H EMPLOYEES' PERCEPTION OF INNOVATION STRATEGY, DYNAMIC TECHNOLOGICAL ENVIRONMENT AND PERFORMANCE OF KENYA PLANT HEALTH INSPECTORATE SERVICE

BY

NYARIBO JOASH ATUNGA

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

NOVEMBER, 2017

DECLARATION

I declare that this research project is my own original work and that it has not been presented to any other university or institution for academic credit.

Signature……. Date……

JOASH ATUNGA NYARIBO

D61/79188/2015

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

Signature……..…. Date……

PROF. ZACHARY B. AWINO,

Department of Business Administration,

School of Business,

University of Nairobi.

DEDICATION

I wish to dedicate this work to the Almighty Father, God, who made all these a reality.

ACKNOWLEDGEMENTS

I wish to express my unreserved gratitude and indebtedness to all those who in one way or another contributed to the success of this research project. Special thanks go to my supervisor, Prof. Zachary B. Awino, for his invaluable guidance, immense patience and counsel in the research project.

Finally my gratitude goes to classmates and colleagues at work who encouraged me a lot. Thanks to them all and God bless you abundantly.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

ABBREVIATION AND ACRONYMS

AGDP	Agricultural Gross Domestic Product
BoD	Board of Directors
CEO	Chief Executive Officer
ERA	Economic Review of Agriculture
ERP	Enterprise Resource Planning
GDP	Gross Domestic Products
JKIA	Jomo Kenyatta International Airport
KEPHIS	Kenya Plant Health Inspectorate Service
MoALF	Ministry of Agriculture, Livestock and Fisheries
PQBS	Plant Quarantine and Biosecurity Station
RBV	Resource Based View
SMEs	Small and Medium Enterprises

ABSTRACT

The study sought to establish the employee perception of innovation strategies adopted by Kenya Plant Health Inspectorate Service (KEPHIS). The independent variables for the study were product, process, market and technology innovations. The study adopted descriptive and cross sectional survey design. Primary data were collected using questionnaires and analyzed using SPSS software version 20. From the results of correlation analysis, there appears a favorable and statistically substantial correlation between product innovation and performance of KEPHIS. The study also revealed is a progressive and substantial correlation between process innovation and performance of KEPHIS. Market innovation was also found to have a positive and significant association with performance of KEPHIS. Finally, technology innovation had a positive and significant association with performance of KEPHIS. The model summary revealed that the independent variables: product innovation, process innovation, market innovation and technology innovation explains 93.7% of changes in the dependent variable as indicated by the value of R^2 which implies that there are other factors not included in this model that account for 6.3% of changes in performance of Kenya Plant Health Inspectorate Service. The model is fit at 95% level of confidence since the F-value is 184.560. This validates that generally the multiple regression model is statistically important, in that it is an appropriate forecast model for expounding how the designated autonomous variables influences achievements of KEPHIS. Regression results showed that product innovation showed a progressive and statistically substantial relationship with performance of KEPHIS, process innovation had positive and statistically significant relationship with performance of KEPHIS while market innovation had positive and statistically significant relationship with performance of KEPHIS. Finally, regression results showed that technology innovation had positive and statistically significant relationship with performance of KEPHIS. It was concluded that product innovation, process innovation, market innovation and technology innovation influences performance of Kenya Plant Health Inspectorate Service. The study established that there was a positive influence of product innovation on the performance of Kenya Plant Health Inspectorate Service. The investigation found out a positive and statistically significant relationship between process innovation and performance of Kenya Plant Health Inspectorate Service. Process innovation is vital to KEPHIS as this provides a good policy towards efficiency in service delivery since this sector is service oriented. Process innovations entail the entire operations of such institutions and can be enhanced through best practices in line with industry standards. This study recommends that measures be set up so that KEPHIS can improve efficiency through process innovations. Market innovation was also found to a positive influence on the performance of Kenya Plant Health Inspectorate Service. This study recommends adoption of efficient market strategies to widen the market scope. The findings of the study helped bridge the identified gaps in knowledge and theories that had informed this investigation. It also informs the policy makers on innovation strategies to adopt then allocate resources accordingly to improve on firm performance.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Business firms the world over are adequately environmental needy and natural serving since they don't exist in a vacuum. They rely upon their surrounding for plenty of issues extending from input assets, for example, data, thoughts, crude materials and work among others, to the utilization of completed merchandise or administrations by the environment. Furthermore, their actions are likewise impacted and molded by such ecological powers as social, monetary, mechanical, cutthroat and regulatory powers. In this manner, firms must improve on a persistent premise to remain focused and to get by over the long haul (Cefis & Marsili, 2006).

Many professionals and researchers suggest that the level to which any firm can persistently innovate is connected to development by individual workers (De Jong & Den Hartog, 2007). Workers can innovate either as part of their employment or by conveying intentional inventive behaviour. An organization which depends entirely upon its plans of recommended behaviour is an extremely delicate structure and that organizations depend on willful innovative and unprompted behaviour which encourages the accomplishment of firm goals. Innovative effort cites patterns that encompass jointly the creation and articulation of new ideas, either without anyone else's input or taken up from others, and the recognition or execution of new ideas at work (Yuan & Woodman, 2010).

Organizations are viewed as open systems which depend and serve the environment (Burnes, 2000). The Resource Based View theory contends that the environment gives organizations resources that are profitable, exceptional, matchless and non-substitutable and capabilities. These resources can create sustainable competitive advantage by executing strategies that create value and which are difficult to mirror by competitors thus enhancing performance (Barney, 1991).

The study sought to unravel how the dynamic technological environment affects firm innovations in achieving the desired performance. The firm-fit to its external environment determines its performance (Ansoff, 1990). Ramadani and Gerguri (2011) identify new technological process and or enhancement of technological processes as an innovation. Mobile phones, Ipads and many more gadgets as well as services such as M-pesa, social networks have no doubt exemplified technology development dynamism.

The agriculture health sector in Kenya as in many other countries in the world remains the foundation of the county's backbone and the means of income for most of countryside populace. Continued agricultural development is vital in stimulating the living standards of our people and also generating fast financial development. The firms in this sector therefore have been necessitated to employ the various innovative and competitive strategies in order to survive in the industry.

1.1.1 Employee Perception

Perception is conceived as a process intervening between stimuli and responses. It is a method by which people sort out and deduce their sensory imprints so as to provide gist to their setting. Incidentally, an individual's opinion depends on the amount of information accessible to him/her and the level to which he/she can infer the information gained (Garner et al., 1956). Perception is an individual's assessment of veracity that is influenced by, on top of other things, the person's esteem. It is seen as a process that represents the interaction of countless number of factors and variables (Mills, 2006).

The quality or exactness of an individual's insights presents a key influence on the excellence of their judgements or activities in a particular setting. The awareness procedure involves four phases: data awareness and choice, sorting out of data, analysis of data and recovery of data from memory (Wood, 2001). Therefore, an individual may be in possession of the same set of information that other people have on a given circumstance but still arrive at a diverse conclusion due to individual differences in the ability to deduce the information that is in the public realm (Quick & Nelson, 1997).

Researchers are actively exploring the roles and effects of perceptions on people's decisions and behavior so as to have an informed perspective of various perceptions on employees' behaviors such as firm performance, turnover or commitment in human asset administration. Tzeng (2010) stresses that design and concentration of perception idea maps may impact the establishment of intellectual illustrations. This might be expediting or limiting with respect to the readers' memory creation and thinking on the reading resources. Employees' perceived organizational support is related to various attitudes and behaviors (Eisenberger et al., 1990).

1.1.2 Innovation Strategy

Innovation strategy directing the innovation process was documented by Cooper and Schindler (2012). It gives an unmistakable bearing and focuses the exertion of the whole firm on a common development end. The majority of firms are embracing products innovations, procedure innovations, market innovations and motivation innovations. These novelty strategies ought to determine how the centrality of innovation will be imparted to every one of the workers to accomplish their up-front investment and should transparently mirror the importance that administration puts on them. High performing institutions management is committed to new product development (Bessant & Francis, 2013).

In the present forceful and worldwide focused environment, merchandise and service innovation is winding up more pertinent, majorly in light of three critical designs: concentrated worldwide antagonism, disjointed & challenging markets, assorted and swiftly progressing advances (Wheelwright & Clark, 2014). Companies with services and items that are adjusted to the necessities and needs of core clients and that offer them speedier and more professionally than their rivals have an upper hand to create a sustainable competitive advantage.

Globalization, hi-tech advancements, unpredictability of buyer requirements coupled with shorter merchandize time cycles have encouraged ongoing radical environmental moves, and demanded a more tactical view from the individuals who oversee and lead organizations. There are currently more high-flying deliberate thoughtful ways in which the human asset drives industry, with a solid accentuation on creating entrepreneurial people and administration groups as major components of firm achievement (Atkinson & Meagher, 2014).

Storey and Easingwood (2013) emphasize both practically and in theory that the field of innovation in the UK has been underdeveloped by a traditional view on what constitutes its appropriate domain of concern. It is contended that various fundamental concerns ought to be tended if firms and their leaders are to be made more important. These matters comprise, work description, choice, instruction & growth, improvement requirements detection, society & setting, the connection amongst advancement and organizational systems and structures.

1.1.3 Dynamic Technological Environment

Amongst the contributors of organizational theory, there is no consensus on the fundamental meaning of environment. In the course of recent years; scientists have employed diverse ways to characterize this idea. Pioneer researchers in this field include Dill (1958) and Duncan (1972). Dill (1958) presented the idea of chore surroundings, and focused on the outside natural factors. These factors had an effect on firm objective settings.

According to Mckeown and Max (2008) firm setting is composed of a set of interactions linking partners and the environment. These relations constantly co-craft the surroundings making the industry setting change in intricacy and hurly-burly. As frameworks turn out to be more mind boggling, understanding them turns out to be progressively troublesome and adjustment to the changing conditions turns out to be trickier.

Emery and Trist (1965) categorizes organizational technological environment into four groups namely: tranquil-randomized, serene-grouped, bothered-reactive or turbulent-field. Tranquil randomized was the minimum complex while turbulent-field was the most intricate. They noticed that as the environment turns out to be more unstable, rising adaptability is expected to adapt to or deal with the ambiguity that comes about. Their work added remarkable significance to understanding the structure of organizational surrounding. The surrounding is the entirety of physical constituents regarded in the decision making of a person in an organization (Duncan, 1972). The environment in which organizations operate vary from time to time, prompting organizations to be constantly on the lookout for threats and opportunities and must be ready to deal with them as they come.

Environmental hurly-burly is explained as drive in the surrounding which involves fast and unforeseen adjustment in the environmental sub- proportions (Vorhies, 2003). A steady domain changes less frequently, yet when it does, the change is unsurprising. On the other hand, in unstable environments there are numerous surprising changes. Turbulence is caused by changes in and communication between natural factors generally because of technological advances. The rise in environmental instability brings about diminishment of organized rivalry, the expanding requirement for data and advancement, faster cycles of improvement and trouble in perceiving client item and service needs (Mason, 2007).

1.1.4 Organizational Performance

The idea of firm achievement depends on the possibility that a firm is the deliberate relationship of profitable resources, including persons, physical, and fund possessions, with the end goal of accomplishing a mutual cause (Carton, 2004). Organizational achievement involves the real yield or aftereffects of a firm as calculated alongside its expected yields (or objectives). Richard et al., (2009) indicates firm performance as including three particular regions of firm results; fiscal attainment, for example, proceeds, return on resources and return on assets, produce market achievement, for example, sales; market segment and investor return measure through aggregate investor return and financial worth included.

Organizational achievement is the evaluation of set markers or models of adequacy, competence, and environmental responsibility, for instance, output, process duration, regulatory conformity and waste cutback. Performance as well refers to quantifications with respect to how a particular request is dealt with, or the illustration of attaining something magnificently; consuming data is outstanding as compared to just merely possessing it. This is the aftermath of the superior part of the organization's processes and systems (Subramaniam, et al., 2001). Likewise, it denotes the degree to which a person fulfils the wants vis-à-vis his actions in a specific circumstance, setting, situation or occupation.

Organizational accomplishment is the capacity of a firm to achieve its main goal through healthy administration, solid control and a steady commitment to meeting outcomes (Parthasarthy, 2007). Firms discharging services must expand their assessment of output beginning with the regular firm-oriented perspective to a twofold organization-client viewpoint. This widened move can aid accommodate clashes or use cooperative energies between improving service excellence and enhancing profitability (Parthasarathy, 2007). The exploration reckons the organizational performance with respect to the opposition from numerous organizational viewpoints together with excellence, efficiency, piece of the overall industry, productivity, return on value, and general firm achievement.

1.1.5 Agricultural Health Sector in Kenya

Agriculture is the pillar of Kenya's wealth, presently amounting to 24% of Gross Domestic Product (GDP) directly, worth Ksh. 342B and an additional 27 percent by implication, worth Ksh. 385B. The industry additionally represents 65% of the country’s aggregate exports and offers well over 18% of formal business. More than 60 % of casual work are found in the country side zones.

Tea, coffee and other industrial crops account for 17 percent of AGDP and 55 percent of agricultural exports. Horticulture, which has registered a momentous export propelled development in the previous 5 years and is currently the biggest sub-segment, contributes 33% of AGDP and 38 percent of export income. Food crops adds 32 percent of AGDP, however just 0.5 percent of exports, while the animals sub-segment contributes 17% of AGDP and 6 percent of exports

Kenyan national economic development is profoundly connected to growth and development in Agriculture. In the initial two decades after sovereignty (1963), the farming segment, and thus the national wealth, registered the most notable growth in sub-Saharan Africa at average rates of 6 % per year for agriculture and 7% for the national economy. The agriculture segment recorded a depressed growth rate of 3.5 % in 2014 compared with the 5.2 % growth in 2013. The segment among others in this manner led to the decreased national financial growth in 2014 (Economic Review of Agriculture [ERA] 2015.

1.1.6 Kenya Plant Health Inspectorate Services

KEPHIS is among the several state regulatory agencies in the country. It was created through the State Corporations Act (Cap 446), Legal Notice No. 305 of 18th October, 1996. It is one of the country's parastatals under MoALF whose obligation is to guarantee the excellence of agriculture inputs and produce to avoid undesirable effects on our wealth, the environment and human wellbeing.

The Institution has its headquarters in Karen, Nairobi with regional offices at Nakuru, Mombasa, Kitale, Kisumu, Embu and centers at Jomo Kenyatta International Airport (JKIA), Eldoret international airport and Plant Quarantine & Biosecurity Station (PQBS), Muguga. Additionally, KEPHIS has offices along Kenyan border (Lunga Lunga, Taveta, Loitokitok, Namanga, Isebania, Busia, Malaba, Suam and Moyale.

The body is managed by the Board of Directors (BoD) appointed by the government to run the corporation on her behalf. The Board is entrusted with day by day running of the agency, especially with regard to accounting. These managers tend to adopt strategies that strive to maximize shareholder value hence maximizes social welfare of the State (Loderer & Waelchii, 2010).

1.2 Research Problem

Strategic innovation is believed to create superior performance on the organization that adopt it. Through strategic innovation, competitiveness has grown around the globe in different business industries (Lilly & Juma, 2014). Strategic innovation is a way that a firm is capable to battle with other organizations in technologically dynamic environment. It focuses on the organizations evolution overtime as it explores the unexplored positions in its industry. It can therefore be concluded that strategic novelty contributes to establishment of fresh markets and products for the market (Birkinshaw et al., 2011). However even after the benefits of strategic innovation has been established, its impact on performance of firms has remained misunderstood. One reason is because the drivers of innovation have not been known and secondly is because innovation among the parastatals has not been tested (Mabrouk & Mamoghli, 2010). In addition, even though the existence of turbulence is acknowledged, what is much less evident is action by employees to anticipate and prepare for the unexpected turbulence (Lynch, 2009). Therefore, organizations should ensure that their employees are suitably motivated and that continuous training is available in order to effectively deliver and improve their performance.

Like all other parastatals in Kenya, KEPHIS is facing dynamic technological environment among other challenges. For it to survive and prosper in its market segment it must adopt appropriate innovative strategies. KEPHIS uses its capabilities, recruits and continuously trains staff to revitalize its human resource; engages in mentorship programmes to make knowledge accessible to staff and building positive organization culture (Ng'etich, 2010).Wamakau (2010) found out that creating and nurturing strong skilled workforce through training and development are effective innovative tools used by KEPHIS to improve its performance in the technological dynamic environment.

Researchers have investigated the link between strategic novelty and firm success. Murat (2013) investigated the link involving innovation and firm performance of Turkish Automotive Supplier Manufacturing. Analysis outcome exhibited that industrial advancement (merchandise and procedure novelties) had huge and positive effect on firm achievements. Shehada (2010) conducted a study on three NGO's in Palestine so as to understand them as strategic organizations that enact specific behavior in response to pressure within their environment. Her findings showed that each of the organizations actually dealt with the complex environment differently, such that they have different strategies. IbnuHajar (2015) investigated the impact of business strategy on novelty and organizational success in the small growing manufacturing segments in Portugal. It demonstrated that, to some extent, business technique positively affect development, business strategy positively influence firm performance, and novelty positively have an effect on firm accomplishments. Masood and Hassan (2015) explored the effects of novelty categories comprising merchandise, procedure, promoting and firm improvements on business achievements, for example, creative, manufacture, marketing and fiscal achievements in Pakistani manufacturing firms. The outcome disclosed the affirmative effects of novelty types on firm success.

Locally, Christine and Makori (2017) investigated the effects of implementation of tactical novelty on the performance of financial profit-making institutions in Kenya; equity was used in this study. The work concluded that overall, strategic improvement, as indicated by market innovation strategies and product innovation strategies positively and significantly impacted performance among commercial banks in Kenya. Owino (2016) did an evaluation on the relationship of strategic innovation on the performance of SMEs in Nairobi County. He found out a progressive connection between strategic innovation and accomplishments.

Awino (2011) studied the impact of chosen strategy factors on performance of big private manufacturing companies of the supply chain in Kenya. He found practical confirmation that the autonomous impact of center skills, interior abilities, plan, and strategy execution on firms' success is weaker as evaluated with the combined impact of the same factors. Kimutai (2015) investigated the influence of strategic marketing practices on flower industry firms' performance in the in Kenya. The study found out that that flower firms must ensure that their marketing strategies are perceived as the best by the customers who can otherwise be lost to the rival companies if these rival companies devise better marketing strategies targeting the same customers.

An evaluation of the above discussed past explorations demonstrated that the context determines the appropriateness of strategic response. The studies also revealed that strategic responses were also influenced by the time when the research was conducted due to the dynamic character of the technological environment. What was more, no studies had been conducted on strategic perception of employee's on innovation strategy, dynamic technological environment and performance of KEPHIS or the link between these practices and performance. This research subsequently sought to plug the knowledge gaps by answering the question: what was the employees' perception of innovation strategy, dynamic technological environment on the performance of Kenya Plant Health Inspectorate Service in Kenya?

1.3 Research Objectives

The objectives of this study were:

i. To establish the employees' perception of innovation strategies adopted by KEPHIS
ii. To determine the employees' perception of the effects of innovation strategies and dynamic technological environment on performance of KEPHIS

1.4 Value of the Study

The results of this study would be very valuable to the policy makers, as it would have the capacity to demonstrate the noteworthy of embracing novelty strategies in order to attain high returns and improve on productivity of the agricultural sector. The ministry of agriculture in Kenya would also find the results of this study very valuable, as it would be assist in ascertaining the extent of technological rivalry in the business and the innovation strategies that mitigate the effect of such technological competition in order to achieve better performance at the Kenya Plant Health Inspectorate Services.

The firm managers would find the study useful in improving their innovative capabilities and activities. The findings of this investigation would likewise be precious to specialists and researchers, as it would structure a foundation for more exploration. This work would enrich the previous studies in the discipline of strategic management in unstable environments throughout its scrutiny of the setting organizations work in, the impacts of hurly-burly on the firm performance and eventually validating the application of strategic issue management as an instrument to oversee irregular change. Moreover, this would likewise present a point of reference to different researchers studying similar disciplines.

There are several theories providing theoretical framework for understanding environment and influence on organization's performance. The open systems approach theory, resource based view theory and the dynamic capability theory. The discoveries of this work would add to these theories by confirming whether the theories are applicable in the context of this study. Besides, the result would contribute to the theories by bringing in a new variable on employees perception.

This chapter introduces the study background, context, theories and gaps motivating the study. Agriculture is the backbone of our country, Kenya. For this reason, the institution has to be continually innovative in a dynamic technological environment so as to survive and deliver on its mandate. This study unravels the employees' perception on innovation strategy that KEPHIS has developed to cope with the dynamic technological environment. The performance of KEPHIS is paramount to the Kenyan economy. It assumes a crucial part in export of horticulture crops and tea which injected over Ksh. 220B to the economy in 2016. The chapter concludes by identifying the research problem and the research gaps that have not been addressed in the previous studies. Finally, it enumerates the benefits the study would have to key stakeholders such as government, policy makers, academicians and investors.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature associated to the purpose of the study. It is structured as per the theoretical foundation of the study and specific objectives developed in the previous chapter which include the innovation strategies and the effects of innovation strategies and dynamic technological environment on the performance of KEPHIS. This section highlights in detail works done by other scholars and researchers on the subject of strategic management in turbulent, dynamic technological environments.

This section examines four possible theories that will be applied in this study; Strategic Innovation Theory, Resource Based View, Open System Theory and Dynamic Capability theory. It further gives a pair wise review of the relationships between the study variables. In a detailed account it looks at the different innovation strategies and their influence on organizational performance. The important aspects of the chapter are propositions emerging from the empirical studies and knowledge gaps. It indicates the relationship of the conceptualized variables.

Previous studies have found it difficult to establish the link between the innovation strategies and company performance (Easterby-Smith, 1994). Therefore, the literature reviewed continues to support further evaluation of the topic as a necessary process to establish whether innovation strategies employed lead to increased performance of state corporations. This creates a gap in information that the study sought to fill by looking at the influence of innovation strategies on the accomplishments of KEPHIS.

2.2 Theoretical Foundation

The Strategic Innovation Theory, resource based theory, the dynamic capability and open systems theories provide an important theoretical framework for understanding the innovation strategies in a dynamic technological environment and on performance. Porter's Generic Competitive strategy and the industry-related forces may influence firm performance. This study will use the above theories to investigate how they apply in KEPHIS and hence enhance the success of state corporations.

2.2.1 Strategic Innovation Theory

This is a "soft" evolutionary theory where the firm relates to the market developments and this is decisive for its innovation activities. (Sundbo, 2002). This mobility arises with respect to the surrounding deviations and firm prevailing circumstances. This theory is comprised of six pillars: the entrepreneurial function, the growth cycle, the time factor, non-technical innovations, dynamic value and the emulation process (Van Someren & Van Someren, 2017).

Ahmadi and Nasiri (2007) defines innovation process as drastic, incremental, imitative, totally fresh, enriched, high-tech, managerial, and numerous additional novelty varieties. Whereas Markides (2000) trusts that planned novelty is a totally extra ordinary technique of rivalry in a business that is realized by means of violation of guidelines of the game and discerning to procedures. Strategic innovation is essentially a different way of contending in a prevailing industry and it begins by novelty in one's industry model driving towards a fresh approach of doing things (Charitou & Markides, 2003).

Strategic novelty as well as first-hand product presentation remain key proportions of a business enterprise (Cassia et al., 2012). Innovation was regarded as an imperative foundation to increase aggressiveness and was applied for industry growth (Cassia et al., 2012). Tactical novelty is concerned with formation of fresh outlets and hops in client esteem and redesigning the current outlets to achieve significant advancements for clients (Gebauer et al., 2012). It is for these reasons businesses are persistently looking for techniques and procedures that empower them to enhance their practices that gives rise to superior productivity and effectiveness (Chapman & Hyland, 2004).

2.2.2 The Resource -Based View

The resource based view (Barnley, 1991) and competitive forces approach (Porter, 1980) were the leading paradigms in strategic management in the 1980s and 1990s.The RBV draws its thoughtfulness regarding the firm's inside capability as a propeller of viable advantage. According to Barnley (1991) assets of an organization are its principal competitive basis of benefit. This upper hand is drawn from the manufactured goods outlets and exclusively lies on the association's peculiar and hard to mirror assets.

Different scholars have argued that RBV is an efficiency based justification of performance variations in organizations (Pisano & Shuen, 1997). This theory is used to explain the organizations internal capability as a driver of competitive advantage. An organization can use its internal resources or external resources for successive innovation leading to superior performance. These resources can be in terms of skilled manpower, ideas, processes or external funding.

In forceful markets, where assets are persistently bound to vary, the mere ownership of specific resources is insufficient. Competitive advantages may be short-lived (Wu, 2007), and the quickened industrial advance can rapidly turn produced goods and services obsolete. Firms facing a low environmental volatility can obtain greater benefits from their resources. However, in highly volatile environments, the effects of such resource accumulation are substantially inferior (Wu, 2010).

2.2.3 Open System Theory

Innovation strategy, dynamic technological environment and performance of firms are supported by the open system theory. No organization is self-sufficient to operate independent of the others. In some cases we can experience a deep relation in innovation with price and costs. This theory sees organizations as intertwined in a number of sub-systems and a change to one part will lead to changes in other parts, subsequently, impacting on the performance (Burnes, 2000).

A rapidly changing technological environment has forced firms to co-operate so as to be able to innovate successfully. As organizations interact with externals, the more it will learn about new opportunities which ultimately will lead to more innovations (Enkel et al., 2009). Firms characterized by more advanced innovations have been shown to cooperate more frequently with research organizations. These firms also depend to a greater degree on Research and Development and patents granted by governments.

Firms have to battle for the scarce assets responsible for their continued existence and only firms that are well-matched with the pressing environment evade being wiped out (Carmeli & Tischer, 2004). The dynamic regulatory and technological environments have greatly affected the way public organizations operate. The dwindling government funding to the state corporations over the years, changing customer requirements, global warming among other factors have tickled management to think outside the box so as to remain afloat. State corporations have to devise ways on how to adapt to the environment to mitigate on these threats.

2.2.4 Dynamic Capability Theory

This approach challenges the previous static view of the firm, and extends RBV to dynamic markets (Acedo et al., 2006).This approach emphasizes utilization of accessible inner and outside firm particular capabilities to tackle shifting environments. It additionally scrutinizes the basis and techniques of affluence formation by companies working in conditions of swift industrial transformation. This affluence development in systems of speedy industrial modification depend to a vast degree on sharpening inward industrial, structural, and supervisory procedures within the company (Teece et al., 1997).

Dao et al., (2016) demonstrate dynamic capability of innovation capability linkage to the firm performance when working together with other capabilities and resources in different markets. The dynamic capability theory applied in this study enlighten the dynamic technological environment that organizations operate in. The use of IT and or combined with other capabilities in organizations will be key innovation strategies in a dynamic environment towards a superior performance.

Dynamic capabilities have different features according to the organization's external environment (Eisenhardt & Martin, 2000). In moderately dynamic markets, where change is frequent but predictable, they are associated with the traditional concept of routine, presented as complex, detailed and analytical processes based on existing knowledge. In highly volatile environments, with rapid and unpredictable changes, dynamic capabilities appear as simple, experimental and interactive processes based on the rapid creation of new knowledge. Thus, dynamic capabilities are based on the combination and coordination of resources to create skills and knowledge, to create new processes and procedures (Newbert, 2005) that contributes to the company's viable upper hand. Previous literature typically hypothesized the existence of direct relations linking novelty possessions and abilities, and performance results. The current study proposed the existence of an intermediate variable - dynamic technological environment, between innovation and performance.

2.3 Innovation Strategies in Organizations

The innovation strategies considered in this section fall into four categories. These include; product/service innovation strategies, technological innovation strategies, marketing innovation strategies and process innovation strategies (Adriopoulos & Dawson, 2009). New Product entails the alterations instituted in a company's production unit, introduction of fresh products to the outlets or use of novel and improved resources in the manufacturing line (Wong, 2014). Product innovation can also be seen as the process of introducing fresh goods and services with the point of pulling in new clients and therefore creating new markets. Product innovation involves technical design of the products features, research and development and marketing of the new product through commercial activities.

Merchandize development is vital for a firm to have the capacity to make a focused edge in the evolving surrounding. Product innovation enable organizations to introduce new and quality products into the market thus gain competitive advantage over the competitors in the same industry (Comison et al., 2010). According to Hult et al., (2004) product innovation enables the organization to protect itself against threats from the competitors.

There exists a significant relationship involving organizational accomplishments and positive product innovation (Bayus & William, 1999). Espallardo and Ballester (2009) in a study on SMEs success of novelty in enhancing a company's gain discovered that little firms must put resources into improvement ideally when aggressive powers are more severe. This study carried out established that product improvement had a positive impact on the organization's achievement in its industry.

Process innovation is as an idea creation that ultimately leads to a presentation of novel merchandize and services in the marketplace (Kuratko & Hodgetts, 2004). Process innovation is a procedure that is adapted by the organization so as to adjust itself to the variations in the environment (Calantone et al., 2002). The process of Innovation will therefore involve building on the capabilities of the organization geared towards creating new products and services.

Innovation is created in social network interactions by the different people that are involved in the formulation of the process. This interaction may involve the organization suppliers, its customers, the members of the public and the corporation (Romijin & Albaladejo, 2002). Organizations that have closer relationships to the potential customers than the competitors will have the advantage of being more creative than the competitors hence being more innovate (Lawson & Samson, 2002).

According to Saunila and Ukko (2012) organizations with flexible and less bureaucratic structures easily generate new ideas and communicate them for application. He further argued that when communication is open and flexible with the organization then there is easier knowledge sharing which leads to an organization being more superior as compared with the competitors. Flat and open management structures encourage idea generation, sharing and tend to be more innovative than rigid, vertical structures.

Market novelty is the utilization of promoting blend and choice with the intend of fulfilling the clients' inclinations. Organizations should give great importance to market innovation since it enables the organization to reach out to it's the customers faster and more efficiently. Entrepreneurial innovation is a chief factor in market innovation that gives rise to growth of the economy (Audretsch, 2009).

In today's turbulent business environment, there is need for new ideas that can completely change any aspect of the value chain. This goes beyond just innovations in products and services (Birkinshaw et al., 2011). Ren et al., (2010) underscores that marketing novelty is a necessary tool for organizations to achieve a sustainable competitive advantage. Ultimately firms are considered to be more innovative when they engage in marketing innovation as part of their overall innovation strategy.

The hi-tech novelty achievement rests on not just on the technical potential of the business, but also on additional vital abilities in promotion, formation, manufacturing, tactical planning and resource distribution. Product advancement, superior manufacturing competencies, procedure improvement, and organizational adaptability gives companies capabilities to sustain technological innovation. According to Bower and Christensen (1995) hi-tech novelty abilities fall into logical study resources, procedure innovation resources, product innovation assets, or design assets. The internal efficiency on most operational processes of most enterprises can be attributed to more investments in technologies.

Technological innovation strategies involve the adoption of systems such as ERP systems that provide capabilities that support and enhance processes associated with it. The systems should also help improve activities by automating routine tasks such as order management. These strategies will lead to reduced costs, better service delivery among other benefits in organizations.

2.4 Innovation Strategies and Performance of Organizations

Innovation, technology progressions, in addition to viable advantage are intertwined by intricate and multifaceted interactions. Requirements for firm innovation and technical upper hand are progressively critical segments of competitive strategy for numerous banking institutions (Miller, 1989).

Most profit-making banks encounter severe cutthroat challenges as a result of rapid rate and volatility of technology variations (Ansoff, 1988). Banking Industry engage in incessant and fast adjustment of their merchandise attributes and the ways in which they perform business. These worldwide techniques engaged are reliant to a great extent on hastening the pace at which developments are converted into gainful profitable business enterprise (Feldman, 1996).

Snowballing embracing of novelty categories over a period of time has a positive correlation with company achievement (Damanpouret et al., 2009). Various scientists have brought up straight and considerable connection amongst innovation and potential gain of the organization (Subramanian & Nikalanta's, 1996). In the studies there was an immediate relationship of validation and concentration with managerial improvement which in turn relates decidedly with company proficiency.

2.5 Dynamic Technological Environment and Performance of Organizations

Distant background contains elements that spring outside and normally regardless of a firm's working setting (Pearce & Robinson, 2011). They additionally clarify that nature presents firms with prospects, dangers and limitations but hardly ever does a firm wield at all consequential proportional impact. As indicated by Beatham et al., (2004), firms appraise their achievement in fiscal expressions; return and proceeds.

Atkinson and Brander-Brown (2001) advocate for an accentuation on equally fiscal as well as non-fiscal measurements of organizational performance such as aggressiveness, service excellence, customer loyalty, resource usage and innovation. Cadogan et al., (2002) emphasizes that the external environmental such as market changes, technology, customer demands and competition have significant influence on the performance of organizations. According to Isik et al., (2010), managing both the positive and negative effects of external factors can remodel corporate wide features.

Lumpkin et al., (2008) suggest that the economy that organizations operate in has considerable effects in all ventures including providers, manufacturers, service providers, wholesale, retail, government and non-government institutions. There are various key economic indicators used by firms in assessing the economic environment. Spending designs are influenced by the wealth circumstances of different market fragments making it imperative for each firm to think about the fiscal patterns that influence its business both at home and global realms (Pearce & Robinson, 2011)

2.6 Employee Perception, Innovation Strategies, Dynamic Technological Environment and Organization Performance

Employees' perception is very important, but rarely considered in most organizational performance studies that have been carried out. Positive employee perception of an organization is an important factor for the organization's portfolio, existence, growth and development (Snell, 2006). A positive perception of the system, may lead a manager to utilize the system to help employees develop and achieve their performance objectives (Gallup, 2008). Therefore, whatever the employees perceive is generally what the employee believes and acts on. Workers' views in a firm are crucial to its achievements; since the driving power behind the accomplishments, or otherwise, of any business rests on its employees (Mullins, 1999)

According to Ansoff and McDonnell (1990), vital innovation involves alterations in the company's key planned behaviour to guarantee achievement in changing future state. Strategic innovation is an array of choices and activities that affect preparation and execution of tactics intended to realize a firm's intentions. Planned organization proposes that a fruitful company's strategy must be positively lined up with the outer condition.

Changing business environments influence how the business is performed. Adjustments made to suit the firm in view of the turbulent and complex environments may be viewed as tactical reaction. Successful novelty advancements calls for incessant scanning of both interior and exterior environment in order to be informed of every single natural variable that underpin present and upcoming company processes of a firm (Thompson & Strickland, 2003).

The continued existence and achievement of an organization happens when the firm generates and keep up an equivalent among its plan and the environment and furthermore between its inner potential and its strategy. Environmental scanning is the first step in responding to the environmental challenges in response to the firm's threats, technological changes, political, economic, social and cultural challenges (Pearce & Robinson, 2011). A company's plan must, for this reason, underscore a change to the aggressive situation of the company's products and services in the business by setting up an upper hand over its rivalry.

2.7 Empirical Studies and Knowledge Gaps

Chandler (1962) was the first researcher to relate structure to the strategy of an organization. He noted that a new strategy required a new structure for enlarged firms to be efficient. Organizational autonomy has been found to moderate between competitive strategies in the Kenyan state corporations (Munyoki, 2015). State corporations can survive the changed environmental conditions with different strategies and different structures. Technological changes have high influence on changes in strategy and structure in those organizations (Njeri, 2012). Firms must formulate a business strategy that incorporates a competitive strategy so as to realize a viable long term success. Company chiefs adapt to variations in firms exterior environment by the selection of suitable tactics and plan that will go with it (Porter, 1980).

Fakii (2013) found a weak to moderate positive correlation between strategy and resulting performance in state corporations due to elements inside and outside firm above and beyond the strategy. According to Munyoki (2015) strategies employed by State Corporations in Kenya influence performance positively. More work has been done on other sectors by exploring various variables influencing performance (Karanja, 2014; Muriuki, 2015). From the above studies none has looked in-depth at a specific parastatal's performance to get its innovation strategy as moderated by dynamic technological environment.

Chapter two presents a literature review and theoretical foundation on impact of strategy innovation and the business environment that organizations operate in on their performance. It gives an in-depth study on the possible theories linked to the current study. Additionally, it explains how the theories are used in the study and applied to enhance innovation and subsequently performance. Finally it looks at the concept of innovation strategy and dynamic technological environment and how it influences the performance of organizations through the review of previous studies.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This part three provides a detailed, systematic, hypothetical examination of the techniques employed to the area of research (Kothari, 2004). It includes techniques of unfurling, clarifying and forecasting phenomena in order to solve an issue; it is the 'how'; the procedure, or techniques of directing research will be carried out. It presents the hypothetical basis for understanding the technique or set methodology to be utilized in conducting this study.

The section gives point by point description of the research methodology and approaches to be employed in the study. This incorporates the exploration strategy, investigation population, sampling frame, data gathering and analysis techniques. Exploration design is a plan, is an arrangement and outline technique of investigation conceived in order to find answers to study problems; it is the core of any exploration (Kothari, 2004).

The research design adopted in this study is dictated by the topic of study and type of research. This informed on the choice of population of study and the sample frame. The study adopts a cross-sectional survey design, and used quantitative data for analysis. Spearmen Correlation equation was used to evaluate the data collected to establish the relationship of the variables under study.

3.2 Research Design

The study used descriptive and cross sectional survey design. Descriptive design was suitable for it allowed the investigator to acquire information in relation to the present condition of the phenomena (Mugenda, 2003). It is an influential form of quantitative analysis. Descriptive exploration is intended to present a picture of a circumstance as it normally occurs at the setting.

Cross sectional survey research design involves acquiring data at one point in time. The design is furthermore used to gather data on people attitudes, views, behaviors or some other assortment of instruction or societal concerns (Orodho & Kombo, 2002). This design is favored because it empowers the scientist to describe the area of research and compare the outcomes in order to scrutinize the variations and parallels with the frame of reference within a given period of time (Lisa, 2008).

Exploiting the design can consequently facilitates in formulation of information and answers to the dilemma at hand. Therefore, these designs are found, to the largest part, suitable for this research. They will give the "status quo" of concept studied on the target population or its characteristics; in this case, the employees' perception of innovation strategy, dynamic technological environment and performance of Kenya Plant Health Inspectorate Service.

3.3 Population of the Study

The population of the research comprised the entire 376 KEPHIS employees as at end of March 2017.The institution has 3 main divisions. Namely; Finance and Administration, Quality Assurance and Phytosanitary Services.

Each of the three divisions is run by general managers who are answerable to the Managing Director. The Managing director is answerable to the Board of directors who in turn report to the Cabinet Secretary MoALF. This defines the reporting lines of the top management in the state corporation.

Directly below the general managers are section heads and regional managers. These are the operational units in the company. The regions in KEPHIS have been apportioned to the 3 managers depending on the kind of services prevalent in those areas/sections. These employees are spread in all 8 KEPHIS regional and centers offices as seen in Table 3.1

3.4 Sample Frame

A sample of 58 employees was utilized for the investigation. Proportionate stratified random sampling was employed. The sample was stratified based on the number of employees in each region/center so as to ensure proportionate representation of the regions/centers in the sample. The number of employees was selected from each of the 8 centers. Simple random sampling was applied to choose employees from each center so as to give each of the sampling units an equal and non-zero probability of being selected.

Table 3.1: The number of employees to be selected from each center

Region	**Sample**
Headquarters, Nairobi	17
Mombasa regional office	4
Kitale regional office	8
Embu regional office	4
Kisumu regional office	4
Nakuru regional office	10
Plant Quarantine Station (PQS)- Muguga	6
Plant Inspection Unit, JKIA	5
Total	58

(Source: Primary Data, 2017)

3.5 Data Collection

In this study, emphasis was given to primary data. The primary data was collected using a questionnaire. A questionnaire was used to obtain data required to meet the specific objectives of the study (Mugenda & Mugenda, 2003). The respondents were KEPHIS employees spread across the 8 regions in the county. All cadres of employees were represented given that the respondents were selected randomly.

This exploration used a questionnaire to gather the requisite information. A questionnaire comprised of a list of structured questions and Likert rating scales relating to the field of inquiry. Close ended questions has the advantage of collecting viable quantitative data. Questionnaire method was favored because it was effectual, low-cost and stress-free.

The questionnaires were distributed by email as well as drop and pick to recognized respondents with a precise clarification on their purpose and significance. The respondents for this study were 58 employees at KEPHIS drawn from all the regions as indicated above.

3.6 Data Analysis

The collected data was examined and checked for completeness and comprehensibility. It was summarized, coded and tabulated. Descriptive statistics such as means, standard deviation and frequency distribution were used to analyze the data. This ensured that the gathered information is clearly understood by describing the situation.

The study employed inferential statistics to establish the relationship between innovation strategy and dynamic technological environment on organizational performance at KEPHIS. Specifically, the study used Spearman correlation to ascertain this linkage.

The following regression equation was applied;

$Y = \beta_{0+} \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where Y= Organizational performance

X_1=Product Innovation

X_2 = Process Innovation

X_3 = Market Innovation

X_4= Technological Innovation

ε = Error

βo = The constant which denotes the value of dependent variable when all the independent variables are 0.

B_i = The regression coefficient or change induced by X_1, X_2, X_3 and X_4 on Y. It determines how much each (X_1, X_2, X_3 and X_4) contributes to Y (Organizational performance)

This chapter discusses the methodology and research design that was adopted in the research process. The research adopts a cross sectional study of KEPHIS employees which is a state corporation in the MoALF. The respondents of the study have been defined. The data collection method used has been discussed together with its advantages. A questionnaire was used as the research tool to gather data from the KEPHIS employees.

The chapter concludes by giving the research procedures used as well as the methods applied in analysis of data. Data collected was coded and analyzed using regression method. The findings were presented using tables, charts and percentages and then interpreted.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

This chapter presents the findings and discussions. The discoveries are given in line with the investigation objectives. The main objectives of the investigation were to establish the employees' perception of innovation strategies adopted by KEPHIS and to determine the employees' perception of the effects of innovation strategies and dynamic technological environment on performance of KEPHIS

To set ground for further analysis and achieve the study objectives, this chapter presents results of reliability tests of the goodness of fit of the data gathered. Using frequencies and percentages, the study's response rate as well as the demographics of the respondents sampled are presented and described.

Analysis of descriptive statistics and inferential statistics was conducted and the results presented in form of tables and figures. Additionally, the chapter presents and explains the results on the expressions of the variables under exploration. A total number of 58 questionnaires were administered and 55 were appropriately filled and sent back. The results for the response rate are as presented in Table 4.1.

Table 4.1: Response Rate

Response	Frequency	Percent
Returned	55	94.8
Unreturned	3	5.2
Total	**58**	**100%**

Source: Survey Data, (2017)

The results in Table 4.1 showed a general positive response rate of 94.8%. As per Mugenda and Mugenda (2003) and Kothari (2004) a response rate of above 50% is adequate for a descriptive study. Babbie (2004) also emphasized that response rates of above 50% are suitable to analyze and publish, 60% is good, 70% is very good while above 80% is outstanding. In view of these affirmations from distinguished researchers, 94.8% response rate is very good for the investigation.

4.2 Reliability Test Results

The reliability of a tool refers to its ability to produce dependable and constant measurements. Reliability of this instrument was evaluated through Cronbach Alpha which measures the internal consistency. Cronbach Alpha value is extensively applied to confirm the reliability of the construct. The results are presented in Table 4.2.

Table 4.2: Reliability Test Results

Variable	Respondents	α=Alpha	Comment
Product innovation	8	0.982	Reliable
Process innovation	10	0.839	Reliable
Market innovation	8	0.974	Reliable
Technology innovation	5	0.856	Reliable
Performance	6	0.841	Reliable

(Source: Survey Data, 2017)

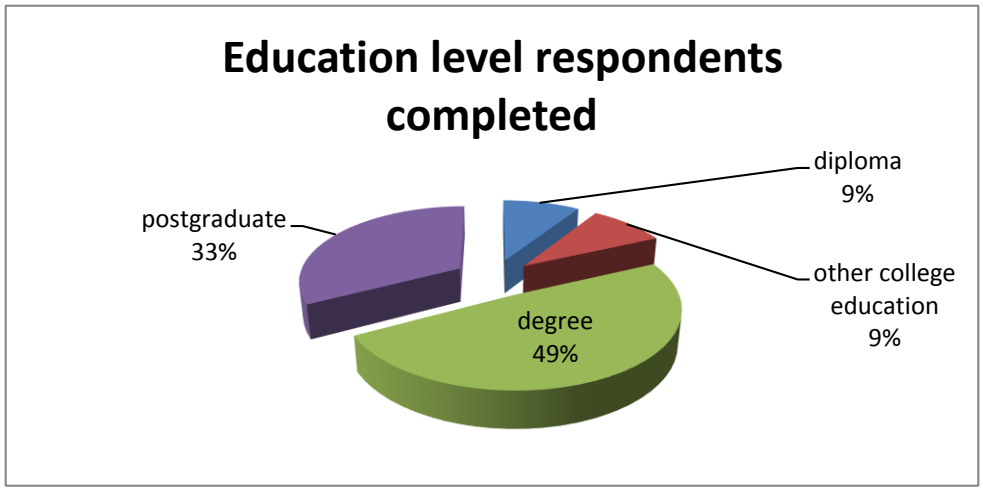
The findings on Table 4.2 indicated that product innovation had Cronbach alpha coefficient of 0.982, process innovation had Cronbach alpha coefficient of 0.839. Further, reliability tests showed that market innovation had Cronbach alpha coefficient of 0.974, technology innovation had Cronbach alpha of 0.856 while performance had Cronbach alpha coefficient of 0.841. All variables depicted the value of Cronbach's Alpha to be beyond value 0.7 hence the investigation was consistent (Kothari, 2004). This represented a high degree of steadiness and on this basis it was supposed that scales used in this study was dependable to portray the variables.

4.3 Demographic Characteristics

This section reports on information that describes basic characteristics of the respondents such as gender of the respondent, age, level of education and work experience.

4.3.1 Respondents Education level

Respondents were requested to indicate their level of education. The findings are presented in Figure 4.1. It was important to establish the educational level of respondents. This is because the success of any organization is dependent on employees' competence.



(Source: Author 2017)

Figure 4.1 Education level

Study findings indicated that most of the respondents (49%), had degree level of education, and 33% of the respondents had postgraduate level of education. Another 23% had college level of education while 9% of the respondents had diploma level of education. This implies that majority of employees are competent. They are therefore able to manage and grow the organization.

4.3.2 The Extent Adoption of Innovation Strategies affect Performance of KEPHIS

Respondents were requested to specify the extent adoption of innovation strategies affect performance of Kenya Plant Health Inspectorate Service. The results are presented in Figure 4.2.

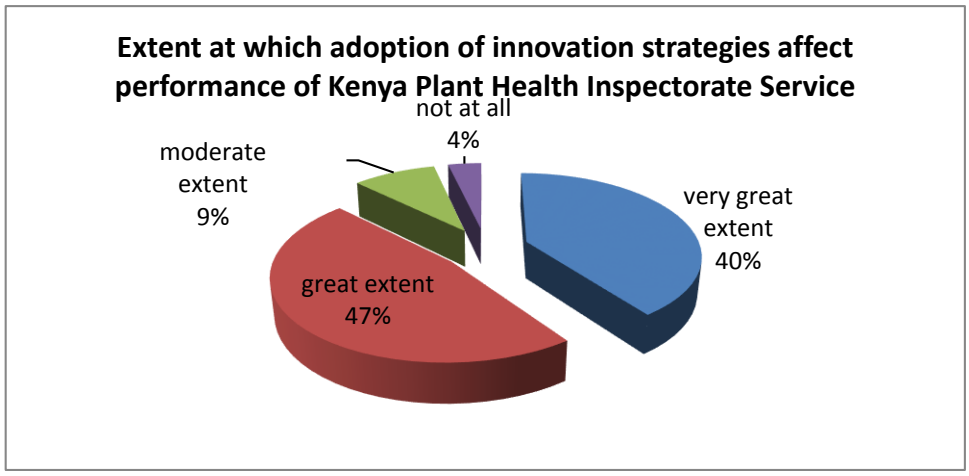


Figure 4.2 The Extent adoption of Innovation strategies Affect Performance of KEPHIS (Source: Author 2017)

Study findings indicated that a highest percentage of the respondents (87%), were in agreement that adoption of innovation strategies affect performance of Kenya Plant Health Inspectorate Service to large extent. Another 9% indicated moderate extent while 4% of the respondents indicated that adoption of innovation strategies do not affect performance of Kenya Plant Health Inspectorate Service at all.

4.4 Descriptive Statistics

Descriptive statistics was applied to define the fundamental highlights of the information in the investigation. Simple summaries and measures about the sample of investigation were given harmony with exploration purpose.

4.4.1 Product Innovation and Performance of Kenya Plant Health Inspectorate Service

The study sought to establish the effect of product innovation on the performance of Kenya Plant Health Inspectorate Service. The respondents were asked to respond on statements related to product innovation. The responses were graded on a five Likert scale in Table 4.3. Result findings were presented in Table 4.3.

Table 4.3: Product innovation and performance of Kenya Plant Health Inspectorate Service

statement	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree	Mean	SD
New goods and services have been introduced in the company in the last 2yrs	3.6%	5.5%	9.1%	54.5%	27.3%	4.0	1.0
The company specializes on goods and services that are most preferred by the customers	1.8%	7.3%	16.4%	56.4%	18.2%	3.8	0.9
Product innovation is part of the organization's vision and mission	1.8%	9.1%	12.7%	43.6%	32.7%	4.0	1.0
The management of the organization allows communication within the business for new ideas	1.8%	9.1%	10.9%	54.5%	23.6%	3.9	0.9
Improving the quality of the products is one of the key objectives of the organization	1.8%	5.5%	5.5%	54.5%	32.7%	4.1	0.9
Product innovation is considered as means of achieving a firm's competitive advantage	3.6%	3.6%	25.5%	38.2%	29.1%	3.9	1.0
Employees are rewarded for coming up with new product ideas for improvement of existing products	5.5%	7.3%	14.5%	27.3%	45.5%	4.0	1.2
Improving employee commitment, morale or both is part of the product innovation strategy adopted by the firm	1.8%	3.6%	10.9%	38.2%	45.5%	4.2	0.9
Average						4.0	1.0

Results in Table 4.3 showed that majority of the respondents 81.8% agreed that new goods and services had been introduced in the company in the last 2yrs. The results also showed that majority of the respondents 74.6% of the respondents agreed the company specializes on goods and services that are most preferred by the customers. The results also showed that majority of the respondents 76.3% of the respondents agreed product innovation is part of the organization's vision and mission. Results further showed that majority of the respondents 78.1% agreed that the management of the organization allows communication within the business for new ideas.

The results also showed that majority of the respondents 87.2% of the respondents agreed improving the quality of the products is one of the key objectives of the organization. The results also showed that majority of the respondents 67.3% of the respondents agreed that product innovation is considered as means of achieving a firm's competitive advantage. Further, result findings indicated that majority 72.8% of the respondents agreed that employees are rewarded for coming up with new product ideas for improvement of existing products.

Finally, majority 83.7% of the respondents agreed that improving employee commitment, morale or both is part of the product innovation strategy adopted by the firm. On a five point scale, the average mean of the responses was 4.0 which means that majority of the respondents were in supportive to the statements in the questionnaire. The SD was 1.0 implying that the responses were bundled around the mean response.

4.4.2 Process Innovation and Performance of Kenya Plant Health Inspectorate Service

The exploration sought to establish the employees' perception of process innovation on the performance of Kenya Plant Health Inspectorate Service. The respondents were asked to respond on statements related to process innovation. The responses were graded on a five Likert scale in table 4.4. Result findings were given in Table 4.4.

Table 4.4: Process Innovation and Performance of Kenya Plant Health Inspectorate Service

Statement	Strongly Disagree	disagree	Uncertain	Agree	Strongly Agree	Mean	SD
Improving service quality through process innovation is one of the key objectives of the organization	1.8%	5.5%	12.7%	60.0%	20.0%	3.9	0.8
There has been cost reduction and efficiency in service delivery after introduction of a new system	3.6%	12.7%	23.6%	36.4%	23.6%	3.6	1.1
There are programmes to stimulate the creation of new ideas for employees	1.8%	7.3%	14.5%	50.9%	25.5%	3.9	0.9
New business methods are usually worth trying even though they may prove risky and costly	5.5%	9.1%	23.6%	45.5%	14.5%	4.5	7.0
There has been training on new computer based programmes in the last 6 months	9.1%	12.7%	18.2%	36.4%	23.6%	3.5	1.2
Smooth workflow through process innovation leads to customer satisfaction	1.8%	5.5%	18.2%	50.9%	23.6%	3.9	0.9
Introduction of new systems leads to better cash flows	3.6%	3.6%	21.8%	49.1%	21.8%	3.8	0.9
There has been increased savings with introduction of proper inventory management systems such as Just in time systems	5.5%	0.0%	12.7%	54.5%	27.3%	4.0	1.0
There has been improvement in performance after the organization introduce new systems of workflow management	7.3%	1.8%	29.1%	49.1%	12.7%	3.6	1.0
Technological changes within the organization have led to the overall good performance of the organization	5.5%	1.8%	9.1%	56.4%	27.3%	4.0	1.0
Average						3.9	1.6

Results in Table 4.4 revealed that majority of the respondents 80% agreed that improving service quality through process innovation is one of the key objectives of the organization. The results also showed that majority of the respondents 60% of the respondents agreed that there has been cost reduction and efficiency in service delivery after introduction of a new system. The results also showed that majority of the respondents 76.4% of the respondents agreed that there are programmes to stimulate the creation of new ideas for employees. Results further showed that 60.0% of the respondents concurred that new business methods are usually worth trying even though they may prove risky and costly. The results also showed that majority of the respondents 60% of the respondents agreed that there has been training on new computer based programmes in the last 6 months.

The results also showed that 74.5% of the respondents concurred that smooth workflow through process innovation leads to customer satisfaction. Further, result findings showed that majority 70.9% of the respondents agreed that introduction of new systems leads to better cash flows. The results also showed that majority of the respondents 81.8% of the respondents agreed that there has been increased savings with introduction of proper inventory management systems such as Just in time systems. The results also showed that majority of the respondents 61.8% of the respondents agreed that there has been improvement in performance after the organization introduce new systems of workflow management.

Finally, majority 83.7% of the respondents agreed technological changes within the organization have led to the overall good performance of the organization. On a five point scale, the average mean of the responses was 3.9 implying that majority of the respondents in support of the statements in the questionnaire. The standard deviation was 1.6 meaning that the responses were bundled around the mean response.

4.4.3 Market Innovation and Performance of Kenya Plant Health Inspectorate Service

The exploration sought to establish employees' perception of market innovation on the performance of Kenya Plant Health Inspectorate Service. The respondents were asked to respond on statements related to market innovation. The responses were graded on a five Likert scale in Table 4.5. Result findings were given in Table 4.5.

Table 4.5: Market Innovation and Performance of Kenya Plant Health Inspectorate Service

Statement	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree	Mean	SD
The use of online tools and social media has helped the company grow and attract new clients	3.6%	7.3%	10.9%	65.5%	12.7%	3.8	0.9
A sound marketing strategy is important to the organization in the long run	3.6%	5.5%	7.3%	49.1%	34.5%	4.1	1.0
There are new opportunities of doing business that have been identified by the business	3.6%	9.1%	29.1%	45.5%	12.7%	3.5	1.0
Customers' needs and preferences keep on changing	3.6%	0.0%	10.9%	32.7%	52.7%	4.3	0.9
The organization has changed its way of marketing in the last one year.	0.0%	3.6%	10.9%	56.4%	29.1%	4.1	0.7
The prices offered by the organization are lower than those of other private organizations in the same industry	1.8%	7.3%	10.9%	50.9%	29.1%	4.0	0.9
The organization researches on what customers want before they ask for it	3.6%	10.9%	7.3%	52.7%	25.5%	3.9	1.0
Goods/services produced by the organization are considered unique from other businesses.	1.8%	5.5%	12.7%	50.9%	29.1%	4.0	0.9
Average						4.0	0.9

Results in Table 4.5 showed that majority of the respondents 78.2% agreed that the use of online tools and social media has helped the company grow and attract new clients. The results also showed that majority of the respondents 83.6% of the respondents agreed that a sound marketing strategy is important to the organization in the long run. The results also showed that majority of the respondents 58.2% of the respondents agreed that there are new opportunities of doing business that have been identified by the business.

Results further disclosed that 85.4% of the respondents concurred that customers' needs and preferences keep on changing. The results also showed that majority of the respondents 85.5% of the respondents agreed that the organization has changed its way of marketing in the last one year. The results also showed that majority of the respondents 80.0% of the respondents agreed that the prices offered by the organization are lower than those of other private organizations in the same industry. Further, result findings pointed that 78.2% of the respondents agreed that the organization researches on what customers want before they ask for it.

Finally, majority 80.0% of the respondents agreed goods/services produced by the organization are considered unique from other businesses. On a five point scale, the average mean of the responses was 4.0 implying that majority of the respondents concurred to the statements in the questionnaire. The standard deviation was 0.9 implying that the responses were bundled around the mean response.

4.4.4 Technology Innovation and Performance of Kenya Plant Health Inspectorate Service

The investigation sought to establish employees' perception of technology innovation on the performance of Kenya Plant Health Inspectorate Service. The respondents were asked to respond on statements related to technology innovation. The responses were graded on a five Likert scale in table 4.6. Result findings were presented in Table 4.6.

Table 4.6: Technology Innovation and Performance of Kenya Plant Health Inspectorate Service

statement	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree	Mean	SD
The technological innovation success depends not only on the technological capabilities of the firm, but also on other critical capabilities in marketing, organization, manufacturing, strategic planning and resource allocation	1.8%	1.8%	10.9%	36.4%	49.1%	4.3	0.9
Technological innovation capabilities fall into scientific research assets, process innovation assets, product innovation assets, or design assets	0.0%	3.6%	12.7%	63.6%	20.0%	4.0	0.7
The internal efficiency on most operational processes of the organization can be attributed to more investments in technologies	0.0%	5.5%	7.3%	56.4%	30.9%	4.1	0.8
Technological innovation strategies adopted by firms should identify and explore new revenue opportunities and improve customer satisfaction through reliable delivery	0.0%	1.8%	3.6%	49.1%	45.5%	4.4	0.7
Technological innovation strategies involve the adoption of systems such as ERP systems that provide capabilities that support and enhance processes associated with it.	0.0%	1.8%	20.0%	56.4%	21.8%	4.0	0.7
Average						4.2	0.7

Results in Table 4.6 revealed that majority of the respondents 85.5% concurred that the technological innovation realization rests on not only on the technological capabilities of the organization, but also on fundamental competences in marketing, organization, manufacturing, tactical designs and distribution of resources. The results also showed that 83.6% of the respondents agreed that technological innovation capabilities fall into scientific research assets, process innovation assets, product innovation assets, or design assets.

The results also showed that majority of the respondents 87.3% of the respondents agreed that the internal efficiency on most operational processes of the organization can be attributed to more investments in technologies. Results further disclosed that 94.7% of the respondents agreed that technological innovation strategies adopted by firms should identify and explore new revenue opportunities and improve customer satisfaction through reliable delivery.

Finally, majority 78.2% of the respondents agreed that technological innovation strategies involve the adoption of systems such as ERP, ACCPAC, and Electronic Certification Systems that provide capabilities that support and enhance processes associated with it. On a five point scale, the average mean of the responses was 4.2 which means that majority of the respondents concurred to the statements in the questionnaire. The standard deviation was 0.7 inferring that the responses were bundled around the mean response.

4.5 Inferential Analysis

Inferential statistics was used to make interpretations and forecasts concerning the population of this investigation. Pearson correlation and regression model was used to show relationship on the variables under exploration.

4.5.1 Correlation analysis

The survey sought to determine the relationship among the investigation variables. The results are as given in Table 4.6. Relational analysis is applied to determine if there exists a linkage between two variables which lies between (-) strong negative correlation and (+) perfect positive correlation. Pearson correlation was employed to establish the employees' perception of innovation strategies adopted by Kenya Plant Health Inspectorate Service (KEPHIS).

The innovation strategies were product, process, market and technology innovations. The survey determined that there was a positively strong and statistically significant correlation (r=.936, p = .000) between product innovation and performance of Kenya Plant Health Inspectorate Service. The study also found out that there was a positively strong and significant correlation between process innovation and performance of Kenya Plant Health Inspectorate Service (r = .879, p = .000).

Market innovation was also seen to have a strong positive and significant association with performance of Kenya Plant Health Inspectorate Service (r = .881, p = .000). Further, the examination depicted that there is a strong positive and significant correlation between technology innovation and performance of Kenya Plant Health Inspectorate Service (r = .903, p = .000).

Table 4.7: Correlation matrix of variables

Variables		Performance	Product innovation	Process innovation	Market innovation	Technology innovation
Performance	Pearson Correlation	1				
	Sig. (2-tailed)					
Product innovation	Pearson Correlation	.936**	1			
	Sig. (2-tailed)	0.000				
Process innovation	Pearson Correlation	.879**	.857**	1		
	Sig. (2-tailed)	0.000	0.000			
Market innovation	Pearson Correlation	.881**	.844**	.783**	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
Technology innovation	Pearson Correlation	.903**	.893**	.785**	.760**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	

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

(Source: Survey Data, 2017)

4.6 Regression Analysis

Performance of Kenya Plant Health Inspectorate Service was regressed against product innovation, process innovation, market innovation and technology innovation. The regression analysis was undertaken at 5% significance level. The study obtained the model summary statistics as displayed in Table 4.8.

Table 4.8: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
	.968[a]	.937	.931	.18852

Source: Research Findings (2017)

The coefficient of determination also known as the R^2 indicates the deviations in the response variable that is as a result of changes in the predictor variables. From the outcome in table 4.8, the value of R^2 was .937, an indication that 93.7 percent of the deviations in the performance of Kenya Plant Health Inspectorate Service are caused by changes in product innovation, process innovation, market innovation and technology innovation.

Other variables not included in the model justify for 6.3 percent of the variations in the performance of Kenya Plant Health Inspectorate Service. Also, the results reveals an existence of a strong relationship among the selected independent variables and performance of Kenya Plant Health Inspectorate Service as indicated by the correlation coefficient of 93.7 %. Table 4.9 shows the ANOVA results of the study.

Table 4.9: Analysis of Variance

Indicator	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	26.238	4	6.560	184.560	.000[b]
Residual	1.777	50	.036		
Total	28.015	54			

Source: Research findings (2017)

The significance value is 0.000 which is less than p=0.05. This implies that the model was statistically significant in predicting how product innovation, process innovation, market innovation and technology innovation affect the performance of Kenya Plant Health Inspectorate Service. The F value derived indicates that the data used was linear and therefore can be used for regression analysis.

The investigator employed t-test to determine the significance of each individual variable used in this study as a predictor of the performance of Kenya Plant Health Inspectorate Service. The p-value under sig. column was used as an indicator of the significance of the connection between the dependent and the independent variables. At 95% confidence level, a p-value of less than 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 indicates a statistically insignificant association between the dependent and the independent variables. The regression results of the model are as shown in Table 4.10.

Table 4.10: Regressions of Coefficients

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	-.296	.153		-1.933	.059
Product innovation	.273	.112	.256	2.432	.019
Process innovation	.213	.072	.209	2.952	.005
Market innovation	.310	.079	.267	3.919	.000
Technology innovation	.294	.076	.308	3.868	.000

Source: Research Findings (2017)

From the above results, it is evident that product innovation produced a positive and statistically significant relationship with performance of Kenya Plant Health Inspectorate Service (r =.273, p = .019), process innovation had positive and statistically substantial correlation with performance of Kenya Plant Health Inspectorate Service (r =.213, p = .005), market innovation had positive and statistically substantial correlation with performance of Kenya Plant Health Inspectorate Service (r =.310, p = .000) technology innovation had positive and statistically substantial correlation with performance of Kenya Plant Health Inspectorate Service (r =.294, p = .000).

The following regression equation was estimated:

$Y = -.296 + 0.273X_1 + 0.213X_2 + 0.310X_3 + 0.294X_4$

Where,

Y = Performance of Kenya Plant Health Inspectorate Service

X_1= Product innovation

X_2 = Process innovation

X_3 = Market innovation

X_4= Technology innovation

On the estimated regression model above, the constant = -.296 shows performance of Kenya Plant Health Inspectorate Service if the independent variables (product innovation, process innovation, market innovation and technology innovation) were put at zero. A unit rise in product innovation would lead to rise in performance of Kenya Plant Health Inspectorate Service by 0.273.

A unit growth in process innovation would give rise to growth in performance of Kenya Plant Health Inspectorate Service by 0.213; a unit rise in market innovation would contribute to growth in performance of Kenya Plant Health Inspectorate Service by 0.310 units. Further, a unit rise in technology innovation would contribute an increase in performance of Kenya Plant Health Inspectorate Service by .294.

4.7 Discussion of Research Findings

The strategic innovation utilizes growth strategies so as to alter new product sets, services and different industry models of rivalry and it generates novel tenets for clients and companies (Sorati, 2008). The study sought to establish the employees' perception of innovation strategies adopted by Kenya Plant Health Inspectorate Service (KEPHIS). Independent variables for this study were product, process, market and technology innovations whilst the dependent variable of this study was performance of Kenya Plant Health Inspectorate Service. The effect of each of the independent variable on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables in this study revealed a positive and statistically significant relationship between product innovation and performance of Kenya Plant Health Inspectorate Service. Slater et al., (2014) asserts that product innovation is paramount to organizational rejuvenation and accomplishments. They further said that fundamental product innovations offer unparalleled customer paybacks, considerable cost discounts, or the capacity to create new businesses, any of which lead greater organizational performance.

Product innovation is a key factor for effective market penetration in models of ingenious obliteration and Schumpeterian progression (Becker & Egger, 2013). Moreover, the results concurred with those of Hult et al., (2004) who argued that product innovation enables the organization to protect itself against threats from the competitors.Comison et al., (2010) also agrees that product development is vital for a firm to have the capacity to make a focused edge in the evolving surrounding.

Product innovation enable organizations to introduce new and quality products into the market thus gain competitive advantage over the competitors in the same industry. Statistical results from 140 Turkish businesses from numerous divisions, analyzed using Structural Equation Modeling, green product innovation substantially positively affects both business performance and viable competence (Ar, 2012).

The study findings revealed a positive correlation between Market innovation and performance as analyzed using Pearson correlation model. This was echoed by Audretsch, (2009) who asserts that market novelty enables the organization to reach out to its customers faster and more efficiently. This has the impact of improved entrepreneurship and thus that gives rise to growth of the economy. The study agrees with Ren et al., (2010) who conjectured that marketing innovation is a necessary tool for organizations to achieve a sustainable competitive advantage.

The study a showed that there exist a positive relationship between process innovation and performance of Kenya Plant Health Inspectorate Service. The findings of this study concurred with those of Kuratko & Hodgetts (2004) who advanced that at the long term, process innovation as an idea creation, will ultimately lead to a presentation of novel merchandize and services hence boosting on performance. Also a study by Ma, et al., (2011) in business industries in China, found out that knowledge positioning has a straight and positive impact on process innovation, process innovation has a straight and positive influence on business performance. Process innovation helps to safeguarding a company's market locus given the features of its product supply.

The study finally showed that there exist a progressive connection between technology innovation and performance of Kenya Plant Health Inspectorate Service. This is in support of Yam, et al., (2010) who affirms that Technological innovation capability (TIC) have different impacts on different performance measures which are critical in the success of the company. Camisón et al., (2014) agrees that firm innovation supports the advancement of high-tech innovation competences and that both organizational innovation and technical competences for products and procedures can contribute greater company achievement. Technological innovation strategies involve the adoption of systems such as ERP systems that provide capabilities that support and enhance processes associated with it. The systems should also help improve activities by automating routine tasks such as order management. These strategies will lead to reduced costs, better service delivery among other benefits in organizations.

The model summary revealed that the independent variables: product innovation, process innovation, market innovation and technology innovation explains 93.7% of changes in the dependent variable as indicated by the value of R^2 which implies that there are other factors not included in this model that account for 6.3% of changes in the performance of Kenya Plant Health Inspectorate Service. The model is fit at 95% level of confidence since the F-value is 184.560. This endorses that generally the multiple regression model is statistically significant, in that it is an appropriate prediction model for explaining how the selected independent variables influences performance of Kenya Plant Health Inspectorate Service.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This part summarizes the findings of chapter four, deductions, and limitations encountered during the research. This chapter also highlights the policy recommendations that can be implemented by policy makers to increase performance of Kenya Plant Health Inspectorate Service and by extension other state corporations in the same category. This will also form a basis in decision making by the management of KEPHIS.

The findings from the data analyzed and discussed in chapter four have been given in brief together with the objective of the exploration in this section. The conclusions of the exploration have been drawn from the study and recommendations founded on the purposes of the research for action are also given.

Lastly the chapter presents limitations of the examination and suggestions for further studies. The study was not very exhaustive in that sector. It covered a small section of the agricultural sector which is so enormous. The researcher gives impediments encountered in the course of the study which he found be valuable to successive researchers. Finally the chapter gives the possible areas one might study to give a wide grasp of the field and unravel

5.2 Summary

The study sought to determine the employee perception of innovation strategies adopted by Kenya Plant Health Inspectorate Service (KEPHIS). The independent variables for the study were product, process, market and technology innovations. The study adopted descriptive and cross sectional survey design. Primary data were collected using questionnaires and analyzed using SPSS software version 20.

From the results of correlation analysis, there is a positive and statistically substantial correlation between product innovation and performance of Kenya Plant Health Inspectorate Service. The research also discovered that there is a positive and substantial correlation between process innovation and performance of Kenya Plant Health Inspectorate Service. Market innovation was also found to have a positive and significant association with performance of Kenya Plant Health Inspectorate Service. Finally, technology innovation had a positive and significant association with performance of Kenya Plant Health Inspectorate Service.

The model summary revealed that the independent variables: product innovation, process innovation, market innovation and technology innovation explains 93.7% of changes in the dependent variable as indicated by the value of R^2 which implies that there are other factors not included in this model that account for 6.3% of changes in performance of Kenya Plant Health Inspectorate Service. The model is fit at 95% level of confidence since the F-value is 184.560. This endorses that generally the multiple regression model is statistically substantial, in that it is an appropriate prediction model for explaining how the selected independent variables influences performance of Kenya Plant Health Inspectorate Service.

Regression results showed that product innovation showed a positive and statistically significant relationship with performance of Kenya Plant Health Inspectorate Service, process innovation had positive and statistically substantial relationship with performance of Kenya Plant Health Inspectorate Service while market innovation had positive and statistically major correlation with performance of Kenya Plant Health Inspectorate Service. Finally, regression results showed that technology innovation had positive and statistically weighty connection with performance of Kenya Plant Health Inspectorate Service.

5.3 Conclusion

From the exploration findings, the investigation concludes that performance of Kenya Plant Health Inspectorate Service is significantly affected by product, process, market and technology innovations. The study found that product innovation had positive and statistically significant relationship with performance of Kenya Plant Health Inspectorate Service. The study therefore concludes that a unit rise in product innovation would lead to a unit rise performance of Kenya Plant Health Inspectorate Service.

The study found that process innovation has positive and statistically significant values for this study and therefore it is concluded that a unit in increase in risk process innovation leads to a unit increase in the performance of Kenya Plant Health Inspectorate Service. Market innovation was observed to have a progressive and statistically substantial correlation with performance of Kenya Plant Health Inspectorate Service and this means that a unit in increase in market innovation leads to a unit increase performance of Kenya Plant Health Inspectorate Service.

It was also concluded that technology innovation had positive and statistically significant relationship with performance of Kenya Plant Health Inspectorate Service implying that a unit in rise in technology innovation leads to a unit rise in the performance of Kenya Plant Health Inspectorate Service.

Finally, the study concludes that the independent variables selected for this study that include product innovation, process innovation, market innovation and technology innovation influences leads to a unit increase in the performance of Kenya Plant Health Inspectorate Service. It is therefore sufficient to conclude that these variables significantly influence leads to a unit increase in the performance of Kenya Plant Health Inspectorate Service as shown by the p value in ANOVA summary.

The fact that the predictor variables explain 93.7% of changes in leads to a unit increase in the performance of Kenya Plant Health Inspectorate Service implies that there are other factors influencing in leads to a unit increase in the performance of Kenya Plant Health Inspectorate Service that were not included in the model.

5.4 Recommendations and Implication of the Study

Empirical research on the strategic perception of employee's on innovation strategy, dynamic technological environment and performance of KEPHIS or the link between these practices and performance had not been done prior to the present study. This research therefore filled the knowledge gaps by answering the question: what are the effects of strategy innovation and dynamic technological environment on the performance of Kenya Plant Health Inspectorate Services in Kenya? The findings of this survey have a number of implications for theory, practice and policy.

Therefore, organizations should ensure that their employees are suitably motivated and that continuous training is available in order to effectively deliver and improve their performance. The innovation strategies considered in this study fell into four categories. These include; product/service innovation strategies, technological innovation strategies, marketing innovation strategies and process innovation strategies.

The study recognized that there was a progressive influence of product innovation on the performance of Kenya Plant Health Inspectorate Service. This study recommends more funds for research and development of new products to be set apart.

The survey acknowledged that there was a progressive and statistically substantial correlation between process innovation and performance of Kenya Plant Health Inspectorate Service. Process innovation is vital to KEPHIS as this provides a good policy towards efficiency in service delivery since this sector is service oriented. Process innovations entail the entire operations of such institutions and can be enhanced through best practices in line with industry standards. This study recommends that measures be set up with the goal of improving KEPHIS efficiency through process innovations. In addition the study recommends that the capabilities of the organization should be well identified since the process of Innovation will involve building on the capabilities of the organization geared towards creating new products and services.

Market innovation was also found to a positive influence on the performance of Kenya Plant Health Inspectorate Service. This study recommends adoption of efficient market strategies to widen the market scope. Organizations should give great importance to market innovation since it enables the organization to reach out to it's the customers faster and more efficiently.

Finally, technology innovation was found to a positive influence on the performance of Kenya Plant Health Inspectorate Service. This study recommends adoption of efficient market strategies to widen the market scope. It is through technology the organization will be able to leverage on efficiency and effectiveness. This study recommends more funds for research and adoption of new technology.

The study revealed that innovativeness has a significant influence on organization performance. Managers in organizations can apply the findings of this study to develop internal capacity and the right environment to work towards superior innovativeness. Firms must embrace innovativeness as a key resource and this study can be used to demonstrate that it would be worth spending resources to engage in innovativeness.

The study therefore recommends that innovativeness should be highly rewarded and encouraged in organizations. From the study findings, the study concluded that performance of Kenya Plant Health Inspectorate Service is significantly affected by product innovation, process innovation, market innovation and technology innovation.

To ensure innovativeness impacts on performance in a sustained way it would be important for organizations to set up policies that define what is achieved, when, at what cost, using what modalities, how and what is learned is passed on among staff in the organization.

This will also ensure that mistakes and unnecessary losses due to a poor understanding of the innovation components, stages, and importance are minimized. Managers have to ensure they have policies defining the various process, product, market and technological innovations and also similar subsets to enable them understand their innovativeness levels and environment.

5.6 Suggestions for Further Research

A replication of this exploration on the same variables should be carried out targeting top management. More time should be apportioned and a mixture of information gathering tools should be employed, example questionnaires and interview guides and focus group discussion. This will cross check the information provided.

The study has explored the employees' perception of innovation strategy, dynamic technological environment and performance of Kenya Plant Health Inspectorate Service, a state-run corporation in the Ministry of Agriculture, Livestock and Fisheries which is a fraction of over 25 regulatory agencies that are mandated to perform unique functions. A cross-sectional survey in these agencies is highly recommended which would guarantee a broad view of the research findings in this regulatory environment thus usher new approaches.

The study recommends another examination to be carried out with the aim of probing employees' perception of innovation strategy, dynamic technological environment and performance of state-run agencies in Kenya. The country has over 130 state corporations which fall into various categories. These categories include; regulatory, commercial, semi-commercial, research and educational among others.

Finally, a study to identify organization barriers hindering successful adoption of technology innovation at Kenya Plant Health Inspectorate Service as well as other state corporations. There are a number of key factors such as resources, internal capability, technology, organizational culture that are key to adoption of resources. An in-depth exploration on these barriers will help policy makers to unravel the problem so as to stimulate growth in the respective firms.

REFERENCES

Ansoff, H. I. (1988). General management in turbulent environments. *Practicing Manager*, 11(1), 6-27.

Atkinson, R. D. & Mengher, J. (2014). Competitiveness, Innovation and Productivity: Clearing up the Confusion. *The Information Technology and Innovation Foundation Journal,* 17 (4), 187-97.

Ahmadi P, Nasiri Vahed N (2007). The relationship between effective strategic and organizational innovation. Tadbir Journal, 186: 38-42.

Ar, I. M. (2012). The Impact of Green Product Innovation on Firm Performance and Competitive Capability: The Moderating Role of Managerial Environmental Concern. *Procedia - Social and Behavioral Sciences*, *62*, 854–864.

Awino, Z. B. (2011). Strategic management: an empirical investigation of selected strategy variables on firms' performance: a study of supply chain management in large private manufacturing firms in Kenya.

Babbie, E. (2004). *The Practice of Social Research*. *The Practice of Social Research* (10. Aufl.). Belmont, Victoria, Toronto, Madrid, Colonia Polanco: Thomson Wadsworth.

Bayus, Barry L., William, P. Putsis, Jr. 1999. Product proliferation: An empirical analysis of product line determinants and market outcomes. Marketing Sci.18 (2) 137–153.

Beatham, S., Anumba, C., Thorpe, T., & Hedges, I. (2004). KPIs: A critical appraisal of their use in construction. *Benchmark*, 11(1), 93-117.

Becker, S. O., & Egger, P. H. (2013). Endogenous product versus process innovation and a firm's propensity to export. Empirical Economics, 44(1), 329–354.

Bessant, J., & Francis, D. (1998). Implementing the new product development process, *Technovation Journal*, 17 (4), 187-97.

Birkinshaw, J. C; Bouquet & Barsoux, J. L. (2011). MIT Sloan. *Management Review*, 52 (2), 43.

Burgelman, R.A., Maidique, M.A., & Wheelwright, S.C. (2004). Strategic Management of Technology and Innovation. McGraw Hill, New York.

Burnes, B. (2000). Managing Change: *Strategic Approach for organizational Dynamics*. Pitman Publishing. London.

Cadogan, J. W., Diamantopoulos, A. & Siguaw, J. A. (2002). Export Market-Oriented Activities: Antecedents and Performance Consequences, *Journal of International Business Studies*, 33(3), 615-626.

Camisón, C., Villar-López, A., Camis??n, C., & Villar-L??pez, A. (2014). Organizational innovation as an enabler of technological innovation capabilities and firm performance. *Journal of Business Research*, *67*(1), 2891–2902.

Cassia, L., Massis, A. Pizzurno, E. (2012), Strategic innovation and new product development in family firm. An empirically grounded theoretical framework, International Journal of Entrepreneurial Behavior & Research, 18(2): 198-232.

Cefis, E., & Marsili, O. (2006). Survivor: The role of innovation in firms' survival. *Research Policy*, *35*(5), 626–641.

Chandler, A.D. Jr. (1962). *Strategy and Structure: Chapters in the History of the American Industrial Enterprise*. Cambridge, MA: MIT Press.

Chapman, R. Hyland, P. (2004). Complexity and learning behaviours in product innovation, Technovation, 24(7): 553-61.

Charitou, C. D., & Markides, C. C. (2003). Responses to Disruptive Strategic Innovation. MIT Sloan Management Review, 55-63.

Cooper, R.D., & Schindler P.S., (2012). Business Research Methods, London, Tata McGraw – Hill Edition.

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.

De Jong, J. P., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, *10*(1), 41-64.

Demanpour, F., Walker, R. & Avellaneda, C. (2009). Combinative effects of innovation types and organizational performance. A longitudinal study of service organizations. *Journal of Management Studies*, 46(4), 650-675.

Dill, W. R. (1958). Environment as an influence on managerial autonomy. *Administrative Science Quarterly*, 2, 409-443.

Easterby-Smith, M. (1994), Evaluating Management Development Training and Education, 2nd edition ed, Gower Press, Farnborough.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived Organizational Support And Employee Diligence, Co. Journal of Applied Psychology, 75(1), 51–59.

Eisenhardt, K., & Martin, J. (2000). Dynamic capabilities: What are they? *Strategic Management Journa*l, 21(10-11), 1105-1121.

Emery, F. E., & Trist, E. L. (1965). The causal texture of organizational environments. Human Relations, 18, 21-32.

Enkel, E., Gassmann, O., & Chesbrough, H. W. (2009). Open R&D and open innovation: Exploring the phenomenon. *R & D Management,* 39(4), 311–316.

Fakii, I. Z. (2013). The Influence of Strategy on Organizational Performance Of State Corporations In Kenya (Doctoral Dissertation, School Of Business, University of Nairobi).

Feldman, M. P. (1996).Geography and Regional Economic Development: The Role of Technology-Based Small and Medium Sized Firms. *Small Business Economics*, 8(2), 71-74.

Garner, W. R., Hake, H. W., & Eriksen, C. W. (1956). Operationism and the concept of perception. *Psychol Rev*, *63*(3), 149–159.

Gebauer, H., Worch, H., & Truffer, B. (2012). Absorptive capacity, learning processes and combinative capabilities as determinants of strategic innovation. *European Management Journal*, 57-73.

Hult, G. T., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management,* 33, 429–438.

Kothari C.R. (2004). Research Methodology: Methods and Techniques.2nd Ed. NewDelhi, New Age International (P) Limited.

Kuratko, D. F. & Hodgetts, R. M. (2004). Entrepreneurship: Theory, Process, Practice Mason, Ohio: Thomson South Western.

Lilly, L., & Juma, D. (2014). Influence of strategic innovation on performance of commercial banks in Kenya: the case of Kenya Commercial Bank in Nairobi County. *European Journal of Business Management, 2*(1), 336-341.

Lumpkin, D.; Gregory, G., G. T. & Eisner, A. B. (2008). *Strategic management text and cases* (4th ed). Boston McGraw-Hill/Irwin.

Ma, W., Zhu, G., & Hou, Y. (2011). Learning Orientation, Process Innovation, and Firm Performance in Manufacturing Industry. *Advances in Information Sciences and Service Sciences*, *3*(11), 357–364.

Mabrouk, A, & Mamoghli, C. (2010). Dynamic of financial innovation and performance of banking firms: context of an emerging banking industry. *International Research Journal of Finance and Economics,* 17, 99-120.

Markides C., (2000). All the right moves – A guide to crafting breakthrough strategy, Harvard business school press.

Mugenda, O. M. & Mugenda, A. G (2003). *Research Methods,* Quantitative & Qualitative Approaches, Nairobi, Acts Press.

Mullins L.J (1999), *Management and Organizational Behaviour*, (5th Ed.): In Marrow,

A.J (1969), The Practical Theorist: The Life and Work of Kurt Lewin Teachers

College Press.1977 Ed.

Munyoki, C. (2015). Competitive Strategies, Organizational Autonomy, Positioning and Performance of Kenyan State Corporations (Doctoral dissertation, School of Business, University Of Nairobi)

Orodho, A. J. & Kombo, D. K. (2002). Research Methods. Nairobi: Kenyatta University Institute of Open Learning.

Pearce, J. A. & Robinson, R.B. (2011). Strategic Management: Formulation, Implementation, and control, 12th ed, MC Graw Hill. International Edition.

Snell, J. (2006). Measuring Perception, Plybridge Distributors, Estover Road, Plymouth volume 1

Sundbo, J. (2002). Innovation as a strategic process Sundbo &I. Fuglsang (Eds), Innovation as Reflexivity (2002). London Routledge.

Porter, M.E. (1980). *Competitive Strategy*, The Free Press, New York, NY.

Ramadani, V. & Gerguri, S. (2011). Innovation: Principles and Strategies. *Advances in Management*, 4(7), 7-12.

Saunila, M., & Ukko, J. (2012). A Conceptual Framework for the Measurement of Innovation Capability, *Baltic Journal of Management*, 7(4).

Slater, S. F., Mohr, J. J., & Sengupta, S. (2014). Radical product innovation capability: Literature review, synthesis, and illustrative research propositions. *Journal of Product Innovation Management*, *31*(3), 552–566.

Sorati, A. N. (2008). Strategic innovation. Journal of Management and Human Resource in Oil Industry. 2(2): 143-171.

Storey, C. & Easingwood, C. (2013). The augmented service offering: conceptualization and study of its impact on new service success. *Journal of Product Innovation Management*, 15(4).

Subramaniam, M., Venkatraman, S.R., & Hatten K.J. (2001). Global new product development: preliminary findings and research propositions. *Journal of Management Studies,* 35(6), 773–796.

Subramanian, A., & Nilakanta, S. (1996). Organizational innovativeness: exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance. *Omega*, 24(6), 631-647.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509-533.

Thompson, A. & Strickland, A. J. (2003). *Strategic management: concepts and cases*. New Delhi: Tata McGraw Hill.

Van Someren T.C.R., Van Someren-Wang S. (2017) The Instrument: Strategic Innovation as a New Foundation for Russian Innovation System. In: Strategic Innovation in Russia. Springer, Cham.

Vorhies, D. W. (2003). An Investigation of the factors leading to the development of marketing capabilities and organizational effectiveness. *Journal of Strategic Marketing*, 6, 3-23.

Yam, R. C. M., Lo, W., Tang, E. P. Y., & Lau, A. K. W. (2010). Technological innovation capabilities and Firm Performance. *World Academy of Science, Engineering and Technology*, *66*.

APPENDICES

Appendix I: Letter of Introduction

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS

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

P.O. Box 30197
Nairobi, Kenya

DATE 02/10/2017

TO WHOM IT MAY CONCERN

The bearer of this letter NYARIBO JOASH ATUNGA

Registration No. D61/79188/2015

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

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

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

Thank you.

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
02 OCT 2017
P.O. Box 30197 - 00100, NAIROBI

PATRICK NYABUTO
SENIOR ADMINISTRATIVE ASSISTANT
SCHOOL OF BUSINESS

Appendix II: Research Questionnaire

Part A: Demographic Information

What level of education have you completed?

Diploma	[ ]	Other College Education	[ ]
Degree	[ ]	Postgraduate	[ ]

Any other……

Which is your department…….

To what extent does adoption of innovation strategies affect performance of Kenya Plant Health Inspectorate Service?

Very great extent	[ ]	Great extent	[ ]
Moderate extent	[ ]	Little extent	[ ]
Not at all	[ ]		

Part B: Product Innovation

On a scale of 1-5 Tick the appropriate alternative provided for each question with 5- Strongly agree, 4- Agree, 3-Uncertain, 2-Disagree, 1- Strongly Disagree

	1	**2**	**3**	**4**	**5**
New goods and services have been introduced in the company in the last 2yrs					
The companyspecializes on goods and services that are most preferred by the customers					
Product innovation is part of the organization's vision and mission					
The management of the organizationallows communication within the business for new ideas					
Improving the quality of the products is one of the key objectives of the organization					
Product innovation is considered as means of achieving a firm's competitive advantage					
Employees are rewarded for coming up with new product ideas for improvement of existing products					
Improving employee commitment , morale or both is part of the product innovation strategy adopted by the firm					

Part C: Process Innovation

On a scale of 1-5 Tick the appropriate alternative provided for each question with 5- Strongly agree, 4- Agree, 3-Uncertain, 2-Disagree, 1- Strongly Disagree

	1	2	3	4	5
Improving service quality through process innovation is one of the key objectives of the organization					
There has been cost reduction and efficiency in service delivery after introduction of a new system					
There are programmes to stimulate the creation of new ideas for employees					
New business methods are usually worth trying even though they may prove risky and costly					
There has been training on new computer based programmes in the last 6 months					
Smooth workflow through process innovation leads to customer satisfaction					
Introduction of new systems leads to better cash flows					
There has been increased savings with introduction of proper inventory management systems such as Just in time systems					
There has been improvement in performance after the organization introduce new systems of workflow management					
Technological changes within the organization have led to the overall good performance of the organization					

Part D: Market Innovation

Using a scale of 1 – 5 tick the appropriate answer from the alternatives provided for each of the questions.1.Strongly Disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly

	1	**2**	**3**	**4**	**5**
The use of online tools and social media has helped the company grow and attract new clients					
A sound marketing strategy is important to the organization in the long run					
There are new opportunities of doing business that have been identified by the business					
Customers' needs and preferences keep on changing					
The organization has changed its way of marketing in the last one year.					
The prices offered by the organization are lower than those of other private organizations in the same industry					
The organization researches on what customers want before they ask for it					
Goods/services produced by the organization are considered unique from other businesses.					

Part E: Technological Innovation

Using a scale of 1 – 5 tick the appropriate answer from the alternatives provided for each of the questions.1.Strongly Disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly

	1	**2**	**3**	**4**	**5**
The technological innovation success depends not only on the technological capabilities of the firm, but also on other critical capabilities in marketing, organization, manufacturing, strategic planning and resource allocation					
Technological innovation capabilities fall into scientific research assets, process innovation assets, product innovation assets, or design assets					
The internal efficiency on most operational processes of the organization can be attributed to more investments in technologies					
Technological innovation strategies adopted by firms should identify and explore new revenue opportunities and improve customer satisfaction through reliable delivery					
Technological innovation strategies involve the adoption of systems such as ERP systems that provide capabilities that support and enhance processes associated with it.					

Part F: Performance

Using a scale of 1 – 5 tick the appropriate answer from the alternatives provided for each of the questions. 1. Strongly Disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly Agree

	1	**2**	**3**	**4**	**5**
Productivity of the organization improved in the last 5 years					
The organization's profitability has been on the rise for the last 5 years					
There has been an increased revenue over the past 5 years					
There has been an increase of market share of organizations for the past 5 years					
The management is committed to sustainability and good reputation in the long run					
The firm's performance is key to the employees of the organization					

Thank you!