

# The Impact of Innovation on Productivity in the Insurance Industry: Kitwe District Case Study

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## Abstract

Kennedy M. N. (2003) advocates that in large companies, innovation is often allocated time and budgets for specialist projects such as new product development or implementing extensive research & development strategies. To keep it simple, innovation in any business means doing something new, different, and smarter or better that will make a positive difference. So, innovation plays a key role in the productivity of the companies. Also, Robert G. and Scott J. E. (2008) have explained in their journal that the concept of productivity is simple: it is output over input, or, "the most bang for the buck." More specifically, in the field of new product development (NPD), productivity is defined as output. In short, you can measure productivity through sales revenue and profitability. The study aimed at finding out the evolution of the Insurance Industrial vis-à-vis the command of proportion of market share. The idea was to find out if the reason for a 'Lions share' of the market was due to innovation or other factors. The idea was to critically analyze the effect of innovation on productivity. Productivity was measured in terms of revenue generated annually from sales. To have a fair account of all the Insurance companies we used purposive sampling technique to get views from each company. Primary data was collected using structured questionnaires distributed to the 80 respondents from Kitwe District in the Copperbelt province. Secondary data was obtained from Pension Insurance Authority reports. Four hypotheses were tested to ascertain the relationship between innovation and productivity in the insurance industry. It was concluded that research was the bed rock of innovation. It is important that companies invest in research in order to be innovative. It was established that innovation has an effect on productivity and that technology was critical in offering quality products. Price was seen as the main player in establishing a competitive market as the industry is tented with price undercutting. The study further suggest that insurance companies should invest a lot on innovation or creativity of doing business to ensure efficient operations leading to high productivity and competitive advantage.

**Keywords:** *Innovation, Insurance, Productivity, Price, Technology*

## Introduction

Innovation is the platform for new product development (Little D. A., 2005). It is the vehicle for increasing revenue for insurance companies. For a company to sustain growth of revenue, that is, gross

written premiums, there is need to keep the changing or improving the product offering. Innovation also requires investment in technological products. In the insurance industry this would include mobile insurance services, big data services, and cloud computing platforms, enterprise resource planning and interactive websites. Innovation embraces the development of efficiency in underwriting and claims processes. In any business innovation means doing something new, different, and smarter or better that will make a positive difference. Innovation as we use it here refers to any combination of activities and technologies that breaks existing performance trade-offs in the attainment of an outcome in a manner that expands the realm of the possible.

According to the finance survey of 2009, only 4% of the Zambian insurable population had insurance. This means that about 96% of all Zambian adults had no insurance protection. However, the trend is changing and the local insurance market is buoyant. Today, Zambia boasts of 27 insurance companies and three reinsurance companies, making the sector one of the fastest growing in terms of the number of players entering the market (Insurers Association of Zambia, 2014). This is a clear testimony that there is potential for growth. However, because of the many participants there are concomitant threats that the market share of each Insurance company will go down. The only remedy to combat reducing revenue is to be innovative by coming up with new products. Increased competition has had to force the players on the market to be innovative and come up with new products that meet the demands of Zambians. The Insurance Act, 1997 as amended in 2005 prohibited insurance companies from conducting both Life and non-Life insurance business (Insurers Association of Zambia., 2014).

The liberalization of the Insurance Industry in Zambia saw the birth of companies, such as Madison General, Madison Life, PICZ General Insurance, PICZ Life and ZSIC General Insurance Company Limited and ZSIC Life. The pension's Insurance authority reports that significant growth had also been recorded in volume of business under written. As at December 2013, the volume of general insurance stood at K1.022 billion and a total of K330 million was paid out in claims. This is in comparison to GWP of K96, 485 in 2002 and K27, 167 that was paid out in claims (Insurers Association of Zambia., 2014). This is a synopsis of the buoyant performance of the sector which has seen the growth of the Insurance industry not only in terms of the number of insurance companies but also the growth in written premiums and claims paid out.

Companies that have invested in new product development and other innovations are realizing growth in gross premium income and are at the top of the 'food chain'. Companies that have not invested in technology, new ways of issuing cover notes, mobile insurance services, enterprise resource planning, internet services, and interactive websites are at the bottom of the productivity ladder. On the contrary, it will be observed from the findings that being at the top of the market share ladder is not all rosy. This is because the top three companies had in 2011, 2012, 2013 and 2014 experienced declining gross premium income. If they had been innovative in those years, it meant that the strategies employed were back firing. This paper aimed to carry out a postmortem of such developments and establish the effects of innovation on productivity.

## **Literature Review**

Scarpetta *et al.*, (2002), empirical evidence shows that competition leads to innovation and this will result in new product development. Research and Development (R &D) leads to significant improvement in market share and productivity. In agreement Parker Beauchamp, (2015) says through investing in new technologies and innovations, Insurance companies had improved the quality and efficiency for products, claims and business practices. Some of the new trends include big data analysis software on-line services and Mobile services. Copper G. and Edgett Scott J. have defined productivity

as output over input, or ‘the most bang for the buck.’ Productivity was output measured as new product sales or profits divided by input measured as R&D NPD costs and time.

Price is one element of the marketing mix that produces revenue, the other elements produce costs (Kotler K., 2014). The research paper aimed to find out the relationship between premiums (price) and productivity. However, am well aware that they are other variables at play which are also affecting revenue such as preferences, advertising, sales promotions, brand loyalty, branch network to mention but a few. It was because of this that I recognize that this was a limitation of this research, other people would have to research on how price and other variables affect productivity. This was in agreement with the Evolutionary theory of economic change by (Nelson and Winter, 1982). This theory had stressed the dynamic of innovation clusters as opposed to single innovation. The effect of multiple innovations had been observed to harness greater impact on revenue than a single innovation.

Kotler K. (2014) gives us the experience by Coca-Cola as they battered by a national wide series of taste-test challenges from the sweeter-tasting Pepsi-Cola, Coca-Cola decided in 1985 to replace its old formula with a sweeter variation, dubbed new coke. Coca-Cola spent \$4 million on market research. Blind taste tests showed that Coke drinkers preferred the new, sweeter formula, but the launch of new Coke provoked a national uproar. Market research revealed that Coca-Cola did not do enough to measure the emotional attachment consumers had to Coca-Cola. They reintroduced its century-old formula as ‘classic Coke’. This research revealed that Insurance Companies are being innovative by launching new products such as Mobile offices, packaged policies etc.

Mytelka K Lynn and Smith K. (2001), Industries that are regarded as ‘traditional’ or mature or ‘low-tech’ often generate substantial amounts of sales from technologically new products and processes. My interest here was to find out if technologically new product and processes had an effect on productivity. Some Insurance companies had invested in new computer software and hardware in order to produce computer generated cover notes and to produce computer generated payment vouchers for claims; this also enabled them to produce good and accurate reports in terms of claim reserves. The paper find out that Insurance companies that had such innovation led to increased revenue in their coffers.

According to Parker Beauchamp (2015), new technologies and innovations had permeated the insurance industry and upped-the-ante in quality and efficiency for products, claims and business practices. Though insurance had been historically viewed as a slow-moving industry, recent technology integrations and evolving customer needs had created a significant shift; and next year would only continue to change the game. Insurance trends in 2015 would revolve around increased data intelligence, improved accuracy in underwriting, and an emphasis on customer-center services and processes.

## **Conceptual Framework**

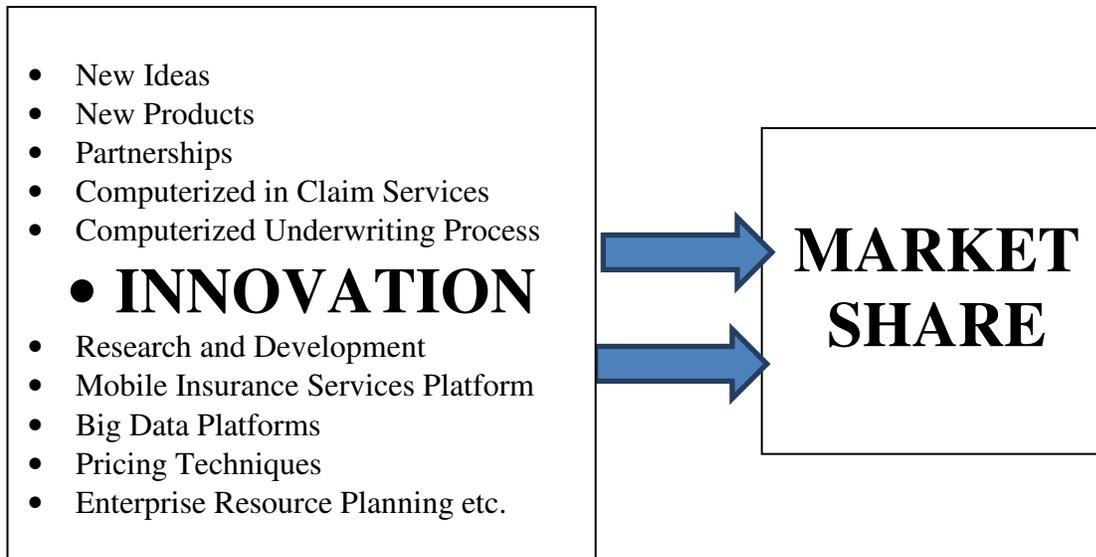
### **Introduction**

The framework of the study was based on the underlying factors of the *evolutionary theory of economic change* developed by Nelson and Winter,(1982). Their research was molded around research, advancement in technology, potential market share, inventions of new products, price of products and various innovations that make processes more efficient and effective.

My theory was that research and development was the foundation for successful idea formulation. Research was the beginning of the realization of ideas that lead to product development. Research was critical at realizing the needs of the consumers. Surveys are tools that companies use to get feedback on what the customers want on the market. Direct observation can also be a good source of customer feedback.

Innovation was observed to be the pinnacle of product development and it hinges on everything that was done at research stage. Innovation does not end with product development but encompasses the

processes. I framed this objective on grounds that even if these companies had good products, if their systems are flawed then turn round time would affect productivity. Similarly down time is also another evil that works against efficiency and effectiveness. The diagram below shows Innovation factors that influences productivity conceptual framework for the study:



*Fig. 1: Conceptual Framework*

## Research Hypothesis

The research hypothesis developed for this study will be answered by using the three selected innovation initiatives. The major questions to be answered are: “How significant are these innovation initiatives on influencing productivity in terms of (a) Research and Development (b) Price and (c) Technology (d) Innovation on the quality of products and services in explaining company performance in the view of achieving competitive advantage. The hypotheses of this study included:

$H_0$ : Research and development has no impact on innovation

$H_1$ : Price has no impact on Productivity

$H_2$ : Technology has no impact on Productivity

$H_3$ : Innovation has no impact on Productivity

## METHODOLOGY

### Introduction

Chapter four focused on research methodologies that were used in this study. The research approach used in this study consisted of a research design, target population, research instruments, data collection and analysis, validity and variability methods that were used.

### Research Design

A descriptive and inferential type of research was used in this study. It involved gathering detailed data on the various aspects of innovation and their effect on productivity.

## Population of The Study

This research was conducted in Kitwe District of the Copperbelt province of Zambia. The research population was 101 people from all insurance companies based in Kitwe. Kitwe had a representation of about eleven of the companies and the population of respondents was 80. The population had a mixture of senior management, middle management and unionized staff. Further to this, the population comprised of staff from the claims unit, underwriting unit, and accounts unit.

## Methods of Data Collection

Primary data was collected using structured questionnaires distributed to the 80 respondents from Kitwe in the Copperbelt. The questionnaire had both open ended and closed ended questions to enable guide the respondent through filling of the questionnaire as well as probe them for more information. Secondary data was obtained from Pension Insurance Authority reports.

## Method of Data Analysis

Both Descriptive and inferential statistics for variables were computed followed by reliability of all innovation initiatives in terms of productivity. To test the hypotheses ANOVA was used to determine the relationships among variables. Also, Chi-square tests were used to test the relationships among variables.

## Validity and Reliability

To achieve content validity, questionnaires included a variety of questions on Research, Innovation, Technology and revenue. All the subjects completed their questionnaires in the presence of the researcher. Reliability was ensured by minimizing sources of measurement error like data collector bias. Data collector bias was minimized by the researcher's being the only one to administer the questionnaires.

## Data Analysis, Results and Discussion

### Introduction

This section presents the findings related to whether innovation improves productivity in different companies resulting to high demand and quality of products and services to ensure that customers or clients are satisfied.

### Presentation of The Findings

The study focused on how various innovation initiatives impacts productivity in organizations. Table 4.1 shows the distribution of respondents who were aware that there company had a research department that contributes to new ways of doing business.

**Table 4.1 Existence of a Research Department in the Company**

	Frequency	Percent
Yes	44	55.0
No	36	45.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

*Source: Field data (2022).*

Findings from the study show that 55 percent of companies had a research department while 45 percent had no research department. This implies that a research department in insurance companies or any company is vital to search for new ways of doing business resulting to improved operations.

Table 4.2 shows a Chi-Square test between Presence of a Research Department and name of the company.

**Table 4.2 Presence of Research Department\*Name of Company**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.146 <sup>a</sup>	10	.053
Likelihood Ratio	19.996	10	.029
<b>N of Valid Cases</b>	<b>80</b>		

*Source: Field data (2022).*

A chi-square test was also used to check for the linear association of the two variables i.e. presence of research department and name of the company. After the cross tabulations, the chi-square value for the tabulation was 18.146 and the Pearson value was 0.053, implying an insignificant relationship of the variables at the level of significance of 5%.

Table 4.3 shows areas in which research is more effective in the selected insurance companies.

**Table 4.3 Areas in which Research is more effective**

	Frequency	Percent
Claims	37	46.3
Underwriting	18	22.5
Accounts	4	5.0
Other	21	26.3
<b>Total</b>	<b>80</b>	<b>100.0</b>

*Source: Field data (2022).*

The table above shows that the Claims department had the highest proportion of 46.3 percent respondents who said research was more effective while the Accounts department had the lowest proportion of 5 percent.

Table 4.4 shows a Chi-Square test between areas in which research is more effective and name of the company.

**Table 4.4 Areas in which Research is more effective\*Name of Company**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.477 <sup>a</sup>	30	.226
Likelihood Ratio	40.595	30	.094
<b>N of Valid Cases</b>	<b>80</b>		

*Source: Field data (2022).*

We conclude that there was no relationship between areas in which research is more effective in insurance companies and name of company. Research had no relationship with the departments as indicated by the result with p-value = 0.226 is greater than 0.05.

Table 4.5 shows the number of respondents on whether the research department had an impact on innovation.

**Table 4.5 Effects of Research Department on Innovation**

	Frequency	Percent
Yes	73	91.3
No	7	8.8
<b>Total</b>	<b>80</b>	<b>100.0</b>

*Source: Field data (2022).*

This table indicates that the higher proportion of 91.3 percent of respondents said the research department had an effect on innovation while the lower proportion of 8.8 percent of respondents did not agree.

Table 4.6 shows an ANOVA regression between research department and innovation (Innovation was a dependent variable and research department an independent variable).

**Table 4.6 ANOVA of Research Department\*Innovation**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	.410	1	.410	5.353	.023 <sup>b</sup>
Residual	5.977	78	.077		
Total	6.388	79			

*Source: Field data (2022).*

The table indicates that the significance value is 0.023 which was less than 0.05 thus the research department had an effect on innovation. The F critical at 5 percent level of significance was 3.96. Since F calculated is less than the F critical (value = 5.353), this shows that the overall model is significant. We conclude that research and development had an effect on innovation.

Table 4.7 shows the number of respondents on who agree that clients are involved in coming up with new products in the selected insurance companies.

**Table 4.7 Client Involvement in Coming up with New Products**

	Frequency	Percent
Yes	49	61.25
No	31	38.75
<b>Total</b>	<b>80</b>	<b>100.0</b>

*Source: Field data (2022).*

Obtained results indicate that the highest proportion of 61.25 percent of respondents said that clients were involved when coming up with new products in insurance companies while the lowest proportion of respondents 38.75 percent (31) said clients were not involved. This implies that clients also are encouraged to contribute to any new innovations that insurance companies bring about.

Table 4.7 shows the number of respondents on who agree that innovation has an impact on the productivity or market shares of the selected insurance companies.

**Table 4.7 Effect of Innovation on Productivity (Market Share)**

	Frequency	Percent
Yes	74	92.5
No	6	7.5
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data (2022).

The table above indicates that the higher proportion of respondents 92.5 percent said innovation had an effect on productivity while the lower proportion of respondents 7.5percent said innovation had no effect on productivity. This result was significant as shown in the table below.

Table 4.8 shows an ANOVA regression between innovation and productivity were productivity was a dependent variable and innovation an independent variable.

**Table 4.8 ANOVA of Innovation\*Productivity (Market Share)**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	.505	1	.505	7.816	.007 <sup>b</sup>
Residual	5.045	78	.065		
<b>Total</b>	<b>5.550</b>	<b>79</b>			

Source: Field data (2022).

The results show that the significance value is 0.007 which was less than 0.05 therefore innovation had an effect on productivity. The F critical at 5 percent level of significance was 3.96. Since F calculated is less than the F critical (value = 7.816), this shows that there was a significant relationship between innovation and productivity (market share) in insurance companies.

Table 4.9 shows the distribution of companies that have software for big data analysis.

**Table 4.9 Companies that have Software for Big Data Analysis (Not word, excel)**

	Frequency	Percent
Yes	52	65.0
No	28	35.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data (2022).

Companies that have software for big data analysis formed the highest proportion of 65 percent while those without the software for big data analysis had the least proportion of 35 percent. This is significant as indicated in the table below.

Table 4.10 shows an ANOVA regression between software for big data and productivity were productivity was a dependent variable while software for big data an independent variable.

**Table 4.10 ANOVA of Software for Big Data\*Productivity (Market Share)**

ANOVA <sup>a</sup>						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.457	1	13.457	20.981	.000 <sup>b</sup>
	Residual	50.030	78	.641		
	<b>Total</b>	<b>63.488</b>	<b>79</b>			

Source: Field data (2022).

The results show that the significance value is 0.000 which was less than 0.05 therefore software for big data had an effect on productivity or market share. The F critical at 5 percent level of significance was 3.96. Since F calculated is less than the F critical (value = 20.981), this shows that there was a significant relationship between software for big data and productivity (market share) in insurance companies.

Table 4.11 shows the insurance companies that have mobile insurance services to improve on the productivity.

**Table 4.11 Insurance Companies that have Mobile Insurance Services**

	Frequency	Percent
Yes	38	47.5
No	42	52.5
<b>Total</b>	<b>80</b>	<b>100.0</b>

Source: Field data (2022).

The results indicate that insurance companies which had no mobile insurance services had the highest proportion of 52.5 percent while those that had mobile insurance services had the lowest proportion of 47.5 percent. The result is significant as indicated by the ANOVA regression table below.

Table 4.12 shows an ANOVA regression between mobile insurance services and productivity (productivity was a dependent variable while mobile insurance services was an independent variable).

**Table 4.12 ANOVA of Mobile Insurance Services\*Productivity (Market Share)**

ANOVA <sup>a</sup>						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.038	1	4.038	5.297	.024 <sup>b</sup>
	Residual	59.450	78	.762		
	<b>Total</b>	<b>63.488</b>	<b>79</b>			

Source: Field data (2022).

The results show that the significance value is 0.024 which was less than 0.05 therefore innovation had an effect on productivity. The F critical at 5 percent level of significance was 3.96. Since F calculated is less than the F critical (value = 5.297), this shows that there was a significant relationship between mobile insurance services and productivity (market share) in insurance companies.

Table 4.13 shows the distribution of respondents on how technology influences productivity.

**Table 4.13 Impact of Technology on Productivity (Market Share)**

	Frequency	Percent
Yes	70	87.5
No	10	12.5
<b>Total</b>	<b>80</b>	<b>100.0</b>

*Source: Field data (2022).*

Results show that the higher proportion of respondents were 70 representing 87.5 percent said technology had an effect on innovation while lower proportion of respondents were 10 representing 12.5 percent of the population said technology had no effect on innovation. The result is significant as indicated by the ANOVA regression table below.

Table 4.14 shows an ANOVA regression between technology and productivity (productivity was a dependent variable while technology was an independent variable).

**Table 4.14 ANOVA of Technology\*Productivity (Market Share)**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.400	1	1.400	6.500	.013 <sup>b</sup>
Residual	16.800	78	.215		
<b>Total</b>	<b>18.200</b>	<b>79</b>			

*Source: Field data (2022).*

Results from the study show that the significance value is 0.013 which is less than 0.05 thus the technology had an effect on innovation. The F critical at 5 percent level of significance was 3.96. Since F calculated is less than the F critical (value = 6.500), this shows that there was a significant relationship between technology and innovation in insurance companies. We reject the null hypothesis and conclude Technology has an impact on innovation.

Table 4.15 shows the distribution of respondents on whether pricing technique has got an effect on productivity.

**Table 4.15 Impact of Pricing Technique on Productivity (Market Share)**

	Frequency	Percent
Yes	70	87.5
No	10	12.5
<b>Total</b>	<b>80</b>	<b>100.0</b>

*Source: Field data (2022).*

Results from the study indicate that 70 respondents representing the highest proportion of 87.5 percent said pricing had an effect on growth in revenue while 10 respondents representing the lower proportion of 12.5 percent said pricing had no effect on growth in revenue. The result is significant as indicated by table ANOVA regression table below.

Table 4.16 shows an ANOVA regression between pricing technique and productivity (productivity was a dependent variable while pricing technique was an independent variable).

**Table 4.16 ANOVA of Pricing Technique\*Productivity (Market Share)**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.207	1	1.207	21.681	.000 <sup>b</sup>
Residual	4.343	78	.056		
<b>Total</b>	<b>5.550</b>	<b>79</b>			

*Source: Field data (2022).*

The above table shows that the significance value is 0.000 which was less than 0.05 therefore pricing had an effect on revenue (market share). The F critical at 5 percent level of significance was 3.96. Since F calculated is less than the F critical (value = 21.681), this shows that there was a significant relationship between pricing techniques and revenue (market share) in insurance companies.

## Discussion

### Research and Market Share

Research creates a bridge between floundering in the same old routine of presenting the same products and ingenuity of presenting a product mix that is second to none. It’s also a bridge between the insurance company and the clients. The findings in this research were that research and development had an impact on innovation. According to Scarpetta *et al.* (2002), ‘empirical evidence shows that developing and delivering new products that are differentiated, solves major customer problems, and offer a compelling *value proposition* to the customer or user is the number one key to profitability’. For any organization to excel it needs to have growth in revenue. All activities in an organization will at one point or the other generate a cost. This has to be absorbed by the liquidity in the company. Research and Development (R &D) leads to significant improvement in market share and productivity. According to findings 55 percent of the insurance companies said they had a research department in their Companies. On the other hand, 45 percent did not have any research department.

The highest proportion of respondents 46.3 percent said research was effective in the claims section while 5 percent said Accounts had the lowest proportion. The researcher disagrees with this perception because it is the at underwriting stage that one convinces the customer to buy the product, which means it is expected that an underwriting department must be impacted more by research and development. It is clear that if you are to harness high productivity in the company you need to have a sound robust research department. In agreement Copper and Edgett. (2008) have defined ‘‘productivity as output over input, or ‘the most bang for the buck.’ Productivity is output measured as new product sales or profits divided by input measured as R&D NPD costs and time’’. Higher proportion (91.3%) of respondents in this research said the research department had an effect on innovation while the lower proportion (8.8%) of respondents said that the research department had no effect on innovation.

### Price and Market Share

Results from the study indicate that 70 respondents representing the highest proportion of 87.5 percent said pricing had an effect on revenue while 10 respondents representing the lower proportion of 12.5 percent said pricing had no effect on revenue. Kotler (2014), clearly put it that ‘price is one element of the marketing mix that produces revenue; the other elements produce costs’. This explains the

desperation of the new entrants; their first move is always to undercut premiums with the view of winning some clients in order to take a ‘bite’ at the market share.

Michael (2008) said ‘Profitable markets that yield high returns will attract new firms. This results in many new entrants, which eventually will decrease profitability for all firms in the industry. Unless the entry of new firms can be blocked by incumbents (which in business refers to the largest company in a certain industry, for instance, in telecommunications, the traditional phone company, typically called the "incumbent operator"), the abnormal profit rate will trend towards zero (perfect competition)’. It is critical for the Pensions Insurance Authority (PIA) to change the ‘goal posts’ because the Zambian market is small. There is need to increase regulation of the market and increasing the minimum capital requirement for setting up an insurance company or broking firm would be a good start. The industry seems to be growing exponentially but on very shaky platform characterized by liquidity challenges. To avoid many of these new entrants from winding up it is important that some barriers to entry are created especially the minimum capital requirement. On the contrary, Scarpetta *et al.* (2002), stated categorically that ‘easing product market regulation and employment protection, positively affects multi-factor productivity levels and technological catch-up by raising the incentives to improve efficiency and lowering the costs of doing so’.

According to the Pensions and insurance authority (2014) ‘the industry had over 27 insurance companies and 49 brokers at the end of July 31<sup>st</sup> 2014. The industry also had two local reinsurance companies, 260 agents and a number of other players’. It is against this back ground that ‘Top predators’ get the enthusiasm or drive to use innovation as a tool to differentiate their products from that of others. This way they can create an offering which is unique tailor made to suit the clients. In the near future companies that are not able to come up with new ideas, new products, new and better ways of underwriting and efficient claims processing will end up being smothered away from business. This will result in mergers for the small struggling companies at the bottom. Failure to do so will result in liquidity challenges because of not creating and collecting enough premiums. This means the going concern is brought to an end by challenges of meeting financial obligations, consequently, such companies will go under ‘dead and buried’.

The table above shows evidence of insurance company’s gross premium income shrinking due to competition.

**Table 4.17 Market Share in 2011-2014-ZSIC GI - SBP 2015-2017**

Company	Sept 2014	Position	2013	Position	2012	Position	2011	Position
	Gross Premium		Gross premium		Gross premium		Gross Premium	
			ZMK million		ZMK million		ZMK million	
<b>Professional ICZ</b>	149,520	3	266,539	1	246,320	1	206,403	2
<b>Madison General Ltd</b>	147,382	2	234,967	2	234,867	2	210,120	1
<b>ZSIC GI</b>	123,382	4	173,580	3	220,025	3	201,092	3
<b>NICO</b>	160,055	1	109,708	4	121,698	4	114,113	4

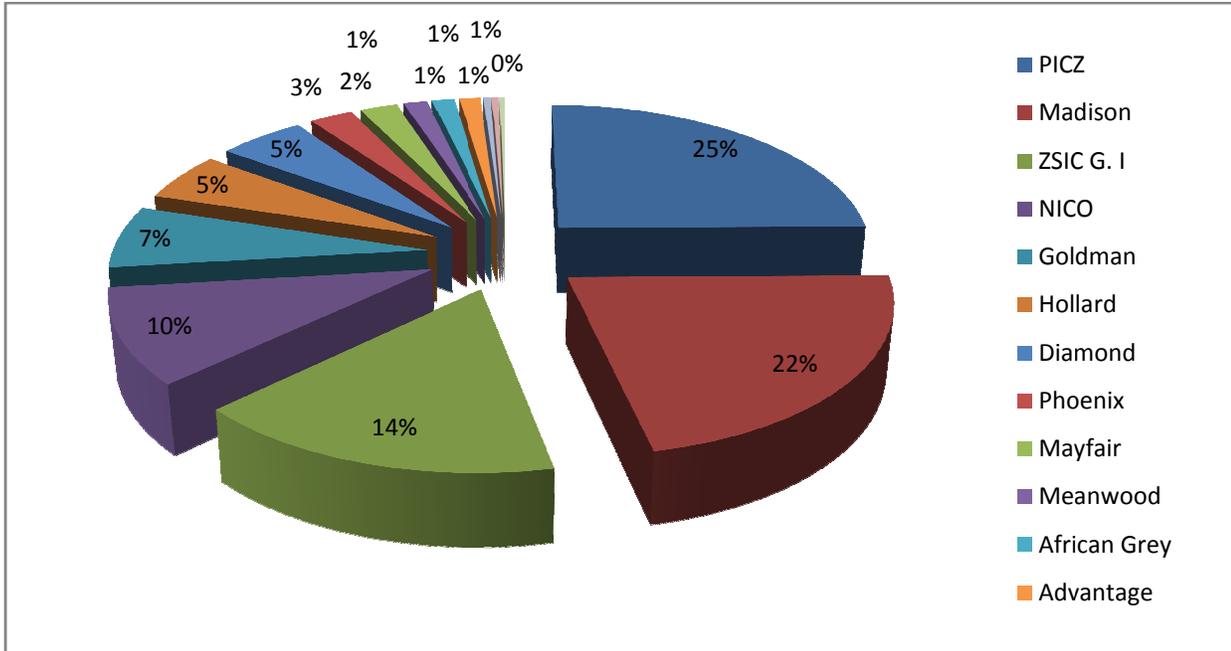
<b>Goldman Insurance</b>	50,777	6	72,324	5	58,103	5	40,841	5
<b>Hollard Insurance</b>	67,873	5	56,534	6	34,954	7	19,469	7
<b>Diamond</b>	44,343	7	54,985	7	49,305	6	46,571	6
<b>Phoenix of Zambia</b>	22,500	8	27,406	8	25,270	8	14,516	8
<b>Mayfair Insurance</b>	17,222	11	23,782	9	12,529	9	7,078	9
<b>Meanwood</b>	19,080	9	14,806	10	3,679	11		
<b>African Grey</b>	18,151	10	14,068	11	8,602	10		
<b>Advantage</b>	8,565	13	13,217	12	3,526	12		
<b>A Plus</b>	6,363	14	4,345	13	-			
<b>Focus</b>	11,503	12	4,165	14	-			
<b>General Alliance</b>	4,790	15	2,907	15	-			
<b>Total</b>	<b>851,506</b>		<b>1,075,346</b>		<b>1,020,890</b>		<b>862,213</b>	

*Source: Pensions Insurance Authority, (2014)*

It is clear that companies at the top have not been very innovative or their efforts are not hitting the target market. The top three companies experienced a drop in market share in 2014 compared to 2011. PICZ dropped from K206,403,000.00 to K149,520,000.00, Madison General dropped from K210,120,000.00 to K123,382,000.00 and ZSIC General dropped from K201,092,000.00 to K123,382,000.00.

On the other hand, at the bottom we can see some gains but some companies also experienced reduced market share. Comparing 2013 to 2014 Phoenix dropped from K27,406,000.00 to K22,500,000.00, Mayfair dropped from K23,782,000.00 to K17,222,000.00, Meanwood increased the market share from K14,806,000.00 to K19,080,000.00, African Grey also increased market share from K14,068,000.00 to K18,151,000.00.

On the contrary, the bottom two dropped their market share. Advantage dropped from K13,217,000.00 to K8,565,000.00 while Aplus dropped from K4,345,000.00 to K6,363,000.00.



**Source:** Pensions Insurance Authority, (2014)

It is clear that insurance companies that are not implementing a combination of new ideas, new product offering, and better computerized underwriting processes, improved claims handling computerized services and partnerships companies will experience shrinking gross premium income. 52 percent representing 41.6 of the respondents said undercutting does not lead to an increase in premium income while 28 percent or 35 respondents said undercutting leads to an increase in premiums. In my view undercutting gives small companies some relief in the short run but in the long run it begins to chew into the pool, subsequently, companies begin to struggle with claims settlement. Pricing alone cannot be innovative enough to realize serious profit margins.

### Technology and Market Share

Results show that the higher proportion of respondents (70) representing 87.5 percent said technology had an effect on innovation while lower proportion of respondents were 10 representing 12.5 percent of the population said technology had no effect on innovation. The companies at the bottom A plus 10 percent, Focus 6.25 percent and African Grey 6.25 percent said Technology had an effect on market share and when you compare with table showing market share they were growing. However, even when the companies at the top (Madison 1.25 percent, ZSIG GI 15 percent and NICO 10 percent) also said the same thing they were observed to be reducing their market share, it's possible that they have not implemented the right innovations.

Technology was observed to be the bed rock of innovation; a 'birds eye' view on the insurance industry revealed that insurance companies had invested a lot of money in new software and hardware with the view of offering quality products to the customers. My interest here was to see if the companies are moving with the current trends in the Insurance industry. Current trends in the industry are gravitating towards big data, cloud computing, mobile insurance and Enterprise resource planning (ERP). The question is; do such efforts lead to increased market share?

According to Mytelka and Smith (2001), they said 'Industries that are regarded as 'traditional' or mature or 'low-tech' often generate substantial amounts of sales from technologically new products and

processes'. In my research it was found that the higher proportion of respondents (92.5%) said innovation has an effect on market share while the lower proportion of respondents (7.5%) said innovation has no effect on market share. In agreement Parker Beauchamp, (2015) says through investing in new technologies and innovations, Insurance companies had improved the quality and efficiency for products, claims and business practices.

Some of the new trends include big data analysis software on-line services and Mobile services. Companies that have software for big data analysis formed the highest proportion 65 percent while those without the software for big data analysis had the least proportion of 35 percent. Manual cover notes are difficult to process and reports tend to be inaccurate. The use of software packages for insurance companies enables the insurance company to produce proper management reports and you are able to forecast your demand more accurately. In agreement, Laudon and Laudon (2014) said 'Sales forecast and demand forecast is critical to estimation of revenue for the company'.

The results indicate that insurance companies which had no mobile insurance services had the highest proportion of 52.5 percent while those that had mobile insurance services had the lowest proportion of 47.5 percent. Mobile Insurance is fairly new phenomenon but is quite cheap and convenient way to do insurance. Companies that have invested in software technology like Enterprise Resource Planning (ERP) are able to know their customers in that they have detailed information about them. These computers software are able to send messages to phones reminding customers about the policies that are due for renewal or even a reminder about premiums which were overdue. Some websites are interactive; one can inquire and even get a quotation on line.

Nonetheless, technology does not come cheap you have to dig deeper in your 'pockets'. This could be the reason why some companies have set themselves apart from others as the Top 'Predators'. Kaupp the chief executive officer of Archer Point had pointed out clearly that Technology does not come cheap. He said that 'for a typical mid-sized company, the total software and services cost would range between \$150,000 and \$750,000. The company might also spend more money on Hardware and infrastructure. These estimates are drawn on assumption that implementation is done on the premises as opposed to subscription-based solutions'. In agreement Henrik (2004) had clearly put it that 'the cost of developing new technologies and products are generally high , investing in research and development in order to be more innovative was observed to be an expensive venture'. On the contrary, in my research the highest proportion of 74 percent (59) of respondents said the cost of technology does not hinder investment in technology, the lowest proportion of 26 percent (21) said it hindered investment in technology.

Henrik (2004), has argued that the 'internal quality structure was also seen as an obstacle to innovation, especially with respect to methods for evaluating new ideas, and the high costs in combination with a certain lack of experience from developing radical ideas has produced a situation where conventional ideas tend to be chosen for development'. According to me, certain companies tend to have centralized management system. This means that the authority will be polarized more at head office. Consequently, the structure does not allow the flow of ideas from various branch networks or if they do, the good ideas are archived whereas the poor ideas from certain groups of people from the head office will always tend to be dominant. Bureaucratic tendencies have been very successful at creating hemorrhages for good ideas and the company ends up with mediocre products and ideas.

### **Innovation and Market Share**

It was found that the higher proportion of respondents (92.5%) said innovation had an effect on productivity (market share) while the lower proportion of respondents (7.5%) said innovation had no

effect on productivity. The hypothesis test proved that that innovation does have an impact on productivity. Innovation is no doubt the difference of being a top ‘predator’ and being at the bottom in the insurance industry. Mytelka and Smith (2001) said ‘industries that are regarded as ‘traditional’ or mature or ‘low-tech’ often generate substantial amounts of sales from technologically new products and processes’. It is a forgone conclusion that companies invest in new product development (NPD) with the view to set the pace in terms of market share. Companies were observed to have created interesting partnerships with other cooperating partners in order to set themselves apart from the rest. In an effort to enhance productivity, Insurance companies had been seen forming partnerships. For example ZSIC General insurance Company Limited has had to partner with Roads Transport Safety Agency (RTSA), the idea was that RTSA would sale road tax while ZSIC General Insurance Company Limited would be selling insurance. The two products are complimentary goods. On the other hand, PICZ had partnered with Zampost so that as Zampost clears vehicle sales, PICZ would sale insurance to new vehicle owners. Mayfair had partnered with Tobacco Association of Zambia in order to participate in the Tobacco Marketing and Insurance. I observed from the questionnaires that most of the respondents did not want to reveal examples of the products their companies had invented and put on the market. It could be that they did not know their own products or they did not want to be victims of corporate espionage. However, a good number had mentioned a few of their new products.

The research attempted to find out if the respondents understood what innovation was. It is a fact that innovation is coming up with new ideas , better underwriting processes, faster methods of claims processing, good sound accurate accounting processes. In a nutshell innovation is a broad concept embracing many things. Most of the respondents with 47.5 percent proportion said that innovation meant coming up with new ideas, coming up with new products, coming up with better ways of issuing policies and coming up with effective ways of processing claims while few respondents with 3.8 percent said innovation meant coming up with new products and coming up with effective ways of processing claims respectively.

74 respondents representing 92.5 percent said Innovation had an effect on productivity (market share) while 6 respondents representing 7.5 percent said Innovation had no effect. The companies at the bottom A plus 11.25 percent , Focus 5 percent and African Grey 6.25 percent said Innovation had an effect on productivity and when you compare with table showing market share they were growing. However, even when the companies at the top (Madison 0.025 percent, ZSIC GI 15 percent and NICO 10 percent) also said the same thing they were observed to be reducing their market share, it’s possible that they have not implemented the right innovations.

Some of these products are hardly known by clients on the market and some have just not been heard off. This is a summary of the Insurance Industry in Zambia which is characterized by poor marketing. In some cases the products are developed without conducting any market research and involvement of the recipients, subsequently, such products end up being a disaster.

According to Scarpetta *et al.* (2002), ‘the customer or user must be an integral part of the entire development process, from scoping, through product definition, development and right on to validation and beyond’. In my research the highest proportion (61.25%) of respondents said that clients are involved when coming up with new products in insurance companies while the lowest proportion (38.75%) said clients are not involved. 38 percent of respondents felt their insurance companies did not involve their clients when coming up with new products surely this is very significant. It may explain why some products are not known at all and this could be the reason why some products do not perform well on the market. Kotler (2014), propounded to us the vivid example of how emotions of customers are critical to brand loyalty. In 1985 Coca-Cola attempted to change the taste of Coca-Cola to compete

with the sweeter-tasting Pepsi-Cola. Coca-Cola spent \$4 million on market research. The idea was to replace the old formulae with the new one which they called 'new Coke'. The tests they conducted revealed that people preferred the new Coke. However, when the new product was launched, it attracted a national wide protest. This was a clear testimony that Coca-Cola did not do enough to evaluate the emotional attachment of the consumers. Subsequently, they had to reintroduce the century-old formula as 'classic Coke'. This could be the challenge facing our Insurance Industry, launching products on the market that have not been tested through research and which do not have customer focus. The end result is product failure on the market.

Perhaps the problem is that companies underestimate the value of brand loyalty and end up with very low results from their launches of new products on the market. This is typical of the Insurance Industry where we see a lot of buzzing about new products. A microscopic look at the 'noise' reveals that products offer less than what is expected and in many ways than none, they do not fare well at all. Some clients do not want to move to other companies because of their long-term business relationship and brand loyalty, subsequently, innovation has not wooed them to the competitors. Nonetheless, if you involve clients in new product development and restructure your offering according to their tastes, the results are usually buoyant and lead to increased productivity.

In 1997, entertainment in Las Vegas launched a pioneering loyalty programme that pulled all customer data into a centralized warehouse and provided sophisticated analysis to better understand the value of the investment made in its customers. One company cut back its traditional ad spending, largely replacing it with direct mail and e-mail system. Good customers would receive as many as 150 pieces in a year for gambling. In addition, they had introduced a latest loyalty innovation mobile marketing that would send time-based and location-based offers to customer's mobile devices in real time. The business raised about US\$6.4 million in revenue (Kotler, 2014). The focus here was on what the customers really wanted, they also understood who was their best customer and they did this by building on the foundation of brand loyalty. Some new entrants on the market tend to underestimate companies which have been on the market for a long time and quickly introduce new products without appreciating the extent of brand loyalty prevailing on the on the market; the results tend to be catastrophic. However, investment in technology does bring immediate change to a business.

## **Conclusion**

In a competitive market characterized by free entry of new insurance companies with few or no barriers to entry, no insurance company in the long run will be productive without updating its products and services or the ways in which they are produced or delivered. Since innovation tends to be involving and each innovation presents its own limitations, an important part of the innovation process is finding the right balance between conflicting demands. In many ways than none, there is always a new way in which you can present your product mix through tailor made products but marketing is the key to unlocking the demand. In addition, there are thousands of possible applications of a new technology. Determining the right formulae of such possible combination is always a mystery.

Innovation is a culmination of information from different fields: technology, market, design, and economics. Innovation encompasses a broad spectrum of initiatives including new product development, better underwriting processes, effective and efficient claims handling processes, Implementation of new software and hardware, mobile insurance services and enterprise resource planning, etc. You cannot draw meaningful conclusions from what one company has done or is doing. This is a preserve of a market research analysis of the whole industry. This research was an attempt to enlighten the stakeholders about positive attributes of innovation.

Research creates a bridge between floundering in the same old routine of presenting the same products and ingenuity of presenting a product mix that is second to none. It's also a bridge between the insurance company and the clients. The findings in this research were that research and development had an impact on innovation. Results from the study indicate that 70 respondents representing the highest proportion of 87.5 percent said pricing had an effect on revenue while 10 respondents representing the lower proportion of 12.5 percent said pricing had no effect on revenue. Kotler (2014), clearly put it that 'price is one element of the marketing mix that produces revenue; the other elements produce costs'. This explains the desperation of the new entrants; their first move is always to undercut premiums with the view of winning some clients in order to take a 'bite' at the market share. Technology was observed to be the bed rock of innovation; a 'birds eye' view on the insurance industry revealed that insurance companies had invested a lot of money in new software and hardware with the view of offering quality products to the customers. My interest here was to see if the companies are moving with the current trends in the Insurance industry. Current trends in the industry are gravitating towards big data, cloud computing, mobile insurance and Enterprise resource planning (ERP). It was found that the higher proportion of respondents (92.5%) said innovation had an effect on productivity (market share) while the lower proportion of respondents (7.5%) said innovation had no effect on productivity. The hypothesis test proved that that innovation does have an impact on productivity. Innovation is no doubt the difference of being a top 'predator' and being at the bottom in the insurance industry.

Innovation has a greater impact on the productivity of any company or organization resulting to customer retention and satisfaction. Innovation has evolved to become a long tedious process of constant interaction; with the customer on your books, future would-be customers, current suppliers and competitors, with consultants and with academic researchers. The future growth of insurance companies hinges on the efforts each company puts in innovation. This will in turn can give the customers a new offering that is designed for their 'taste buds', that is delivered ,processed and packaged to meet their expectations. Innovation has a significant effect on the market share.

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### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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