



Strathmore
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**MODELLING OF INSURANCE PENETRATION CONTRIBUTION TO THE
ECONOMY.**

BY

SUSAN WAITHERA MURIITHI

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Kenya**

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..... Susan H. Muriithi [Name of Candidate]

..... ~~SH~~ [Signature]

..... 10th Feb. 2021 [Date]

This Research Project has been submitted for examination with my approval as the Supervisor.

..... MELEKH OLECH [Name of Supervisor]

..... Melekh [Signature]

..... 10/02/2021 [Date]

Strathmore Institute of Mathematical Sciences

Strathmore University

ABBREVIATIONS.

GDP	Gross Domestic Product
GDPI	Gross Direct Premium Income
IRA	Insurance Regulatory Authority
CBS	Central Bureaus of Statistics
IP	Insurance Penetration

ABSTRACT

The study was set to understand the relationship between the economy of the country and insurance penetration. The relationship between the two would be important to understand the contributions of insurance penetration to the economy as well as recognize what causes the low insurance penetration rate.

The availability of already published information on these factors was reliable and due to this reason, the use of primary data was not obtained. The data was available from the Insurance Regulatory Authority as well as the Central Bureau of Statistics and sigma-explorer. The target population was the already registered number of insurance companies and a cover period of the past five years which was key since the penetration rate in the country has been dropping ever since 2013 when it was at its highest.

The model used was a regression analysis which combined the major determinants of insurance penetration the variables to be used in the regression. This included assets, investments and investment income and the Gross Premium Income. From the analysis the Gross Premium Income was seen to be the leading factor in the insurance industry to be contributing to the national economy.

The insurance sector is the major contributor to insurance penetration by the decision they make in everything from the distribution channel, promotion methods, pricing, benefits provided, technology used, and everything in general and still maintaining a competitive advantage. Every decision they make is a contribution towards the economy. Due to their major role in all this the study examines what is done and how this affects the penetration rate and what can be done to change and improve this.

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF STUDY

Insurance protect policyholders from possible losses. They exist purposely to manage risk and at the same time make profit for the company. Insurance is divided into two classes namely: Life Insurance which protect one from risks against their own life and General Insurance which protects one valuable materials and property. Over the past years many insurance companies have come up and people made aware of the importance of insurance but there is still a big percentage of people who have are still not fully informed about insurance policies and also those who are not able to take up insurance due to financial reasons.

(Ward & Zurbruegg, 2000). Insurance promote financial intermediation in addition to economic transactions through risk transfer. (Skipper, 2001), insurance can have effects such as promoting financial stability, mobilize savings, facilitate trade and commerce, enable risk to be managed more efficiently, encourage loss mitigation, foster efficient capital and can be a substitute for and complement government security programs.

Within any given economy, the insurance industry is an essential agent for sustainable economic growth and development (Haufler, 2013). The development of the insurance industry is measured through insurance penetration which is gross premium income (GPI) as a percentage of the national GDP. The insurance penetration level generally measures the development of the insurance industry in the country and how far it has spread.

The insurance sector has helped the economy develop in a number of ways. Offer financial protection to its customers. Each day people are faced with many risks and the insurance can help meet the financial needs of these risks if they occur. They help businesses manage risks and protect against their employees. Just like consumers, businesses face many risks e.g. disasters, political instability and some risks are borne within the business itself and the insurance comes in to help manage such risks. Businesses also take up high risk projects expecting high returns due to the

existence of insurance. In cases of employees, if one gets into an accident the business usually takes insurance covers in behalf of their employees.

Insurances are a source of collecting funds. From the premium they collect they are later utilized in the development of a country and promoting its economic growth. They offer employment opportunities which reduce the gap of unemployment and also help in the growth of the economy. Promotes saving habits, these savings lead to investments and financial stability which help in the development of the economy.

As we have seen the importance the insurance industry to the growth of the country's economy it is for this reason, we need to help spread the penetration of the insurance industry. As such there is a need for the government, the regulatory authority, and the insurance market players to rethink a model that will see the market being able to tap into the widely unreached market that has the potential to transform the local economy in folds (Insurance Regulatory Authority, 2014).

In pretty much every developed and developing nation the significance of the insurance is ascending because of the expanding portion of the insurance sector area in the whole monetary sector. Insurance agencies, along with mutual and pension funds , are one of the greatest institutional investors into stock, real estate and securities markets . Their effect on the monetary advancement has been growing because of maturing social orders, augmenting pay dissimilarity and globalization. The growing connections between the insurance and other monetary areas likewise accentuate the possible part played by insurance agencies in economic development. (Rule, 2001).

1.2 PROBLEM STATEMENT

There is a wide gap in the penetration of insurance companies in Kenya. According to (Alushula, 2019), insurance penetration had dropped to 2.43% of the Gross Domestic Product being the lowest in 15 years. The peak of the hit was in 2013, when it stood at 3.44% of the GDP, but has been dropping ever since.

Little or no knowledge on the contribution of insurance activities to the economic growth has been fully given and it was observed that insurance penetration which is mostly measured by the volume of premiums divided by gross domestic product is not adequate in capturing actual insurance activities and its contribution to the economy and for this purpose, they adopted to using Bayesian methods to provide a robust measure of insurance activities with more samples and time-varying model analysis (Olayungbo & Akinlo, 2016).

(Kamau,2012) used a different approach which looked into the factors causing low penetration where a sample of 65 respondents was chosen, fifty-two questionnaires were completely and satisfactorily filled. Two meetings were directed with the advertising director and the promoting chief at the Insurance Regulatory Authority. Information examination was led utilizing illustrative insights. The information was introduced in outlines and tables according to the recognized topics dependent on the exploration goals. The study found that the nature of the insurance industry, disposable income, cost of insurance, and demographic factors are factors that can explain the current low insurance penetration in Kenya.

(Murera, 2020) in seeking to increase insurance penetration says what ails the insurance industry is self-inflicted and as insurance is essential to the section f the population the is very vulnerable, they must find a way to collaborate and provide social protection. They could also increase by taking advantage of technology for more efficient distribution.

1.3 RESEARCH OBJECTIVES.

- To identify key factors contributing to the current insurance penetration
- To identify strategies adopted to alleviate insurance penetration
- To understand the relationship between the national economy and insurance penetration.

1.4 JUSTIFICATION

Growth in the insurance industry is seen to contribute towards the economy but at very low rate. This paper aims to understand the factors contributing to low insurance penetration and how this might affect the economy of the country.

The findings of this study will provide a better perception on how to develop the insurance industry. When insurance uptake grows the national GDP will increase and the economic development of the country will also improve.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

In my first chapter it gives us background information to the subject topic and now in this sector, it tries and combines various sources contributing to insurance penetration and how to enhance it.

The literature on provided below on the relationship between economic growth and insurance are documented in a moderate manner by different papers. However, In Kenya specifically there are very few conceptual and empirical studies on the topic. In most of the available research work the relationship is studied on different regions and countries. Beenstock , Dickson and Khajuria (1988) studied the connection and link between insurance and economic development on different economic regions for twelve different countries. They had pooled time series application in conjunction with cross sectional analysis and found a ceorrelation between premiums, interest rate and GNP.

2.2 THEORETICAL REVIEW

2.2.1 Economic growth

A measure of the development of an insurance sector is the insurance penetration rate, defined as gross premium income (GPI) as a percentage of gross domestic product (GDP). According to Mahul et al (2009), growth may be stimulated by an increase in both the quantity and quality of the factors of production which results in some benefits such as improved living standards that will result in the economic growth of the nation.

2.2.2 Insurance penetration.

(Lai & Limpaphayom, 2003) noted that different insurance companies choose different strategies according to their resources and capabilities. Insurance companies with a focused strategy choose to compete by targeting a specific market or product-line segment. On the other hand, many insurance companies have also

decided to increase their product diversity to reduce the risk of over-relying on one particular product market segment.

The strategy adopted forms the fundamental part in executing the planned objectives and the interactions of the insurance company and the market, competitors, and environmental factors.

The use of Ansoff's matrix by most insurance firms provides four growth strategies the key being market penetration and the other market development, product development, and diversification Market penetration is the least risky but has its limits which then force the use of the other strategies. Diversification is the riskiest but with high returns.

According to (Andreu, 1995), Information asymmetry assumes that one party to a transaction has relevant information which the other does not. The challenge most firms face is measuring risks, collecting relevant data, monitoring producer behaviour, and enforcing underwriting guidelines and these difficulties could make it impossible for private insurance markets to develop.

A focus strategy also contributes to insurance penetration. Arasa &Githinji (2014), conducted a correlation and regression analysis which showed the correlation of focus strategy to market share and sales which was positive. Similar research by (Cheptiram, Nzioki, & Njeje, 2016), which proxied focus strategy to market segmentation and focused on three companies. Market division eexpression was in terms of measurability and accessibility and the author found a positive correlation between market segmentation and the performance of the sampled companies which implied that market segmentation contributed to the growth and development of these companies.

Insurance penetration relies heavily on high administrative specifically general managers and marketing directors play a major part in ensuring the company builds its competitive edge. Study shows that government regulation is a major factor since a unit change creates a 2.453 increase in building competitive advantage. Despite the

role of government regulation increasing the competitive advantage we expect the penetration to have grown but insurance penetration is still low.

Insurance companies are yet to embrace technology and product distribution so we to grow and get into the unreachable market. With an increasing high population and a low insurance uptake, there is great demand that needs to be tapped. Reinhard (2012) in his study showed a need to create awareness. Most insurance products are in English which is funny because the national language is Kiswahili with a further 49 ethnic groups with a huge population living in their rural areas and this poses a challenge to insurance companies.

2.2.3 Insurance penetration strategies.

Creating awareness is a major element in insurance penetration. Many clients are not very sure about paying premiums for an intangible product with future benefits that may never be claimed, and they often do not trust insurance companies (Njuguna & Arunga, 2013). A study by Siege et al. (2001), found that some insurance firms provide information and conduct education campaigns among low-income households on the need for risk protection through such schemes as micro insurance and to differentiate micro-insurance from the conventional insurance products. According to Morelli et al. (2010), for an insurance scheme is to succeed, it needs to satisfy, among other conditions; comprehensibility and understandability by the clients, and then maybe the clients will have more information and more trust enabling the insurance companies to spread more and deep. Innovation and cost efficient promotion methods are efficient ways to communicate with customers, some direct marketing also not only build awareness but also give a way of getting feedback.

Another form of alleviating insurance penetration is the pricing strategy as most customers want affordable products and it poses a challenge to insurance companies to provide affordable products that will still benefit them. A case in the micro insurance sector by (Njuguna & Arunga, 2013), cites Churchill, (2007); Dalal &

Morduch, (2010), found that challenge arises from the target market that consists of self- employed or informal workers whose income is often low and unpredictable a solution to this was that policyholders could pay when they get the money during peak seasons or when they get a loan or the government cash transfer. Anderson (2006) in his study suggests that for the clients with low income then the insurance companies should make products that match their cash flow mostly for daily income earners.

The Ansoff matrix provides ways to penetrate the market. One of the strategies was product development and in here a firm can develop new incentives for existing products or creating new products that have more benefits to the policyholders, an insurance firm could also increase the maturity period of products or extend the current product benefits.

2.3 SUMMARY OF THE LITERATURE REVIEW

From the discussed literature review a number of factors and strategies have been brought to light by different authors in regard to insurance penetration. Though major responsibility is on the insurance sector, every other party is still involved that is the government and the customers. They are all connected towards their contribution to the economy from the management of the insurance, the government, and the market customers. Development of the insurance sector will result market diversification and growth which result to improved financial performance in the economy which is believed to be a goal of any nation. Due to this reason there is an urgency to come up with strategic ideas and models to increase insurance penetration rate. All factors leading to this should be evaluated to come up with ideas on how to change the current problem and see what is to be rectified and how this will be conducted.

CHAPTER 3: METHODOLOGY.

3.1 INTRODUCTION.

This chapter focuses on how our data was collected. It also looks into the research design adopted and analyses this to generate research findings. The time that was considered for the collection of the data was from 2015 to 2019 which is available.

3.2 RESEARCH DESIGN

It shows the arrangement of the strategy adopted and the variables in a research proposal. (De Vaus, 2001), this undertaken to ensure that evidence collected enables one to answer questions as unambiguously as possible. This study looks at the causal relationship between economic growth and insurance penetration. Focusing on the improved performance of the insurance premium (GDPI) in terms of its percentage to the economy measured through (GDP) for a certain period. To establish a relationship, we used a regression model.

This section of the research will be aligned with; research purpose, data sources, data collection tools, sampling and data analysis.

3.3 POPULATION AND SAMPLING

The population included all the insurance companies in Kenya listed under the Insurance Regulatory Authority (IRA) and the data available from the 2010 industry Audited Returns. The coverage period was five years and the secondary data obtained from already published information from the Insurance Regulatory Authority and Central Bureau of Statistics. The sources considered were secondary data which was available for the period of time(5 years).

The study was based on the whole population from a secondary source. This study focused on a cover period of five years with information taken from the reports of the Insurance Regulatory Authority which shows well representation and reliability. The variables selected in the regression analysis were among the key factors to the growth and spread of Insurance.

3.4 DATA COLLECTION

The secondary data used was from published information from the Central Bureau of Statistics, the Insurance Regulatory Authority and Swiss Re Institute. The IRA in their annual report show how the insurance sector has contributed to the economy and have done research on different determinants of insurance penetration and their personal effect towards the economy and as such are a relevant source of data collection. The Central Bureau of Statistics has data on the inflation rate in the country which is relevant in our study.

One of source of data as indicated was Swiss Re Institute for the data premiums written. In this the data is in a time series with ability of expanding it beyond the time limits for this particular study. The data available also extends worldwide but this study focused on Kenya in particular.

3.5 DATA ANALYSIS AND PRESENTATION

The data collected in the study was analyzed by the application of with Time-Varying Parameter Vector Auto regressions Model (TVP-VAR) in alignment with excel spreadsheet. The analysis was done with key focus on the study objectives and the research variables.

3.5.1 Multiple regression Model

This equation can be expressed as:

$$Y_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

Where β_0 is our intercept and the X_s represent our independent variables explaining the Y_t which is our GDP for the economy.

This model will acquire data for the past five years and look into the economic and how it's change over the years. This is to be determined by the determinants of insurance penetration where relevant data will be acquired from IRA as well as the

Central Bureau of Statistics (CBS) and Swiss Re Institute to see how the adjustments of these determinants have affected growth.

Insurance penetration is measured by relating the insurance premium to growth of the economy.

The variables used are key factors in the spread of insurance. All these factors affect the decisions made by the insurance firms towards pricing their products and how many policies they sell which determines how far they have been developing.

The five-year period is relevant as it will show the trend that has been happening in the past recent years. Insurance penetration has been dropping since 2013 and it is important to look at why this is the case up to this period which will then give a better explanation to what can be done differently or changed.

3.5.2 Data presentation:

After thorough analysis through excel the data will then be presented in form of graphs, trends, and summary statistics.

3.6 DATA VALIDITY AND RELIABILITY

The data for our study is reliable and valid as is assured from where it was collected which is from published information. The insurance players are expected by the IRA to provide the right information.

The Central Bureau of Statistics compiles its information economy-wise which is also a reliable source for our secondary data.

4. RESULTS AND FINDINGS

Insurance Regulatory Authority (IRA) Data.

In the data the aspects considered are investments, investments income, Gross Direct Premium Income and the assets. These key performance indicators play a role in the economic growth and also are as a result of the insurance penetration. The numbers are in thousands which means the figures are billions. These are figures which are clearly essence in the Kenyan economy. The years considered were from 2015 to 31st December 2019, the data from the audited reports was not available for 2020 as per the period of this research. The different key performance indicators are arrived to through the Insurance Distribution Channels which for the Kenyan economy include; agents, brokers or direct. Excel spreadsheets were considered for the analysis and the figures are as a result of excel as mentioned in the previous chapter.

4.1 ASSETS

From figure 1 below it is clear that the assets have been increasing which have an effect on the economic growth. Economic growth consists of the increase in the country's production capacity which enables the economy to run with more resources.

Increase in assets have an effect on the income of the citizens. With more penetration for the insurance then it can be seen from the figure that the assets have also increased which has an impact on the economy of the country. The largest change in the assets accumulative worth was experienced between 2018 and 2019. This means that the future might be promising in terms of the contribution of the insurance industry to the economy. However this might be affected by the prevailing coronavirus situation which calls for more research on the subject matter.

Insurance is very essential in the modern society by and especially in the assets perspectives as it makes many economic activities possible as more people are able to risk and do business without the fear of accidents. Insurance in the Kenyan

environment reduces anxieties, allows loss mitigation, reduces dependence on government securities and enables savings. These are the reasons for the increased assets accumulation through the insurance industry. The figure of the assets are in billions which indicates that they are significant numbers in the Kenyan economy.

An environment that reduces the risk of assets is essential in Kenya which is a developing country. The reduced risks allow even the foreign investors to enlarge the investments.

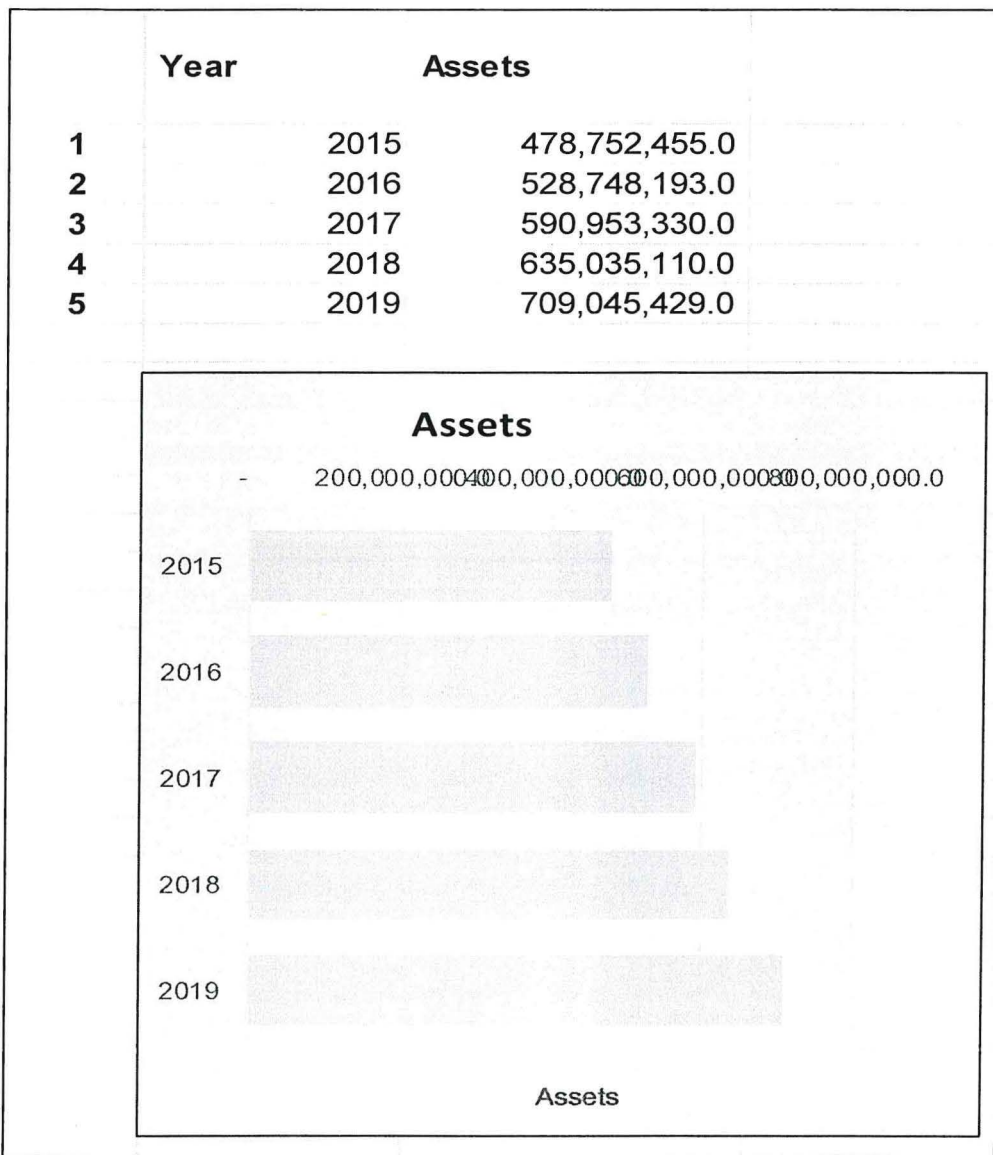


Figure 1: Assets

4.2 INVESTMENTS AND INVESTMENTS INCOME

Insurance companies are involved in both their operations and side investments. Both of these accrue profits and incomes. Total fixed assets investment plays a significant role in economic growth, inflation rate and trade balance.

There is a correlation in the rates of penetration of insurance and the expansion of the real GDP which is connected to the direct and indirect investments. The report by IRA for 2019 states that "The insurance industry contributes to the economy by providing financial security, mobilising savings and promoting direct and indirect investments. The real gross domestic product (constant prices) expanded by 5.4% in 2019 while insurance penetration reduced from 2.43% in 2018 to 2.34% in 2019."

(IRA, 2019: pg 21)

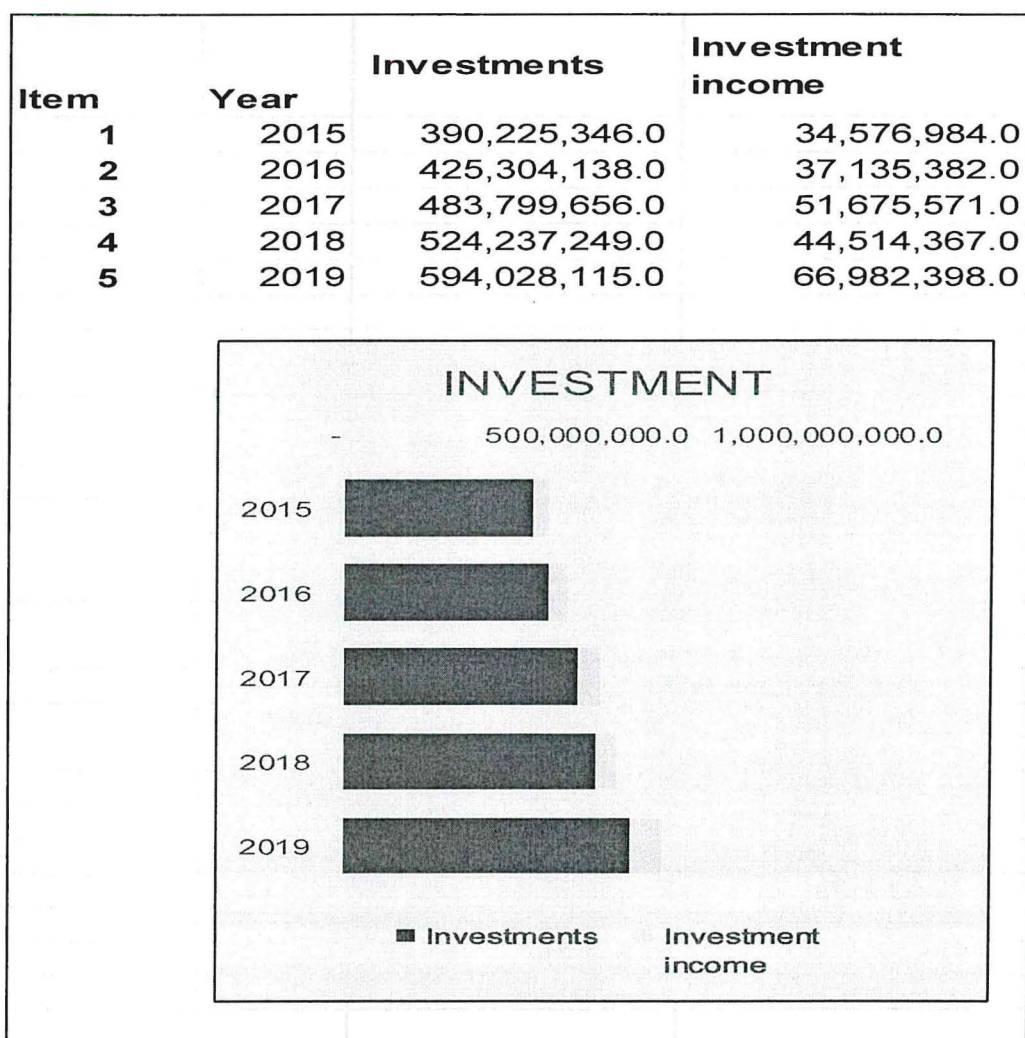


Figure 2: investments

4.3 GROSS DIRECT PREMIUM INCOME

Insurance penetration is generally defined as the ratio of gross direct premium to the gross domestic product (at current) for a certain year and with the consideration of a given country or region . On the other hand insurance density is a representation of the ration ratio of gross direct premium to a country's total population. This indicates that there is a relation between the gross direct premium, gross domestic product, penetration and population. The following figures shows how the gross direct premium has been nchanign with time.

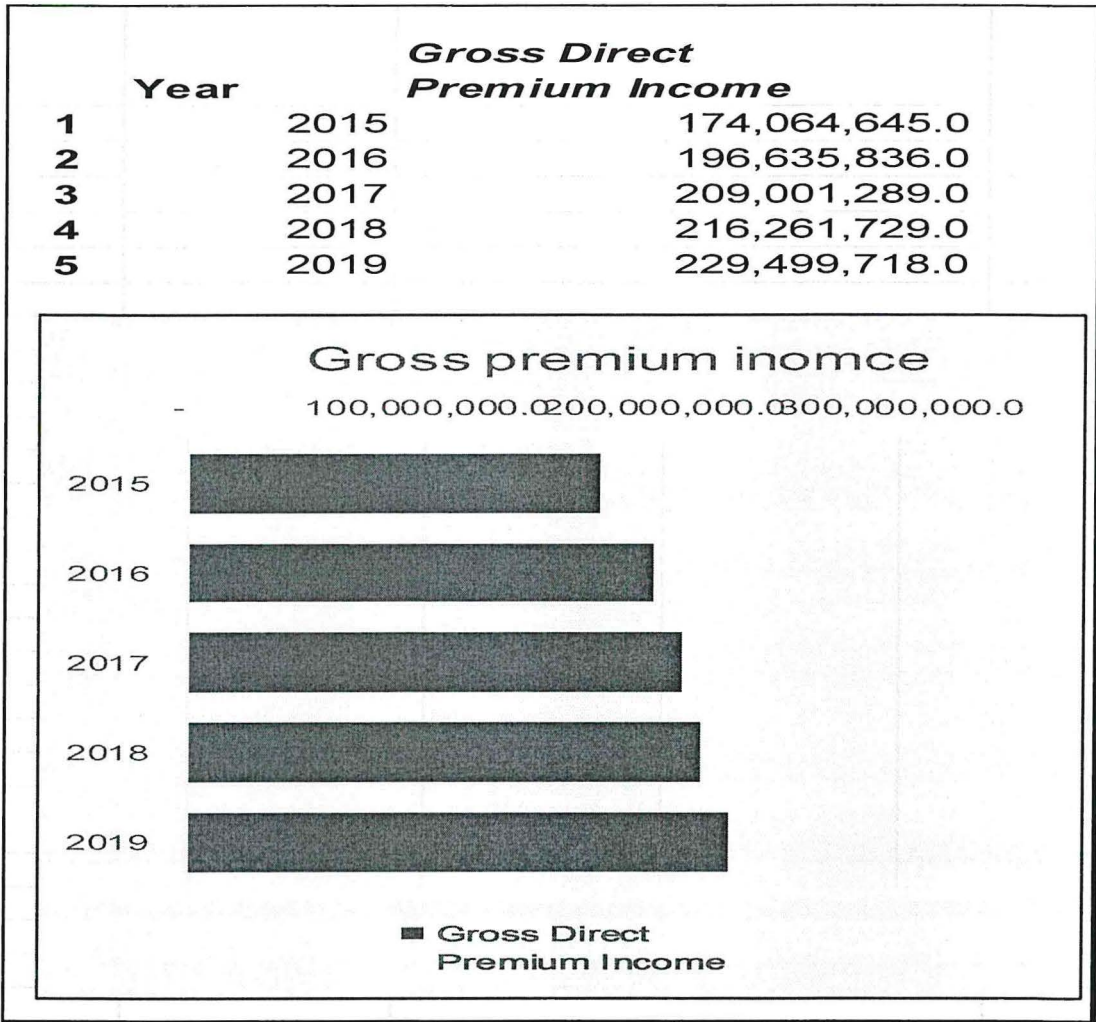


Figure 3: Gross direct premium

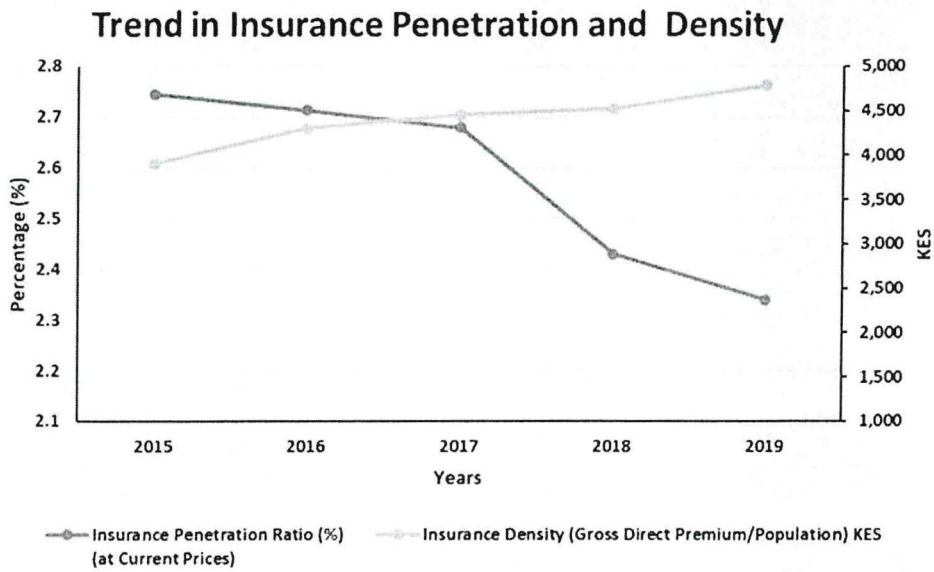


Figure 4: insurance penetration trend; source, IRA

Modelling for 2019

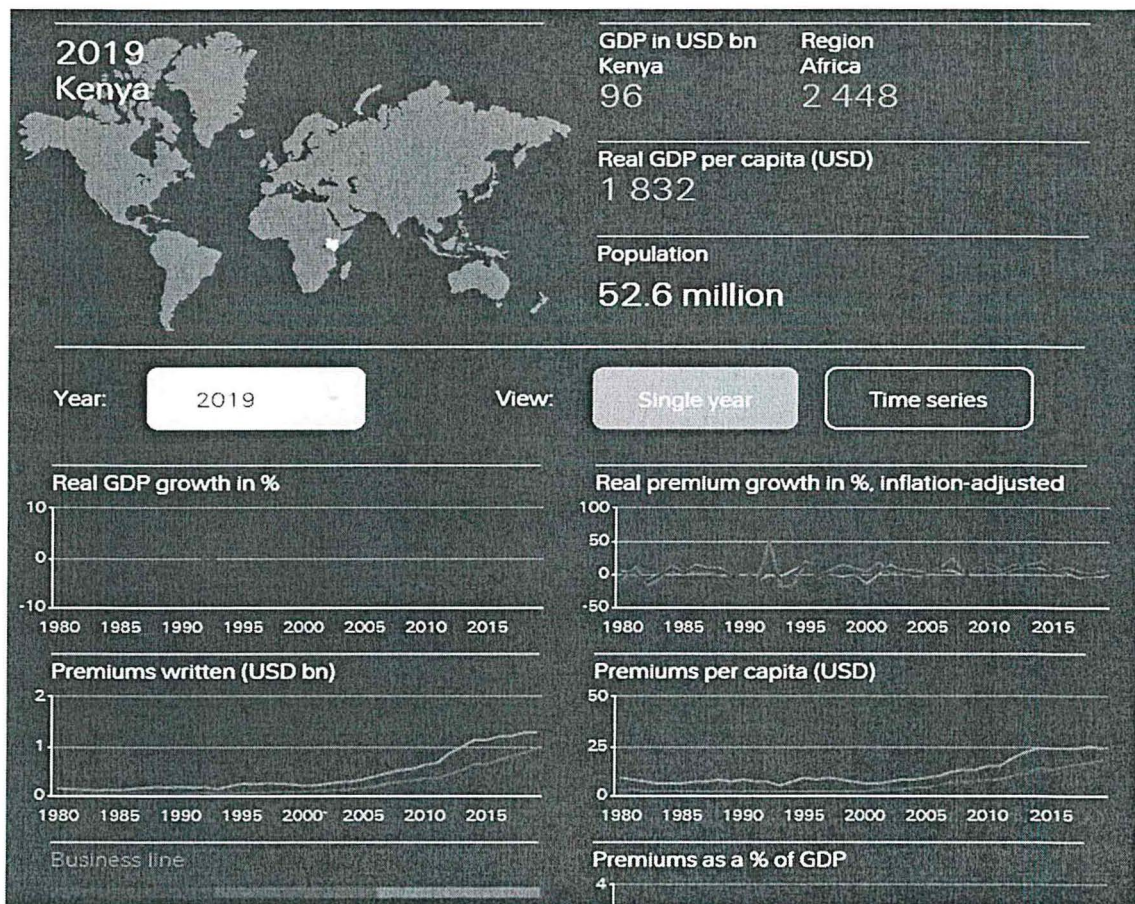


Figure 5: Data for premiums and GDP kenya, 2019 Source; sigma explorer, swissre.com

<i>Coefficients</i>	
Intercept	34752597.9335
ASSETS	1052.277137
INVESTMENT	2235.60482
INVESTMENT	
INCOME	377.551607
GDPI	1627.214767

Figure 6: Our betas for the respective variables.

From the figure the gross premium income is seen to be the one greatly influencing the GDP amongst the key industry factors. This is then followed by the Investments

which is also seen to positively affect the economy. Assets and Investment income show a lower relationship with the economy's GDP.

5. CONCLUSION AND RECOMMENDATIONS

In the past different studies have applied bank or stock variables in their gauging of the relationship between finance aspect and growth aspect for both the developing and developed countries. There has been neglect on the focus at the insurance aspect. This paper aimed at focusing on this aspect where the insurance aspect was looked at with relation to change in economy. This was particularly done for the Kenyan economy.

In overall there has been penetration of insurance over the years with a similar increase in the assets income and premiums. This paper was focusing mostly on the years between 2015 and 2019. Going forward more focus should be put towards educating more people on insurance and ensuring there is better regulations within the sector. This will ensure more economic growth where individuals can go to business with less fear of losses.

Insurance Gross Direct Premium Income is seen to be a major boost in the economy of the country which measures insurance penetration. The investments income generated also positively contribute to the growth of the economy.

Kenya is affected by covid 19 and this has taught many on the need for insurance. This means that reforms and more penetration should be done within the coming years. The assets growth will increase with a bigger rate provided the culture of insurance is nurtured. Liberalization reforms have put Kenya at a good place where the government doesn't have full control over the insurance companies as compared to some other countries.

However, this paper does not lack its limitations. In the future it will be important to get data from primary sources. This will involve interviews and questionnaires with

the experts to get their thoughts on the topic and also their projection. At the moment insurance sector is promising for the Kenyan economy.

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