personality, they advance the cause of organizational innovations (Kuhn, 1987).

Kuhn, (1987) contends that the coaching role is a major role in organizational innovation process. This involves encouraging and enhancing team members, protecting ideas, securing top-level management support among others. Personality types who fill the coaching role are great listeners and less opinionated compared to idea generators and the champions.

According to a review from the innovation management, (2013) if your firm is to be an innovative, then you need to maximize the extent to which your employees are working to the organization’s benefit rather than to their own benefit. While this may sound rather like programming people to become mindless company cogs whose only interest is the organization’s growth, the opposite is actually true. If employees believe in their organization and strive to help the organization achieve its corporate goals, they are likely to become more satisfied employees who feel they are an integral part of the organization and that they are appreciated by the organization. Thus, you need to communicate goals across the organization. Managers must work with their teams to ensure each member knows what her bit is. Sharing goals is the single most important thing you can do to get employees working for the organization’s benefit.

2.5 Chapter Summary
The chapter presented the literature and recent studies in the areas of organization innovation and information technology in firm performance. Starting with a review of IT, worker skills, innovation in firm performance, and finally reviewing a firm’s productivity through innovation activities. The following chapter three captures the research methodology, research design, population, sample sizes, and procedures that were used to carry out the study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the broad spectrum of the methodology used in carrying out this research study. The pertinent components of this chapter consist of research design, population, and sampling design. The last part of this chapter will deal with the issues of data collection methods, procedures and data analysis. This chapter outlines the overall research methodology for this study. The research design discusses the population, and the sample size used in the study, and analyses the data collection method used. This chapter further outlines the research procedures applied in the study as well as data analysis and presentation. The chapter concludes with a summary.

3.2 Research Design

According to Hyusamen, (1993) research design is a detailed plan of how a research study is going to be conducted starting from data collection to data analysis of the research. This study employed a descriptive research approach, which is defined by Churchill and Brown, (2007) as typically concerned with determining the frequency with which something occurs or the relationship between variables. Similar views are expressed by Cooper and Schindler, (2001) that a descriptive study investigates variables by answering who, what, where, when and how questions. A survey in form of standardized questions in a questionnaire was used to collect data. The subjects in the sample in the survey were questioned by means of a standardized procedure for the answers to be compared and analysed statistically (Welman & Krugler, 2001). In the study, the independent variables were: organizational innovation and information technology, and innovation activities, awhile the dependent variable was firm performance.
3.3 Population and Sampling Design

3.3.1 Target Population

According to David, (2008) a population is a group of people or items that researchers take the opportunity to study their characteristics of behaviour. A population also refers, to the collection of elements about which inferences are made. It’s a well-defined or specified set of people, group of things, households, firms, services, elements or events which are being investigated (Cooper & Schinder, 2008). The population of focus in this research was the employees of Safaricom, Safaricom Customers and Safaricom Agents. The target population totals one hundred and twenty employees.

Table 3.1 Population Distribution

<table>
<thead>
<tr>
<th>Classification</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safaricom Employees</td>
<td>20</td>
<td>16.7</td>
</tr>
<tr>
<td>Safaricom Customers</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>Safaricom Agents</td>
<td>40</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>120</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

3.3.2 Sampling Design

Strydom and De Vos, (1998) noted that sampling is a selection of individuals from the population in such a manner that every individual in the population has an equal chance of being selected into the sample population. A sample design is a technique a researcher uses in getting a sample from the population to ensure precision and accuracy of the information (Crosby, 2001). Sampling is concerned with the selection of a subset of individuals from within a population to estimate characteristics of the whole population (Mugenda, 2003).

3.3.2.1 Sampling Frame

A sample frame is a list that includes every member of the population from which a sample is to be taken (Bienstock, 2006). Cooper and Schindler, (2008) allude that, a sample frame is a list of elements from which the sample is actually drawn and is closely related to the population. Bienstock, (2006) posits that, the purpose of a sampling frame is
to provide a means for choosing the particular members of the target population that are to be studied in the research process. It reduces the length of time needed to complete the study, it cuts costs, it is manageable, and is almost a mirror of the sample population. For this study, the sample frame was obtained from Safaricom human resources.

### 3.3.2.2 Sampling Technique

According to Collins and Hussey, (2006) a sampling technique is the method of selecting elements from the population that represent the population. Cooper and Schindler, (2003) state that, a sampling technique is a scientific method of selecting a sample to be studied from a population. Purposing sampling technique was used for this study. Purposing sampling was used since it was the best technique at identifying only those respondents that have valuable information the study was trying to collect. In addition, the sampling technique ensured the selection of respondents with the requisite information to address the specific research questions thereby enhancing the credibility and reliability of the findings of this study (Cooper & Schindler, 2003).

### 3.3.2.3 Sampling Size

The sample size is a smaller set of the larger population (Cooper & Schindler, 2006). Determining a sample size is a very important issue for collecting accurate result within a quantitative survey design. Mugenda and Mugenda (2003) argue that the sample must be carefully selected to be representative of the population and the need for the research to ensure that the subdivisions entailed in the analysis are accurately catered for.

**Table 3.2 Sample Size Distribution**

<table>
<thead>
<tr>
<th>Classification</th>
<th>No in Population</th>
<th>Target No. in Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safaricom Employees</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Safaricom Customers</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Safaricom Agents</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>120</strong></td>
</tr>
</tbody>
</table>
3.4 Data Collection Methods

The data collection methods are the optional techniques the researchers use to obtain data that is relevant for analysis. It involves gathering of facts presented to the researcher from the study environment (Cooper & Schindler, 2003).

Primary data collection method using questionnaires was employed in this study. Questionnaires are the most effective data collection toll for survey type of studies. The questionnaire had both open ended and closed ended questions. The respondents were expected to provide answers to the open ended questions. In the case of closed ended questions, a five-point Likert-type scale and rankings was used ranging from strongly agree to strongly disagree. Open ended questions provide a greater uniformity of responses and were more easily processed than open ended ones (Babbie, 2008).

The questionnaire did not request for any personal information such as respondent name or contact details. The questionnaire was split into two sections. The initial section asked questions concerning the general respondent information. The second section looked at the effects of organizational innovation and technology on firm performance. All the questions in the questionnaire reflected the appropriate levels of measurement for further statistical analysis.

3.5 Research Procedures

Pilot questionnaire was prepared and administered to ensure the objectivity and clarity of the questionnaire. This pre-tested the questionnaire and any suggestions for improvement encountered during the piloting process were incorporated in the final questionnaire. Final questionnaires were distributed to the respondents via emails, and telephone interviews. This enhanced the speed of data collection. To improve the response rate, there was a cover letter explaining the reasons for the research, why the research was important, why the recipient was selected and a guarantee of the respondents’ confidentiality was provided. The questionnaire had clear instructions and an attractive layout. Each completed questionnaire was treated as a unique case and a sequential number given to each. As the research sent out the questionnaires in soft copies using her email address, it was very easy for the respondents t ask for any clarifications and prompt responses were availed.
3.6 Data Analysis Method

Data analysis is a process of transforming a mass of raw data into tables, charts, with frequency distribution and percentages, which are a vital part of making sense of the data (Crosby, 2001). The collected data was first checked for completeness and accuracy.

The collected data was edited and entered into the Statistical Package for the Social Sciences (SPSS) software to enable the carrying out of the analysis. Data analysis was conducted using descriptive statistics. Descriptive analysis can be described as a process that involves transforming a mass of raw data into tables, charts, with frequency distribution and percentages which are a vital part of making sense of the data (Denscombe, 1998). In this study, frequency and percentages were used for analysing demographic profile of the participants, organizational innovation, information technology and firm performance. In addition, the data for each variable was described using means and standard deviation.

3.7 Chapter Summary

This chapter focused on the methodology that was used in conducting the study. First, the research design that was applied was descriptive in nature. The population, the sample frame, the sample size and the sampling technique used was specified. Data collection used was structured questionnaires which were mailed to the respondents to complete. Data was analysed by descriptive statistics and presented in the form of tables and figures using SPSS. The next chapter discusses research findings in relation to the research questions.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter discusses the results of the data analyzed from the questionnaires. The chapter begins by presenting descriptive analysis of the general information from the respondents. The rest of the chapter is thematically organized research questions. The first section presents the findings on organizational innovations and organizational performance. The second section analyzes innovation activities and performance, while the third section analyses the findings on I.T, worker skills and organizational performance. These findings are represented in form of distribution tables, means, charts, and graphs, with the summary of major findings made at the end of the chapter.

4.1.1 Response Rate

Kotler (1997) defines response rate as the extent to which the final set of data includes all sample members and is calculated from the number of people with whom interviews are completed and divided by the total number of people in the entire sample, including those who refused to participate and those who were unavailable. This research had a sample size of 120 respondents. All the 120 questionnaires issued were returned duly filled giving a response rate of 100%.

4.2 Demographic Information

The demographic data sort from the respondents included mobile user’s age, gender, marital status, years of work at Safaricom, and how often Safaricom launches new products and services. The following are some of the results that were obtained with regards to demographic information

4.2.1 Classification of Respondent by Gender

The distribution of mobile users’ respondents by gender is shown in table 4.1.
The chart indicates that male respondents were 53%, while female respondents were 47%. The study therefore indicates that the majority of respondents were male, an observation of the proportions indicates both genders were adequately represented in the study.

4.2.2 Classification of Respondent by Age Group

The distribution of respondents was surveyed by age group is shown in figure 4.2 below.
According to the findings, respondents aged 21-to – 30 years were the highest with 34.2%, followed by less than 20 years at 24.2%, then 31-to- 40 years at 17.5%, followed by 41- to – 50 years at 12.5%. Respondents over 51 years were least at 11.7%.

4.2.3 Classification of Respondent by Marital Status

Demographic data also sort to document the marital status of the respondents. The findings are shown in figure 4.3 below.

![Marital Status Pie Chart]

Figure 4.3: Marital Status

According to the findings, the highest group of respondents were single people at 48%, followed by married 28%, separated at 15% and finally divorced at 9%

4.2.4 Classification by Number of Year at Safaricom

Respondents were asked to indicate the number of years they had worked at Safaricom. The findings are shown in figure 4.4 below.
According to the findings, respondents who had worked 2 to 5 years at Safaricom were the highest at 45%, followed by those who had worked 6-to-10 years at 25.8%, then those with less than 1 year at 20%, while those with 11–to- 15 years were at 5.8%. The lowest number of respondents indicated they had worked over 16 years at 3.3%.

4.2.5 Period for Launching New Products and Services

Similarly, respondents were asked to indicate how long Safaricom take to launch new products. The findings are indicated in figure 4.5 below.
According to the respondents, 55% indicated half yearly, 38.3% indicated quarterly, 5% indicated 5%, while 0.8% indicated 2 and 3 years respectively.

4.3 Organizational Performance

The study sought to establish respondents understanding and rating or organizational performance. Several questions were that represented organizational performance in the context of Safaricom were asked to respondents. Table 4.1 below indicates the findings with regards to organizational performance.

Table 4.1: Organizational Performance

<table>
<thead>
<tr>
<th>Distribution</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-Shwari is best Money saving platform</td>
<td>120</td>
<td>4.52</td>
<td>.778</td>
</tr>
<tr>
<td>Internet technologies like Safaricom</td>
<td>120</td>
<td>4.45</td>
<td>.977</td>
</tr>
<tr>
<td>Modem have contributed to Safaricom Performance</td>
<td>120</td>
<td>4.54</td>
<td>.839</td>
</tr>
<tr>
<td>Data bundles, 3-G, M-Pesa &amp; cloud Technologies have enhanced Safaricom's</td>
<td>120</td>
<td>4.33</td>
<td>.901</td>
</tr>
<tr>
<td>Performance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information technology has led to innovations in Telecommunications industry</td>
<td>120</td>
<td>4.33</td>
<td>.901</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the findings, the respondents indicated that Data bundles, 3-G Safaricom services, M-Pesa services & cloud Technologies had enhanced Safaricom's Performance with a mean of 4.54 and SD of 0.839, followed by M-Shwari platforms with mean of 4.52 and SD of 0.778, then Modem data services with mean of 4.45 and SD of 0.997, and finally information technological innovations performance with a mean of 4.33 and SD of 0.901.

4.4 Organizational Innovation and Organizational Performance

The findings on Innovation and organizational performance are presented in the sections below:

4.4.1 Innovation and Profitable Growth
Innovation and profitable growth were examined to determine their effect on organizational performance. Respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in chart below:

Figure 4.6: Innovation and Competitive Advantage

When asked whether innovation contributed to competitive advantage, and organizational performance, 53.3% of the respondents said that they strongly agreed, 31.7% said that they agreed, while 7.5% said that they had no opinion. 5.8% of the respondents said that they disagreed that innovation causes competitive advantage that leads to organizational performance, and 1.7% said that they strongly disagreed.
Respondents were asked their views concerning M-Pesa and M-Shwari’s contribution to organizational profitable growth. 57.5% indicted that they agreed, 29.2% indicted that they strongly agreed while 8.3% indicted that they had no opinion on whether M-Pesa and M-Shwari contributes to profitable growth. 3.3% indicted that they disagreed while 1.7% indicted that they strongly disagreed.

**Figure 4.7: M-Pesa and M-Shwari Offers Profitable Growth**

**Figure 4.8: M-Shwari is Best Money Saving Platform**
On whether M-Shwari is the best money saving platform that has led to organizational growth, 66% of respondents felt that they strongly agreed, and 22% felt that they agreed, while 10% felt that they had no opinion. 1% of respondents felt that they strongly disagreed, and a further 1% felt that they disagreed that M-Shwari is the best money saving platform that enhances organizational performance.

4.4.2 Global Trends and Implications on Innovation

Global trends and implications on innovation were examined to determine their effect on organizational performance. Respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.2 below:

<table>
<thead>
<tr>
<th>Global Trends</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global trends have influenced Safaricom Innovations</td>
<td>120</td>
<td>4.65</td>
<td>.560</td>
</tr>
<tr>
<td>Customer demands have necessitated Innovation at Safaricom</td>
<td>120</td>
<td>4.74</td>
<td>.527</td>
</tr>
<tr>
<td>Imitating a global innovation is easier than developing new product</td>
<td>120</td>
<td>4.59</td>
<td>.587</td>
</tr>
</tbody>
</table>

According to the findings, respondents indicated that Customer demands have necessitated Innovation at Safaricom with a mean of 4.74 and SD of 0.527 followed by Global trends have influenced Safaricom Innovations with a mean of 4.65 and SD, while Imitating global innovations for new products was last with a mean of 4.59 and SD of 0.587

4.4.3 Steps That Lead to Profitable Innovation

Steps that lead to profitable innovations were examined to determine their effect on organizational performance. Respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.3 below;
Respondent’s views on steps that lead to profitable innovations were represented by three questions. When asked whether Safaricom innovates products and services to attract new clients, 70% felt that they strongly agreed, 20% felt that they agreed, while 4% felt that they of respondents had no opinion. Further, 3% of the respondents felt that they strongly disagreed while 3% felt that they disagreed. When respondents were asked whether innovation and creativity had caused product differentiations which led to organizational growth, 58% indicated that they strongly agreed, 24% indicated that they agreed, 10% indicated that they had no opinion, 6% indicated that they disagreed while only 2% indicated that they strongly disagreed. Similarly, when respondents were asked whether innovation is key to an organizations’ performance, 64% said that they strongly agreed, 18% said that they agreed, 10% said that they had no opinion, another 4% said that they disagreed while the last 4% said that they strongly disagreed.

### 4.4.4 Commonly Occurring Stimuli in Innovation

Commonly occurring stimuli in innovation was examined to determine its effect on organizational performance. Respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.4 below:

<table>
<thead>
<tr>
<th>Profitable Innovations</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safaricom innovates products &amp; services to attract new clients</td>
<td>3%</td>
<td>3%</td>
<td>4%</td>
<td>20%</td>
<td>70%</td>
</tr>
<tr>
<td>Innovation &amp; creativity has caused product differentiation</td>
<td>2%</td>
<td>6%</td>
<td>10%</td>
<td>24%</td>
<td>58%</td>
</tr>
<tr>
<td>Innovation is Key to firms performance</td>
<td>4%</td>
<td>4%</td>
<td>10%</td>
<td>18%</td>
<td>64%</td>
</tr>
</tbody>
</table>

**Table 4.3: Steps that Lead to Profitable Innovation**
Table 4.4: Commonly Occurring Stimuli in Innovation

<table>
<thead>
<tr>
<th>Stimuli in Innovation</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture of innovations leads to profitable innovations</td>
<td>120</td>
<td>4.70</td>
<td>.478</td>
</tr>
<tr>
<td>Safaricom’s Customers promotes Innovation of new products &amp; Services</td>
<td>120</td>
<td>3.84</td>
<td>1.108</td>
</tr>
<tr>
<td>Market share for innovative telecommunication firms in Kenya is rising</td>
<td>120</td>
<td>4.38</td>
<td>.810</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the findings, Culture of innovations impact on profitable innovations had the highest mean of 4.70 and SD of 0.478, followed by rising market share for innovative telecommunication firms in Kenya with a mean of 4.38 and SD of 0.810, and finally Safaricom’s Customers promotes Innovation of new products & Services had the lowest mean of 3.84 and SD of 1.108.

4.4.5 Correlation Between Organizational Innovation and Performance

The study findings on organizational innovation were subjected to correlation analysis to determine whether there exists a significant correlations. The results are shown in table 4.5 below:

Table 4.5: Correlation Between Organizational Innovation and Performance

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Organizational Performance</th>
<th>Organization Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Performance</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>Organization</td>
<td>Pearson Correlation</td>
<td>.697*</td>
</tr>
<tr>
<td>Innovation</td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

According to the findings, there exists a strong positive correlation between organizational innovation and organizational performance. The correlation R was 0.697; P value was 0.000 which was less than 0.05 that determines the significance threshold.
### 4.4.6 Organizational Innovation and Performance Linear Regression

Since there existed a significant correlations between organizational innovations and organizational performance, a linear regression analysis was conducted to determine level significance between the organizational innovations and organizational performance. The findings are shown in tables 4.6, and 4.7 below:

#### Table 4.6: Linear Regression Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.597a</td>
<td>.356</td>
<td>.348</td>
<td>.38688</td>
<td>.039</td>
<td>4.760</td>
<td>1</td>
<td>118</td>
<td>.031</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Organizational Innovation

#### Table 4.7: Linear Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant) Organizational Innovation</td>
<td>2.919</td>
<td>.707</td>
</tr>
</tbody>
</table>

The findings in table 4.7 shows that the independent variable is statistically significant. Organizational innovation had P<0.031<0.05; Table 4.6 "R" column shows a strong positive relationship at 0.597, while the R squared of 0.356 indicates that 35.6% of variation in organizational performance at Safaricom is attributable to variations in organizational innovations. The formula used to determine the linear regression relationship to organizational performance was:

**Organizational Performance = 2.919 + 0.351X_1**
Where X1 = Organizational Innovations

4.5 Findings on Innovation Activities and Firm Performance

This study sort to find out the effect of innovation activities on organizational performance at Safaricom. The study findings are listed in the sections below:

4.5.1 Innovation and Organizational Success

On innovation and organizational success, respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the figures below;

![Figure 4.9: Innovation and Organizational Performance](image)

When asked whether innovation activities led to organizational performance, 60% of respondents indicated that they strongly agreed, 21.7% indicated that they agreed, while 15% indicated that they had no opinion. Equally, 2.5% of respondents indicated that they disagreed that innovation activities had effect on organizational performance while only 0.8% indicated that they strongly disagreed.
Respondents were asked whether product development teams at Safaricom ensured profitable innovations; 32% felt that they strongly agreed, 28% felt that they agreed, while 22% felt that they had no opinion on the same. 11% of the respondents felt that they disagreed that product development teams ensured profitable innovations while 7% of the respondents felt that they strongly disagreed.

Figure 4.11: Safaricom Foundation is a Result of Safaricom’s Profitable Years
According to the findings, 24.2% of respondents said that they disagreed, with 6.7% said that they strongly disagreeing that Safaricom foundation had led to profitable performance at Safaricom. 40% said that they had no opinion, while 16.7% said that they strongly agreed, while 12.5% said that they agree that Safaricom foundation had led to profitable performance.

4.5.2 Innovation and its Impact on Organizational Sustainability

Innovation and its impact on organizational sustainability was also examined to determine its effect on organizational performance. Respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.8 below;

Table 4.8: Innovation and its Impact on Organizational Sustainability

<table>
<thead>
<tr>
<th>Distribution</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation leads to sustainability and good reputation in the long run</td>
<td>120</td>
<td>4.18</td>
<td>.917</td>
</tr>
<tr>
<td>Marketing strategy is key to Safaricom's sustainability</td>
<td>120</td>
<td>4.53</td>
<td>.830</td>
</tr>
<tr>
<td>Safaricom has embraced Product diversifications for sustainability</td>
<td>120</td>
<td>4.63</td>
<td>.711</td>
</tr>
<tr>
<td>Safaricom has embraced product differentiation to keep off competition</td>
<td>120</td>
<td>3.55</td>
<td>1.371</td>
</tr>
<tr>
<td>Safaricom's New Products &amp; Services enhances market share positioning</td>
<td>120</td>
<td>4.22</td>
<td>.891</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the findings, respondent opinion for product diversifications for sustainability had the highest mean of 4.63 and SD of 0.711, followed by marketing strategy for sustainability with mean of 4.53 and SD of 0.830. New Products & Services enhancing market share positioning had a mean of 4.22 and SD of 0.891; Innovation leads to sustainability and good reputation in the long run with a mean of 4.18 and SD of 0.917, while product differentiation to keep off competition had the least mean of 3.55 and SD of 1.371.
4.5.3 Innovation, Company Growth and Reputation

Respondents were asked to rate how innovation affects the company’s growth and reputation based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.9 below;

<table>
<thead>
<tr>
<th>Distribution</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safaricom has reputation for its Products and Services</td>
<td>120</td>
<td>3.99</td>
<td>1.226</td>
</tr>
<tr>
<td>Safaricom has a good management strategy for long term sustainability</td>
<td>120</td>
<td>4.11</td>
<td>1.143</td>
</tr>
<tr>
<td>Safaricom has organizational strategies that encourages innovation</td>
<td>120</td>
<td>4.02</td>
<td>1.290</td>
</tr>
<tr>
<td>Safaricom has dynamic capabilities compared to other players in the market</td>
<td>120</td>
<td>3.96</td>
<td>1.687</td>
</tr>
<tr>
<td>Kopa-Credo innovations have enhanced Safaricom's growth</td>
<td>120</td>
<td>4.07</td>
<td>1.295</td>
</tr>
</tbody>
</table>

Respondents felt that good management strategy for long term sustainability was the highest with a mean of 4.11 and SD of 1.143, followed by Kopa-Credo innovations having a mean of 4.07 and SD of 1.295. Reputation for Products and Services had a mean of 3.99 and SD of 1.226, while organizational strategies for innovation had a mean of 3.96 and SD of 1.687.

4.5.4 Innovation and Impact on Employees

On innovation impact on employees and firm performance, respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.10 below:
Table 4.10: Innovation and Impact on Employees

<table>
<thead>
<tr>
<th>Distribution</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees are key to Safaricom's organizational Innovations</td>
<td>120</td>
<td>3.59</td>
<td>1.226</td>
</tr>
<tr>
<td>Safaricom has a dynamic Board and management that encourages innovations</td>
<td>120</td>
<td>4.11</td>
<td>1.180</td>
</tr>
<tr>
<td>Safaricom gives employees autonomy to enhance innovations</td>
<td>120</td>
<td>4.24</td>
<td>1.167</td>
</tr>
<tr>
<td>Safaricom employees work smart and for long hours</td>
<td>120</td>
<td>4.06</td>
<td>1.102</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the findings, respondents thought that autonomy to enhance innovations had the highest impact on employee. The mean for innovation autonomy was highest at 4.24 and SD of 1.167, followed by a dynamic Board and management that encourages innovations with a mean of 4.11 and SD of 1.180; working smart and for long hours had a mean of 4.06 and SD of 1.102, while employees are key to Safaricom's organizational Innovations was last at 3.59 with an SD of 1.226

4.5.5 Correlation Between Innovation Activities and Performance

The study findings on innovation activities were subjected to correlation analysis to determine whether there exists a significant correlation between innovation activities and organizational performance. The results are shown in table 4.11 below;

Table 4.11: Correlation Between Innovation Activities and Performance

<table>
<thead>
<tr>
<th>Organization Performance</th>
<th>Pearson Correlation</th>
<th>N</th>
<th>511*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Activities</td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>511*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>
Correlation is significant at the 0.05 level (2-tailed).

According to the findings, there exists a strong positive correlation between innovation activities and organizational performance. The correlation R was 0.511, and the P value was 0.000 less than 0.05 significance threshold. Therefore the correlation is significant.

4.5.6 Innovation activities Linear Regression

Since there existed a significant relations between innovation activities affecting organizational performance, a linear regression analysis was conducted to determine level significance between innovation activities and organizational performance. The findings are shown in tables 4.12, and 4.13 below:

Table 4.12: Innovation Activities Linear Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.521a</td>
<td>.271</td>
<td>.268</td>
<td>.30744</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>df1, df2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sig. F Change</td>
</tr>
<tr>
<td>1</td>
<td>5.512</td>
<td>1</td>
<td>118</td>
<td>.021</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Innovation Activities

Table 4.13: Innovation Activities Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>5.334</td>
<td>.219</td>
<td></td>
</tr>
<tr>
<td>Innovation Activities</td>
<td>.432</td>
<td>.047</td>
<td>521</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Organization Performance

The findings in table 4.15 indicate that the independent variable is statistically significant. Innovation activities had P<0.021<0.05; Table 4.14 "R" column shows a strong positive relationship at 0.521, while the R squared of 0.271 indicates that 27.1% of variation in
organizational performance at Safaricom is attributable to variations in Innovation activities.

The formula used to determine the linear regression relationship to organizational performance was;

**Organizational Performance = 5.334 + 0.432X_1**

Where \( X_1 = \) Innovation activities

### 4.6 Findings on Firm Performance Improved Through I.T and Worker Skills.

The IT and worker skills effect on organizational performance at Safaricom are represented in the findings of this study. The study findings are listed in the sections below:

#### 4.6.1 IT and Firm Performance

On IT and firm performance, respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.14 below:

<table>
<thead>
<tr>
<th>Profitable Innovations</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet technologies like Safaricom Modem have contributed to performance</td>
<td>2.5%</td>
<td>4.2%</td>
<td>7.5%</td>
<td>17.5%</td>
<td>68.3%</td>
</tr>
<tr>
<td>Data Bundles, 3G, Cloud technologies and M-Pesa have enhanced Safaricom performance</td>
<td>1.7%</td>
<td>2.5%</td>
<td>5.0%</td>
<td>21.7%</td>
<td>69.2%</td>
</tr>
<tr>
<td>M-Pesa is the best money transfer platform in the market</td>
<td>6.7%</td>
<td>8.3%</td>
<td>8.3%</td>
<td>13.3%</td>
<td>63.3%</td>
</tr>
<tr>
<td>Safaricom wouldn’t perform well without M-Pesa</td>
<td>15.0%</td>
<td>46.7%</td>
<td>10.0%</td>
<td>10.8%</td>
<td>17.5%</td>
</tr>
</tbody>
</table>

Respondents were asked various questions to determine the effect of information technology on organizational performance. For instance, respondents were asked if they
think internet technologies like Safaricom Modem have contributed to organizational performance. 68.3% indicated that they strongly agreed, 17.5% indicated that they agreed, while 7.5% indicated that they had no opinion. Similarly, 4.2% indicated that they of respondents disagreed, while 2.5% indicated that they strongly disagreed.

When asked whether data bundles, 3G technology, cloud technologies and M-Pesa have enhanced Safaricom performance, 69.2% felt that they strongly agreed, 21.7% felt that they agreed, while 5.0% felt that they had no opinion. 2.5% of respondents felt that they disagreed while 1.7% felt that they strongly disagreed that data bundles, 3G technology, cloud technologies and M-Pesa have enhanced Safaricom performance.

Respondents were also asked whether M-Pesa was the best money transfer platform in the market; 63.3% said that they strongly agreed that M-Pesa was actually best money transfer platform in the market, 13.3% said that they agree; 8.3% of respondents said that they didn’t have an opinion; 8.3% said that they disagreed while 6.7% of respondents said that they strongly disagreed that M-Pesa was the best money transfer platform on the market. On the question whether Safaricom wouldn’t perform well without M-Pesa, 46.7% of respondents indicated that they disagreed, while 17.5% indicated that they strongly agreed. Equally, 15.0% indicated that they strongly disagreed, while 10.0% indicated that they had no opinion. Only 10.8% indicated that they agreed.

4.6.2 IT and Innovation Today and Performance

To determine the effect of IT and Innovation Today on organizational performance, respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.15 below:
Table 4.15: IT and Innovation Today and Performance

<table>
<thead>
<tr>
<th>Distribution</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology has led to innovations in Telecommunications industry</td>
<td>120</td>
<td>4.33</td>
<td>.901</td>
</tr>
<tr>
<td>Technological changes has brought new innovations at Safaricom</td>
<td>119</td>
<td>4.14</td>
<td>.977</td>
</tr>
<tr>
<td>Information technology has contributed to positive performance of Safaricom</td>
<td>120</td>
<td>4.40</td>
<td>.974</td>
</tr>
<tr>
<td>Information technology has also brought stiff competition in telecommunication sector</td>
<td>120</td>
<td>4.31</td>
<td>.968</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the findings, when respondents were asked about I.T, innovation today and organizational performance, Information technology contribution performance had a respondents mean of 4.40 and an SD of 0.974, followed by Information technology has led to innovations in Telecommunications industry with a mean of 4.33 and SD of 0.901; then Information technology has also brought stiff competition in telecommunication sector with a mean of 4.31 and SD of 0.968. The question on whether technological changes had brought new innovations at Safaricom had the least respondent’s mean of 4.14 and SD of 0.977.

4.6.3 Worker Skills and Firm Performance

To determine the effect of worker skills and organizational performance, respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the figures below:
According to the findings, Safaricom use of IHRS to enhance employee performance had the respondents of 48.3% felt that they strongly agreed while 39.2% felt that they agreed. 7.5% of respondents felt that they had no opinion concerning IHRS and employee performance; 3.3% felt that they disagreed, while 1.7% felt that they strongly disagreed that IHRS enhanced employee performance.

Figure 4.12: Safaricom users IHRS to Enhance Employee Performance

Figure 4.13: IHRS Helps Safaricom Recruit Talent in Telecommunications Sector
Respondents were asked to whether they believe IHRS helps Safaricom recruits talent in telecommunication sector; 63% indicated that they strongly agreed, 14% indicated that they agreed, while 7% indicated that they had no opinion on the same. 9% of the respondents indicated that they disagreed, while 7% indicated that they strongly disagreed that IHRS helps Safaricom recruit talent in telecommunication sector.

![Figure 4.14: Safaricom Motivates Employees through Credible Benefits](image)

In response to whether Safaricom motivates employees through credible benefits, 55% of the respondents said that they strongly agreed, 17.5% said that they agreed, while 7.5% said that they didn’t have an opinion over the same. 17.5% said that they of respondents equally disagreed that Safaricom motivates employees through credible benefits, while 2.5% said that they strongly disagreed.

### 4.6.4 Innovation, Worker Personality Types and Performance

To determine the effect of innovation, worker personality and organizational performance, respondents were asked to rate each of the questions based on a Likert scale of strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and strongly agree = 5. The findings are represented in form of mean and standard deviation as shown in the table 4.16 below:
According to the findings, when respondents had been asked questions on innovation, worker types, personality types and organizational performance. In their response, Safaricom leads in selling ideas to other organizations had the highest mean of 4.18 and SD of 0.866, followed by Safaricom has a customer care service that cares for the needs of clients with a mean of 4.06 and SD of 4.06; then Marketing team at Safaricom enhances niche opportunities through idea generation with a mean of 4.02 and SD of 1.021, and finally Safaricom employees are highly competent was last with a mean of 3.94 and SD of 1.225.

### Table 4.16: Innovation, Worker Personality Types and Performance

<table>
<thead>
<tr>
<th>Distribution</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing team at Safaricom enhances niche opportunities through idea generation</td>
<td>120</td>
<td>4.02</td>
<td>1.021</td>
</tr>
<tr>
<td>Safaricom leads in selling ideas to other organizations</td>
<td>120</td>
<td>4.18</td>
<td>.866</td>
</tr>
<tr>
<td>Safaricom employees are highly competent</td>
<td>120</td>
<td>3.94</td>
<td>1.225</td>
</tr>
<tr>
<td>Safaricom has a customer care service that cares for the needs of clients</td>
<td>120</td>
<td>4.06</td>
<td>4.06</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.6.5 Correlation between IT, Worker Skills and Personality and Performance

The study findings on IT, Worker Skills and Personality were subjected to correlation analysis to determine whether there exists a significant correlation between the factor and organizational performance. The results are shown in table 4.17 below;
Table 4.17: Correlation Between ITR and Worker Skills and Performance

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Organizational Performance</th>
<th>IT and worker skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Performance</td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
<tr>
<td>IT &amp; workers</td>
<td>Pearson Correlation</td>
<td>.267**</td>
</tr>
<tr>
<td>kills</td>
<td>Sig. (2-tailed)</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

According to the findings, there exists a positive correlation between IT, Worker Skills and Personality factor and organizational performance. The correlation R was 0.267, and the P value was 0.003 less than 0.05 required to determine level of significance. Therefore, the relationship is significant.

**4.6.6 I.T Worker Skills and Performance Linear Regression**

Since there existed a significant relations between innovation activities affecting organizational performance, a linear regression analysis was conducted to determine level significance. The findings are shown in tables 4.18, and 4.19 below;

Table 4.18: I.T Worker Skills and Performance Linear Regression Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>.587a</td>
<td>.371</td>
<td>.364</td>
<td>.30311</td>
<td>.371  .003</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), I.T worker Skills

Table 4.19: I.T Worker Skills and Performance Linear Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.738</td>
<td>.361</td>
</tr>
</tbody>
</table>
I.T worker skills & .264 & .088 & .587 & 3.012 & .003 & .090 & .437

a. Dependent Variable: Organization Performance
The findings in table 4.22 indicate that the independent variable is statistically significant. I.T and worker Skills had P<0.003<0.05; Table 4.21 "R" column presents a positive relationship at 0.587, while the R squared of 0.371 indicates that 37.1% of variation in organizational performance at Safaricom is attributable to variations in I.T and worker skills.

The formula used to determine the linear regression relationship to organizational performance was;

Organizational Performance = 3.738+ 0.264X₁
Where X₁ = I.T and Worker Skills

4.7 Multivariate Analysis

Since there existed a significant relations between innovation factors affecting organizational performance, a multiple regression test was conducted to determine level significance when all variables are combined. The findings are shown in tables 4.20, and 4.21 below;

Table 4.20: Multiple Regression Analysis Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>.528*</td>
<td>.279</td>
<td>.224</td>
<td>.29688</td>
<td>.124</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.486</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>116</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.001</td>
</tr>
</tbody>
</table>
a. Predictors: (Constant), IT, worker Skills, & personality, Innovation Activities, Organization Innovation

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.487</td>
<td>.675</td>
<td></td>
</tr>
<tr>
<td>Organization Innovation</td>
<td>.426</td>
<td>.126</td>
<td>.131</td>
</tr>
<tr>
<td>Innovation Activities</td>
<td>.292</td>
<td>.045</td>
<td>.377</td>
</tr>
<tr>
<td>IT, worker Skills, &amp; personality</td>
<td>.230</td>
<td>.087</td>
<td>.233</td>
</tr>
</tbody>
</table>

Table 4.21: Multiple regression Analysis Coefficients

The findings in table 4.20 indicate that all independent variables statistically significant. Organization Innovation had P<0.000<0.05; Innovation activities P<0.005<0.05, and IT, worker Skills, & personality P<0.009.

Table 4.21 "R" column indicates a strong positive relationship at 0.528, while the adjusted R squared of 0.224 indicates that 22.4% of variation in organizational performance at Safaricom is attributable to variations in Organization Innovation, Innovation activities, and IT, worker Skills, and personality types. The regression analysis summary equally indicates a statistically significant relationship at P<0.001<0.05

The formula used to determine the regression relationship to organizational performance was:

**Organizational Performance = 3.487 + 0.426X_1 + 0.292X_2 + 0.092X_3**

Where X1 = Organization Innovation
X2= Innovation activities
X3 = IT, worker Skills, & personality

4.7.1 Independent Sample T-Tests

An independent sample T-test was used to compare the significance of means between the respondent’s gender and innovation profitable growth influence at Safaricom. The findings are shown in the table below.

Table 4.22: T-Tests Group Statistics

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative Profitable Growth Male</td>
<td>64</td>
<td>4.2292</td>
<td>.61971</td>
<td>.07746</td>
</tr>
<tr>
<td>Female</td>
<td>56</td>
<td>4.3810</td>
<td>.49412</td>
<td>.06603</td>
</tr>
</tbody>
</table>

Table 4.23 Independent Samples Test

<table>
<thead>
<tr>
<th>Innovation Profitable Growth</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>4.777</td>
<td>.031</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-1.491</td>
<td>117.0</td>
</tr>
</tbody>
</table>
According to the findings, the mean of male respondents was 4.2292, with SD of 0.61971 and Std. Error Mean of 0.07746 while the mean of the female respondents was 4.3810, with SD of 0.49412 and Std. Error Mean of 0.06603.

In Table 4.22, Levene’s test $T_{(117.036)} = -1.491$; $F$ value $= 4.777$; $P<0.031<0.05$; therefore there exists a significant difference between gender and innovation influence on profitable growth.

The mean of female respondents is 0.15179 higher that the Male respondents. With 95% confidence, you would expect female view of innovation and profitable growth to lie between $-0.35337$ (Lower) and $0.04980$ (Upper) than the male respondents

### 4.7.2 ANOVA

One way ANOVA was used to compare means between organizational performances, with number of years respondents had worked at Safaricom. The findings are shown in the table below.

**Table 4.24: ANOVA**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.642</td>
<td>4</td>
<td>.161</td>
<td>1.673</td>
<td>.161</td>
</tr>
<tr>
<td>Within Groups</td>
<td>11.032</td>
<td>115</td>
<td>.096</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.674</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Organizational Performance
Number of years at Safaricom

According to the findings, the variation between the groups sum of squares was 0.642; df (4). The variations within the groups was 11.032, with degree of freedom df (115).

$F(4, 115) = 1.673$; $P>0.161>0.05$; therefore there is no significant relationship between respondents views of organizational performance and the number of years spent at Safaricom. The mean number of years for respondents were not significantly different.

### 4.7.3 Chi Square Tests
A Chi-Square test was used to determine whether significant association existed between gender of the respondents and their marital status and the influence on organizational performances. The findings are shown in the table 4.25 below.

<table>
<thead>
<tr>
<th>Table 4.25: Chi-Square Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
</tr>
<tr>
<td>Pearson Chi-Square</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
</tr>
<tr>
<td>N of Valid Cases</td>
</tr>
</tbody>
</table>

According to the findings, Pearson Chi-Square $X^2 (3) = 5.499; P>0.139>0.05$; therefore there is no significant association between gender and marital status and their views on organizational performance.

4.8 Chapter Summary

The major of the study shows that respondents had a high valued opinion on innovation activities as a key lead to organizational performance at 60% of respondents strongly agreeing with only 0.8% strongly disagreeing.

The study equally reveals the existence of a strong positive correlation between innovation activities and organizational performance. The correlation ($r=0.511$) was positively significant at $p<0.000 <0.05$). On the issue of innovation, competitive advantage, and organizational performance, 53.3% of the respondents strongly believed that innovation can be attributable to organizational competitive advantage, which leads to performance, while only 1.7% strongly disagreed.

The issue on whether M-Shwari was the best money saving platform that contributed to organizational growth, 66% of respondents strongly agreed and believed that M-Shwari platform contributed to Safaricom performance; only 1% of the respondents strongly disagreed. According to the findings on organizational innovative activities, the study revealed the existence of a strong positive correlation between innovation activities and organizational performance. The correlation ($r=0.511$) is positively significant at $p<0.000 <0.05$).
On information technology on organizational performance, respondents when asked whether data bundles, 3G technology, cloud technologies and M-Pesa have enhanced Safaricom performance, 69.2% strongly believed so, with only 1.7% strongly disagreeing. Respondents were asked to whether they believe IHRS helped Safaricom recruits talent in telecommunication sector, and if IHRS enhanced performance; 63% strongly agreed, with only 7% strongly disagreeing.

When a multiple regression was conducted, all independent variables were found to be statistically significant. Organization Innovation had P<0.000<0.05; Innovation activities P<0.005<0.05, and IT, worker Skills, and personality P<0.009. The multiple regression had a strong positive relationship at 0.528, with 22.4% of variation in organizational performance being attributable to variations in Organization Innovation, Innovation activities, and IT, worker Skills, and personality types. The regression analysis summary equally revealed that all variables were statistically significant at P<0.001<0.05.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter addresses the results and the findings on effects of innovation on organizational performance: A case study of Safaricom Ltd. The findings are outlined according to the purpose of the study. The findings are based on the responses from the questionnaires filled and information gathered from the research questions. This chapter will provide the researchers discussion on the findings of the research as compared to findings in the literature review in chapter two that were also based on the purpose of the study. Conclusions and recommendations will also be provided in this chapter.

5.2 Summary

The general objective of this study was to determine effects of innovation on organizational performance. The specific objectives were: To establish whether organizational innovation has improves firm’s performance; to assess how innovative activities affect productivity in firms and finally to determine whether firm performance is improved through information technology and worker skills.

The population of the study was one hundred and twenty respondents drawn from Safaricom employees, customers, and agents within Nairobi. The sample frame was adopted from Safaricom Human Resources. Purposing sampling technique was used to ensure that only respondents with relevant information needed for the study were sampled.
As noted, the study adopted simple random sampling for both employees, customers, and agents. Data was collected using questionnaires, edited and entered into the Statistical Package for Social Sciences (SPSS) software version 21 to enable carry out descriptive analysis. A total of one hundred and twenty (120) questionnaires were dispatched and all one hundred and twenty (120) responses were received, giving a response rate of 100%. Descriptive statistics used included frequency distribution tabulation. This study used descriptive statistical indexes such as frequencies, percentages, and mean. For inferential statistics, correlation analysis was done to enable easy data interpretation, and to make sense of the data. The analyzed data was presented in form of tables, and figures according to the research questions.

The first specific objective looked at organizational innovation and organizational performance. 68% of the respondents indicated Safaricom modem to have highly contributed to organizational performance of Safaricom. 69.2% believed that M-Pesa strongly contributed to organizational performance. 46.7% highlighted that Safaricom wouldn’t perform well without M-Pesa. Most respondents cited M-Pesa, M-Shwari, and M-Banking as the most profitable innovations with a mean of 4.52 that have caused Safaricom to perform better. Other factors as global trends, competition, and customer care received the least mention as having effects on innovation and organizational performance.

The second specific objective looked at innovation activities and organizational performance. The study found that sound management and board strategies, product and service diversification, employee innovation autonomy, and innovative marketing strategies were identified as having the most effect on organizational performance. 60% of the respondents felt that innovation had resulted in organizational performance. 32% believed that product development the organization to profitable innovations. However, only 16.7% strongly indicated that Safaricom foundation had contributed to organizational performance. Other areas like product differentiation, employee dynamic capabilities least contributed to organizational performance.

The third specific objective improved performance due to improved I.T and worker skills. The study found that data bundle technologies, 3G technologies, M-Pesa and M-Shwari innovations, and Information technologies like the integrated human resources
management system. 68.3% felt that I.T technologies had enhanced firm performance. 48.3% believed that Safaricom IHRS had improved employee performance while 63% indicated that IHRS had enhanced talent for Safaricom in the telecommunication industry. Employee credible benefits, and telecommunication competition in technologies were least identified to possess innovative effect that contribute to organizational performance.

In examining correlations between the independent variables and organizational performance, organizational innovations had the highest correlation of 0.698, followed by innovative activities at 0.511, and lastly by I.T and worker skills at 0.261.

5.2 Discussions

5.2.1 Organizational Innovations and Organizational Performance

The study findings indicated that M-Pesa, M-Shwari, and M-Banking as the most profitable innovations that have caused Safaricom to perform better. According to Maital and Seshadri, (2007), alluded to the fact that organizational innovations are vested in the products and services that enhances organizational competitive edge. Equally, Business Knowledge Resource, (2015) had indicated that innovative ideas, products and services do shape an organizations corporate structure, thereby helping organizations to adopt various strategic options that lead to profitability and performance. This is exactly what the study found out with innovative products such as M-Pesa, M-Shwari, and other M-Banking services at Safaricom, and their relatedness to Safaricom’s performance.

The Management review of MIT, (2015) had indicated that organizations that innovate benefit the most in telecommunication industry as reduce cost of production; increase income avenues; enhance efficient operating systems, while at the same time build a team of highly competent human resource that can enhance performance. The study findings indicate that Safaricom was at pace with global innovation trends, hence their good performance. Similarly, Safaricom’s ability to cater to the changing needs of customers led to massive growth and performance.

According to Green, (2010) incremental innovation provide organizations with the ability to focuses on making small improvements their current products and services and
eventually build a formidable organizational performance. The study findings agree with Green’s assertions. Safaricom M-Pesa and M-shwari have undergone incremental innovations making them solid products and services that currently contribute massively towards Safaricom’s performance.

Green (2010), also argued that involving customers in innovations, and catering to customers’ needs are some of the avenues that lead to great innovations as the process tends to search for solutions for customer’s needs, hence innovations that lead to performance. According to the study findings, Safaricom has involved customers at different levels of product and service innovations; has involved customers in coming up with tailored solutions to current market needs, hence curving itself a huge market share that has led to massive profitability and performance.

According to the study findings, Safaricom’s management and Boards nurture and supports the culture of innovation. This has led to development of many new innovative products and services that have not only enhanced employees autonomy and decision making, but also overall organizations performance. The findings are in tandem with Business Knowledge Resource, (2015) that indicated that innovative ideas, products and services do shape an organizations corporate structure, and performance. 58.3% of indicate that the atmosphere of innovation had led to Safaricom’s performance creating a huge competitive advantage compared to other players. Equally, 57.5% indicated that M-Pesa innovations had led to Safaricom’s performance. Similarly 66% of respondents believed that M-shwari innovations is the best money saving platform that has led to Safaricom’s performance.

5.2.2 Innovative Activities and Organizational Performance

The study findings indicates that sound management and board strategies, product and service diversification, employee innovation autonomy, and innovative marketing strategies contributes more to organizational performance at Safaricom. According to Econ-IT2 (2015), product differentiation is at the heart of innovation. Organizations that successfully differentiate their product have a greater change of enhancing innovations that boost organizational performance. The findings of the study are in agreement with
the stated assertion, as the study indicates Safaricom has thrived and become profitable due to its diversified products and services.

Equally, innovative products and services according to Henry (2006), command more competitive advantage opportunities that enables organizations to that achieve growth, profitability and performance. According to the findings, Safaricom has excelled at creating innovations that are more profitable than other players in the telecommunication sector in Kenya. Notably also, product and service innovation at Safaricom has enabled the organization to expand its market share compared to other providers in the market. As had been argued by Maital and Seshadri, (2008), successful innovation enhances organizations ability to scale up and adapt locally products that addresses local needs.

According to Econ-IT2, (2015), organizations should chat a course for sustainability through product as service innovation. According to the study findings, Safaricom has effectively utilized product differentiation and diversification to build products that enhances sustainable competitive advantage. As had been mentioned earlier, this products include M-Pesa, and M-Shwari, among other. Securing strategic market positioning is key to organizational performance. 66% of respondents had strongly agreed and believed that M-Shwari platform contributed to Safaricom performance. On information technology on organizational performance, 69.2% of respondents strongly agreed that data bundles, 3G technology, cloud technologies and M-Pesa have enhanced Safaricom performance.

Company being overtaken by partners when the innovation is done in partnership / risk of transfer of know-how, and company becoming too dependent on the new product.

According to Henry, (2006) innovation is allowing companies to grow faster and have a richer product mix

Dundon, (2006) had argued that organizational reputation in developing faster responses to customer needs, developing low costs products, and quality products and services do influence organizational performance. When customers develop loyalty to an organizations brand, products and services, then the organization performance is guaranteed. Such is the case as confirmed by the study findings. Most customers are loyal to Safaricom brand due to innovations and services that have added value in the day to day life of the customers. Managers at Safaricom according to the study, equally believe
that Safaricom has built a formidable reputation for sustainable competitive advantage and performance.

5.3.3 Firm Performance Improved Through IT and Worker Skills

Tachiki et al., 2004; OECD, (2003, 2004) had argued that information technology improves organizational performance. This is because, information technology enhances organizations ability to pass information faster for critical decision making. Any organization that is able to generate information and pass it to its functional operational components has the ability to leverage of such feedback to create more formidable innovations improves performance.

According to the study findings, Safaricom has made good use of information technology to lowers transaction and coordination costs through real time transactions like the ones conducted on M-Pesa platforms which in turn, have maximized Safaricom’s performance. Equally, Information technology has enabled Safaricom to build strategic innovations, that involve customers, and employees in the design implementation and evaluation processes, where they can log into online platforms to participate. According to the Peteraf (2008), an organizational critical resource must have certain characteristics standard to be able to sustain competitive advantage over a period of time. By utilizing information technologies to its advantage, the study findings suggests that Safaricom is profitable.

According to the findings, Safaricom has not only been able to achieve significant growth, and performance, but also utilized IT to solidify its grip on the market share. By adopting technologies like 3G, cloud sourcing, Internet bundles, Safaricom has entrenched its performance parameters now and for the future. It is imperative therefore to argue that IT innovations are extremely essential and necessary for an organizations performance.

Of significance to note, according to (Keep et al., 2008), there exists a strong positive correlation between worker skills and organizational performance. According to the study findings, the employee’s skills in innovation has played a great role in solidifying Safaricom’s performance. The autonomy given to employees coupled with the
organization’s ability to recruit and retain talent has been attributed to its continuous good performance.

As had been stated by Kuhn, (1987), business innovation benefits from a diversity of personality types. The argument was built on the precept that employees in a company are innovative, free-spirited, and nonconformist, if they are given a chance to explore their talents at work. Therefore, a multiplicity of personality types and traits at work has enhanced Safaricom’s innovation processes. 68.3% of respondents showed strongly that employee performance is enhanced through IRHS a system that is used to collect information on employee personality types, so as to enhance talent and performance.

5.4 Conclusions

5.4.1 Organizational Innovations and Organizational Performance

Organizational performance is at the very heart of every organization’s existence. The study findings indicate a strong positive correlation, and significant relationship between sound management and board strategies, product and service diversification, employee innovation autonomy, innovative marketing strategies and Safaricom’s performance. Other factors like quality of the innovations, steps of the innovations and employees and customer involvement contribute significantly to an organizational performance.

Quality of products and services is particularly essential for Safaricom to establish itself as a cut above the rest in a technically competitive environment. To ensure this standards are upheld, Safaricom should develop a quality assurance department that ensures that all products and services that are churned out meet the minimum quality thresholds. As a result, Safaricom will cut a reputation as an organization that pays attention to quality innovations, hence attract more customers, thereby enhancing its performance.

5.4.2 Innovative Activities and Organizational Performance

The study findings innovations that lead to product and service diversification and diversification are most profitable and lead to organizational performance. Equally, there is a strong positive correlation between innovative activities like M-Pesa, M-Shwari, and information technologies and an organization’s performance. In Kenya, the mobile service
industry continues to expand through mobile money transfer services, mobile payment services, data cloud sourcing among others so as to enhance sustainable competitive advantage.

As indicated above, Safaricom over the years has taken the lead in innovation activities, however, this might not be enough to pride of M-Pesa and M-shwari since other players in the market are trying to imitate Safaricom innovation activities so as to offer money transfer services, and M-Shwari services. Safaricom should therefore enhance their mechanism of value addition on their innovation activities so as to remain relevant, and enhance their competitive advantage. Value addition on innovation activities will ensure that other firms imitation of their technology don’t stand a chance in a free competitive market.

5.4.3 Firm Performance Improved Through IT and Worker Skills

The study revealed that there exists a strong positive relationship between I.T innovations, worker skills, worker personality types and organizational performance. Marketing teams, management teams, board teams, customers and employees are all essential to the development of sustainable innovations in an organization. Equally, motivating employees through good benefits enhances their morale to innovate, and to build sustainable organizational key performance competencies.

Safaricom should invest in talent analytics by enhancing their hiring techniques so as to hire staff endowed with personality types that enhances organizational performance. Equally, Safaricom should invest in capacity building of worker skills. Improving workers skills and abilities will have a positive impact on organizational performance as has been indicated by the significant positive relationship between worker skills, and organizational performance.

Finally, Safaricom should invest in board members and management teams that not only have sufficient skills for governance, but those who have proven value addition skills to organizational operations and performance.
5.5 **Recommendations**

In light with the study findings of this research project, the following recommendations are advanced.

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### 5.5.1 Recommendations For Improvement

#### 5.5.1.1 Organizational Innovations and Organizational Performance

In order for Safaricom to enhance sustainable performance, it must appreciate the importance of organizational innovations and take it to a higher level. This is in terms of management and corporate innovations by ensuring that strategic plans, steps of innovations, and the stimuli that triggers profitable innovations are well documented, and executed. Product differentiations for M-Pesa, and M-Shwari should be enhanced to ensure that competitors aren’t able to imitate their products and services. Customer care must also be placed on the fore front to ensure customer satisfaction, which will translate into loyalty and enhanced organizational performance.

#### 5.5.1.2 Innovative Activities and Organizational Performance

Safaricom should appreciate the influence of innovative activities to organizational performance. In so far as M-Pesa, M-Shwari and other innovative activities have earned Safaricom competitive advantage and mileage that has enhanced performance, it should not be lost that competition in rife in the Kenyan market, and other players would like to imitate Safaricom’s success through imitation of their products and services. In this regard, product and service differentiation and diversification must be enhanced. Organizations reputation and leadership must equally be upheld to enhance sustainable performance.

#### 5.5.1.3 Firm Performance Improved Through IT and Worker Skills

Safaricom should provide competitive costing on internet data bundles, 4G technologies, as other players in the market are already doing so. Since the study findings have
indicated Information technology as critical component for organizational performance, Safaricom should continuously develop, and assimilate global cutting edge innovative technologies to remain competitive, and enhance performance. Since employees are a critical component of organizational key competency base, Safaricom should ensure that their employee’s benefits are very competitive, ensure employee morale, and autonomy for better innovative environment that will lead to more enhanced performance.

5.5.1.2 Recommendations for Future Research

Researchers and academicians can utilize this research for testing hypothesis, or for enhancing further research, particularly telecommunication industry. Such a research will be able to ascertain the influence of innovation on telecommunication industries and performance. Equally, further studies should be done to ascertain why mobile money transfer enhanced Safaricom’s performance compared to other players in the market.
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Zand F., van Beers C. & van Leeuwen G. “Information Technology, Organizational Change and Firm Productivity: A Panel Study of Complementarity Effects and Clustering Patterns in Manufacturing and Services” ICTNET 1st Workshop The diffusion of ICT and its impact on growth and productivity Parma, 16-17 December 2010

Hellen Muthoni
P.O Box 21866 – 00100
Nairobi

Dear Respondent,

APPENDIX I: COVER LETTER

RE: REQUEST FOR YOUR PARTICIPATION IN MY RESEARCH PROPOSAL

I am the above student currently pursuing a course towards conferment of Executive Master of Science in Organization Development (EMOD) from United States International University – Africa.

In partial fulfilment of the requirements of the award of the degree, I am conducting research proposal to determine effects of innovation on organizational performance: Case study of Safaricom Ltd. You have been randomly selected to participate in this study. Participation is voluntary and I will spare a few minutes of your time to fill in the blanks of the attached list of questions to the best of your knowledge. Kindly complete all sections of the questionnaire to enable me complete the study. Please note that the information you provide will be treated as confidential, and will only be used for purpose of this research.

The findings of this study will inform Safaricom management to facilitate on decision making towards the adoption of strategies that will add value to users of mobile phones. The final report will be shared with all stakeholders, with priority given to participants.

Your participation in this study will be highly appreciated.

Yours Sincerely,

HMM

Hellen Muthoni Makimi
APPENDIX II: QUESTIONNAIRE

SECTION A: GENERAL INFORMATION

Please respond to the questions below by ticking in the boxes provided.

1. Name (Optional): ......................................................

2. Gender
   a. Male □
   b. Female □

3. Age
   Less than 20 □ 41 – 50 Years □
   21 – 30 years □ Above 50 Years □
   31 – 40 years □

4. Marital status
   Single □
   Married □
   Separated □
   Divorced □

5. How long have you been working at Safaricom or /been an agent/ customer/?
   Below one Year □ 11 - 15 Years □
   2 – 5 Years □ Above 15 Years □
   6 – 10 Years □

6. How often does Safaricom launch new products and services
   Quarterly □
   Every two Years □
   Half - Yearly □
   Every Three Years □
   Yearly □
Section 2 A: Organizational innovation and firm performance.

To what extent do you agree with the following statement? Please Tick the box that represents your answer, where Strongly Disagree is the lowest value and Strongly Agree is the highest value.

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<th>STATEMENT</th>
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<td><strong>Innovation &amp; Profitable Growth</strong></td>
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<td>7. Safaricom’s innovation helps in the development and growth of a sustainable competitive advantage</td>
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<td>8. Safaricom offers exciting products &amp; services like M-Pesa, M-shwari, M-banking to ensure profitable growth</td>
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<td>9. M-Shwari is the best Mobile Money savings platform for the Bank-less available in Kenya</td>
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<td><strong>Global Trends and their Implications on Innovation</strong></td>
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<td>10. Global trends the world over has necessitated the need for innovation in Safaricom</td>
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<td>11. The changing demands of current customers the whole over has necessitated innovation in Safaricom</td>
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<td>12. Replicating a product launched by a competitor globally is easier than developing a totally new one</td>
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<td><strong>Steps that lead to profitable innovation</strong></td>
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<td>13. Safaricom constantly innovates and creates new products and services to attract new customers/clients</td>
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<td>14. Innovation and creativity has caused differentiation in the telecommunication industry</td>
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<td>15. Innovation is key and is of paramount importance to firm performance</td>
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<td><strong>Commonly occurring stimuli in innovation</strong></td>
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<td>16. Building/embracing a culture that supports innovation</td>
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leads to profitable innovation

17. Customers/clients of Safaricom actively promote the development of new products and services

18. The market share of innovative telecommunication firms in Kenya is increasing

**Section 2 B: Innovation activities and firm productivity**

*To what extent do you agree with the following statement? Please Tick the box that represents your answer, where Strongly Disagree is the lowest value and Strongly Agree is the highest value*

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<td><strong>Innovation and Organization Success</strong></td>
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<td>19. Innovation has led to profitable growth and organization success in Safaricom</td>
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<td>20. The main objective of product development team is to ensure innovation in Safaricom which will lead profits</td>
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<td>21. Profits gained from Safaricom over the years have led to the birth of Safaricom Foundation</td>
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<td><strong>Innovation and its impact on Organization Sustainability</strong></td>
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<td>22. Innovation leads to organization sustainability and good reputation in the long run</td>
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<td>23. A sound marketing strategy is important for Safaricom as a whole to operate in the long run</td>
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<td>24. Safaricom has embraced product diversification, as a corporate strategy to survive in the telecommunication industry</td>
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<td>25. Safaricom is using product differentiation strategy</td>
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<td>as a process of distinguishing their products &amp; services</td>
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<td>26. Safaricom has secured a market positioning strategy through their new products and services</td>
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<td><strong>Innovation, company growth and reputation</strong></td>
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<td>27. Safaricom has remarkable reputation in terms of its products and service</td>
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<td>28. Safaricom has good management structures to facilitate its growth in the long run</td>
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<td>29. Safaricom has organizational strategies that encourage innovation</td>
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<td>30. Safaricom has dynamic capabilities/resources compared to other players in the sector</td>
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<td>31. Kopa-credo services through M-Shwari has greatly contributed to Safaricom’s growth</td>
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<td><strong>Organization innovative growth and its impact on employees</strong></td>
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<td>32. Employees are key part of organizational innovation at Safaricom</td>
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<td>33. Safaricom has a dynamic/adaptive board and management that encourage innovation</td>
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<td>34. Safaricom gives employees autonomy to enhance innovative activities</td>
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<td>35. Workers/employees at Safaricom are positively charged to work smart and for long hours</td>
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**Section 2 C: Firm performance improved through IT and worker skills**

*To what extent do you agree with the following statement? Please Tick the box that represents your answer, where Strongly Disagree is the lowest value and Strongly Agree is the highest value*
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<td><strong>IT and Firm Performance</strong></td>
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<td>36. Internet provision technologies like Safaricom Modem has contributed to Safaricom’s performance</td>
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<td>37. Data bundle, 3-G, M-Pesa and Cloud technologies have contributed to Safaricom’s Performance</td>
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<td>38. M-Pesa in the best money transfer technology on the market</td>
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<td>39. Safaricom would not perform well financially without M-Pesa</td>
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<td><strong>IT and innovation today</strong></td>
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<td>40. Information technology and innovation today has generally led to innovation in the telecommunication industry as a whole</td>
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<td>41. Technological change has brought new development and innovation in Safaricom</td>
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<td>42. The dynamic progress of IT has contributed to positive firm performance in Safaricom</td>
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<td>43. The advert or introduction of new technology in the telecommunication sector in Kenya has brought in stiff competition</td>
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<td><strong>Worker skills and firm performance</strong></td>
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<td>44. Safaricom uses integrated Human Resource systems to enhance worker performance</td>
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<td>45. Integrated Human Resources System helps Safaricom recruit the best talent in telecommunication</td>
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<td>46. Safaricom has ensured that their workers/employees remain motivated by offering incredible benefits</td>
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<td><strong>Innovation and worker personality types</strong></td>
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<td>47. The marketing team at Safaricom possess the role of idea generators, hence recognize niche opportunities</td>
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<td>48. Safaricom workers are energetic and ready to take risks and sell ideas to others in the organization</td>
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<td>49. Safaricom workers have a high degree of competence</td>
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<td>50. Customer care department at Safaricom are good listeners, and are willing to assist their clients on all areas of concern</td>
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*Thank you for your response*