

**EFFECT OF INNOVATION ON FINANCIAL PERFORMANCE
OF GENERAL INSURANCE COMPANIES IN MOMBASA
COUNTY, KENYA**

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DECLARATION

I wish to declare that this research project is my original work and it has never been submitted to any other college or institution of higher learning for award of any academic grade.

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This research work has been submitted for examination with my approval as the Supervisor.

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DEDICATION

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ABBREVIATIONS AND ACRONYMS

AKI:	Association of Kenya Insurers
AI:	Artificial Intelligence
CCK:	Communication Commission of Kenya
DOI:	Diffusion of Innovations
GDP:	Gross Domestic Product
GPI:	Gross Premium Income
IIK:	Insurance Institute of Kenya
IRA:	Insurance Regulatory Authority
IoT:	Internet of Things
KES:	Kenya Shillings
KBT:	Knowledge –Based Theory
MIPs:	Medical Insurance Providers
OECD:	Organization for Economic Cooperation and Development
RBV:	Resource Base View
ROA:	Return On Asset
ROI:	Return On Investment
R &D:	Research and Development
SCA:	Sustainable Competitive Advantage
SPSS:	Statistical Package for Social Sciences

ABSTRACT

A business entity operates with an objective of making profits in the long-run. Financial sector in any country plays a major in the growth and development of the economy. In Kenya, the insurance industry has continued to grow despite the fact that its growth had remained minimal. However, the continuous reduction in insurance penetration remains a puzzle to both the industry players and the government. This has made many insurance companies to focus their attention in improving their bottom line by embracing innovation and which has been considered to be key in reducing operational expenses and improving the overall financial performance. The core objective of this study was to assess if the General Insurance Companies operating within Mombasa County had adopted innovation in their operations and if innovation had had any impact on their financial performance. The innovation was assessed using innovation factors: Product, Marketing, Organizational and Process innovation while that of the financial performance was assessed using the ROA and ROE. The appropriate research design adopted for this study was cross-sectional survey design. The targeted population of the study was small and it comprised of all the 33 general insurance companies that have been operating in Mombasa County from the Year 2014 to 2017. The study therefore opted for a census survey where all the elements of study were included in the population. The primary data was collected using a structured questionnaire and the secondary data was generated from the industry regulator (IRA) annual published reports. SPSS version 20 was used to analyze and generate the descriptive statistics. 31 Respondents returned the questionnaires translating to a response rate of 94%. Mean, Median and Standard Deviation were used to describe the data while the Percentage and Frequency tables were used to present the data. The regression analysis and correlation analysis was used to test the relationship and association between the two variables respectively. The model fitness was tested using the ANOVA. The study established a strong positive correlation between innovation and financial performance of General insurance companies in Mombasa County. The study further established that the level of education of these managers had a direct relationship with the financial performance of these companies. This is because an educated person tends to be more creative and hence innovative. Due to the rapid changing of the technology and which affects how insurance products will be issued and distributed, a further study on Process innovation was also proposed. Several recommendations were made from the study findings such as: Education level for all employees working for general insurance companies needs to be enhanced in order to make them cope with innovation, general insurance firms to allocate more funds to innovation budget, firms to improve technology that would enable insurance products to reach a larger market, creating awareness on contemporary innovation skills to employees working for all the general insurance firms and finally, a need for all general insurance firms to promote various aspects of innovations that could enhance their sales volume, market share, profitability and net income.

CHAPTER ONE: INTRODUCTION

The concepts of innovation and Organizational financial performance are covered in this chapter. The selected major theories that the study anchored on and the context of the study which was the insurance industry, but focusing more on the insurance companies that offers general insurance and operates within Mombasa County will be highlighted in brief. And finally the chapter ends with the motivation of the study.

1.1 Background of the Study

Innovation has become a major topic for discussion for individuals, companies and even nations. Governments and industries have been looking for ways on how they can foster innovation and entrepreneurship for economic development to sustain development and business success. Organization are continuously operating in a very dynamic environment which they have no control over it due to the turbulence brought up by globalization which has led to increased competition, deregulation of markets, rapid changing investor and customer needs (Gitau, 2013). Firms therefore need to come up with breakthrough innovations that will help them operate effectively (Davila, 2014). Organizations needs to remain focused by enhancing their development limits and benefits from the accessible open doors and also enhance their performance by embracing innovations in their operation. A successful innovation therefore gives an organization an upper hand over its competitors in terms of superior performance (Lyons, Chatman & Joyce, 2007). According to Calantone, Cavusgil and Zhao (2002) innovation is a core determinant for an organization's performance.

The study was anchored on two relevant theories and a model: Diffusion of Innovation Theory (DOI), Knowledge-Based Theory (KBT) and Resource-Based View Model (RBV). DOI Theory was used to explain how innovation spread through market or non-market channels or within an organization (Rodgers, 1962). The KBT was used to explain how an organization capacity to advance relies upon the pool of information accessible inside the organization and its transfer and sharing being core to innovation (Michailova & Hutchings, 2006). RBV model was used to explain how an organization day to day operations and overall performance is affected by the collection and heterogeneity of the resources and capabilities it has (Barney, 1991).

The insurance industry in Kenya is a financial sector that will contribute to the realization of vision 2030. According to Kokonya (2018), innovation is a powerful tool that an insurer can use to remain competitive and move ahead of the rest in the rapid changing consumer market. Though innovation alone cannot guarantee success to insurers, it plays a bigger part in achieving this success and with the increase of smartphones and other digital platform tools in Africa, some insurers in Kenya and South Africa have adopted digital changes to serve their clients better. However, it is the continuous decline of the industry overall performance and penetration rate which has failed to reach the industry set penetration target of over 3% that has motivated this research study and which was to identify the different types of innovation that were predominant in Kenyan insurance sector and establish on how they affect the financial performance of general insurance companies in Mombasa County, Kenya.

1.1.1 Concept of Innovation

Schumpeter (1934) defined innovation as the introduction of a product or service that the clients had not seen before, introduction of a new production method never used before by the company, opening up of a new market in an industry or introduction of a new organizational structure in a given field. Organizations therefore need to remain focused by increasing their development limits and benefits from the accessible open doors and enhance their performance by embracing innovations in their operation. A successful innovation thus gives an organization an upper hand in terms of competition and superior performance (Lyons et al., 2007). According to Gates and Cooksey (1998), innovation can also be defined as a process in which a firm becomes inventive and executes new strategies in running its operations in order to produce enhanced results. Developing innovation capability is core to any firm as it supports growth and survival for the firm (Francis & Bessant, 2005).

According to Child (1997), innovation can be seen as the ability of a firm to respond to the external environment and influence it to its advantage. It is also seen as the primary means by which firms adjust to their external environment through the choice of their strategies (Mintzberg, 2008). However according to Drucker (2001), firms are always faced with fundamental choices in their decisions on whether to innovate or not and if to innovate then which type of innovation to use; Product, Process, Market or Organizational innovation (OECD, 2005). According to Schilling (2006), innovation starts at the time a new idea is generated and when it is converted into a new product, service or a process it thus acquires value and hence becomes an innovation. Lundvall (2007) quoting Schumpeter (1934) argues that innovation can be new products, processes, raw materials, forms of organization and markets.

OECD (2005) further defined product innovation as implementing significant change to the quality or use of products or services, Process innovations as the adoption of enhanced or novel manufacturing technologies that help the firm to meet customer demands while remaining competitive in the business environment, Marketing innovation as the adoption of fresh marketing techniques and methods that are geared towards maintaining customer relationship through clear pricing strategies and product promotions and Organizational innovation as the organization and handling work procedures for example client relationships both internally as well as externally in ways that promote competitive advantage.

In the insurance industry innovation has been cited as one of the major tool that can be used by the insurers to deal with stiff competition and ever changing consumer market. Advancement in technology and with the increase of smartphones, some insurers in Kenya and South Africa have adopted digital changes to serve their clients better. Some of the innovations that can be used in the insurance industry are the Internet of Things (IoT), Artificial Intelligence (AI), Drones, Block chain technology, Digital platforms and Telematics. AI is used by the staffs to analyze the social media and come up with product prices and managing claims. Drones are used for claims management especially in situations such as fires or floods where it is not possible for claims adjuster to gain immediate access and for risks assessment and Telematics in motor are used to understand more about the risks they are covering and encourage better driving habits and improve road safety (Kokonya, 2018).

1.1.2 Financial Performance

Financial measures have been widely used to measure firm performance and according to Weston (2011), financial performance is a measure that can be used to indicate on how good or bad the organization is doing in financial terms and there are various evaluation methods and financial indicators that can be used. Financial performance looks at how the firm is using its assets to generate revenues. Lole (2012) defines financial performance as one of the various mathematical tools used to evaluate how efficiently a firm employs resources in enhancing profitability and firm value.

According to Jim (2014), financial performance of an organization can be measured using several categories which include, but not limited to profit growth, Return on Asset (ROA), Return on Investment (ROI), Earnings per Share (EPS), Market share and employee growth. Financial performance of a company is captured in the financial reports that are prepared mostly at the end of each company financial year and it is a summary that includes companies Assets, Liabilities, Capital, Income and Operating expenses (Muchoki, 2013). However insurance firms can measure performance using Gross income, Net premium written, Investment income, Operating profit or loss after taxation, Asset investments and Shareholders fund results. For the purpose of this ROA and ROE was used to measure the financial performance of the insurance companies.

1.1.3 General Insurance Companies in Kenya

The Insurance industry in Kenya is a major sector for the economy that is expected to contribute a lot to both the economy and realization of the Vision 2030 and which main objective is to achieve an economic Gross Domestic Product (GDP) of 10% per

year (Kenyan Vision 2030 Report, 2007). According to the AKI (2016), the industry Gross written premium for the year ending 2016 was KES 197.0 billion compared to KES 173.79 billion recorded in the year ending 2015. The Gross written premium for general insurance was KES 123.08 billion in the year ending 2016 compared to KES 111.93 billion in 2015, while that for life insurance was KES 73.92 billion up from KES 61.86 billion in 2015. The total industry asset base recorded for the year ending December, 2016 increased to KES 508.18 billion from KES 466.36 billion recorded as at the end of December, 2015 (AKI, 2016).

The insurance industry in Kenya is comprised of 52 insurance companies and among these are 38 general insurance companies. General insurance companies are those companies that underwrites or deals with general insurance covers only. In this class, there are no life insurance covers and medical covers in their portfolio. Insurance Regulatory Authority (IRA) registers and issue licenses to all insurance companies in accordance with the provisions of the Insurance Act, Chapter 487 of the laws of Kenya and AKI is a professional self-regulation body for the industry. The insurance industry is currently experiencing an increased merger and acquisition and of late the industry has witnessed several buyouts, consolidation and entrance of new players. This trend is expected to continue due to the improved business environment and the attractiveness of the insurance sector and once the new regulations such as Takaful Guidelines, Risk Based Supervision and Financial Services Authority takes effect, the insurance landscape is expected to transform completely. According to AKI (2016), there are thirty five (35) insurance companies that are transacting general insurance business in Mombasa County.

However these operate only as Branches with their respective head offices located in Nairobi County and therefore the data collected from these branches will reflect the overall picture of their respective companies. The list of the companies is shown on appendix three.

1.2 Research Problem

With the rapid change in customer tastes and preferences combined with environmental dynamism, the firm's ability to survive and succeed depends on how quick it can adapt and influence the external environment and innovation makes this possible (Child, 1997). Strategic management theory posits that innovation is a major tool in which organizations can align itself to the external environment through strategic choices they make (Mintzberg, 2008). Financial performance is an important indicator of any business since it shows if the business is performing well or not. From the study conducted by Deshpande, Farley and Webster (1997), the firm's innovative capacity was found to be a key factor that sets apart organizational performance among the several companies located in five countries: Japan, United States, France, Germany and England.

Organizations use innovation as a growth strategy to increase their market share, venture into new markets and also ensure that the company continues enjoying increased profitability (Njagi, 2016). The increase in the economic growth in Kenya which is strengthened by discovery of oil and gas, shifting demographics, growing middle class level as well as major investments in infrastructure projects continue to create new opportunities for the insurance sector in Kenya (IRA, 2014).

Innovation has been identified as key in attaining success within the insurance industry, however Kenyan insurance industry has remained conservative when it comes to innovation and this can be backed by the lower insurance penetration of less than 3% as at the end of December, 2017 and the IRA continues to advocate for the adoption of innovation which is seen as a major catalyst in enhancing the insurance uptake. The need to develop innovative solutions has increased as more consumers demand value for their money and as new trends take place. As noted by Kokonya (2018), the insurance industry has become so dynamic and very competitive and in order to serve the customers better a number of insurance companies in Africa especially in Kenya and South Africa have started adopting innovation. Indeed technology and innovation has changed the manner in which data is created, analyzed and stored.

Many studies on the subject of innovation and firm's financial performance have been done both locally and internationally. Product innovation plays a major role in the contribution of profits for most manufacturing establishments while process innovation was more widespread among firms with more modest levels of profitability. This is according to the research study conducted by Youtie and Roper (2008) that assessed the impact of product and process innovation on profitability of manufacturing firms in Georgia, America. Hanen et al., (2010) conducted a study which indicated that innovation had enhanced productivity and employment growth of Tunisian service firms. In a study conducted by Roberts (1999), in the United States of America indicated that Product innovation led to sustained superior profitability. Innovation was also found to be a mediating factor between the growth and quality as evidenced in the study that was conducted by Cho and Pucik (2005).

Artz et al. (2010) also did a study which found that product innovation had a considerable impact on the firm's performance. Locally, Korir (2014) conducted a study that established a strong influence of financial innovations on financial performance of commercial banks in Kenya. A study that was conducted in Nairobi County by Njagi (2016) concluded that indeed product innovation had a positive effect on manufacturing firms' profitability. Muchoki (2013) conducted a study that concluded that product innovation had improved financial performance of the mobile telephone firms in Kenya.

In a study conducted by Ongwen (2015), the results indicated that for those commercial banks in Kenya that had adopted product innovations had a better financial performance compared to those which had not. Oirere (2015) conducted a study whose findings indicated that innovation had increased profits, market share and reduced operating costs for SMEs in Nairobi County. From the previous studies highlighted on innovation and firm's financial performance, the researchers have either concentrated on a single type of innovation or have used a different context and also there are limited studies done on insurance industry. The nature of the services being offered by insurance companies are both products and processes and it is difficult to differentiate between the product and the process and thus the financial performance of an insurance company cannot be identified from a single type of innovation. This study was therefore different from the rest in terms of conceptual and contextual. The study was aimed to close this knowledge gap by establishing the effect of innovation on financial performance of the general insurance companies in Mombasa County, Kenya by addressing the following research question; what was the effect of innovation on the financial performance of the general insurance companies in Mombasa County, Kenya?

1.3 Research Objective

The research objective for this study was to establish the effect of innovation on the financial performance of General insurance companies in Mombasa County, Kenya.

1.4 Value of the Study

The future researchers and academicians would benefit from this study since the literature contains concepts and theories of innovation and firm's financial performance which can be of great importance to the insurance industry which has been struggling to reach an overall penetration of 3% and above. The study findings would also add more value to the growing literature of innovation and financial performance of general insurance companies in Kenya.

Secondly, the findings for this study would be of great benefit to the insurance industry in Kenya as it would provide an overview on how companies can use innovation as a tool to enhance their profitability and uptake of insurance products by consumers and thus increasing the overall insurance penetration which in turn improves their overall financial performance.

Lastly, the study would be beneficial to the Government through the Insurance Regulatory Authority (IRA) and other regulators in regard to formulation of policies and guidelines towards maintaining and improving the operating environment for the insurance firms. Financial sector in which the insurance industry falls is a core pillar in the realization of the vision 2030. Therefore innovations are key building blocks for the firms' survival including the general insurance companies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The various research studies done previously by other scholars and researchers on innovation and firm's financial performance would be covered under this chapter. It would also highlight on their views and perspectives based on the research objective. The chapter begins with theories related to innovation, followed by empirical reviews of innovation and firm's financial performance and ends with a conceptual framework.

2.2 Theoretical Review

Dawson (2009) defines a theory as a systematic explanation to an occurrence and from the literature of innovation and firm's financial performance various theories have been used. However this study was anchored on two main theories and a model; Diffusion of Innovation Theory, Knowledge-Based Theory and Resource-Based View model. This section covers the reviews and the discussion of the DOI, KBT and RBV.

2.2.1 Diffusion of Innovation Theory

Diffusion of innovation theory details how innovation is spread through a market or non-market channel or within an organization. The theory explains on how a new idea and technology can spread along the market and non-market channels and at what rate. The theory posits that diffusion is a process in which a new product is communicated to the participants of a particular market set up. Diffusion manifests itself differently thus affecting product innovation as well as the time taken to adopt the new product either in the organization or by the market.

This therefore means that customers tend to adopt a new product in a time sequence (customers will adopt the new product at different times) this therefore implies that effect on profitability shall be spread over a period of time. In order to measure the impact of innovation on performance for different firms, various factors must be evaluated within a defined set up (Rogers, 2003). According to Spann-Merchant (1998), for the innovation to reach the potential adopters it must travel through the communication channel. Communication itself is composed of six elements; the source and content of the message, the channel of communication, timing and purpose of the message and the location of the message recipient. In diffusion, the communication channel forms a major part in the exchange process and innovation is core as it allows the transmission of the new ideas (Kaplan, 1991)

Abraham and Rosenkopf (1997) brought an element of social network effects which is considered to have a major bearing on the measure of responsibility on the extent of diffusion in many firms. Like many theories, this theory is not without its limitations. Key to note is that DOI theory is effective when used to describe the adoption process of behaviors, but it does not explain on how the same can be used in prevention or cessation of behaviors. Again, it does not take into consideration the individuals resources and social support when adopting new behavior or innovation.

2.2.2 Knowledge-Based Theory

According to the KBT as advanced by Krambia and Thomas (2006) and Barney and Muhanna (2004), the growth and success of an organization is mainly influenced by the intangible resources that it holds. A distinctive and inimitable resource such as knowledge can be of strategic value to the firm (Connor & Prahalad, 1996; Grant, 1996b; Kang, Morris & Snell, 2007). Another perspective brought about by the KBT

is that organizations that have capacity to access knowledge from different sources whether individually or as a group performs better (DeCarolis & Deeds, 1999).

Organizational knowledge has been considered to be a total different concept other than just being a process of aggregating knowledge from different individual members of the firm (Brown & Duguid, 1991; Nahapiet & Ghoshal, 1998). The collective knowledge offers a firm with a competitive advantage as it belongs to the company and not an individual property (DeCarolis et al. 1999; Ebbers & Wijnberg, 2009). The major company assets are tangible and intangible resources that it hold or have access to and its capacity to exploit the same in performing its day to day operations (Newbert, 2008). KBT views knowledge transfer and sharing as core to innovation.

2.2.3 Resource Based View

Resource based views as advanced by Barney (1991) indicates that the key internal resources that are owned by the firm offers it with a competitive advantage and these resources are seen as key to firm's Strategic Competitive Advantage and superior performance. According to Penrose (1959) any firm can achieve a superior performance depending on the manner in which it deploys its resources. Barney (1991) posited that firms that owned resources that were inimitable, rare, valuable and non-substitutable would attain a sustained competitive advantage. However, Bhatt and Grover (2005); Bharadwaj and Bendoly (2007) proposed that the organization can enhance the value of its resources if it has other complimentary resources which makes it impossible for competitors to copy the total effect.

This model does have some assumptions such as the resources being immobile and heterogeneous. The theory posits that organizations differs from one another in terms

of skills, capabilities and other resources and it therefore assumes that organizations achieve the competitive advantage by using different bundles of resources. Over time, many scholars have raised a number of critiques against RBV; the first one is that RBV mainly focuses on single firms and it does not adequately address the case where firms are collaborating and networking. According to Li et al., (2006), the assumption of resources being unique makes RBV difficult to generalize. According to Connor (2002) RBV can only be applied to large firms that have strong market power, but not for smaller firms whose static resources limits their SCA. Therefore these firms do not fit within the bounds of this model which favors only firms striving to attain SCA. It has also been argued that RBV does not consider the individual judgments and mental models of managers and entrepreneurs (Foss, 2007; Mahoney, 1995). Another major critique of RBV is that it is too tautology and thus does not meet the criteria for theory classification.

2.3. Empirical Review

There are several studies done on this subject of innovation and firm's performance and most of their findings concur that firm's success is mostly influenced by the innovation (Calantone et al., 2002; Cainelli et al., 2004; Keskin, 2006; Bowen et al., 2010; Jime ´nez-Jime ´nez & Sanz-Valle, 2011). Other studies have also been done earlier on different types of innovations and the findings have shown that each type of innovation has different impact on performance (Subramanian & Nilakanta, 1996). Youtie et al., (2008) undertook a study to establish if there was any impact of product and process innovation on manufacturing firm's profitability in Georgia, United States of America. The study adopted survey research design and the primary data was collected by the questionnaires. The study targeted population was 653 firms and 110 firms were selected as a sample. The study findings indicated that product

innovation matters most for the most profitable manufacturing establishments while process innovation was more widespread among firms with more modest levels of profitability.

Corsino (2008) undertook a study on the effect of product innovation on firm growth in London. The study used a descriptive research design and the secondary data covering a period of seven years was obtained from the said organizations. The population consisted of 524 firms out of which a sample of 45 firms were obtained. The study found that incremental innovation increases performance of producers and also affects the ability of the firm to sustain its market position. In a study conducted by Hanen et al., (2010) on Tunisian service firms that used a sample of 71 firms for the period from 2007 to 2009, primary data collected using questionnaires and the findings indicated a positive effect of innovation on productivity and employment growth, but a negative effect on sales growth. The sample may have been too small given that there were numerous service firms in the country.

Oirere (2015) did a study to establish if the financial performance of small and medium sized manufacturing enterprises in Nairobi County were in any way affected by innovation. The primary data was collected by questionnaires and descriptive research design was used to analyze the data and make conclusions. The target population was 3,582 companies and out of this a sample of 83 firms was used. Regression analysis was used to analyze the data and the findings of the study concluded that innovation had increased company's profits, market share and savings, but also reduced operating cost for the small and medium manufacturing enterprises. Njogu (2014) undertook a similar research study, but used a sample of 200 firms out of a targeted population of 1050 firms. He used regression analysis and a descriptive

statistics to analyze the data. The study findings indicated that there was a positive relationship between the two variables on SMEs in Nairobi County.

Kimingi (2010) conducted a study in which he wanted to establish if technological innovations had any effect on the financial performance of commercial banks in Kenya and he used the data falling under the period from 2001 to 2009. A census survey design was used. Descriptive and content analysis was used to analyze both the quantitative and qualitative data. The study findings indicated that commercial banks had adopted different types of technological innovations which had positively affected the financial performance of the banks. A study conducted by Korir (2014) sought to establish if financial innovations had any effect on the commercial banks financial performance in Kenya. The target population was all the 44 Commercial Banks and the secondary data was generated from the CBK annual reports. The study findings revealed a positive relationship between the two.

Njagi (2016) undertook a study in which he sought to establish if Product innovation had any effect on the profitability of private manufacturing firms in Nairobi County and the findings of the study indicated a positive relationship. Muchoki (2013) conducted a study on mobile firms that indicated that product innovations led to improved financial performance of mobile telephone firms in Kenya. Ongwen (2015) conducted a study which found that technological innovations had positive effects on financial performance of commercial banks in Kenya. Mugane (2015) did a study on financial innovation on the financial performance of commercial banks in Kenya and the findings indicated a negative relationship between the two. Ngigi (2012) wanted to know if commercial banks in Kenya had adopted financial innovation and what was its effect on the overall financial performance of the banks and the result of the

study indicated that the financial innovation adopted in payment system had led to improved financial performance of commercial banks.

2.4 Summary of the Literature and Research Gaps

The literature review has examined the two main theories and a model that anchor this study, DOI, KBT and RBV model. Past empirical studies shows that product innovation has strong effect for most profitable manufacturing companies. Studies as well indicated that product and process innovation had positive effect on organization financial performance. Innovation increased profits and the company's market share and also reduced operating cost for small and medium manufacturing enterprises. While studies have shown that innovation increased profits and general competitiveness of the firm, it has failed to indicate how market innovation can be used to improve firm profitability.

This creates a knowledge gap that can be exploited in the present study. In addition, most of the studies that have been done in the past had focused more on manufacturing companies, but failed to examine innovation on service industries and particularly on insurance companies. There is also a knowledge gap on how general insurance companies can use organizational innovation to enhance profitability and increase the market share.

2.5 Conceptual Framework

The conceptual framework as shown in figure 2.1 describes the general relations between innovation and financial performance of general insurance companies operating in Mombasa County. Innovation as the independent variable under this study was measured using the four main types of innovations; Product, Process, Marketing and Organizational innovation. Financial performance as a dependent variable was assessed using ROA and ROE.

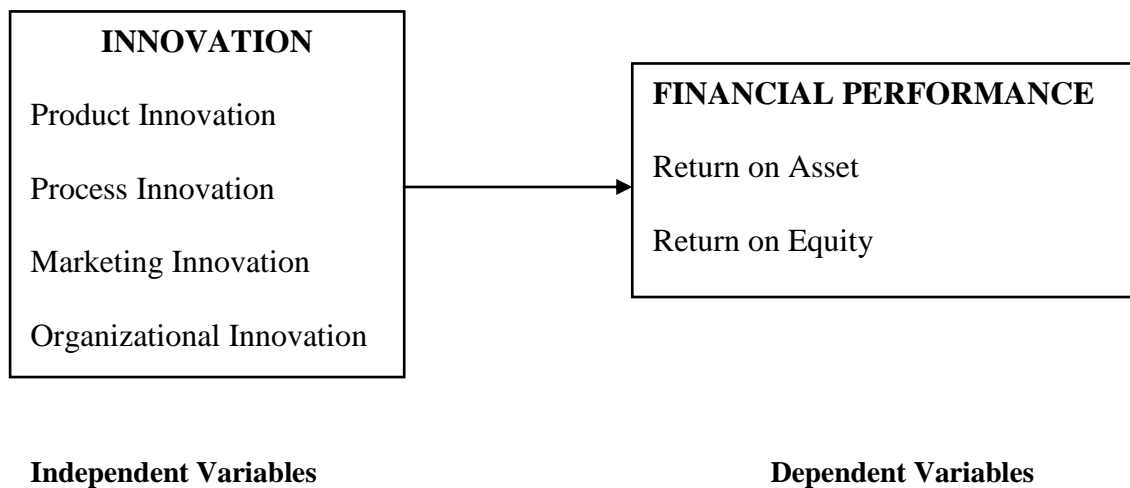


Figure 2.1: Conceptual Framework

Source: Researcher (2018)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the roadmap that was used in conducting this research study. It outlines on the type of the research design that was adopted, the population of the study used and the method of data collection. The chapter also explains how the collected data was analyzed to generate research findings for reporting. All this was guided by the research objective and which was to establish the effect of innovation on the financial performance of the general insurance companies in Mombasa County.

3.2 Research Design

Descriptive Cross-sectional survey design was adopted for this study. This design was appropriate since the research was carried out once and gives out a snapshot point in time and allows contact with otherwise inaccessible participants. The design was also appropriate as it allowed the generalization of the findings and thus enabling the profile of persons, situations or events to be portrayed accurately by describing the prevailing conditions by using observation and interpretation techniques (Sekeran, 2005).

All the General insurance companies operating in Mombasa County were covered and there was no chance of excluding any element. The targeted population was too small. When population is small there is no point of using a sample (Kothari, 2004).

3.3 Population of the Study

All the insurance companies that sell general insurance products in Mombasa County and that have been in operation for the period from 2014 to 2017 formed the population of the study. According to AKI (2016), there are Thirty five (35) general

insurance companies, but one Sanlam general insurance company came into existence in the year 2016 after taking over Gateway insurance company. For this reason Sanlam and Gateway was excluded from the study population due to incomplete data for the said period.

The study adopted a census survey and the analysis was done to all the units from the population of interest. Census survey has an advantage of excluding random errors and systematic errors that normally arise when a population sample is used. When the population is small there is no point of using a sample (Kothari, 2004). The respondents were the Branch Managers and Underwriting Supervisors working at the branches.

3.4 Data Collection

Primary and secondary data covering a period of 4 years from 2014 to 2017 was used. Secondary data was obtained from published IRA annual reports. The self-administered questionnaires that contain both open and close-ended questions were distributed to the respondents to collect both the primary and secondary data. The respondents were the Underwriting Supervisors and Branch Managers working at branches for the (35) General insurance companies in Mombasa. The choice of respondents was based on the fact that these were employees who were in a better position to understand better issues regarding innovation in their companies and the period of 4 years was found to be ideal, because it represented a period in which the respondents could remember most of the sought information. The use of self-administered questionnaires was to afford privacy of responses and which lead to a higher response rate.

The questionnaire contained three sections as follows: Section A contained questions of general information about the respondents and their firms, Section B comprised of questions regarding the innovation used in the company and section C covered the financial performance metrics. Qualitative data was collected using Likert scale. The secondary data was generated from the IRA published Annual Reports.

3.5 Operationalization and Measurement of Study Variables

The study variables were both operationalized on the basis of the study objective. Financial Performance was measured using ROA and ROE while innovation was measured by Product, Process, Marketing and Organizational innovation. Product innovation used the number of new products or services and number of improved or modified products / services introduced in the company every year from 2014 to 2017. Process innovation was measured by looking at the usage of Internet of things, Telemarketing, Use of drones to collect data, use of Artificial Intelligence and use of Telematics technology. Marketing innovation was measured using Online transactions; New Markets, Innovative marketing and Organizational innovation was measured using the New branches opened, Satellite offices established and strategic alliances formed with banks (Bancassurance).

According to Zikmund (2003), operationalization gives meaning to a concept by specifying the operations necessary to measure it. Dillman (2000) proposed that the study constructs should be operationalized in order to test relationships among the variables in the theoretical model. Kothari (2004) posits that in a Likert scale of five point's degree where the respondents respond to each of the statement in terms of different degree. The dependent variable was firm's financial performance which was measured using the four year data generated from the IRA published annual industry

reports and that included the Net income, Total Assets and Shareholders Equity. Arasa (2008) study used claims cover ratio, premium and profit as financial performance indicators for insurance companies.

3.6 Data Analysis

First the data collected was sorted out, edited and coded using numerical numbers. Frequency, Mean and Standard deviation were generated using the Statistical package for social sciences (SPSS) package version 20. The data presentation was done using Frequency Tables, Graphs and Pie charts.

The T-tests was done at 95% confidence level and theoretical models were used. Linear Regression Analysis Equation was used and the following model was used:

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

Where:

Y – The dependent variable (Financial Performance) ROA: Net Income/ Total Assets covering the Period from 2014 to 2017.

X₁- X₄ – The independent variables

X₁- Product Innovation (Measured by the number of New or Modified Products or services in each year from 2014 to 2017.

X₂- Process Innovation

X₃- Marketing Innovation

X₄- Organizational Innovation

β₀ - Is the constant of the model

β₁- β₄ – Are the regression coefficients

ε – Stochastic error term estimate

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The data collected together with the discussion of the research findings would be analyzed and presented in this chapter. The findings of the study were guided by the research question. Data was obtained from semi structured administered questionnaires, completed by 51 respondents from various Insurance firms in the stated region of Study. The chapter is structured beginning with the response rate, demographic information, Product, Marketing, Process and Organizational innovations, Expenditure on innovation, Departments responsible for innovation and further ends with inferential statistics generated from the study data.

4.2 Response Rate

The targeted population of study was 35 General insurance companies operating within Mombasa County. However, two insurance companies were left out since they had incomplete data and thus leading to a revised population of study to 33 general insurance firms. This is because one company was taken over by the other in the year 2016 and thus making both of them to have incomplete data that was required within the period under study. Out of the 33 firms, 31 firms responded by completing and returning the questionnaires translating to a response rate of 94%. However, out of the 31 firms that responded, only 22 firms returned a complete set of questionnaires and the remaining 11 firms returned only 1 Questionnaire.

According to Mugenda and Mugenda (2003) in a research study, a response rate of above 70%, 60%, 50% is considered excellent, good and sufficient respectively. The response rate for this study was 94% and this was good enough for analysis.

The non-response rate may be attributed to the reluctance by the respondents to disclose what they considered as confidential information of the company despite the fact that the questionnaires were accompanied by an official letter from the University stating the purpose of the research study.

Table 4.1: Respondents Response Rate

	Frequency	Percentage
Those Responded	31	94
Non response	2	6
Total	33	100

Source: Research Data (2018)

4.3 Demographic Information

This section shows the gender, age, the level of education, the position held in the company and the length of employment for each respondent, the size of the insurance company, the duration the company has been operating since it was established and how the respondents rate their insurance companies in terms of performance.

4.3.1 Respondents Gender

The study sought to establish the respondent's gender composition and the results of the study are shown in figure 4.1 which indicated that 35.29% of the respondents were female and the remaining 64.71% of the respondents were male. From these results it was clear that there were more male senior staffs working for these general insurance companies in Mombasa County than female staffs.

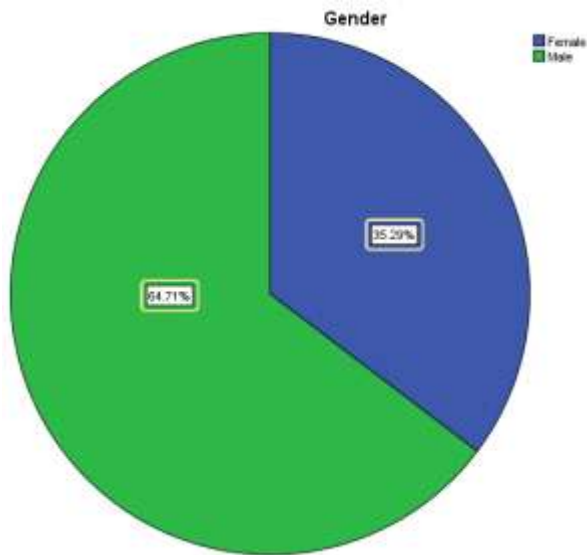


Figure 4.1: Respondents Gender Distribution

Source: Research Data (2018)

4.3.2 Response Age Distributions

This section highlights the age distribution of the respondents. The distribution was grouped into the following: 20-25 Years, 26-30 Years, 31-35 Years, 36-40 Years, 41-50 Years and Over 50 Years. The results are shown in Figure 4.2

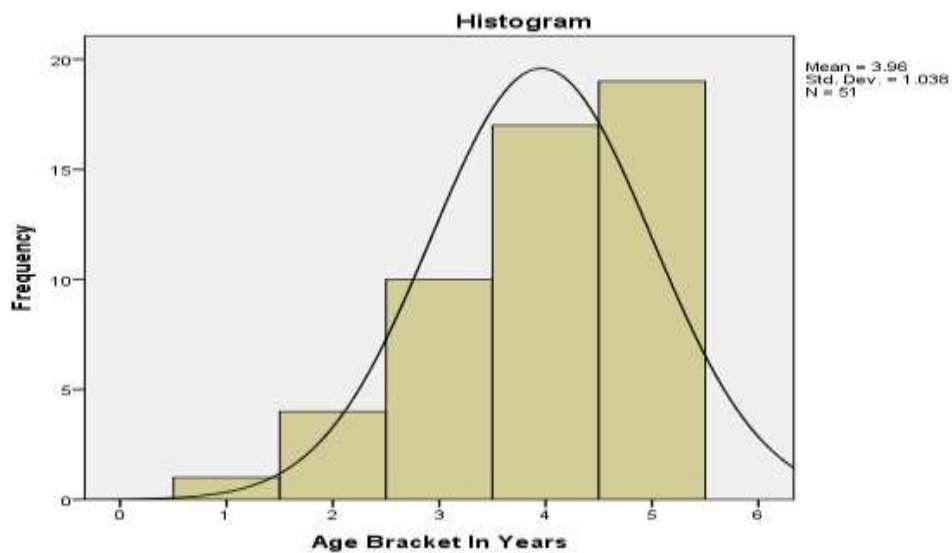


Figure 4.2: Respondents Age Distribution

Source: Research Data (2018)

The distribution age of the respondents ranged from (20-25) and (Over 50) respectively and a mean of 3.96 was obtained representing an age bracket of 41-50 Years as shown in figure 4.2. The most frequently appeared age (Mode) was (Above 50 years) with a median of (41-50 years). The results indicated that the majority of branch managers or supervisors working for these general insurance companies in Mombasa County are aged above 50 years old.

4.3.3 Respondents Positions in the Organization

This was the most diversified variable since the data was collected from 14 different positions even though all falls at the level of supervisors and above but each company used different title for the same as shown in the frequency distribution table 4.2

Table 4.2: Respondents Positions held in the Organization Distributions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ASSISTANT BRANCH MANAGER	2	3.9	3.9	3.9
	ASSISTANT MANAGER	1	2.0	2.0	5.9
	BRANCH MANAGER	18	35.3	35.3	41.2
	BUSINESS DEVELOPMENT MANAGER	1	2.0	2.0	43.1
	BUSINESS DEVELOPMENT TEAM LEADER	1	2.0	2.0	45.1
	CONSULTANT-GENERAL BUSINESS	1	2.0	2.0	47.1
	MARKETING MANAGER	1	2.0	2.0	49.0
	SALESMAN	1	2.0	2.0	51.0
	SENIOR UNDERWRITER	4	7.8	7.8	58.8
	SUPERVISOR	7	13.7	13.7	72.5
	UNDERWRITER	7	13.7	13.7	86.3
	UNDERWRITING MANAGER	1	2.0	2.0	88.2
	UNDERWRITING SUPERVISOR	4	7.8	7.8	96.1
	UNIT MANAGER	2	3.9	3.9	100.0
	Total	51	100.0	100.0	

Source: Research Data (2018)

The study sought to establish the positions held in the company by the respondents. Table 4.2 indicates that 3.9 % of the respondents were Unit Managers, 7.8% were Underwriting Supervisors, 2.0% were Underwriting Managers, 13.7% were Underwriters, 13.7% were Supervisors, 7.8% were Senior Underwriters, 2.0% were Salesmen, 2.0% were Marketing Managers, 2.0% were Consultants-General Business, 2.0% were Business Development Team Leaders, 2.0% were Business Development Managers, 35.3% were Branch Managers, 2.0% were Assistant Managers and 3.9% were Assistant Branch Managers. The results from Table 4.2 clearly indicated that most of the respondents were Branch Managers.

4.3.4 Respondents Years of Experience

A question was asked to the respondents to indicate the duration in terms of the number of years that they had worked for their respective insurance companies and the Scale that was used was: Less than 1 Year, 1-5 Years, 6-10 Years and above 10 Years.

Table 4.3: Respondents Years of Experience in the Organization

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1-5 Years	33	64.7	64.7	64.7
6-10 Years	12	23.5	23.5	88.2
Above 10 Years	6	11.8	11.8	100.0
Total	51	100.0	100.0	

Source: Research Data (2018)

Table 4.3 shows the results of the respondent's responses in terms of how long they had worked for their respective insurance companies. The respondents Years of experience levels in terms of Years of operations distribution is captured in Table 4.3. The Table shows the experience distribution as follows: 64.7% of the respondents had

worked for a period of less than 5 Years, 23.5% had worked for 6-10 Years and 11.8% had worked for over 10 Years. The results therefore indicated that the majority of the senior staffs working for the General Insurance Companies in Mombasa County hardly work for one firm for more than 5 Years.

4.3.5 Highest Education Level of the Respondents

A question was asked to the respondents to indicate their education level and the scale used was: O Level, A Level, College Level, Graduate Level and Post Graduate Level.

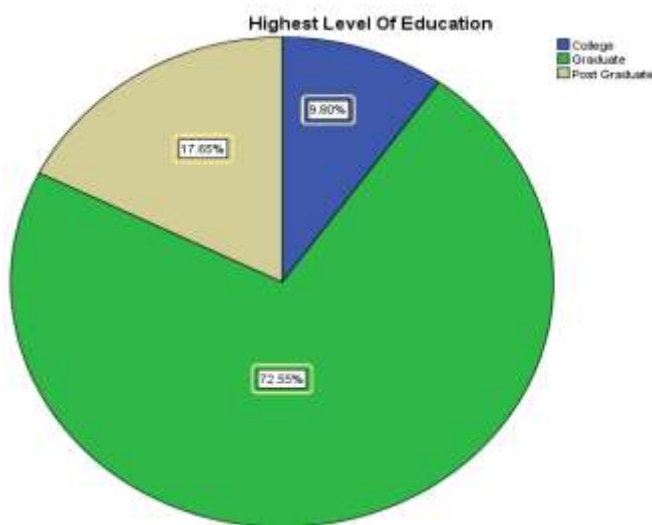


Figure 4.3: Distribution of the Respondents Education Levels

Source: Research Data (2018)

Figure 4.3 shows the respondents education level distribution. The distribution indicates that 9.8% of the respondents working for these companies had attained a College Level of education, 72.55% had completed their Formal Graduate education and 17.65% attained a Postgraduate level of education. The results clearly indicates that most of the senior staffs working for these insurance companies are University Graduates and this means a university graduate level is the minimum required level of education for senior and management staffs working for most general insurance companies in Mombasa County.

4.3.6 Rating the Insurance Company's Performance

A question was asked to the respondents to indicate the rate of the overall performance of their respective companies. The scale of the company rating used was grouped as Excellent, Very Good, Good and Poor in that order. The results of the respondents are indicated in Figure 4.4.

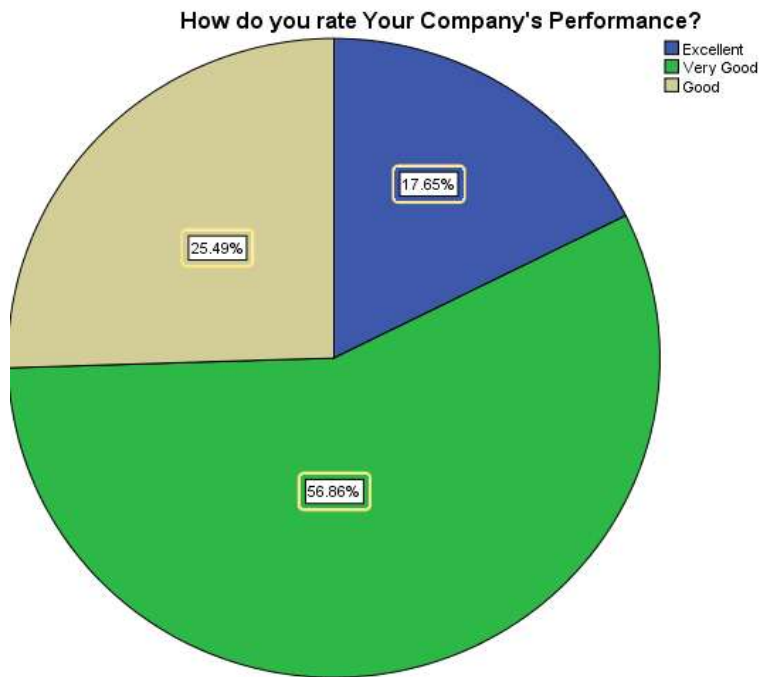


Figure 4.4: Company's Ratings

Source: Research Data (2018)

Figure 4.4 shows various responses that were generated from the respondents working for these insurance firms and the distributions of the results are as indicated in Figure 4.4. 17.65% of the respondents felt that their respective insurance company's performance was Excellent while 56.86% of the respondents felt that their respective company's performance was Very Good and the remaining 25.49% of the respondents felt that their respective company's performance was Good. From these results it was evident that the majority of the respondents rate the performance of their respective insurance companies as Very Good.

4.4 Product Innovation

4.4.1 Number of New Products Innovated between 2014 to 2017

A question was asked to the respondents to indicate the number of New products introduced in the market by their respective insurance companies for the four years from 2014 to 2017. The percentage of the industry average Yearly figure was computed.

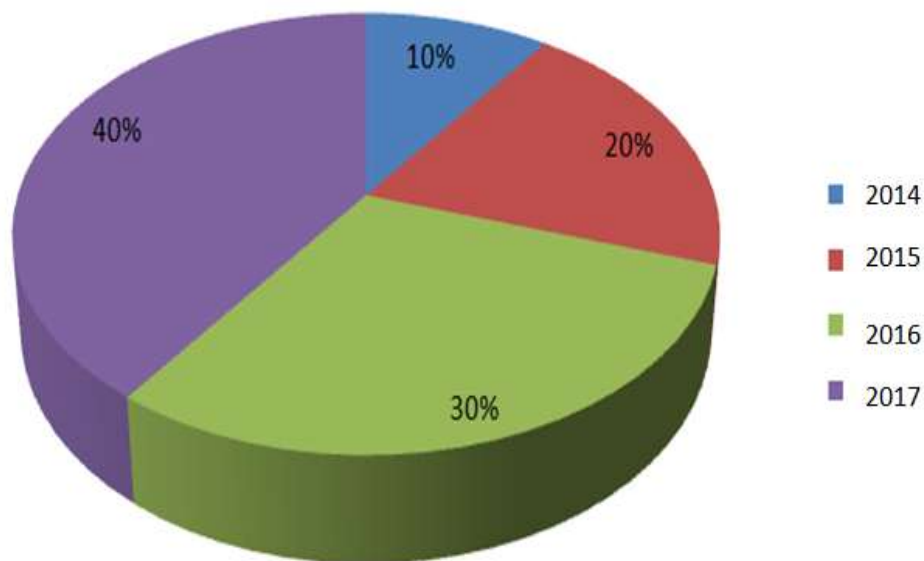


Figure 4.5: Number of New Products Innovated between 2014 and 2017

Source: Research Data (2018)

Figure 4.5 shows the distribution of New Products innovated the year from 2014 to 2017. The distributions indicated that 10% of the New innovated products were introduced in the market in the year 2014, 20% were introduced in the Year 2015, 30% were introduced in the Year 2016 while 40% were introduced in the year 2017. From the results shown in Figure 4.5, it was clear that more products were innovated in the year 2017 compared to the other years though the trend showed a consistent increment in terms of the new products innovated from 2014 to 2017.

4.4.2 Number of Modified Products Innovated between 2014 to 2017

The respondents were asked to indicate the number of Modified products introduced in the market by their respective insurance companies for the four year period from 2014 to 2017. The percentage of the industry average Yearly figure was computed.

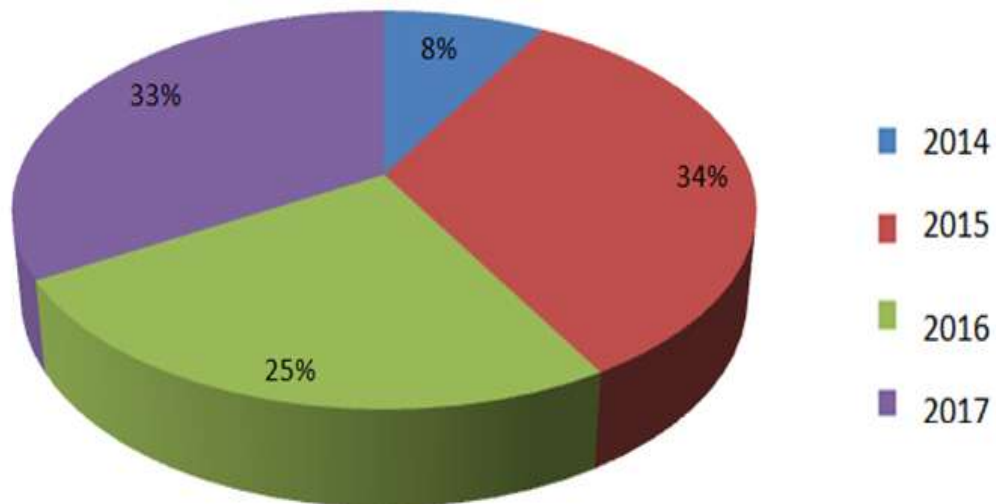


Figure 4.6: Number of Modified Products Innovated between 2014 and 2017

Source: Research Data (2018)

Figure 4.6 shows the distribution of modified Products innovated between the year 2014 to Year 2017. The distributions were: 8% of the modified products were produced in the year 2014, 34% of the products were modified in the Year 2015, 25% were modified in year 2016 while 33% products were modified in the year 2017. From the results of the Figure 4.6, the trend shows that in every Year, there was certain number of modified products produced in the industry. However, the number of the products was not consistent from one year to another. The year 2014 had a lower percentage of modified products while the year 2015 produced more modified products.

4.5 Marketing Innovation

The respondents were asked to indicate how many Marketing innovations had their respective companies undertaken for the Four Year period from 2014 to 2017. The types of marketing innovation available for selection were: Online transactions, New Markets, Innovative marketing and any other. The Scale of 1 -5 was used where: 1 =0-1, 2= 1-2, 3= 2-3, 4= 4-5 and 5 = Over 5 Types

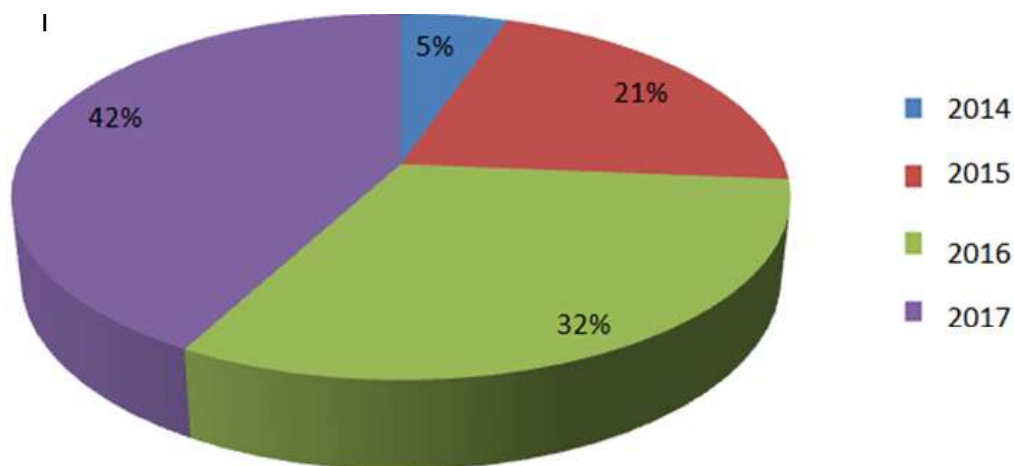


Figure 4.7: Number of Marketing Innovations undertaken from 2014 to 2017

Source: Research Data (2018)

Marketing innovations in General insurance companies within Mombasa County had a significant trend in the general increment that was always steady within the Four Years period under scope of study. From Figure 4.7, 5% of the Marketing innovations were undertaken in the Year 2014, 21% of the Marketing innovations were undertaken in the Year 2015, in the Year 2016 32% of the Marketing innovations were undertaken and 42% of the Marketing innovation undertaken in the Year 2017. From the results shown in Figure 4.7, it was evident that the number of marketing innovations had a consistent increment.

4.6 Process Innovation

4.6.1 Number of Process Innovation undertaken from 2014 to 2017

The respondents were asked to indicate how many Process Innovations had their respective Companies undertaken for the Four Year period from 2014 to 2017. The types of Process Innovations available in the industry for selection were: Internet of Things (IoT), Use of Drones, Use of Artificial Intelligence (AI), Use of Telematics and any Other.

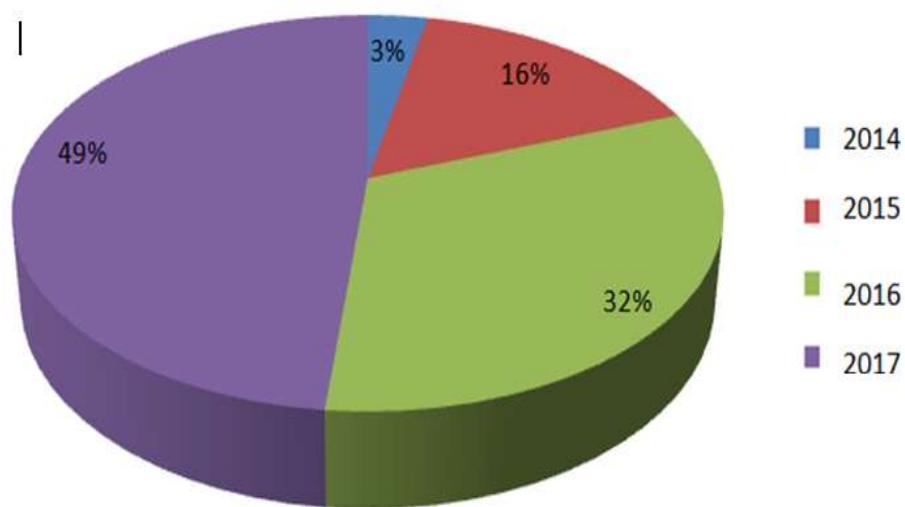


Figure 4.8: Number of Process Innovation undertaken from 2014 to 2017

Source: Research Data (2018)

From Figure 4.8, for the Four Year period, 3% of the Process Innovations were undertaken in the Year 2014, 16% of the Process Innovation were undertaken in the Year 2015, 32% were undertaken in the Year 2016 and 49% were undertaken in the Year 2017. From the results shown in Figure 4.8, it is evident that General Insurance Companies had adopted more Process innovations in their operations.

4.7 Organizational Innovations

4.7.1 Number of Organizational Innovations undertaken from 2014 to 2017

The respondents were asked to indicate how many Organizational Innovations their respective Companies had undertaken for the Four Year Period from 2014 to 2017. The scale of 1 -5 was used where 1 = 0-1, 2 = 1-2, 3 = 2-3, 4 = 3-4 and 5 = Over 4 Organizational innovations. The types of Organizational Innovations that were available for the selection were: New Branch Networks, Satellite Offices, Strategic Alliances (Bancassurance) and any Other.

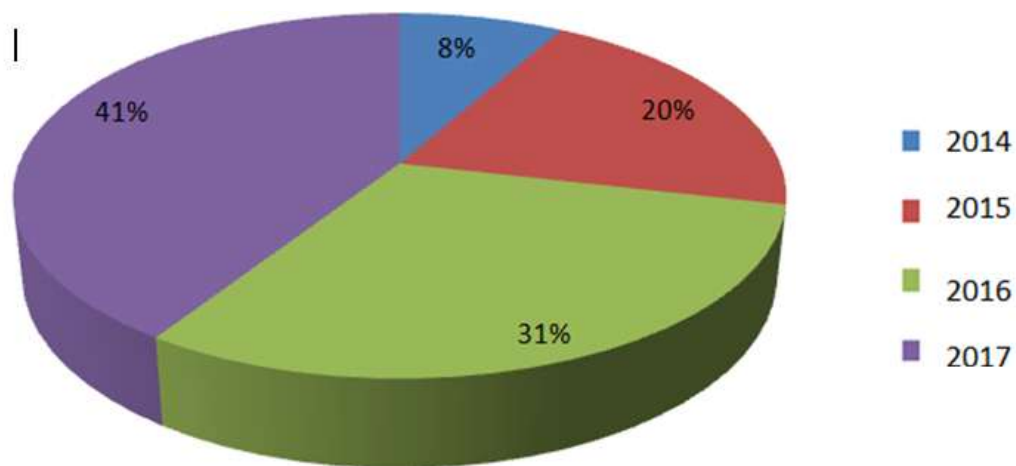


Figure 4.9: Number of Organizational Innovations undertaken from 2014 to 2017

Source: Research Data (2018)

From Figure 4.9, for the Four Year period, 8% of the Organizational Innovations was undertaken in the Year 2014, 20% of the Organizational Innovation was undertaken in the Year 2015, 31% was undertaken in the Year 2016 and 41% was undertaken in the Year 2017. From the results shown in Figure 4.9, it was evident that General Insurance Companies in Mombasa had been opening more Satellite Offices, opened more New Branch Offices or had partnered with more banks for Bancassurances as the trend of increment had been consistent from 2014 to 2017.

4.8 Expenditure and innovation

The respondents were asked to give an estimate of expenditure allocated to the four types of innovations. The expenditure distribution is shown in Figure 4.10. The study sought to establish how much money these companies invests on each type of innovation. The range used was 0-1 Million, 1-5 Million, 5-10 Million and Over 15 Million. The results are shown on Figure 4.9.

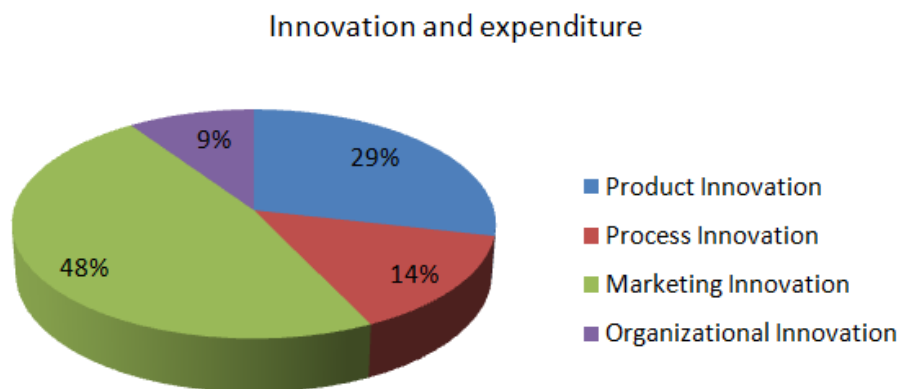


Figure 4.10: Distribution of Expenditure in Innovation

Source: Research Data (2018)

The Figure 4.10 shows the percentage of expenditure allocated to various types of innovation by the General Insurance Companies in Mombasa County. From the total expenditure allocated to innovation, Product innovation had 29%, Process innovation had 14%, Marketing innovation had 48% and Organizational innovation had 9%. Marketing innovation tops the list with bigger share of expenditure at 48% of the total innovation expenditure, followed by Product innovation with 29%, Process innovation with 14% and finally organizational innovation which had the least share of the total innovation expenditure with 9%. From the results, we can deduce that the general insurance firms in Mombasa County perceived that Marketing innovation had a direct impact on marketing of more insurance products and which led to a better Financial Performance for the insurance firms.

4.9 Response showing Departments responsible for innovation

4.9.1 Research and Development Department

A question was asked to the respondents to indicate if they thought Research and Development department in their respective companies was the one in charge with innovation responsibilities.

Table 4.4: If Research and Development department is tasked with Innovations?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	19	37.3	37.3	37.3
No	32	62.7	62.7	100.0
Total	51	100.0	100.0	

Source: Research Data (2018)

The results of the study as indicated in Table 4.4 shows that 37.3% of the respondents felt that Research and Development department was more tasked with innovations responsibilities while 62.7% of the respondents felt that there were other departments that were more responsible with innovation responsibilities other than the Research and Development department. Its therefore clear to state that majority of these Insurance firms consider other department apart from the Research and Development department to be more suited in handling all matters that are concerned with innovation responsibilities.

4.9.2 Marketing Department

A question was asked to the respondents to indicate if they thought Marketing Department in their respective companies was the one in charge with innovation responsibilities.

Table 4.5: If Marketing Department was tasked with innovations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	36	70.6	70.6	70.6
	No	15	29.4	29.4	100.0
	Total	51	100.0	100.0	

Source: Research data (2018)

The results of the study as indicated in Table 4.5 shows that 70.6% of the respondents felt that Marketing department was more tasked with innovations responsibilities while 29.4% of the respondents felt that there were other departments that were more responsible with innovation responsibilities other than Marketing department. Its therefore clear to state that majority of these Insurance firms consider marketing departments to be more responsible for innovations responsibilities.

4.9.3 Finance and Administration Department

A question was asked to the respondents to indicate if they thought Finance and Administration Department in their respective companies was the one in charge with innovation responsibilities.

Table 4.6: If Finance and Administration was tasked with Innovation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	24	47.1	47.1	47.1
	No	27	52.9	52.9	100.0
	Total	51	100.0	100.0	

Source: Research data (2018)

The results of the study as indicated in Table 4.6 shows that 47.1% of the respondents felt that Finance and Administration department was more tasked with innovations responsibilities while 52.9% of the respondents felt that there were other departments that were more responsible with innovation responsibilities other than Finance and Administration department. Its therefore clear to state that majority of these Insurance firms consider other departments to be more responsible with innovation responsibilities other than the Finance and Administration department.

4.9.4 Underwriting Department

A question was asked to the respondents to indicate if they thought Underwriting Department in their respective companies was the one in charge with innovation responsibilities.

Table 4.7: Underwriting was tasked with innovation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	29.4	29.4	29.4
	No	36	70.6	70.6	100.0
	Total	51	100.0	100.0	

Source: Research data (2018)

The results of the study as indicated in Table 4.7 shows that 29.4% of the respondents felt that Underwriting department was more tasked with innovations responsibilities while 70.6% of the respondents felt that there were other departments that were more responsible with innovation responsibilities other than Underwriting department. Its therefore clear to state that majority of these Insurance firms consider other departments to be more responsible with innovation responsibilities other than the Underwriting department.

4.9.5 ICT Department

A question was asked to the respondents to indicate if they thought ICT Department in their respective companies was the one in charge with innovation responsibilities.

Table 4.8: If ICT was tasked with Innovation.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	16	31.4	31.4	31.4
No	35	68.6	68.6	100.0
Total	51	100.0	100.0	

Source: Research data (2018)

The results of the study as indicated in Table 4.8 shows that 31.4% of the respondents felt that ICT department was more tasked with innovations responsibilities while 68.6% of the respondents felt that there were other departments that were more responsible with innovation responsibilities other than the ICT department. Its therefore clear to state that majority of these Insurance firms consider other departments to be more responsible with innovation responsibilities other than the ICT department.

4.10 Inferential Statistics

This section highlights the inferential statistics that was used in the study to identify the relationship between the two variables in line with the research question. The data was analyzed using SPSS Version 20.

4.10.1 Correlation analysis

The correlation indicates the degree or extent of relationship between variables. The range of the output of the correlation lies between -1 to 1. Negative correlated variables are shown using Negative 1 while Positive correlated variables are shown using Positive 1.

4.10.1.1 Correlation coefficients of Education Levels and Innovations

Table 4.9: Correlation coefficients of Education Levels and Innovations

		Highest Level Of Education	Does Your company have an innovation
Highest Level Of Education	Pearson Correlation	1	.171
	Sig. (2-tailed)		.235
	N	51	50
Does Your company have an innovation	Pearson Correlation	.171	1
	Sig. (2-tailed)	.235	
	N	50	50

Source: Research data (2018)

The data was characterized by very High literacy levels. (72.55%), of the respondents had complete Graduate education; (17.65 %) are Post Graduates and (9.80 %) are college Graduates. Ideologically, literacy levels are believed to have a positive correlation with innovation, technical skills and knowledge, but it was evident that majority of the Insurance Officers in insurance Firms had low illiteracy levels. The level of education which indicates that majority of the Insurance Officers in insurance Firms, Mombasa County had completed Graduate education, followed by the Post Graduates; clearly indicate that there is high education which is positively correlating with innovation, high levels of knowledge, high level of skills in undertaking of Innovations in insurance companies also affect the level of income. This is because; new innovated quality products supported by high service delivery attract higher number of customers and eventual leading to improved Financial Performance of the Insurance Firms in Mombasa County. Also according to them education is a requirement in undertaking Innovations in insurance companies.

4.10.2 Regression Analysis

For this study, the relationship between innovation factors and financial performance was tested using the Regression analysis. The adjusted R explains the variance percentage in the financial performance explained by the innovation factors. 84.1% of financial performance could be attributed to a combined effect of innovation factors and the remaining 15.9% could be attributed by other factors.

4.10.2.1 Relationship between Financial Performance and Independent Variables

There was (91.7%) relationship between the Dependent and Independent Variables as captured by the respondents. The independent Variable includes various types of innovations: Product, Process, Marketing and Organizational. Innovations effects on the Financial performance in insurance Firms per Year as shown by the Pearson's correlation coefficient in table 4.10. A linear model was used to show the interrelationship of the two variables. (84.1%) of the Financial Performance through independent variables was used to explain these Variables per Year as displayed by the coefficient of determination(R Square)

4.10.3 Model Summary

Table 4.10: Regression model of the relationship between Independent Variables (Innovation Factors) and Financial Performance

Model	R	R Square	F Change	df1	df2	Sig. Change	F
1	.917 ^a	.841	147.576	1	28	.000	

a. Predictors: (Constant), Innovative Factors

Source: Research Data (2018)

Figure 4.10 shows the relationship between Innovation and Financial performance for General Insurance Companies in Mombasa County. The model summary is about the coefficient of correlation (r) and its square. The R value was 0.917 and its R^2 was 0.841 implying that there was a very strong positive correlation between Innovation and Financial performance of General Insurance Firms in Mombasa County.

4.10.4 Analysis of Variance (ANOVA)

Table 4.11: Analysis of Variance (ANOVA)

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	178191.354	1	178191.354	147.576	.000 ^b
	Residual	33808.646	28	1207.452		
	Total	212000.000	29			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Innovation Factors

Source: Research Data (2018)

The test of the regression model fitness was tested using ANOVA. Table 4.11 shows the model of the variables which were Independent variable represented by Innovation factors: Product, Process, Marketing and Organizational and dependent variable represented by Financial Performance: ROA and ROE respectively. The significant level was given as .000 meaning that the confidence level for the data is at 100%.

4.10.5 Regression Coefficients

Table 4.12: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	132.775	10.870		12.215	.000
	Innovation Factors	42.326	3.484	.917	12.148	.000

a. Dependent Variable: Financial Performance Coefficients^a

Source: Research Data (2018)

The Coefficient refers to the degree of elasticity of the variables. The B column shows the various degree of elasticity and how it determines the extent of coexistence between the dependent and independent variables in terms of $y = mx + c$ which was the basic straight line equation connecting the two variables and was used to predict the dependent variables-Financial performance from the constellation of independent variables. 132.775 represents C and which was the equation Fixed predictor while 42.326 represents m and which was the gradient of the equation meaning that at any given point, the general equation tying dependent and independent variables was $Y = 42.326X + 132.775$. Where Y is the Financial Performance and the X is the Innovation Factors, which in this case was the main point of study.

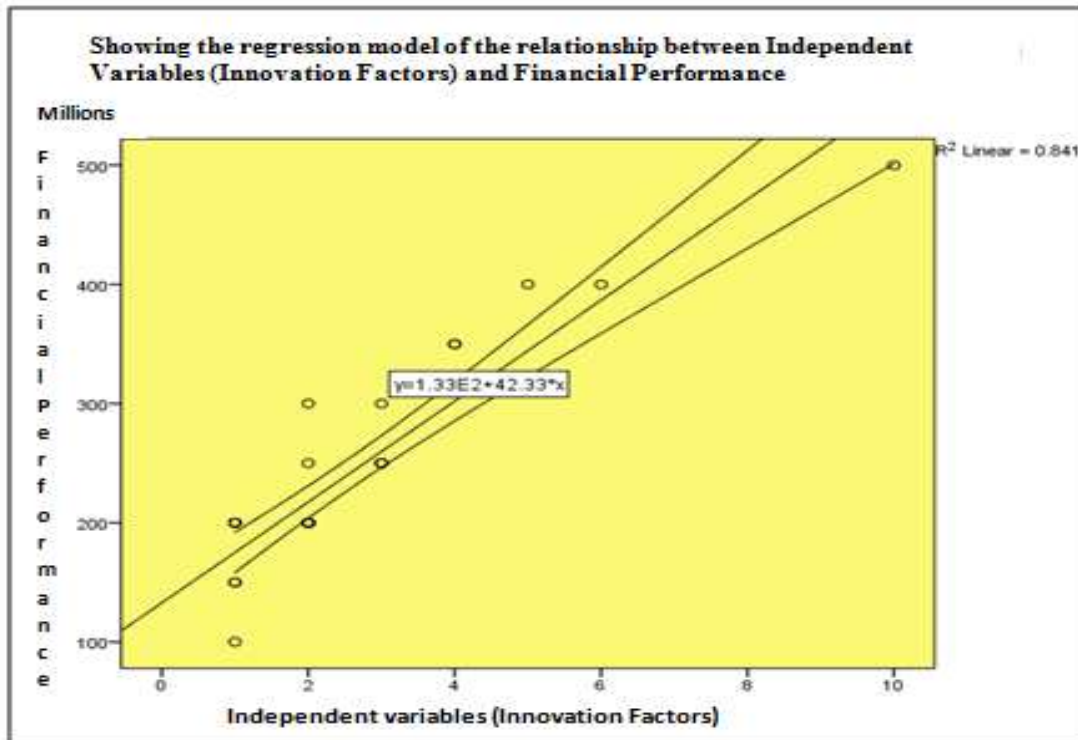


Figure 4.11: Regression Analysis between Innovation Factors and Financial Performance

Performance variable is significant (p-value=0.000) at 95% confidence level with a t-value of 12.148. The model is displayed by the scatter diagram shown on figure 4.11

$$y = 133.775 + 42.33 * x$$

Where: x=Innovation Factors (Independent variable)

y=Financial Performance (Dependent variable)

From Figure 4.11 it was evident that there was a significant relationship between the Innovations in General insurance companies in Mombasa County and the Financial Performance. It was clearly displayed that the less Innovation Factor inputs one insurance Firm puts in the less Financial Performance and vice versa. Insurance Firms may put more in terms of value addition and produce a high quality product which would trigger a higher demand and hence earning a higher income unlike where the insurance company spends less in terms of innovations and thus being outdone by the competition in the industry and hence earning a lower income

4.11 Discussion of the Finding

The main objective of this study was to establish if there was any existence of the relationship between the independent variable (Innovation) and the dependent variable (Financial Performance). The independent variable factors were Product, Process, Marketing and Organizational while the dependent variable was the ROA and ROE for the period from 2014 to 2017. Some of the study findings were: Most General insurance companies had more number of male senior staffs compared to female staffs, majority of the respondents working for these General insurance companies were over 50 years of age and most of the respondents had worked for the period of less than 5 years.

The study also indicated that most of the innovation activities were carried out in the year 2017. The analysis of the study was conducted using the regression analysis where the relationship between innovation and financial performance of the General insurance companies in Mombasa County was tested. The association of the two variables was done using the correlation analysis. The association between innovation and General insurance companies financial performance was tested and found to be positive. Further the study findings indicated that the level of education was correlated with innovations and which clearly showed that high education level leads to higher knowledge and skills which enhances someone creativity and hence innovation. The regression analysis also indicated 84.1% of the financial performance was attributed by the innovation factors and when the two variables were compared, a relationship of the two of 91.7% was obtained. The study thus showed as strong positive correlation between innovation and financial performance as indicated by the R value of 0.917 and the R^2 of 0.841.

The findings of this study corroborated with the findings of the study conducted by Youtie et al., (2008) which sought to assess the impact of product and process innovation on manufacturing firms in Georgia, United States of America. The study established that Product innovation did affect the firm's profitability.

The findings of the study also agrees with that of the study conducted by Kimingi (2010) who did a study to establish if technological innovations had any effect on the financial performance of commercial banks in Kenya and the findings of the study confirmed that technological innovations had a positive effect on commercial banks financial performance. Oirere (2015), also did a study in which it sought to establish if innovation did affect the financial performance of SME's and the findings of the study concluded that innovation did increased the SME's Profits, Market Share, Savings and also reduced the Operating costs. These finds tally with the findings of this study. The findings of this study also indicated the importance of education in innovation and this supports the arguments of the Knowledge Based Theory.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1 Introduction

This chapter consists of a summary of the research findings, the conclusion of the study and the necessary recommendations that needs to be effected in the future and which may lead to a better Financial Performance for all the General Insurance Firms that are operating within and outside Mombasa County. The conclusions would further pave the way for recommendations aimed at improving innovations in modern Insurance Firms by incorporating them in decision making, policy development and effective management of Insurance firms at large.

5.2 Summary

The research study was carried out in Mombasa County to all the General insurance firms that have been operating from the year 2014 to 2017. The purpose of the research study was to examine the Effect of new innovations on Financial Performance of General insurance companies and establish on what can be done to improve the performance in this sector. The objective that guided the researcher was to survey the nature of various Insurance Firms Characteristics in terms of Population size, Experience in the Market, Assets and Liabilities among other demographic aspects, to examine the short term and long term effect on innovations such as use of Internet(IOT),Use of Drones to collect Data, Artificial Intelligence, Telematics among others and establish the appropriate type of innovation that can be used by these Insurance Firms to improve their financial performance. The targeted population of the study comprised of Branch Managers and any other staff who were at the supervisory level. They were (66) in total and since the research was a census all of

them were targeted as respondents. The data was obtained from insurance firms using the semi structured questionnaire and the secondary data collected from the regulator (IRA) published annual reports for the period of four years from 2014 to 2017.

The method of data analysis technique used was Excel and SPSS and was based on the research question and objective of the study in which the following were obtained; from the main objective the following demographic characteristics were analyzed and the mean Income of these insurance Firms was obtained being (Kshs.2.487 Billion per Year); Average Expenditure on various types of innovation used by the insurance companies was also examined and found to be (Ksh.7.258 Million) per Year which is low according to recent raise of the average net income of the firms. This therefore implies that most of these insurance companies do make supernormal profits since the Income is far much greater than the expenditures on the innovation.

Majority of these insurance employees had completed Formal Graduate education system(72.55%) showing a high literacy level in their areas of operations, Marketing department was the main department charged with responsibility of developing new innovations followed by the Finance and Administration department, Research and Development department, ICT and Underwriting in that order. Most of the employees were Graduates and there was also a strong positive correlation coefficient between the Age and the education level of the Insurance Company's employees where the younger the age the less the education level and vice versa. Also a regression model showing the association between the average income (Per Year) and the Insurance Years of experience which stated that the more the experience of the personnel the more the income earned and less the experience the less the income earned. The data was presented by the use of tables and graphs, followed by discussions of the trend observed from the presentation.

5.3 Conclusion

This study analyzed the effect of innovation on the financial performance of various General insurance firms located in Mombasa, County. Based on the main objective of the study although many characteristics of the insurance Firm employees/representatives were identified, four characteristics stood out: Education level (76.55%) of the Respondents had completed their Formal Graduate education, (17.65%) Postgraduate education, (9.80%) had completed College. In the position held in various insurance firms, it was evident that most of the insurance firms employees identified as respondents were Branch Managers, representing (45.56%).

Concerning the age, the minimum age bracket was 20-25 years and the maximum age was Over 50 years and 41-50 Years was the modal age. On the Ratings as to whether the company was performing or not for the Four Years duration of data captured, it was revealed that (56.86%) of the responded said 'very Good', (25.49%) said 'Good' while (17.65%) said 'Excellent'. It was therefore clear to state that innovations was dependent on the ages of individuals employed, Their positions at the various insurance Firms as well as their education levels and that the higher it was for any of these mentioned characteristics, the higher the levels of innovations and hence better financial performance of the Firms.

5.4 Limitations of the Study

The researcher encountered some limitations while collecting the data. Some of the limitations were the reluctance by the respondents to fill the data that they considered as private and confidential especially the company financial data. This was witnessed from several respondents despite the fact all the questionnaires were accompanied by an official letter from the University which assured the respondents that the purpose

of the study was for academic purpose only. Another limitation was a tight busy schedule of the targeted respondents who took so long to fill the questionnaires and in cases where the researcher had to visit them as a follow up, they end keeping the researcher waiting for a longer period and thus wasting a lot of time. Financial constraints to the researcher also contributed to the limitations of this study. This forced the researcher to minimize the follow up trips and which could have enable him to collect more questionnaires.

5.5 Recommendations of the Study

Based on the research findings, the following recommendations were made relevant to the various stakeholders in the Insurance sector as per the objective of the study. The study recommended that the education level of employees working for all insurance firms needs to be improved in order to offer them with concrete skills to use new innovations such as use of internet, use of drones to collect data, artificial intelligence as well as Telematics. Knowledge increases the rate of literacy level and the more knowledgeable and skilled the employees are, the more innovative they are. It was also recommended that general insurance firms needs to create awareness to their employees on contemporary innovation skills like Online Transactions, New Markets and Innovative Marketing to ensure that each and every employee in the insurance firms are well versed with these soft skills since the more they spread across all insurance firms management levels, the better the Financial performance in these insurance Firms. It was also recommended that general insurance firms needs to allocate more funds on innovation and they should also improve on the technology by providing advanced tools for marketing and conducting insurance transactions that would make the insurance products reach a larger market.

5.6 Suggestions for further Study

The study was restricted to only the General insurance companies operating within Mombasa County, but a further study needs to be done to cover the entire insurance industry. This is important since the insurance industry is made up of several players and innovation affects the entire industry. It is good to establish which types of innovation other players in the industry are using. Among the four major types of innovations that the study looked at, Process innovation is likely to be a major type of innovation that is going to affect the insurance industry. This is because of the emerging technologies that are going to influence process innovation more than any other type of innovation. A further study on this type of innovations is recommended.

Further research also needs to be done on the socio economics characteristics of Female managers, Underwriters as well as supervisors and establish what constraints they may be having that hinders them in their involvement in management of the general insurance firms in Mombasa County as the study indicated that there are more male managers than female manager working for these general insurance companies. Despite the fact that insurance industry has been steadily growing in terms of the volume of the premiums generated from one year to another, a further study is recommended to establish on why the insurance penetration in Kenya keeps decreasing year after year.

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APPENDICES

Appendix I: Introduction Letter



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1st October, 2018

TO WHOM IT MAY CONCERN

RE: INTRODUCTION LETTER

This is to certify that **MARENJE PATTERSON MWAZO (REG. NO. D61/79645/2015)** is a bona fide student of the University of Nairobi, pursuing a degree in Masters of Business Administration (MBA).

As part of the fulfillment of the requirement of the course, she is undertaking a study titled ***"EFFECT OF INNOVATION ON FINANCIAL PERFORMANCE OF GENERAL INSURANCE COMPANIES IN MOMBASA COUNTY, KENYA."***

You have been selected as one of the respondents in the study. The purpose of this letter therefore, is to kindly request you to assist and facilitate in carrying out the study in your organization by answering the questions in the attached questionnaire.

Data and information obtained through this exercise is purely for academic purpose and will be treated with utmost confidentiality. In case of any questions or clarifications, she can be reached on 0738592799 or pattersonmarenje@gmail.com.

Your assistance and cooperation will be highly appreciated. Thank you very much in advance.

Yours Faithfully,

A handwritten signature in blue ink, appearing to read "Stephen Odock".

Dr. Stephen Odock,
Coordinator, School of Business, Mombasa Campus



Appendix II: Research Questionnaire

This Questionnaire seeks to collect data related to innovation and insurance companies financial performance and all the information that you will give will be treated with utmost confidentiality. The information collected is for academic purposes only. Kindly fill in the questionnaire and return.

SECTION A: GENERAL INFORMATION

1. Name of the insurance firm? (Optional)

.....

2.. Gender : Male Female

3. Age Bracket in Years (Optional)

20-25 26-30 31-35 36-40 41 -50 Over 51

4. Highest level of education

O level A Level College Graduate

Post Graduate Any other (Specify)

5. Kindly indicate the position that you hold in this organization?

Please specify.....

6. How long have you been in this position?

Less than 1 year 1 - 5 years 6 – 10 years above 10 years

7. Size of the insurance firm.

0-20 Employees 21-50 Employees 51-70 Employees

71-100 Employees Above 100 Employees

8. Number of years the firm has been operating in Kenya

1 - 5 Years 5 – 10 Years 10-20 Years above 20 years

9. How do you rate your Company's performance?

Excellent Very Good Good Poor

SECTION B: INNOVATION

1) Innovation is the introduction of a new insurance product that the client had never seen before, introduction of new production method never used before in the company, opening of a new market in the industry or introduction of new organizational structures in a company. Does your company have an Innovation Policy?

Yes No

2) In your company, which departments are tasked to develop innovations?

- Research & Development
- Marketing
- Finance & Administration
- Underwriting
- ICT
- All of the above

3) Please indicate the number of New or Modified Products or Services introduced by your Insurance Company in the last Four (4) Years? 2014-2017

	2014	2015	2016	2017
New Products				
Modified Products				

4) What challenges did your firm face while undertaking Product innovation?

.....

.....

.....

.....

5) How many of the following innovations has your Insurance Company undertaken from the years 2014 to 2017?

Types	0-1	1-2	3-4	Over 4
Use of Internet (IoT)				
Use of Drones to collect Data				
Artificial Intelligence (AI): Use of a Computer Program that thinks like a human being				

Telematics (Use of GPS to monitor a car as it is being used)				
Others (Please Specify)				

6) How many of the following marketing innovations has your Company undertaken from the year 2014 to 2017?

	0-1	1-2	3-4	4-5	Over 5
Online Transactions					
New Markets					
Innovative Marketing					
Others (Please specify)					

7) On a scale of 1-5, Please indicate how many organizational innovations has your Company undertaken from the year 2014 to 2017?

	0-1	1-2	2-3	3-4	Over 4
New Branch Networks					
Satellite Offices					
Strategic Alliance with Banks (Bancassurance)					
Others (Please specify)					

8) What was the approximate expenditure dedicated to innovation by your insurance company from the year 2014 to 2017?

	0-1 Million	1-5 Million	5-10 Million	10-15 Million	Over 15 Million
Product Innovation					
Process Innovation					
Marketing Innovation					
Organizational Innovation					

SECTION C: FINANCIAL PERFORMANCE

1) To what extent have the following increased with Innovation?. Please tick the most appropriate option using the provided scale.

	To a Very Great Extent	To a Great Extent	To a Moderate Extent	To a Little Extent	Not at All
Sales Volume					
Market Share					
Profitability					
Net Income					
Total Asset					
Shareholders' Equity					

2) Please indicate the extent to which the following have been enhanced by innovation in insurance Companies.

	To a Very Great Extent	To a Great Extent	To a Moderate Extent	To a Little Extent	Not at All
Wide range of Services offered.					
Shortening duration of obtaining a Product or Service.					
Satisfactory Quality of Products and Services.					
Frequent Market Research.					
Identifying needs of prospective Customers.					
Market driven Products and Services.					
High quality Products and Services					

3) Please respond to each statement on the scale provided.

	Strongly Disagree	Disagree	N/A	Agree	Strongly Agree
The level of innovation determines choice of Insurance Company.					
Customers will change to an Insurance Company with more innovative products.					
To command a higher market share, you need innovative ideas.					
There is a Relationship between Innovation and Performance.					
Customer value proposition is linked to Innovation.					
Innovative creates a competitive edge for Insurance Companies					

4) What is the total valuation of Assets and Liabilities that your Company owns or has for the year from 2014 to 2017? Please indicate the average investment by your company.

	0-20 Million	20-40 Million	40-60 Million	60-80 Million	Over 80 Million
Total Assets					
Total Liabilities					

5) Using the Range shown below, please indicate the range in which your Company Net Income falls for the period from 2014 to 2017.

	0 to 200 Million	200 to 400 Million	400 to 600 Million	600 to 800 Million	Over 800 Million
2014					
2015					
2016					
2017					

6) Using the Range shown below, please indicate the range in which your Company Total Assets falls for the period from 2014 to 2017.

	0 to 500 Million	500 to 1 Billion	1 Billion to 1.5 Billion	1.5 Billion to 2 Billion	Over 2 Billion
2014					
2015					
2016					
2017					

7) Using the Range shown below, please indicate the range in which your Company Shareholder's Equity falls for the period from 2014 to 2017.

	0 to 500 Million	500 to 1 Billion	1 Billion to 1.5 Billion	1.5 Billion to 2 Billion	Over 2 Billion
2014					
2015					
2016					
2017					

8) What is the trend of profitability in your Company for the last 4 Financial Years?

Increase [] Decrease [] No change []

Appendix III: General Insurance Companies in Mombasa County

1. AAR Ins. Co. Limited
2. AIG Kenya Ins. Co. Limited
3. African Merchant Ass. Limited
4. APA Ins. Co. Limited
5. Britam General Ins. Limited
6. Cannon Assu. Co. Limited
7. CIC General Ins. Limited
8. Corporate Ins. Co. Limited
9. Directline Assu. Co. Limited
10. Fidelity Shield Ins. Co. Limited
11. First Assu. Co. Limited
12. GA Ins. Co. Limited
13. Gateway Ins. Co. Limited
14. Geminia Ins. Co. Limited
15. Heritage Ins. Co. Limited
16. ICEA LION General Ins. Co. Limited
17. Intra Africa Assu. Co. Limited
18. Invesco Assu. Co. Limited
19. Jubilee Ins. Co. Limited
20. Kenindia Assu. Co. Limited
21. Kenya Orient Ins. Limited
22. Kenya Alliance Ins. Co. Ltd

23. Madison Ins. Co. Limited
24. Mayfair Ins. Co. Limited
25. Occidental Ins. Co. Limited
26. Pacis Ins. Co. Limited
27. Phoenix of East Africa Ass. Co. Ltd
28. Resolution Ins. Co. Limited
29. Saham Ins. Co. Limited
30. Salam General Ins. Co. Ltd
31. Takaful Ins. of Africa Limited
32. Monarch Ins. Co. Limited
33. Trident Ins. Co. Limited
34. UAP General Ins. Co. Limited
35. Xplico Ins. Co. Limited

Source: AKI Annual Report (2016)

Appendix IV: General Insurance Companies Market Share

COMPANY	2013	2014	2015	2016
AAR Insurance Co. Ltd	3.02%	3.56%	3.90%	5.27%
AIG Kenya Ins. Co. Ltd	4.04%	4.02%	3.51%	2.98%
African Merchant Assu.	2.53%	2.55%	2.95%	2.57%
APA Insurance Co. Ltd	7.56%	7.78%	8.26%	7.31%
Britam General Ins. Ltd	4.41%	4.99%	7.25%	5.69%
Canon Assurance Co. Ltd	1.21%	1.21%	1.03%	1.40%
CIC General Ins. Ltd	9.30%	9.53%	7.08%	6.83%
Corporate Ins. Co. Ltd	0.39%	0.36%	0.34%	0.25%
DirectlineAssu. Co. Ltd	2.57%	2.37%	2.48%	2.62%
Fidelity Shield Ins. Co. Ltd	1.43%	1.49%	1.63%	1.40%
First Assurance Co. Ltd	3.74%	3.45%	3.39%	3.19%
GA Insurance Co. Ltd	3.56%	3.81%	3.86%	3.89%
Geminia Ins. Co. Ltd	1.44%	1.50%	1.48%	1.81%
Heritage Insurance Co. Ltd	4.09%	4.02%	4.67%	4.34%
ICEA LION Gen. Co. Ltd	5.27%	5.24%	5.03%	5.12%
Intra Africa Assu. Co. Ltd	0.94%	0.88%	0.85%	0.82%
Invesco Assurance Co. Ltd	2.06%	2.12%	2.05%	1.87%
Jubilee Insurance Co. Ltd	10.00%	9.21%	10.86%	11.45%
KenindiaAssu. Co. Ltd	3.20%	2.64%	2.56%	2.43%
Kenya Orient Ins. Co. Ltd	1.67%	1.93%	2.20%	2.05%
Kenya Alliance Ins. Co. Ltd	1.38%	1.30%	1.07%	0.89%

Madison Ins. Co. Ltd	1.26%	1.52%	2.40%	2.52%
Mayfair Insurance Co. Ltd	1.73%	1.75%	1.81%	1.87%
Occidental Ins. Co. Ltd	1.87%	1.84%	1.70%	1.65%
Pacis Insurance Co. Ltd	0.94%	0.98%	0.90%	0.85%
Phoenix of East Africa Ins.	0.53%	0.46%	0.54%	0.36%
Resolution Ins. Co. Ltd	2.36%	2.52%	2.64%	3.19%
Saham Assurance Co. Ltd	0.98%	1.04%	1.09%	1.27%
Sanlam General Ins. Co. Ltd	-	-	-	0.81%
Takaful Insurance of Africa	0.55%	0.68%	0.69%	0.66%
Monarch Insurance Co. Ltd	0.54%	0.61%	0.63%	0.85%
Trident Insurance Co. Ltd	0.86%	0.99%	0.85%	1.02%
UAP General Ins. Co. Ltd	8.87%	7.51%	7.40%	8.92%
Xplico Insurance Co. Ltd	1.16%	1.40%	1.56%	1.00%

Source: AKI Annual Industry Reports (2016)

Appendix V: General Insurance Companies Profitability

COMPANY	2013	2014	2015	2016
	SHS. '000	SHS. '000	SHS. '000	SHS. '000
AAR Insurance Co. Ltd	102,892	82,236	285,194	218,245
AIG Kenya Ins. Co. Ltd	344,449	170,766	174,205	202,855
African Merchant Assu.	133,005	98,705	139,457	-37,444
APA Insurance Co. Ltd	442,365	38,749	734,966	649,578
Britam General Ins. Ltd	-	-45,058	-210,038	422,080
Canon Assurance Co. Ltd	402,453	-70,190	10,358	-433,375
CIC General Insurance Ltd	727,876	125,133	656,076	5
Corporate Insurance Co. Ltd	130,500	53,506	178,783	22,392
Directline Assurance Co. Ltd	120,719	-79,947	177,055	145,432
Fidelity Shield Ins. Co. Ltd	114,587	101,808	58,503	60,631
First Assurance Co. Ltd	366,201	67,728	330,098	-94,279
GA Insurance Co. Ltd	434,531	204,686	355,785	522,862
Geminia Insurance Co. Ltd	229,429	167,862	107,041	157,530
Heritage Insurance Co. Ltd	536,911	201,274	386,898	498,192
ICEA LION Gen. Co. Ltd	639,668	300,512	512,687	313,149
Intra Africa Assurance Co. Ltd	49,538	-30,672	65,210	37,811
Invesco Assurance Co. Ltd	-477,118	-28,200	-14,296	-15,046
Jubilee Insurance Co. Ltd	1,025,946	761,591	762,263	337,502
Kenindia Assurance Co. Ltd	475,617	-530,148	728,364	232,948
Kenya Orient Ins. Co. Ltd	36,182	196,450	-168,090	55,071

Kenya Alliance Ins. Co. Ltd	906,119	-27,351	215,835	42,229
Madison Insurance Co. Ltd	304,627	-109,684	403,497	35,925
Mayfair Insurance Co. Ltd	230,122	188,190	378,023	285,124
Occidental Ins. Co. Ltd	139,158	101,527	207,564	141,302
Pacis Insurance Co. Ltd	242,471	60,535	72,415	44,305
Phoenix of East Africa Ins.	91,061	-179,641	74,941	-396,633
Resolution Ins. Co. Ltd	50,411	-15,174	-335,566	-424,887
Saham Assurance Co. Ltd	19,569	-44,104	26,849	49,706
Sanlam General Ins. Co. Ltd	149,520	-71,444	-171,791	-36,792
Takaful Insurance of Africa	-15,414	-42,931	31,456	122,961
Monarch Insurance Co. Ltd	45,926	99,555	70,661	18,577
Trident Insurance Co. Ltd	121,383	47,022	132,257	-20,656
UAP General Ins. Co. Ltd	1,034,080	303,159	431,102	621,494
Xplico Insurance Co. Ltd	37,513	151,916	10,441	125

Source: AKI Annual Industry Reports (2016)

Appendix VI: General Insurance Companies Return on Assets

	INSURANCE COMPANY	NET INCOME FROM 2014 TO 2017 SHS. '000	TOTAL ASSETS FROM 2014 TO 2017 SHS. '000	RETURN ON ASSETS (ROA)
1	AAR Insurance Co. Ltd	146,734	14,591,928	1.00%
2	AIG Kenya Ins. Co. Ltd	642,110	17,158,042	3.74%
3	African Merchant Assu.	238,410	14,141,882	1.70%
4	APA Insurance Co. Ltd	56,018	54,572,486	0.10%
5	Britam General Ins. Ltd	1,245,484	34,640,521	3.60%
6	Canon Assurance Co. Ltd	(687,125)	9,392,137	-7.32%
7	CIC General Insurance Ltd	1,996,468	44,844,315	4.45%
8	Corporate Insurance Co. Ltd	496,239	5,393,822	9.20%
9	Directline Assurance Co. Ltd	(286,325)	20,812,535	-1.38%
10	Fidelity Shield Ins. Co. Ltd	211,643	11,150,742	1.89%
11	First Assurance Co. Ltd	(543,892)	19,576,121	-2.78%
12	GA Insurance Co. Ltd	2,964,354	33,170,227	8.94%
13	Geminia Insurance Co. Ltd	1,164,732	15,796,691	7.37%
14	Heritage Insurance Co. Ltd	3,089,786	23,739,190	13.0%
15	ICEA LION Gen. Co. Ltd	800,353	37,497,625	2.13%
16	Intra Africa Assurance Co. Ltd	105,005	6,815,826	1.54%
17	Invesco Assurance Co. Ltd	(274,342)	12,683,326	-2.16%
18	Jubilee Insurance Co. Ltd	5,817,572	53,571,141	10.9%
19	Kenindia Assurance Co. Ltd	1,449,340	29,695,968	4.88%
20	Kenya Orient Ins. Co. Ltd	545,804	11,165,217	4.88%

21	Kenya Alliance Ins. Co. Ltd	798,447	12,665,166	6.30%
22	Madison Insurance Co. Ltd	515,120	11,306,309	4.56%
23	Mayfair Insurance Co. Ltd	923,863	15,326,309	6.00%
24	Occidental Ins. Co. Ltd	1,070,705	11,246,551	9.50%
25	Pacis Insurance Co. Ltd	265,084	7,769,324	3.41%
26	Phoenix of East Africa Ins.	(485,004)	7,147,811	-6.79%
27	Resolution Ins. Co. Ltd	(1,801,585)	11,813,771	-15.3%
28	Saham Assurance Co. Ltd	215,520	5,076,085	4.23%
29	Takaful Insurance of Africa	(57,891)	5,587,138	-1.04%
30	Monarch Insurance Co. Ltd	206,691	4,585,991	4.51%
31	Trident Insurance Co. Ltd	(186,283)	16,563,928	-1.12%
32	UAP General Ins. Co. Ltd	1,072,527	50,871,692	2.11%
33	Xplico Insurance Co. Ltd	(79,086)	7,688,863	-1.03%

Source: IRA Industry Report (2017)

Appendix VII: General Insurance Companies Return on Equity

	INSURANCE COMPANY	NET INCOME FROM 2014 TO 2017 SHS. '000	STOCKHOLDER'S EQUITY FROM 2014 TO 2017 SHS. '000	RETURN ON EQUITY (ROE)
1	AAR Insurance Co. Ltd	146,734	2,928,507	5.00%
2	AIG Kenya Ins. Co. Ltd	642,110	7,673,435	8.37%
3	African Merchant Assu.	238,410	5,453,262	4.37%
4	APA Insurance Co. Ltd	56,018	20,890,180	0.27%
5	Britam General Ins. Ltd	1,245,484	10,830,697	11.5%
6	Canon Assurance Co. Ltd	(687,125)	2,410,795	28.5%
7	CIC General Insurance Ltd	1,996,468	15,955,433	12.5%
8	Corporate Insurance Co. Ltd	496,239	3,624,574	13.7%
9	Directline Assurance Co. Ltd	(286,325)	3,566,491	-8.03%
10	Fidelity Shield Ins. Co. Ltd	211,643	4,522,177	4.68%
11	First Assurance Co. Ltd	(543,892)	8,189,958	-6.64%
12	GA Insurance Co. Ltd	2,964,354	11,337,830	26.1%
13	Geminia Insurance Co. Ltd	1,164,732	6,517,067	17.9%
14	Heritage Insurance Co. Ltd	3,089,786	9,782,527	31.6%
15	ICEA LION Gen. Co. Ltd	800,353	14,722,344	5.44%
16	Intra Africa Assurance Co. Ltd	105,005	3,214,705	3.27%
17	Invesco Assurance Co. Ltd	(274,342)	1,559,160	17.6%
18	Jubilee Insurance Co. Ltd	5,817,572	24,706,336	23.6%
19	Kenindia Assurance Co. Ltd	1,449,340	9,612,143	15.1%
20	Kenya Orient Ins. Co. Ltd	545,804	4,333,161	12.7%

21	Kenya Alliance Ins. Co. Ltd	798,447	5,714,888	14.0%
22	Madison Insurance Co. Ltd	515,120	3,928,392	13.1%
23	Mayfair Insurance Co. Ltd	923,863	6,900,995	13.4%
24	Occidental Ins. Co. Ltd	1,070,705	4,087,867	26.2%
25	Pacis Insurance Co. Ltd	265,084	3,336,020	7.95%
26	Phoenix of East Africa Ins.	(485,004)	5,267,283	-9.21%
27	Resolution Ins. Co. Ltd	(1,801,585)	1,550,927	116.3%
28	Saham Assurance Co. Ltd	215,520	2,017,725	10.8%
29	Takaful Insurance of Africa	(57,891)	1,907,602	3.03%
30	Monarch Insurance Co. Ltd	206,691	1,684,303	12.3%
31	Trident Insurance Co. Ltd	(186,283)	8,580,582	-2.17%
32	UAP General Ins. Co. Ltd	1,072,527	32,018,122	3.35%
33	Xplico Insurance Co. Ltd	(79,086)	3,870,808	-2.04%

Source: IRA Industry Report (2017)