

**INFLUENCE OF INNOVATION STRATEGIES ON THE PERFORMANCE OF
FIRM'S LISTED IN NAIROBI SECURITIES EXCHANGE, KENYA**

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Requirements of the Award of the Degree of Masters in Business Administration of
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DECLARATION

This project is my original work and has not been presented for a degree in this or any other university for examination.

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APPROVAL

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DEDICATION

I dedicate this work to my family for their understanding and support during the study period.

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Most important of all I extend my gratitude to the Almighty God for the strength, knowledge and vitality that helped make this project a reality.

I would wish to thank my family for their support and encouragement and understanding.

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ABSTRACT

Strategy is the direction and scope of an organization over the long term which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholders' expectations. However, research on predictive power of innovative strategies on the performance of firms listed in the NSE is inadequate. This study aimed at exploring this area in the hope of providing important answers to how innovation can be used to leverage performance of organizations in Kenya. The general objective of the study was to investigate effects of various innovation strategies on the performance of firms listed in the NSE. The study adopted a descriptive and inferential research design; the target population for the study was the 61 organizations, where a sample of 53 respondents were selected using simple random sampling technique. In order to collect the relevant data, a semi-structured questionnaire was used. To ascertain the validity and reliability of questionnaire, a pilot survey was conducted. The questionnaires were administered to the sampled respondents. Statistical analyses were conducted using statistical package for social sciences (SPSS) to calculate descriptive statistics, analysis and regression. The Model summary of the regression analysis showed that all the independent variables accounted for 72.4% of the variance in firm performance. Technological strategies, Product development strategies, market strategies and Process strategies were found to have a positive correlation with the performance of firms in NSE. The study recommended that Firms in service industry could make significant gains by pursuing product and process innovations. This is because the impact on performance is much more significant given the nature of the industry. Technological innovations rank higher probably because the market has matured and hence cost savings derived from innovative processes become more attractive for growth.

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LIST OF ABBREVIATIONS AND ACRONYM

ICT	Information communication and technology
NSE	Nairobi Stock Exchange
MS	Microsoft
SPSS	Statistical Package of Social Sciences
IS	Integrated System

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

There have been major and unpredictable changes in the business environment that no matter how successful and superior a company's current business model has been, it will be easily imitated, diluted and commoditized by others and challenged by new business models in the innovation economy (Gitonga, 2003). There are competitors who may introduce new superior methods of production, change the ways in which they compete for business, extend their target markets and find new ways of attracting key employees. Many companies have surprisingly little notion of where their industry is heading, rarely looking beyond their own boundaries, too busy fighting today's fires to take the time to truly understand what is driving their operating environment and how it may evolve (Kihumba, 2008).

In today's dynamic and global competitive environment, innovation is becoming more pertinent for organization, mainly due to three major trends: concentrated international competition, disjointed and challenging markets, and assorted and swiftly changing technologies (Kim & Mauborgne, 1999). In the present economic environment the invention of an entirely new business model or the radical redesign of existing business models is the only way companies can grow and wealth can be created (Hamel & Välikangas, 2003). It is essential to have a clear understanding of a company's ability to act upon and implement innovative ideas and strategies, and to successfully come to grips with the operational, political, cultural and financial demands that will follow (Cross et al, 2003).

1.1.1 Innovation Strategy

Strategy is the direction and scope of an organization over the long term which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholders' expectations. Innovation strategy in any business or industry involves aligning the product life cycles of the company with their various research and development activities. Oke and Goffin (2001) posited that the first stage in formulating an innovation strategy is to describe what innovation means to the institution or the focus areas in

terms of innovation. By comprehending the drivers of innovation needs, a company can expand its focus areas for innovation.

The significance of having an obviously defined innovation strategy directing the innovation process was documented by Griffin (1997) and Cooper, Scott, and Kleinschmidt (2002). Innovation strategy gives a clear direction and concentrates the effort of the whole organization on a common innovation end. The innovation strategy should specify how the significance of innovation will be communicated to all the employees to attain their buy-in and must openly reflect the significance that management places on innovation and the alignment to overall business strategy. The management of high performing institutions was tangibly and visibly committed to new product development and overtly formulated and communicated the institution's new product development strategy (Bessant & Francis, 1999).

1.1.2 Firm Performance

Firm's performance is the appraisal of prescribed indicators or standards of effectiveness, efficiency, and environmental accountability such as productivity, cycle time, regulatory compliance and waste reduction. Performance also refers to the metrics regarding how a certain request is handled, or the act of doing something effectively; of performing; using knowledge as notable from just possessing it. It is the result of all of the organization's operations and strategies (Clarke, Davies & Waterson, 2000). It is also the level to which an individual fulfills the expectations concerning how he should behave or function in a certain situation, context, circumstance or job. Oakland (1999) posited that performance is what individuals do relating to institutional roles.

The financial performance of companies is usually measured using a blend of financial ratios analysis, measuring performance alongside budget, benchmarking or a combination of these methodologies. The common postulation, which explains most of the financial performance discussion and research, is that increasing financial performance will result in improved functions and actions of the firms. The topic of financial performance and investigation into its measurement is well advanced in management and finance fields. It can be argued that there are three principal factors to advance financial performance for financial firms; the institution size,

the institution asset management, and the institution operational efficiency (Fitzgerald, Johnston, Brignall, Silvestro & Voss, 2000).

1.1.3 Nairobi Securities Exchange

The Nairobi Securities Exchange previously known as Nairobi Stock Exchange was formed in 1954 as a voluntary organization of stock brokers and is now one of the most active capital markets in Africa. The administration of the Nairobi Securities Exchange Limited is located on the 1st Floor, Nation Centre, Kimathi Street, Nairobi. As a capital market institution, the Stock Exchange plays an important role in the process of economic development. It helps mobilize domestic savings thereby bringing about the reallocation of financial resources from dormant to active agents. Long-term investments are made liquid, as the transfer of securities between shareholders is facilitated. The Exchange has also enabled companies to engage local participation in their equity, thereby giving Kenyans a chance to own shares. There are as of December 2009, 50 companies listed at the securities exchange (www.nse.co.ke, 2014).

Members of the Nairobi Securities Exchange transact business within the Nairobi stock market, with a limited proportion of business conducted in foreign securities through overseas agents. The stockbrokers act as financial advisers to their clients and carry out their orders. The Nairobi Securities Exchange deals in both variable income securities and fixed income securities. Variable income securities are the ordinary shares, which have no fixed rate of dividend payable, as the dividend is dependent upon both the profitability of the company and what the Board of Directors decides. The fixed income securities include Treasury and Corporate Bonds, preference shares, debenture stocks - these have a fixed rate of interest/dividend, which is not dependent on profitability (www.nse.co.ke, 2009). The Securities Exchange is a market that deals in the exchange of securities issued by publicly quoted companies and the Government. The major role that the securities exchange has played, and continues to play in many economies is that it promotes a culture of thrift, or saving. The securities exchange assists in the transfer of savings to investment in productive enterprises as an alternative to keeping the savings idle.

1.2 Statement of the Problem

The importance of having a clearly defined new innovation strategy guiding the innovation process was recognized by Griffin (1997) and Cooper et al. (2003). Innovation strategy provides

a clear direction and focuses the effort of the entire organization on a common innovation goal. According to Venkatraman and Ramanujam (2001) strategic management in the telecommunication sector demand that organizations should have effective systems in place to counter unpredictable events that can sustain their operations and minimize the risks involved through innovations. A study by Wheelwright and Clark (1992) also reveals that the management of high performing companies was visibly and tangibly committed to new product development and explicitly formulated and communicated the firm's new product development strategy.

During the period of innovation they have experienced performance in aspects of market share and profitability. Many organizations have at some point undertaken some form of incremental innovative initiatives. Some of these organizations consider that the cumulative gains in efficiency are much greater over time than those, which come from irregular radical changes. However, many of these short- and medium-term gains are quickly eroded and absorbed into the industry standard and therefore cannot be depended upon as a prerequisite for survival and growth. Despite the competitive environment that organizations in Kenya are operating in, they have consistently experienced trajectory growth in terms of number of customer and asset base. It is therefore expected that for these organizations to thrive in this competitive environment they must have adopted Innovative strategies to respond and adapt to the changes and challenges in their operating environment (Tidd, Bessant & Pavitt, 2001).

Locally, studies that have been carried out on innovation strategies include: innovation processes and the perceived role of the CEO in the banking industry (Gitonga, 2003); innovation strategies at the Standard Chartered Bank (Odhiambo, 2008); a survey on the determinants of financial innovation and its effects on banks performance in Kenya (Kihumba, 2008) and the application of innovation in developing strategy at Safaricom Ltd (Mwarangu 2009). None of these studies focused on the relationship between innovation strategies and organizational performance. This is despite the fact that the firms are being affected adversely by the changing operating environment calling for adoption of innovation strategies to enhance a competitive edge in the markets. There is therefore a research gap that needed to be filled by carrying out an investigation into the effects of innovations on organizational performance with special focus on firms listed in the NSE.

1.3 Objectives of the Study

The general objective of this study was to investigate the effect of innovation strategies on the performance of selected firms listed in the Nairobi securities exchange. The specific objectives of this study were:

- i. To determine the effect of technological strategies on performance of firms in NSE.
- ii. To establish the effect of product development strategies on performance of firms in NSE.
- iii. To establish the effect of market strategies on the performance of firms in NSE.
- iv. To determine the effect of process strategies on performance of firms in NSE.
- v. To determine the combined effect of innovation strategies namely: technological, product development, market and process strategies on the performance of firms in NSE.

1.4 Research Hypothesis

This study sought to test the following hypothesis:

H₀1: Technological strategies do not have significant effect on the performance of firms in NSE.

H₀2: Product strategies do not have significant effect on the performance of firms in NSE.

H₀3: Market strategies do not have significant effect on the performance of firms in NSE.

H₀4: Process strategies do not have significant effect on the performance of firms in NSE.

H₀5: The combined effect of innovation strategies namely: technological, product development, market and process strategies do not have significant effect on the performance of firms in NSE.

1.5 Significance of the study

This study is important to the policy makers as they would be able to know for certain what environmental factors play a bigger role in shaping their operations and how they affect performance and what strategies to use in order to remain competitive.

Further, the study would be important to the managers as it would help them understand the innovation strategies and how their understanding can help different firms enhance their performance. The study would also help other managers know the methods used in gathering and applying the innovation strategies, which would help them improve their performance.

The study would highlight other important relationships that require further research; this would be in the areas of relationships between firms' resources and the innovations to impact on their performance. The results of this study would also be invaluable to researchers and scholars, as it would form a basis for further research. The students and academics would use this study as a basis for discussions on innovation strategies and firm performance. The study would be a source of reference material for future researchers on other related topics; it would also help other academicians who undertake the same topic in their studies.

1.6 Scope of the Study

The study sought to investigate innovation strategies influencing the performance of firms listed in the NSE in Kenya. This study was limited to 53 firms. This entailed collecting information from the management staff on the innovation strategies they employ. The study focused on four innovation strategies namely technological, product development, market and process strategies.

1.7 Limitations of the Study

The researcher encountered various limitations that hindered access to information sought by the study. The respondents approached were reluctant to give information fearing that the information sought might be used to intimidate them or print a negative image about them or the company.

Secondly the study used a cross-sectional design which means the data was collected at one point in time. This means that the study is unable to establish the long term effect of innovation strategies on the performance of firms listed in Nairobi Securities Exchange. Future studies should therefore use longitudinal research design.

1.8 Operational Definition of Terms

1.8.1 Innovation

According to Oke and Goffin (2010) innovation is a continuous process, for whenever innovation occurs, change results and those affected by the change must in turn innovate in order to respond. In this study innovation is defined as a multi-stage process whereby organizations

transform ideas into new or improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace.

1.8.2 Technological Innovations Strategies

In this study technological innovation strategies refer to the strategies involved in the process through which technological advances are produced. The innovation process includes a set of activities that contribute to increase in the capacity to produce new goods and services (product innovations) or to implement new forms of production (process innovations).

1.8.3 Product Innovations Strategies

Product innovation strategies refer to strategies that facilitate old product development, which involves updating and improving existing products, and new product development, which involves a greater degree of innovational challenge (Goh et al, 2011).

1.8.4 Market Innovations Strategies

Market innovation strategies refer to the strategies concerning the continuous improvement of the target markets mix and how chosen markets are best served. Its purpose is to identify better (new) potential markets; and better (new) ways to serve target markets.

1.8.5 Process Innovations Strategies

Process innovation strategies refer to the strategies that a firm adopts in creation and optimization of process that goes beyond tools and practices. The strategies involves process differentiation logic views of how people connect in the work-flow of a process, carry out tasks, and define the outcomes benefit experiences, and where and how value happens, what are likely obstacles or pitfalls, eventually how it produces (and retains) a sustainable value for competitive advantage (Kemppainen and Vepsäläinen, 2011).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed the theory that informs the study. The conceptual framework is explained using a concept map that captures the key variables and linkages and relationships amongst variables. In addition, a review of empirical studies has been undertaken and an effort to evaluate contributions has been made and pertinent research gaps identified.

2.2 Organizational Performance

Organizational performance is the appraisal of prescribed indicators or standards of effectiveness, efficiency, and environmental accountability such as productivity, cycle time, regulatory compliance and waste reduction. Performance also refers to the metrics regarding how a certain request is handled, or the act of doing something effectively; of performing; using knowledge as notable from just possessing it. It is the result of all of the organization's operations and strategies (Constanzo, Keasey & Short, 2003). It is also the level to which an individual fulfills the expectations concerning how he should behave or function in a certain situation, context, circumstance or job. Oakland (1999) posited that performance is what individuals do relating to institutional roles.

Non-financial performance indicators in the banking sector include efficiency in operations and quality service delivery while financial performance indicators revolve around a blend of financial ratios analysis, measuring performance alongside budget, benchmarking or a combination of these methodologies. The common postulation, which explains most of the financial performance discussion and research, is that increasing financial performance will result in improved functions and actions of the bank. It can be argued that there are three principal factors to advance financial performance for financial firms; the institution size, the institution asset management, and the institution operational efficiency (Fowler, King, Marsh & Victor, 2013).

2.3 Innovation Strategies

Already in the late nineties, Markides (1997) referred to strategic innovation as the strategy of breaking rules, implying that strategic innovation is an extreme on surviving in a volatile market. Gebauer, Worch and Truffer (2012) extended that support by stating that strategic innovation is a fundamentally different way of competing in an existing business and it starts with the innovation in one's business model leading towards a new way of playing the game. While other academics agree that the organization's business model is at the hearth of strategic innovation, not all researchers go till the extent of strategic innovation aiming at the disruption of the industry.

Strategic innovation is about creation of new markets and leaps in customer value and reshaping the existing markets to achieve value improvements for customers (Schlegelmilch, Diamantopoulos & Kreuz, 2003). Strategic innovation has a clear aim of achieving competitive advantage by creating customer value and new markets. This section discuss four different innovation strategies that managers employ to enhance the performance of their organizations.

2.3.1 Technological Strategies

Technological innovation" is used to refer to the process through which technological advances are produced (Reinhilde & Bruno, 1999). The innovation process includes a set of activities that contribute to increase in the capacity to produce new goods and services (product innovations) or to implement new forms of production (process innovations). Therefore, the concept of technological innovation is associated with the idea of a flow – generation, application, dissemination – of technologies. The strengths of the integrated systems (IS) approaches relate to their taking learning, relations, dynamic and systemic aspects of innovation into account. However, IS approaches are not free from criticism and problems, for instance there are some problems in operationalizing the dynamics in systems, leading at times to a reliance on old measures and a tendency to recreate linearity. In order to come to grips with such drawbacks, we applied a "functions approach". All systems fulfill a function.

As a starting point we define the overall function of the innovation system as being to develop/generate, diffuse and use innovations (Reinganum, 1983). Therefore a more elaborate analytical framework is proposed. In sum, six basic interdependent functions need to be served to some degree in a technological system for a new technology to be developed and diffused and

for a supporting industry to evolve. The fulfillment of functions is in turn affected by inducement and blocking mechanisms. Policymakers should search for system weaknesses, i.e. “failures” in the functions, their underlying structural features (i.e. in the characteristics of actors, networks, markets and institutions), and try to correct them to survive (Damanpour, 1996).

Raynor and Christensen (2008) claim that innovation requires a process of co-evolution between technology and cultural perspectives. Technology exerts a significant influence on the ability to innovate and is viewed both as a major source of competitive advantage and of new product innovation. Often, organizations experience problems in this area, which are caused by lack of capital expenditure on technology and insufficient expertise to use the technology to its maximum effectiveness (Raymond, Bergeron & Rivard, 1998). Organizations should obliterate rather than automate believing that technology is often introduced for technology's sake without contributing to the overall effectiveness of the operation. However, organizations traditional lack of resources usually results in a compromise situation. It is important to link technology to innovation in sustaining competitiveness. Organizations that can combine customer value innovation with technology innovation have an increased chance of enjoying sustainable growth and profit. If management skills and activities are conceptualized to be situation specific and embedded in the organizations in which they are practiced then the question arises about what is the best way to prepare managers for the “complexity, uncertainty, uniqueness and value conflicts.

A number of issues merit attention when discussing management development strategies. Management development is now viewed as one of the key organizational processes aimed at delivering successful organizational adaptation and renewal. A systems perspective leads to the development of a broader set of strategies, policies and plans; it permits the notion of organization development through management development; it encourages productivity and responsiveness; it leads to a better assessment of performance and overall programme effectiveness; and it contributes to the creation of a positive learning culture enabling the encompassing of generative learning (Rae, 1986). In framing management development within a more holistic perspective, systems thinking extends its context beyond the rational-functional to include qualitative dimensions, and produces new insights which themselves challenge some of

the fundamental assumptions on which existing conceptions of management development activity and strategy are premised.

Management development is perhaps best conceptualized as an open system consisting of an assemblage of interrelated elements directed towards common goals (Doyle, 1994). The process is then neither fragmented nor piecemeal, but integrated, congruent and supportive of organizational goals. Inherent in a systems model is the existence of a coherent and supportive infrastructure, with management recruitment, selection, reward and promotion considerations all feature as core inputs (Prahalad & Hamel, 1994).

2.3.2 Product Development Strategies

The product innovation strategy is effectively implemented when the business provides unique or superior value to the customer through product quality, features, or after-sale support and service. Firms following this innovation strategy can charge a higher price for their product based on the product characteristics, the delivery system, the quality of service, or the distribution channels. Structural changes in production capabilities are analyzed with the well-known product-process matrix. It provides the most obvious means for generating revenues. Process innovation, on the other hand, provides the means for safeguarding and improving quality and also for saving costs. Improved and radically changed products are regarded as particularly important for long term business growth (Oke & Goffin, 2001).

The power of product innovation in helping companies retain and grow competitive position is indisputable. Products have to be updated and completely renewed for retaining strong market presence. It is not enough to avidly engage in product innovation for its own sake - what some managers refer to as “innoflation” (Mitchell, 1996). It is important to delineate just what product features are to be improved or radically changed. For this purpose, analysts have differentiated between “core” product features and help provided in evaluating, buying and using the core product. The amount of help or support provided will depend on the needs of particular customers. An appropriate premium price can normally be charged for support. Support provides a potentially profitable lever for gaining competitive advantage. It enables a supplier to sell the same core product to different customer groups as different offerings (Storey & Easingwood, 1998).

The need to compare and evaluate production capabilities arises from the proliferating opportunities to allocate a desired product mix into different facilities and locations worldwide. According to the product-process matrix, production facilities can be characterized by the pattern of material flow, layout of machine centers, and worker assignments, as well as the degree of automation and methods of production planning and scheduling (Hart, 1996). The process design can range from a flexible job shop to a disconnected batch line, and a worker or machine-paced connected line, and further to a continuous automated flow. The mix of products and components can be one-of-a kind, customized products with low volumes of many differentiated products, high volumes of few standardized products, and commodity products with high production volumes. When positioned into the normative framework any efficient production facility should be located close to the diagonal.

2.3.3 Marketing Strategies

Market innovation is concerned with improving the mix of target markets and how chosen markets are best served (Mitchell, 1996). Its purpose is to identify better (new) potential markets; and better (new) ways to serve target markets. We deal first with the identification of potential markets. Identification is achieved through skillful market segmentation (Tushman & Nadler, 2006). Market segmentation, which involves dividing a total potential market into smaller more manageable parts, is critically important if the aim is to develop the profitability of a business to the full. Incomplete market segmentation will result in a less than optimal mix of target markets, meaning that revenues which might have been earned are misread.

In recent years “benefit segmentation” has become more widely used (Teese, Pisano & Shuen, 1997). It is based on the study of buyers’ attitudes, on the assumption that in great measure it is needs and benefits which make up markets and which alter markets. In this form of segmentation emphasis is on “usage occasions”, namely how buyers seek to gain benefits in particular buying situations. This form of segmentation is particularly powerful for dividing a total potential market into meaningful market opportunities. Its power derives from being predicated on the assumption that the same individual buyer can have different usage needs for the same core product. This happens quite frequently in practice, as for example when a person travels first

class on business but second class for private travel. Each usage need presents a potential market opportunity (Slater & Narver, 1995).

The second purpose of market innovation is concerned with serving chosen markets better. This activity again relies on accurately interpreting buying preferences, but in greater detail. As with “benefit segmentation”, an understanding of buying preferences is important because buyers are likely to purchase offers which they like most. Often the analysis of buying preferences is done intuitively. This can result in surprisingly successful results. Choice is made on the basis of price alone. Other customers prefer to buy in a “product-buy” mode. In this mode, knowledgeable customers seek superior core product features and are prepared to pay a premium price for these. Less knowledgeable customers prefer to purchase in a “system-buy” mode, in which they are prepared to pay a premium price for core product features and also for help in the form of advice. Last, some customers prefer to purchase in a “consulting-buy” mode. They seek only advice on how to purchase and use the core product and are prepared to pay for this. Identifying potential markets and interpreting buying preferences to understand how chosen markets can be served better is a specialist activity. It is the responsibility of “market champions”. Market champions are to markets what product champions are to products. Skillful market champions fight for the development of markets which their business can supply and dominate in some way. Effective market championing involves spotting positions in which the business can build and retain competitive strength. There is no point in choosing an innovation strategy which the business lacks the means to pursue over time. Skillful market innovation helps to focus the competitive strategy of a business. Customer analysis, competitor analysis and supply competence analysis are its essential ingredients, (Schon, 1998),

Skillful market champions appreciate the specific ways in which different customers buy. They know that some customers will have a preference for certain types of offers, while other customers will have quite different preferences. This means that the same core product can - and indeed, should - be offered quite differently to different market segments, if the aim is to meet buyers’ preferences as closely as possible. There is nothing startlingly new in this. In many markets profitability turns on the ability to sell the same core product - such as airline or train seats - at different prices to different buyers. What skillful market champions appreciate is that

the same core product can be differentiated by varying the support (McAdam & McClelland, 2002).

In many businesses there is a healthy tension between its key competences (Fulmer, 1992), on the one hand, and market opportunities on the other hand. Market champions address the market side of the business equation to assess alternative courses of action against the opportunities open to a business. This approach is quite different from one which assesses alternatives from the point of view of core competences or capabilities. Consideration of the strength of internal capabilities is too limiting a perspective when, as is increasingly the case, external competitive parameters are changing fast (Hamel & Prahalad, 1994).

It is the task of the market champion to question current market practices. The analytical task of the market champion is to identify better potential markets and better ways of serving existing and new markets. Identifying the value propositions which will best serve the interests of selected markets is the most important task of market champions. It is based on interpreting customer usage needs against relevant segmentation criteria. As far as attitudinal purchasing preferences are concerned, these can be amplified by taking into account the different ways in which the same core product can be bought. However, a potential danger occurs, when market champions argue in favor of serving many different market segments, each with its own special mix of core product and support (Tushman & Nadler, 2006). Doing it will require a wide range of offers that militates against achieving economies of scale. This is why in many businesses, a tension exists between wanting to meet the buying preferences of different market segments as closely as possible, and on the one hand the wish to supply as economically as possible through a standardized offers. The operational challenge is, of course, to decide how wide a range of customers to serve.

2.3.4 Process Strategies

Every business process whether stand-alone or aligned with other processes will yield some value, particularly more when aligned (Matsuno, Mentzer & Ozsomer, 2002). So the process alignment is designed to derive a quantified benefit to meet and outperform competition. Creation and optimization of process therefore goes beyond tools and practices. Custodians of a process differentiation logic views of how people connect in the work-flow of a process, carry

out tasks, and define the outcomes benefit experiences, and where and how value happens, what are likely obstacles/pitfalls, eventually how it produces (and retains) a sustainable value for competitive advantage. There are a number of success factors found among best-in-class organizations that have embraced a culture of operational excellence (Tidd et al, 2001). They include support from the top, the integration of initiatives into the firm's strategy, cooperation from business units, a common language, credibility within the organization and ability to measure results.

It is a normative framework developed for identifying efficient service strategies for the different institutional settings, especially those enabled by modern information and communication technologies. Process innovation embraces quality function deployment and business process reengineering (Cumming, 1998). It is a type of innovation which is not easy, but its purpose is now well understood. An efficient supplier who keeps working on productivity gains can expect, over time, to develop products that offer the same performance at a lower cost. Such cost reductions may, or may not, be passed on to customers in the form of lower prices. Process innovation is important in both the supply of the core product as well as in the support part of any offer. Both components of an offer require quality standards to be met and maintained. In the case of services, which by their very nature rely on personal interactions to achieve results, the management of process innovation is a particularly challenging activity (Johne & Storey, 1998).

It is generally well known that a variety of factors are implicated in innovation success. On this note there is a good deal of evidence to support the view that new products success is related to the formalizations of new products processes (Cooper et al, 1999; Cooper, 1993). Though success rates vary, current estimates suggest that around 60 per cent of new products succeed once they are introduced to the marketplace (Griffin, 1997). It is recognized, however, that paying attention to detail can increase the odds by as much as 30 per cent. Achieving a high success rate is suggested to be dependent on not only the number of activities that comprise firms' new products processes, but also how well the activities are carried out. The most important contributions formal New Product Development (NPD) processes are suggested to yield include improved success rates, higher customer satisfaction, and meeting time, quality and cost objectives (Cooper et al, 2003).

The issue of providing the right environment for innovation is central to the debate is whether the capacity to innovate is predominantly a personal attribute, or whether it is an emergent property of organizations amenable to systematic management. Taking the view that innovation is endemic within individuals, managers are immediately faced with the dilemma regarding recruitment and channeling talent in a way that is consistent with the organizations goals. Truly creative individuals are not always easy to manage (Dodgson, 2001). Alternatively, there are those that are skeptical that such a thing as a distinct entrepreneurial personality exists. More important is that organization forms are flexible so that an appropriate balance between order and freedom is maintained. Ensuring procedures are in place to encourage innovation, whilst also providing a systematic means to manage the new products process through to commercialization is key.

It is hardly surprising that making sure customers' needs act as the prime driver for innovation is deemed to be a critical issue (Everitt, 2002). As originally conceived of, the marketing concept holds that all company activities must be organized around the primary goal of satisfying customers' needs. Organizational structures and procedures reflect a market-orientation, and all personnel are expected to be truly customer-focused. Market-oriented firms are also recognized to pay a great deal of attention to customer research prior to new products being developed and produced. The idea of pushing products at customers is alien to the market-oriented firm. Rather, the prime goal of the organization is to tap into customers' needs so well that new products generate their own source of marketing momentum (Everitt, 2002).

2.4 Theoretical Framework

The theory underpinning this research is Rogers' (2003) diffusion of innovations theory, which seeks to explain how new ideas or innovations are adopted. This study seeks to identify the delivery channel technologies that have been adopted by firms in the NSE. Technological advancements have continued to revolutionize various industries in Kenya. A feature of the industries across the globe has been that it is increasingly becoming turbulent and competitive. Organizations, aided by technological developments, have responded to the challenges by adopting innovation technologies, which emphasizes on attempting to build customer satisfaction through offering better products and services and at the same time to minimize operation costs

(Adesina & Ayo, 2010). Provision of banking services has been broadly used, and an understanding of the adoption process will have important implications for bankers and customers alike.

Rogers' (2003) diffusion of innovations theory proposes that there are five attributes of an innovation that effect adoption: relative advantage, compatibility, complexity, triability, and observability. Relative advantage is the degree to which an innovation is perceived as being better than the idea it supersedes. Rogers' theory suggests that innovations that have a clear, unambiguous advantage over the previous approach will be more easily adopted and implemented. Current research evidence indicated that if a potential user saw no relative advantage in using the innovation, it would not be adopted. Compatibility was the degree to which an innovation fit with the existing values, past experiences, and needs of potential adopters. There is strong direct research evidence suggesting that the more compatible the innovation is, the greater the likelihood of adoption (Shu & Strassmann, 2005).

Complexity is the degree to which an innovation is perceived as difficult to understand and use. Trial ability is the degree to which an innovation may be experimented with on a limited basis. Because new innovations require investing time, energy and resources, innovations that can be tried before being fully implemented are more readily adopted. And finally, observability is the degree to which the results of an innovation are visible to the adopters. If there are observable positive outcomes from the implementation of the innovation then the innovation is more adoptable. The underlying principle in this theory is that the greater the perception regarding the relative advantage of an innovation is to a firm, the more likely it is going to adopt it. Firms are more likely to adopt technologies that they perceive as being better than using the predecessors.

2.5 Conceptual Framework

Frequently, the types of innovation are classified using the criterion of their purpose as technical or administrative innovation (Damanpour, 1996). Whereas technical innovations include new technologies, products and/or services, administrative innovations refer to new procedures, policies and organizational forms. Technical innovations include both, product innovations, which refer to the development and introduction of new or improved products and/or services, and process innovations, which involve the adoption of new or improved methods of

manufacture, distribution or delivery of service. Given the competitive environment of the innovation/diffusion process in the telecommunication industry a conceptual framework was developed of the dynamics of innovation. The product innovation in the company leads to business growth, strong market for the products/services, old products are updated and also there is new product development in the company. The independent variables in this study are technology innovations, product innovations, market innovations and process innovations, while the dependent variable is performance measured in terms of market share and profitability.

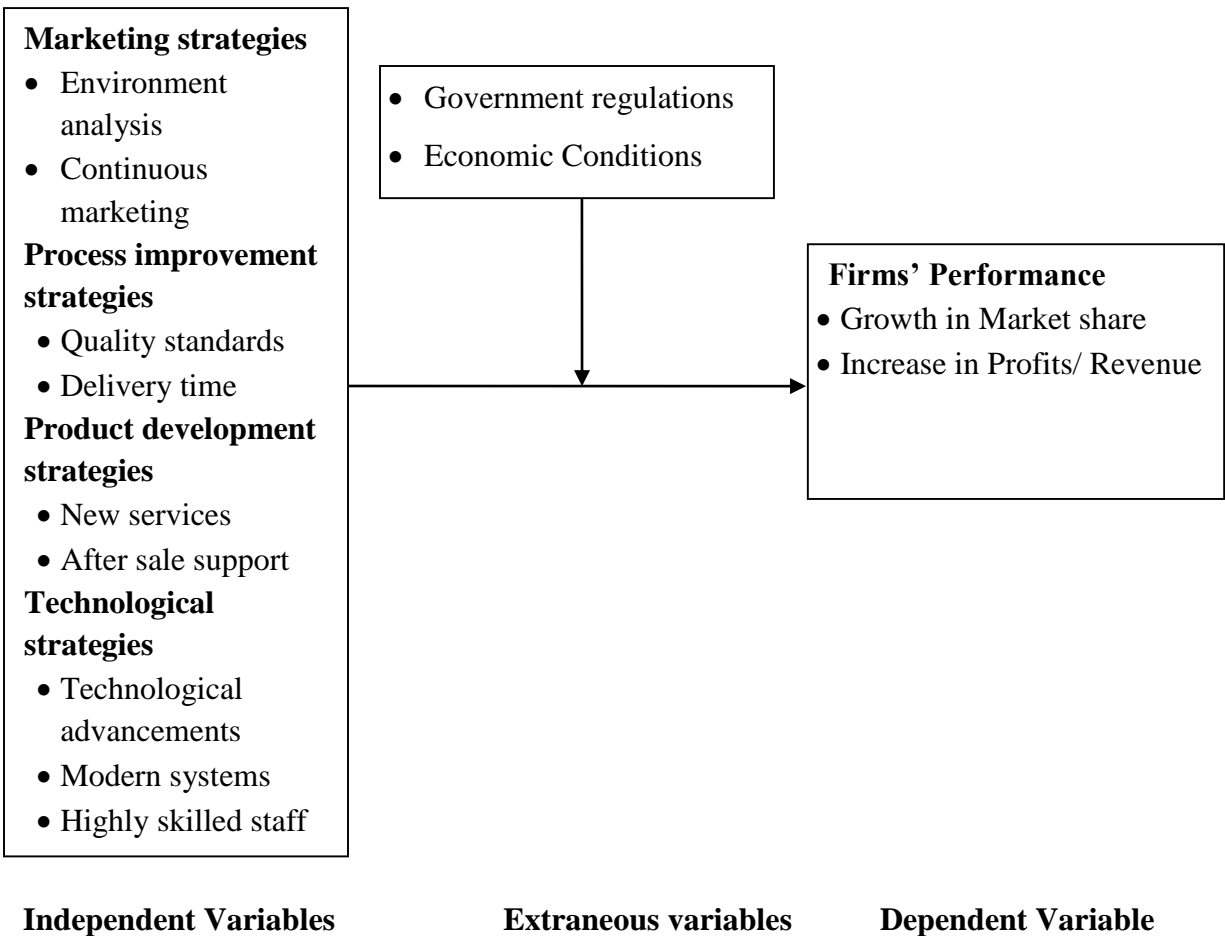


Figure 2.1: Relationship between independent variables and the dependent variable

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research design and methodology was carried out under the following sub topics: research design, respondents, sampling method, data collection instruments, validity of the instruments, reliability of the instruments, data collection procedure and data analysis.

3.2 Research Design

This research problem was studied through the use of descriptive research design. The technique was chosen since it is more precise and accurate since it involves description of events in a well-planned way. A descriptive survey was undertaken. Descriptive designs result in a description of the data, whether in words, pictures, charts, or tables, and whether the data analysis shows statistical relationships or is merely descriptive (Mahmood & Mitchell, 2004)

3.3 Target Population

The target population in this study was the 61 firms listed in the NSE. The target respondents of this study consisted of the management personnel in at the firms under study.

3.4 Sampling Procedure and Sample Size

Researchers use samples as compared to complete enumeration because of convenience and cost of data collection. However, larger samples are preferred for increase in precision (Shenoy, Srivastava & Sharma, 2011). From the population of 61 the sampling frame upon which the sample for the study will be picked. The study will apply the following formula for calculating sample size as derived from (Reinhilde & Bruno, 1999).

$$n = Z^2 \cdot P \cdot Q \cdot \left(\frac{N}{E^2(N-1) + Z^2 \cdot P \cdot Q} \right)$$

Where n: is the sample size.

N = Total Population

Z = Confidence limit

E= Error margin or accuracy which is equal 5

P= population of respondent who will respond positive to the question

Q= is the population of the respondent who will have negative view (1-100) =50. If it is not even then I can use the 50/50% which is 0.5 at 95% level of confidence

Z= 1.96

Calculation for sample size

$$n = 1.96^2 \times 50 \times 50 \left(\frac{61}{5^2(61 - 1) + 1.96^2 \times 50 \times 50} \right)$$
$$= 53$$

Given that the organization is the unit of analysis for both the independent and dependent variables. The targeted firms are categorized into 13 sections based on their nature of business. Since one manager can substantively provide the required information from each of the targeted organizations, a sample size of one (1) respondent from the management of each of the 53 organizations was drawn by first stratified sampling method based on the 13 categories then by random sampling method as shown in appendix II.

3.5 Data Collection

This study collected primary data using a questionnaire that was administered to the target respondents. According to Mugenda and Mugenda (1999) questionnaires are cheaper and quicker to analyze. The questionnaires will be administered personally by the researcher to increase return rate and eliminate any chances of delay. The instructions were carefully explained to the respondents before answering the questionnaires. The questionnaire was administered through a drop and pick later method.

3.6 Validity and Reliability

According to Kim and Mauborgne (1999) a pilot test is necessary for testing the reliability of data collection instruments. Kothari (1990) explains reliability of research as determining whether the research truly measured that which it is intended to measure or how truthful the

research results will be. Pilot study is conducted to detect weakness in design and instrumentation and to provide proxy data for selection of a sample (Im & Workman, 2004).

The researcher selected a pilot group of 10 individuals from I&M Bank Limited, Naivas Supermarket and Uniliver Kenya Limited to test the reliability of the research instrument. The pilot data was not included in the actual study. The pilot study allowed for pre-testing of the research instrument.

According to Ngechu (2004) validity is the extent by which the sample of test items signify the content the test is meant to measure. Expert opinion will be requested to comment on the significance and appropriateness of questions and give suggestions of corrections that need to be made to the makeup of the research tools. This will help to develop and better the content validity of the data to be collected.

Test of reliability assesses the consistency of results across items. Reliability is often measured with a reliability coefficient. A measure is said to have a high reliability if it produces similar results under consistent conditions (Kim & Mauborgne, 1999). The researcher will use Cronbach's alpha coefficient to test the reliability and estimation of internal consistency of measurements. The minimum acceptable value for Cronbach's alpha is from 0.5 to 0.6 (Ogwueleka, 2011; Olatunji, 2010). The cut-off value for this study therefore is 0.70; in essence, for items to be used together as a scale in this study, the items must be above the cut-off value. From the table in Appendix III shows the actual reliability test results for the research instrument. The alpha coefficient were all greater than 0.7. This shows that the instruments had an acceptable reliability coefficient and were appropriate for the study (see appendix III).

3.7 Data Analysis

Before analysis, the data collected was checked for completeness and consistency. The collected data was sorted for order. It was edited to remove errors and spot any inconsistencies and identify any problems resulting from the use of the questionnaire. Editing made coding easier. Statistical package for social sciences (SPSS) for Windows, Version 17.0 (SPSS, 2008) will be used for the statistical analyses of the data generated from the questionnaire survey. The data collected was purely quantitative and was analyzed by descriptive and inferential statistics. Descriptive statistics consisted of percentages, means and other central tendencies. The

inferential statistics to test the studies hypotheses will be Pearsons correlation analysis and multiple regression analysis.

Correlation analysis was used to test hypotheses one to four by determining whether a relationship exists between the innovation strategies under study and performance. Multiple regression analysis was used to test hypotheses five by determining whether innovation strategies under study have any effect on organizational performance. The regression equation took the form below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

α - Is a constant; the concept explaining the level of performance given and it's the Y value when all the predictor values (X_1, X_2, X_3, X_4) are zero. $\beta_1, \beta_2, \beta_3, \beta_4$ - are constants regression coefficients representing the condition of the independent variables to the dependent variables.

X_1 = technological innovation; X_2 = product innovation; X_3 = market innovation; X_4 = process innovation and ε - (Extraneous) Error term explaining the variability as a result of other innovation strategies not accounted for.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This section will present the descriptive statistics of the responses on innovation strategies and performance of firms. The results were analysed using descriptive statistics namely, means and standard deviations in table format. A five point Likert scale was used to establish respondent's perceptions on the variables of the study. The results are presented below.

4.2 Response Rate

The researcher prepared and issued out 53 questionnaires, and out of the 53 questionnaires issued, 49 were filled and returned accounting for 92.45% of the sample population, which is an acceptable figure. Mugenda and Mugenda (2009) reported that a 50% response rate is adequate, 60% good and above 70% rates as very good.

4.3 Descriptive analysis of the responses on innovation strategies and performance

a) Gender

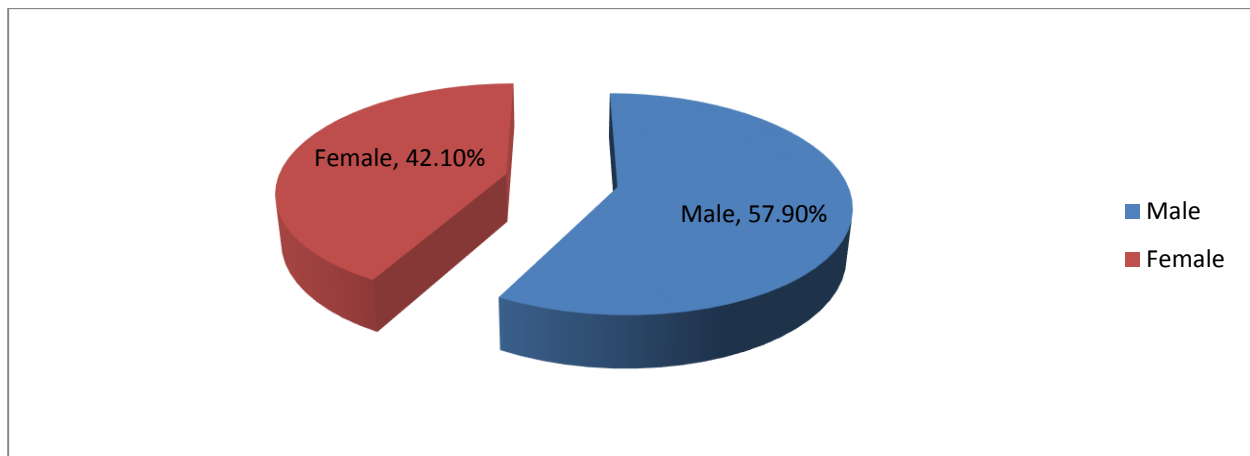


Figure 4. 1: Gender Distribution of the Respondents

There was a fair balance of gender participation in the study. Figure 4.1 indicates that majority (57.9%) of the respondents were male while 42.1% of the respondents were female.

This is a good distribution which depicts a fair balance of gender. Since majority of the responses for this study relies on the perceptual measures of the respondents, this gender distribution is expected to accommodate the opinions and views from both sides of the gender divide. Nevertheless, the balance in gender at NSE may also be an evidence of successful efforts of various gender mainstreaming campaigns.

b) Higher Education Level of Respondents

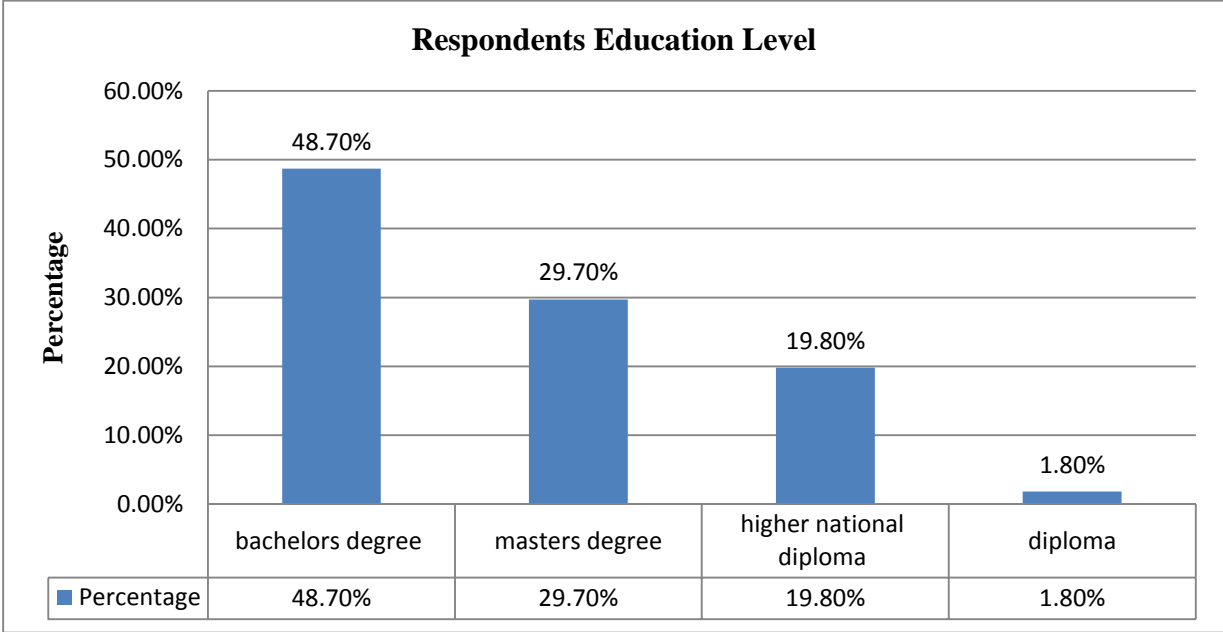


Figure 4. 2: Higher Education Level of Respondents

Figure 4.2, indicates that 23 (48.6%) of the respondents had bachelors degree as their highest level of education, 15 (29.7%) had masters degree, 8 (19.8%) had higher national diploma and a few 1 (1.8%) had diploma. The profile of the respondents makes this a good sample as well-educated respondents have the ability to furnish the study with better information which added value.

c) Length of Continuous Service

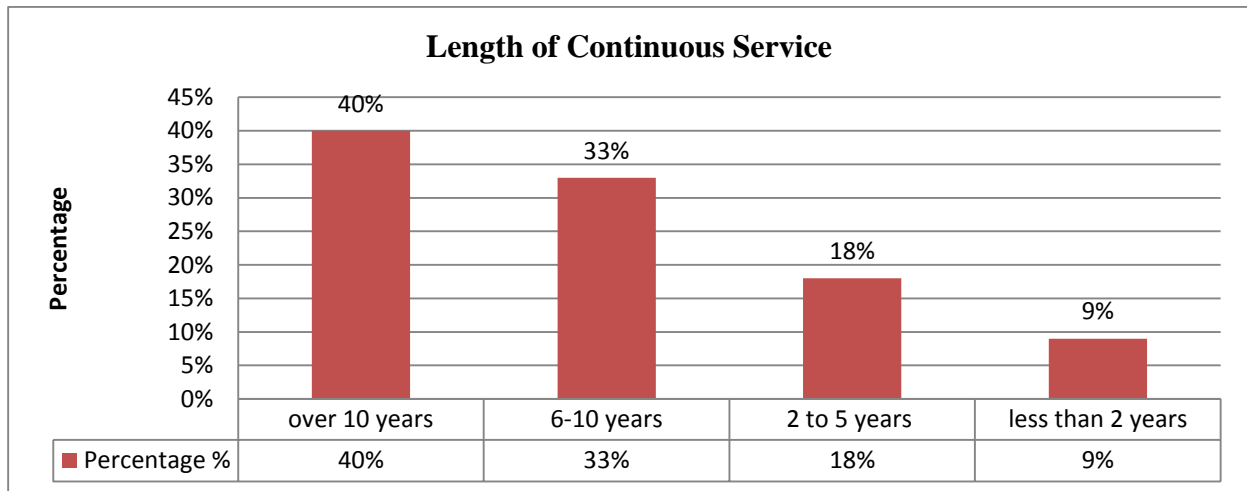


Figure 4. 3: Length of Continuous Service

Figure 4.3, indicates that 20 (40%) of the respondents had been working in their respective organizations for a period of over 10 years, 16 (33%) of the respondents for a period between 6 – 10 years, 9 (18%) for a period of between 2 - 5 % and 4 (9%) of the respondents for a period of less than 2 years. This means that the respondents have adequate working experience with the Nairobi security exchange and therefore possess the necessary knowledge and information which was considered useful for this study.

d) Distribution of Respondents by Department

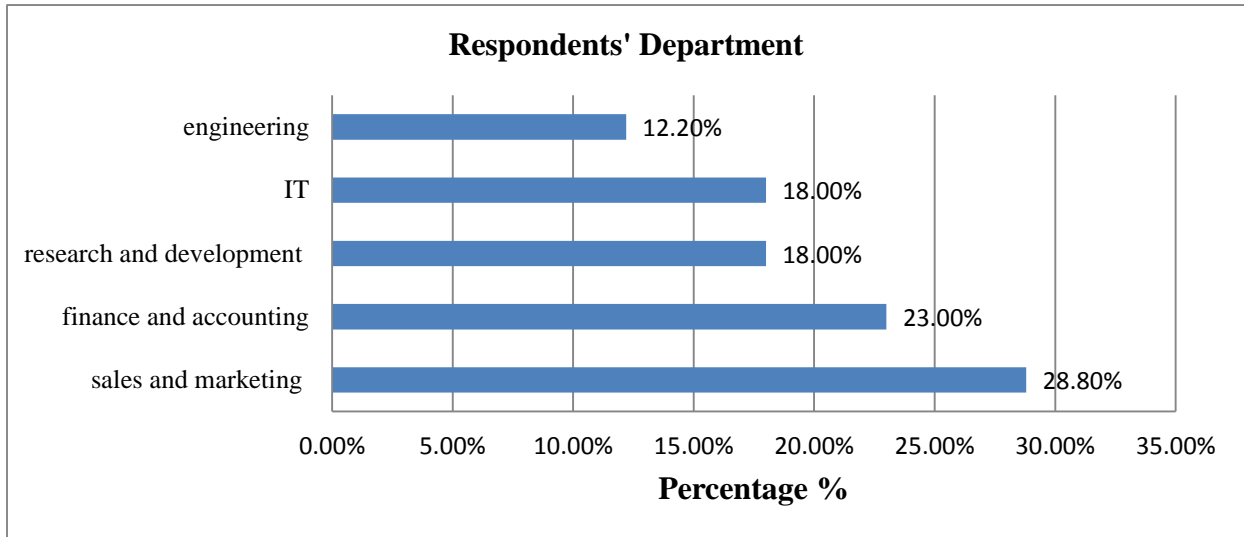


Figure 4. 4: Distribution of respondents by departments

Figure 4.4, 14 (28.8%) of the respondents were in the sales and marketing department, 11 (23%) in the finance and accounting department, 7 (18%) in research and development, and in IT department respectively and lastly 6 (12.20%) were in the engineering department. This profile distribution was important since the study aimed at capturing the opinions of all cadres of employees in the organization as a unit of observation.

4.3.1 Descriptive statistics of Innovation Strategies

This section presents the descriptive statistics of the responses on innovation strategies and Firm performance. A five point Likerts scale where 1=strongly disagree; 2=disagree; 3=uncertain; 4=agree and 5=strongly agree was used to establish respondents perceptions on innovation strategies.

a) Technological Innovations

Table 4. 1: Results of descriptive statistics of responses on Technological Innovations

	N	Maximum	Minimum	Mean	Std Dev
My organization has highly skilled IT experts	49	1	5	4.6	0.31
Technology always goes hand in hand with customer value innovation	49	1	5	4.3	0.19
Technological innovations are always geared towards improving operational effectiveness	49	1	5	4.1	0.18
My organization has strengthened Integrated IS that enhances development of new products	49	1	5	4	0.16

The mean score for the statement “My organization has highly skilled IT experts” had the highest mean (M = 4.6) suggesting that organizations should have skilled employees in the IT department to facilitate technological innovations. The statement “Technology always goes hand in hand with customer value innovation” had a fairly high mean (M = 4.3) suggesting that the technology that is adopted is linked to the value created to the customers. The statement “Technological innovations are always geared towards improving operational effectiveness” had a mean (M = 4.1) suggesting that new technologies should enhance organizational operation. The statement “My organization has strengthened Integrated IS that enhances development of new products” had a mean (M = 4.0) suggesting that the organizations under study build on the information system to facilitates the development of new products.

b) Market Innovations

Table 4. 2: Results of descriptive statistics of responses onMarket Innovations

	N	Maximu	Minimum	Mean	Std Dev
Market innovation strategies have facilitated creation of value through pricing	49	1	5	3.9	0.18
Market innovation strategies employed has led to enhanced entry into new markets	49	1	5	4.2	0.19
Market innovation strategies involves environmental analysis and response to changes	49	1	5	4.5	0.31
This organization conducts aggressive anti-competitors marketing campaigns	49	1	5	4	0.16

The mean score for the statement “Market innovation strategies involves environmental analysis and response to changes” had the highest mean ($M = 4.5$) meaning that for successful implementation of market innovation strategies an analysis of the external environment is necessary while the statement “Market innovation strategies employed has led to enhanced entry into new markets” had a fairly high mean ($M = 4.2$) suggesting that market innovation strategies make it possible to penetrate new markets and therefore increasing the market base. The statement that “This organization conducts aggressive anti-competitors marketing campaigns” had a mean of ($M = 4.0$) suggesting that in a competitive environment it is essential to create awareness about a product or service to enhance product performance that results in improved firm performance. The statement that “Market innovation strategies have facilitated creation of value through pricing” had a relatively low mean of ($M = 3.9$) meaning that organizations should create value to the consumers of products.

c) Product Innovations

Table 4. 3: Results of descriptive statistics of responses onProduct Innovations

	N	Maximum	Minimum	Mean	Std Dev
My organization continuously improves its product to enhance product performance in the market	49	1	5	3.8	0.18
My organization constantly revises its product costs in line with competitors	49	1	5	3.4	0.27
My organization replaces non-performing products with performing products to increase its revenue	49	1	5	4.3	0.12

The mean score for the statement “My organization replaces non-performing products with performing products to increase its revenue” had the highest mean (M = 4.3) suggesting that the organizations only prefers to focus on products that are doing well in the market to increase sales. The statement that “My organization continuously improves its product to enhance product performance in the market” had a fairly high mean (M = 3.8) meaning that the organizations are consumer oriented with an aim of increasing sales and lastly the statement “My organization constantly revises its product costs in line with competitors” had the lowest mean (M = 3.4) meaning that not every organization under study focus on the prices of the competitors.

d) Process Innovations

Table 4. 4: Results of descriptive statistics of responses onProduct Innovations

	N	Maximum	Minimum	Mean	Std Dev
Process innovation strategies has facilitated reduction of costs	49	1	5	4.1	0.13
Process innovation strategies has ensured conformance to regulations	49	1	5	4.3	0.23
Process innovation strategies has facilitated new products introduction	49	1	5	4.0	0.14

The mean score for the statement “Process innovation strategies has ensured conformance to regulations” had the highest mean (M = 4.3) suggesting that new ways in the production process enabled the firms to adhere to set regulations. The statement “Process innovation strategies has facilitated reduction of costs” had a mean (M = 4.1) meaning that new ways in the production process enabled the firms to reduce production overheads and lastly, the statement “Process innovation strategies has facilitated new products introduction” had a mean (M = 4.0) meaning that new ways in the production process have facilitated creation of new products for the market.

e) **Firms' Performance over the last five years**

Table 4. 5: Firms' Performance over the last five years

	N	Maximum	Minimum	Mean	Std Dev
Grown its revenue base from technology related innovations	49	1	5	4.1	0.01
Grown its revenue base from product related innovations	49	1	5	3.6	0.03
Reduced cost from process related innovations	49	1	5	4.1	0.02
Grown its market share from market related innovations	49	1	5	4.2	0.04
Grown its market/revenue from a combination of all the above innovations	49	1	5	4.7	0.05

The mean score for the statement “Grown its market/revenue from a combination of all the innovations had a highest mean score (M = 4.7) meaning that innovations strategies results in increased market share and revenue. The statement “Grown its market share from market related innovations” had a mean of (M = 4.2) meaning that market innovations increases the market share. Also the statement “Grown its revenue base from technology related innovations” had a mean score (M = 4.1) meaning that the revenue of a company tend to increase with increase in technology innovations.

4.4. Hypotheses Testing

The testing of hypothesis was subjected to statistical analysis as shown below. Pearson’s correlation analysis and multiple regression analysis were used to test the study hypotheses

4.4.1. Effect of innovation strategies on firms’ performance

Hypothesis One to Hypothesis Four sought to determine the influence of innovation strategies influencing the performance of firms listed in the Nairobi securities exchange. These hypotheses

were tested using Pearson Correlation analysis which determines the strength and direction of the relationships. The Pearson correlation coefficient ranges from 0 (if no relationship exists) to 1 (for a perfect relationship), correlation coefficients (in absolute value) which are ≤ 0.35 are generally considered to represent low or weak correlations, 0.36 to 0.67 moderate correlations, and 0.68 to 1.0 strong or high correlations with r coefficients > 0.90 very high correlations (Field, 2005).

Table 4. 6: Pearson’s Correlation Analysis exploring the relationship among innovation strategies and performance

	Technological strategies	Product development strategies	Market strategies	Process strategies	Performance
Technological strategies	1 . 49	.599(**) .000 49	.579(**) .000 49	.111(*).038 49	.811(**).000 49
Product development strategies	.599(**) .000 49	1 . 49	.799(**).000 49	.211(**).000 49	.531(**).000 49
Market strategies	.579(**) .000 49	.799(**).000 49	1 . 49	.211(**).000 49	.611(**).000 49
Process strategies	.111(*).038 49	.211(**).000 49	.211(**).000 49	1 . 49	.535(**).000 49
Performance	.811(**).000 49	.531(**).000 49	.611(**).000 49	.535(**).000 49	1 . 49

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

H₀1: Technological strategies do not have significant effect on the performance of firms in NSE.

The study sought to establish whether Technological strategies have significant effect on the performance of firms in NSE. The results in Table 4.6 showed that there was a strong significant positive relationship between Technological strategies and performance ($r = 0.811$, $p < 0.001$). This suggests that an increase in technological strategies will result in an increase in performance. This finding is consistent with the one by Gerstenfield and Wortzel (2007) who analyzed the relationship between the usages of Internet- based innovation technologies, different types of innovation, and financial performance at the firm level. It was found that all studied types of innovation, including Internet-enabled and non-Internet-enabled product or technological innovations, are positively associated with turnover and employment growth. Finally, it was found that innovative activity is most of the time associated with higher profitability. Thus, hypothesis One which states that technological strategies does not have significant effect on the performance of firms in NSE is rejected and the alternative that states that technological strategies have significant effect on the performance of firms in NSE is accepted

H₀2: Product development strategies do not have significant effect on the performance of firms in NSE

The study sought to establish whether product development strategies have significant effect on the performance of firms in NSE. The results in Table 4.6 showed that there was a strong significant positive relationship between product development strategies and performance ($r = 0.531$, $p < 0.001$). This suggests that an increase in product development strategies will result in an increase in performance. This finding is consistent with study by Oke and Goffin (2010) that found that improved and radically changed products are regarded as particularly important for long term business growth. It further established that the power of product innovation in helping companies retain and grow competitive position is indisputable. Products have to be updated and completely renewed for retaining strong market presence. Thus, hypothesis One which states that product development strategies does not have significant effect on the performance of firms in NSE is rejected and the alternative that states that product development strategies have significant effect on the performance of firms in NSE is accepted

H₃: Market strategies do not have significant effect on the performance of firms in NSE

The study sought to establish whether market strategies have significant effect on the performance of firms in NSE. The results in Table 4.6 showed that there was a strong significant positive relationship between market strategies and performance ($r = 0.611$, $p < 0.001$). This suggests that an increase in market strategies will result in an increase in performance. This finding is consistent with the one by Yang's (2007) who found that market innovations had a positive correlation with organizational performance. Thus, hypothesis One which states that marketing strategies does not have significant effect on the performance of firms in NSE is rejected and the alternative that states that market strategies have significant effect on the performance of firms in NSE is accepted

H₄: Process strategies do not have significant effect on the performance of firms in NSE.

The study sought to establish whether process strategies have significant effect on the performance of firms in NSE. The results in Table 4.6 showed that there was a strong significant positive relationship between process strategies and performance ($r = 0.535$, $p < 0.001$). This suggests that an increase in process strategies will result in an increase in performance.

This study concurs with another study by Kemppainen and Vepsäläinen (2011) which concludes that every business process whether stand-alone or aligned with other processes will yield some value, particularly more when aligned. It further asserts that process alignment is designed to derive a quantified benefit to meet and outperform competition. Thus, hypothesis One which states that process strategies does not have significant effect on the performance of firms in NSE is rejected and the alternative that states that process strategies have significant effect on the performance of firms in NSE is accepted.

Multiple Regression Analysis

H₀₅: The combined effect of innovation strategies namely: technological, product development, market and process strategies do not have significant effect on the performance of firms in NSE.

Hypothesis five was tested using multiple regression analysis. Multiple regression analysis was carried out to establish the extent to which the combined effect of technological, product development, market and process strategies effect on the performance of firms in NSE. Before the regression analysis was carried out, Pearson's correlation analysis was carried out to ensure that there was no multicollinearity. Multicollinearity exists when there is a strong correlation between two or more independent variables and this poses a problem when running multiple regressions. According to Field (2009) multicollinearity exists when correlations between two independent variables are at or in excess of 0.80. In this study, the highest correlation was between product development strategies and market strategies ($r = 0.799, p < 0.000$) which rules out multicollinearity.

Table 4. 7: Results of multiple regression analysis establishing the combined effects of innovation strategies and performance

Table 4. 8: Regression Analysis Results

	Unstandardized Coefficients		Standardized	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.147	3.93		2.915	.000
Technological Innovations	.488	.221	.663	1.908	.001
Marketing Innovations	.384	.106	.397	3.608	.001
Process innovations	.221	.115	.192	1.917	.003
Product innovations	.269	.135	.387	1.991	.003

a Dependent Variable: Performance

Table 4. 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.851(a)	.724	.676	.77048

a Predictors: (Constant), technological strategies, product development strategies, market strategies and process strategies

The model summary of the regression analysis in Table 4.9 shows that innovation strategies accounted for 72.4 % of the variance in the performance of firms listed in the Nairobi securities exchange (R square = 0.724). This shows that 27.6% of the variance in performance was explained by factors not in the study. The standardized beta coefficients indicate that technological strategies ($\beta = .663$, $p = 0.001$), product development strategies ($\beta = 0.387$, $p = 0.003$) market strategies ($\beta = .397$, $p = 0.001$) and process strategies ($\beta = 0.192$, $p = 0.003$) were all significant predictors of performance of firms listed in the Nairobi securities exchange.

The significant beta coefficients suggest that improving innovation strategies will lead to increase in performance of firms listed in NSE. These results are consistent with previous studies on Innovation and Corporate Performance (Letangule & Letting (2012).

The Analysis of variance (ANOVA) results as shown in Table 4.10 further confirms that the model fit is appropriate for this data since p-value of 0.000 which is less than 0.05, with 49 degrees of freedom. This implies that there is a significant positive relationship between innovation strategies and performance of firms listed in NSE.

Table 4. 10: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.321	4	5.330	5.502	.001 ^b
	Residual	41.658	43	.969		
	Total	62.979	47			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), technological strategies, product development strategies, market strategies and process strategies

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter provides a summary of major findings, conclusion and recommendation of the research. It draws conclusions and makes recommendations on the influence of innovation strategies on the performance of firms listed in the Nairobi securities exchange.

5.2 Summary of the findings

The general objective of the study was to determine the influence of innovation strategies (namely; technological, product development, market and process strategies) on performance of firms in NSE. The study was guided by five (5) objectives;

5.2.1 Effect of technological strategies on performance of firms in NSE

On technological strategies, the study found a positive correlation between technological strategies and the performance of firms in NSE. This suggests that an increase in technological strategies will result in an increase in performance. This finding is consistent with the one by Mutula (2013) who found that technological innovations and performance were positively correlated.

5.2.2 Effect of product development strategies on performance of firms in NSE

Product development strategies was found to have a positive correlation with performance of firms in NSE. This suggested that an increase in product development strategies will result in an increase in performance. This finding is consistent with the one by Oke and Goffin (2010) that found that improved and radically changed products are regarded as particularly important for long term business growth. It further established that the power of product innovation in helping companies retain and grow competitive position is indisputable. Products have to be updated and completely renewed for retaining strong market presence.

5.2.3 Effect of market strategies on performance of firms in NSE

Regarding market strategies, the study found that market strategies positive correlation with performance of firms in NSE. This suggested that an increase in market strategies will result in an increase in performance. This finding is consistent with the one by Yang's (2007) who found that market innovations had a positive correlation with organizational performance.

5.2.4 Effect of process strategies on performance of firms in NSE

Process strategies was found to have a positive relationship with performance of firms in NSE. This suggested that an increase in process strategies will result in an increase in firms' performance. This study concurs with another study by Kemppainen et al (2011) which concludes that every business process whether stand-alone or aligned with other processes will yield some value, particularly more when aligned. It further asserts that process alignment is designed to derive a quantified benefit to meet and outperform competition.

5.2.5 Effect of innovation strategies namely: technological, product development, market and process strategies on the performance of firms in NSE.

The fifth objective of the study was to determine the combined effect of of innovation strategies namely: technological, product development, market and process strategies on the performance of firms in NSE. Multiple regression analysis was carried out to determine the extent to which the combined effect of innovation strategies influenced firm performance. The Model summary of the regression analysis showed that all the independent variables accounted for 72.4% of the variance in firm performance. The standardized beta coefficients indicate that technological strategies, product development strategies, market strategies and process strategies were all significant predictors of firm performance. Positive beta coefficient suggests that an increase in innovation strategies results in an improvement in firm performance.

5.3 Recommendations and Policy Implication

Organizations in Kenya should consider technology innovations as important for the industry although a cautious approach to investment technology information should be embraced. This is because the technology may not guarantee significant improvement in growth of customer numbers.

Firms in service industry could make significant gains by pursuing product and process innovations. This is because the impact on performance is much more significant given the nature of the industry. Technological innovations rank higher probably because the market has matured and hence cost savings derived from innovative processes become more attractive for growth.

Organisations in Kenya may focus on market innovations especially by improving distribution channels, affirming customer value and pricing products more competitively. The firms need to improve on its quality of products and services which bears on customer satisfaction levels. It is important to note at this point that products, process, technology and market innovations have an interactive effects on each other which should be well configured in future studies to determine exact effect.

5.4 Implications of the Findings to the Management

In terms of practical contribution: Although the empirical results of this study are somewhat similar to those of related studies conducted in the past, the latter tend to be exploratory in nature, whereas our study adopted regression analysis. It can, therefore, not only be used for reference by researchers in the future, but also be of use to businesses in the sector that wish to enhance organizational performance.

According to findings of this study, there are a number of managerial suggestions. These recommendations may be useful for managers in organizations with similar characteristics. Innovation is adequately related to attitude of organization's management. Without a corporate strategy to achieve the desired goal, innovation will be unguided and misdirected. Managers are advised to be aware of importance of information in order to recognizing needs and fulfilling needs with ideas and processes. The role of managers for supervision of the whole process and motivating their employees should not be neglected. Providing a work environment of openness built on trust where every member of the organization feels free to express their opinion without fear, is crucial for managers to be successful in implementation of innovation. Additionally, establishing strong relationships with individual customer and business partner to create a positive image for the company could assist managers.

5.5 Suggestion for Further Studies

While this study successfully examines the variables, it also presents rich prospects for several other areas to be researched in future. The present study was only confined to a firms listed in NSE. It would however be useful to carry out a similar study across heterogeneous industries such as construction, banking among others. It would also be useful to carry out the same type of research across East Africa and beyond and see whether the same results would be replicated.

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APPENDICES

Appendix I: Questionnaire

NB: Please respond by ticking your answer or writing as appropriate. Only one answer should be provided for each question.

PART A: BACKGROUND INFORMATION

1. Kindly indicate the company that you work for.....
2. Gender: Male Female
3. Education level
 - College Diploma/Certificate Undergraduate degree
 - Masters degree PhD
 - Other()
4. Number of years served in present company? (years)
5. What is your department?
 - Research and Development Finance and Accounting
 - IT Sales & Marketing
 - Engineering
 - Others please specify _____

SECTION A: INNOVATIONS STRATEGIES

PART B: TECHNOLOGY INNOVATION STRATEGIES

6. To what extent do you agree with the following statements related to technological innovations in your company? Use a scale of 1 to 5 where 1 = strongly agree; 2= agree; 3= neutral; 4= disagree 5 = strongly disagree.

	1	2	3	4	5
I. Technological innovations are always geared towards improving operational effectiveness					
II. Technology always goes hand in hand with customer value innovation					
III. My organization has highly skilled IT experts					

IV. My organization has strengthened Integrated IS that enhances development of new products					
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PART C: PRODUCT INNOVATION STRATEGIES

7. To what extent do you agree with the following statements related product innovation strategies in your organization? Use a scale of 1 to 5 where 1 = strongly agree; 2= agree; 3= neither agree nor disagree; 4= disagree 5 = strongly disagree.

	1	2	3	4	5
I. My organization continuously improves its product to enhance product performance in the market					
II. My organization constantly revises its product costs in line with competitors					
III. My organization replaces non-performing products with performing products to increase its revenue					
IV. My organization introduces new products before competitors					

8. To what extent does your firm emphasize on the following aspects of product innovation as a means to achieving competitive advantage? Use a scale of 1 to 5 where 1 = very great extent; 2= great extent; 3= moderate extent; 4= low extent and 5 = no extent.

	1	2	3	4	5
I. Product quality					
II. Product variety					
III. Product features					
IV. After sales support					
V. Customer service					
VI. New product development					

PART D: MARKET INNOVATION STRATEGIES

9. To what extent do you agree with the following statements related to market innovation strategies in your company? Use a scale of 1 to 5 where 1 = strongly agree; 2= agree; 3= neither agree nor disagree; 4= disagree 5 = strongly disagree.

	1	2	3	4	5
I. Market innovation strategies have facilitated creation of value through pricing					
II. Market innovation strategies employed has led to enhanced entry into new markets					
III. Market innovation strategies involves environmental analysis and response to changes					
IV. This organization conducts aggressive anti- competitors marketing campaigns					

PART E: PROCESS INNOVATION STRATEGIES

10. Has your organization adopted process innovation strategies?

Yes [] No []

i. If yes to what extent?

Very great extent () Great extent ()

Moderate extent () Little extent ()

Not at all ()

11. Which process innovation strategies does your firm use? (You can tick more than one)

Short product to market cycle ()

Improved business process ()

Speed of service delivery ()

Introduction of new processes ()

Others (specify).....

12. To what extent do you agree with the following statements related to process innovation strategies in your organization? (rank on a scale of 1-5, where 1= no extent and 5 = very great extent)

	1	2	3	4	5
I. Process innovation strategies has facilitated reduction of costs					
II. Process innovation strategies has ensured conformance to regulations					
III. Process innovation strategies has facilitated new products introduction					

PART F: MEASURES OF PERFORMANCE

13. Use a scale of 1 to 5 to answer the following questions where 1 = very great extent; 2= great extent; 3= moderate extent; 4= less extent and 5 = not at all. Tick once in each case.

Over the last five years, to what extent has your firm:	1	2	3	4	5
I. Grown its revenue base from technology related innovations					
II. Grown its revenue base from product related innovations					
III. Reduced cost from process related innovations.					
IV. Grown its market share from market related innovations.					
V. Grown its market/revenue from a combination of all the above innovations.					

14. To what extent do you agree with the following statements about performance of your firm? Use a scale of 1 to 5 where 1 = strongly agree; 2= agree; 3= neither agree nor disagree; 4= disagree 5 = strongly disagree.

	1	2	3	4	5
I. All our products have the highest customer satisfaction levels in the industry					
II. We have the highest product range in the industry					
III. Our new product conception to launch cycle is the shortest in the industry					

IV. Our products and service ensure sustained customer loyalty					
V. We attract the best talent in the industry					
VI. We continuously expand revenue base by tapping into new innovations					

15. In your opinions, what do you think should be done in regard to innovation strategies adopted to enhance your organization performance?

.....

.....

.....

.....

END

Appendix II: List of Firms in the NSE

Selected Firms listed in the NSE	Desired Sample Size	No Of Questionnaires
1. Eaagads Ltd	1	1
2. Kapchorua Tea Co. Ltd	1	1
3. Kakuzi	1	1
4. Limuru Tea Co. Ltd	1	1
5. Rea Vipingo Plantations Ltd	1	1
6. Sasini Ltd	1	1
7. Williamson Tea Kenya Ltd	1	1
8. Car and General (K) Ltd	1	1
9. Sameer Africa Ltd	1	1
10. Marshalls (E.A.) Ltd	1	1
11. Barclays Bank Ltd	1	1
12. CFC Stanbic Holdings Ltd	1	1
13. I&M Holdings Ltd	1	1
14. Diamond Trust Bank Kenya Ltd	1	1
15. Housing Finance Co Ltd	1	1
16. Kenya Commercial Bank Ltd	1	1
17. National Bank of Kenya Ltd	1	1
18. NIC Bank Ltd	1	1
19. Standard Chartered Bank Ltd	1	1
20. Equity Bank Ltd	1	1
21. The Co-operative Bank of Kenya Ltd	1	1
22. Express Ltd	1	1
23. Kenya Airways Ltd	1	1
24. Nation Media Group	1	1
25. Standard Group Ltd	1	1
26. TPS Eastern Africa (Serena) Ltd	1	1

27. Scangroup Ltd Ord 1.00	1	1
28. Uchumi Supermarket Ltd	1	1
29. Hutchings Biemer Ltd	1	1
30. Longhorn Kenya Ltd	1	1
31. Atlas Development and Support Services	1	1
32. Athi River Mining	1	1
33. Bamburi Cement Ltd	1	1
34. Crown Berger Ltd	1	1
35. E.A.Cables Ltd	1	1
36. E.A.Portland Cement Ltd	1	1
37. KenolKobil Ltd	1	1
38. Total Kenya Ltd	1	1
39. KenGen Ltd	1	1
40. Kenya Power & Lighting Co Ltd	1	1
41. Umeme Ltd	1	1
42. Jubilee Holdings Ltd	1	1
43. Pan Africa Insurance Holdings Ltd	1	1
44. Kenya Re-Insurance Corporation Ltd	1	1
45. Liberty Kenya Holdings Ltd	1	1
46. British-American Investments Company Ltd	1	1
47. CIC Insurance Group Ltd	1	1
48. Olympia Capital Holdings ltd	1	1
49. Centum Investment Co Ltd	1	1
50. Trans-Century Ltd	1	1
51. Barclays Bank Ltd	1	1
52. CFC Stanbic Holdings Ltd	1	1
53. A Baumann Co LTD	1	1

Appendix III: Reliability of Research Instruments

Variable	Cronbach's alpha	No. of items
Technological Strategies	0.7191	4
Product Development Strategies	0.7225	4
Marketing Strategies	0.7321	4
Process Strategies	0.7723	3