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A Study on Factors Influencing Motor Insurance In India

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ABSTRACT

Motor insurance had its first phase in the United Kingdom in the beginning part of the last century. The initial motor car was introduced in England in the year 1894. The earliest motor insurance policy was established in the year1895 to cover up third party liabilities. However, by the year1899 accidental damage to the car was added to the policy. In this way initiated more comprehensive policy along with the lines of the policies issued today. The study examined the impact of Automobile Sales, No. of Road Accidents, Road Length and Auto Claims Incurred on Motor Insurance Premium. Secondary data was collected from Handbook on Indian Insurance Statistics and Centre for monitoring Indian Economy from 2005-2006 to 2017 to 2018. Data collected was analysed with the aid of multiple regression analysis. The study revealed that statistically there is a significance relationship between the explained variable Motor Insurance Premium and explanatory variables; Automobile Sales, No. of Road Accidents, Road Length and Auto Claims Incurred) on which predictions were made. Therefore, it is recommended that company should focus on location, branch network, effective service delivery, simplicity in opening account, interest rates, infrastructure so as to effectively satisfy customers' wants. And also, appropriate marketing strategies to retain and stimulate potential customers in order to ensure that their market share is continuously increasing and there should be effective and efficient management that is saddled with the responsibility of analysing all the identified factors and due attention to these factors.

Key words: Motor insurance, Insurance policy, Automobile sales, Road accidents and Road length

INTRODUCTION

Motor Insurance is the biggest and fastest growing general insurance portfolio in Indian market. It is one of the most important branches of insurance which has direct impact on the life of general public all over the world **(Prinja *at el.* 2012)**. With over fifty five million vehicles on Indian roads and a lawful requirement for insurance for every vehicle on road, it is simple to identify and understand why this portfolio plays such a major role in insurance services especially in India. Motor insurance had its first phase in the United Kingdom in the beginning part of the last century. The initial motor car was introduced in England in the year 1894. The earliest motor insurance policy was established in the year1895 to cover up third party liabilities **(Bashir I et al. 2013)**. However, by the year1899 accidental damage to the car was added to the policy. In this way initiated more comprehensive policy along with the lines of the policies issued today. In the year 1903, General Insurance Corporation Ltd. was initiated primarily to manage motor insurance followed by other companies or organisation. After First World War (World War I), there was significant increase in the number of vehicles on the road which actually led to the increase in the number of accidents as well. Many injured persons in road accidents were not been able to recover losses since all motor vehicles were not insured. This resulted to the establishment of mandatory third party insurance through the passing of the Road Traffic Act 1930 and 1934. The obligatory insurance provisions of these Acts have been consolidated by the Road Traffic Act 1960 **(T and Sirajuddin K, 2016)**. In India, the Motor Vehicles Act was passed in the year 1939 establishing the law relating to compulsory third party insurance. The practice of motor insurance in India generally follows that of the U.K market. The activities were regulated by fixed rate regime till March 2008, but now it is left to the insurance companies to make decision on the rate of premium to be charged to the customer. Motor vehicles Act 1988 initially replaced by 1939 Act which became effective from 1st July 1989. Auto insurance provides protection to the vehicle owners against damages to his vehicle and pays for any Third Party Liability determined as per rules against the owner of the vehicle. Third Party Insurance is a legislative requirement. The owner of the vehicle is lawfully liable for any injury or damage to third party life or property caused by or arising out of the use of the vehicle in public locations. Driving a motor vehicle without insurance in a public place is an offence that is punishable with regard to the Motor Vehicles Act, 1988. Although, Motor Vehicle Insurance is also considered as an area which suffers largest loss but it also recognized as major source of premium earnings for the insurance companies. **(Mathur D. and Tripathi A, 2014)**

Need of the study

Insurance activities in India are normally understood as a means to save the tax for a person. It is never counted as a measure for long term investments. In Indian the issue of savings can took place only in banking financial sectors in terms of fixed deposits and other investment instruments that are available to them. Some individuals also want to invest in gold. Immediately after the independence, the Life Insurance companies were nationalized in 1956, and then the general insurance business activities were nationalized in 1972 **(Dutta M M and Mitra G, 2015)**. Life Insurance companies of India have dominated the insurance business over Indian Life Insurance sector. But when private companies entered in to the market having alliance with expatriate insurance business professionals, Indian insurance markets have converted into highly competitive markets. The regulatory body like Insurance Regulatory and Development Authority Act 1999 (IRDA Act) was passed in to law by parliament of India and in 2000 President of India provided his consent to the act. Insurance Regulatory and Development Authority Act, that consists of a chairman, five full-time members and four part-time members **(Varma S. V, 2003**). The practice of motor insurance in India generally follows that of the U.K market **(Nzenga M. R, 2008)**. The activities were regulated by fixed rate regime till March 2008, but now it is left to the insurance companies to make decision on the rate of premium to be charged to the customer. So many studies were carried out on motor insurance but only few examined the impact of Automobile Sales, No. of Road Accidents, Road Length and Auto Claims Incurred on motor insurance and also most of the studies on motor insurance were conducted based on original data from the customers and employees of insurance companies. Therefore, the present study attempted to feel the gap by assessing the impact of mentioned factors on motor insurance premium and it was conducted on the bases of secondary data.

Objectives of the study

The main objective of the study was to examine the factors influencing the motor insurance in India. However, the specific objectives are;

I. To ascertain factors influencing the growth of motor insurance in India

II. To assess the influence of Automobile sales on Motor Insurance Premium and

III. To examine the influence of Auto claims incurred, Road Length and Road accidents on Motor Insurance Premium.

Research hypothesis

HO: There is no significance impact of Auto mobile sales, Auto claims incurred, Road length and road accidents on motor insurance premium.

HI: There is no significance impact of Auto mobile sales, Auto claims incurred, Road length and road accidents on motor insurance premium.

LITERATURE REVIEW

Kumar N.B and Vadivel J A (2016) examined the awareness of the policy holders on various aspect of motor vehicle insurance on credit policy. The study found out that there is improvement in the performance of Indian market in motor portfolio during the last decade income has been in satisfaction. It was recommended that there should be sharp focus on better client services, improved personnel management and information technology. **Ariff U T and Sirajuddin K (2016)** examine policy holders Perception towards Motor Vehicle Insurance with special reference to Pollachi Taluk. The study indicated that there was a significant association between gender and monthly income based on the chi square test. It was also revealed that majority of the policy holders prefer faith in the insurance company, services are promptly render, friendly and good members of staff in the insurance company and many other good things. The future growth of the motor insurance sector will largely rely on effectiveness of the company in providing services that can satisfy clients' needs and wants adequately. It also revealed that the capability of the motor insurance company in changing the perception of clients is another key factor. **Mathur D and Tripathi A (2014)** investigated Factors affecting Customers choice for the selection of Insurance Companies in Ajmer city India. The study revealed that Proximity of the company, Infrastructures and services renders by the company, convenience in terms of security and privacy, Technological activities, Image of the company, reputation, prompt response and ownership were the essential factors influencing the customer's choice of insurance companies. It also found out that customers are influence by the guidance by the members of the staff. **Dara S. and Dhanraj S. (2016)** examine motor insurance claims in India. The study indicated that the number of claims have incurred during the period of 2009 to 2010 and later decreased. It also revealed that there is increasing trend in claims incurred but the actual growth rate is steadily declining. It also found out that claims incurred under NET have increased. **Dutta M M and Mitra G (2015)** examine the factors affecting the growth of Motor insurance in India. It indicated that there is an increase of 42% of net growth rate of premium for auto insurance and automobile sales has been increase 13.7% per year during the 2005 to 06 to2013 to 2014. This occurred due the improvement in quality of road and increase in awareness creation on the safety of road and regulations on the road. It is also revealed that continuous grow of auto insurance premium in India is observed. The dominant factors affecting its growth been the auto incurred. **Shuthi, P. et al (2014)** investigated factors affecting the demand for insurance in Davangere City. It found out that legal factor is the main stimulating factor for the purchase of Insurance and motor insurance and health insurance for migrant are found to be driven the insurance market as compulsory business, while the attitude of non insurance uses were the basic de motivating factors influencing the non users remain as they are. **Langat W. K. Et al (2017)** investigated the influence of client's behaviour on the uptake of insurance products and also the examination of the determinants factors which determine insurance uptake in developing nations. The study Indicated that there is significant relationship between the economic factors of customers and insurance uptake, the customers age is one factor that determine whether customers take factors like claim settlement, product awareness and greatly affect insurance uptake. And income, wealth and interest rate are main determinants in the uptake of insurance services. **Varma S V (2003**) examined the driving factors that can put auto insurance companies in the successful road. It revealed that there is no suitable exist mechanism from the portfolio, and the way forwards is to put necessary resources in place to improve performance in all aspects of motor insurance investment because challenges are apparent before the insurers. More and more auto mobiles will hit the Indian roads. Thus, the growth is secured. It is also found out that competition will be on bases of resources and competence in the operating the activities of the company. Product innovation and differentiation in price will matter but not in short period or in immediate future till the diversified investments remain in the tariff regime. **Bashir I et al (2013)** examined challenges facing motor insurance companies. The study revealed that motor insurance companies experiencing loses and having a high ratio of claims payment. But it's shifting its failures to the shoulders of the policy makers. **Nzenga M R (2008)** analysed the factors influencing the growth of life insurance investment activities in Nairobi Kenya. The indicated that sale promotion as a tool is capable of enhancing life insurance business but companies adopted other methods which are less effective. It is also revealed that professional training programmes are lacking. There is lack of proper government regulations and policies and proper service delivery is also lacking. **Borda M and Jedrzychowska A (2012)** examined attitudes and decisions of the motor insurance buyers in Poland. The study found out that there was positive but weak correlation between customers especially women and highest degree of satisfaction with the process of services provision when buying insurance services. Most of the customers prefer popular motor insurance's product packages when they wish to purchase. The customers were satisfied with the services that have been delivering to them, so, they wish to continue patronising their companies. **Smith K A. et al (2019)** examined the customers' retention and insurance claim pattern.The study found out that price is one factor that has impact on the policy holder's decisions to renew their policies. Undirected data missing was used to analyse claims patterns by grouping the data to reveal natural data structure. Data missing is recognised as one of the useful methods of dealing with challenges. **Rani D M S and Gobana S K (2017)** investigated the prices and services offer by both public and private insurance companies and assessed main factors for competition among the insurance companies. The study found out that, hug gap exist, and resulted due to the issue of correctly rating risks, incorrect rating may lead company's disaster, good rating lead to successful operation. It also revealed that public sector investment are dominating in the public insurer. Competitions are on the bases of premium rate. **Narasima M. G. (1996)** examined and assessed the customer services rendered by Insurance company at Hanamkonda branch in Andhra Pradesh. The study revealed that majority of the policy holders were satisfied with premium rates fixed by Life Insurance Company and remaining ones were unsatisfied. **Eling and Huang (2013)** analyzed the efficiency of non-life insurance corporations in the BRIC Countries (Brazil, Russia, India, China) for the period 2000 to 2008. The result shows that India has less efficient and Brazil has more efficient than other BRICS counties. **Prinja *at el.* (2012)** analysed the efficiency, equity, and quality of health insurance in India. It found that India's health system has problems such as infrastructure, governance and management capacity, regulatory frameworks and management information system. The unregulated private insurance sector fails in providing quality. However, some schemes have improved and strengthen the quality and infrastructure of public healthcare system.

RESEARCH METHODOLOGY

For the purpose of this study thirteen year data representing the period from 2005 to 2018 were used to examine the impact of Automobile sales, Number of Road accidents, Road

Length and Auto claims incurred as explanatory variables on dependent or explained variable Motor insurance premium. Thus, secondary data from handbook on Indian Insurance Statistics and Centre for monitoring Indian Economy were gathered and analysed with the aid of inferential statistics, specifically multiple regression analysis only.

DATA PRESENTATION ANALYSIS AND INTERPRETATION

The collected data was presented, analysed, interpreted and discussed with the aid of multiple regression analysis.

The table below shows the thirteen year data on Motor Insurance premium at Rs. Crores,(Y) Automobile sales at Rs. Crores (X1), Auto claims incurred at Rs. Crores (X2), Road length in Kms. (X3) and X4 which is Road accidents.

Table one: shows the original data of the variables under study.

Years	Premium	Automobile Sales	Auto Claims	Road Lengh in Kms	Road Accidents
2005-2006	6762	70384	6643	2980651	460920
2006-2007	7938	87311	6722	3116401	479216
2007-2008	9752	84873	9001	3209592	484704
2008-2009	11372	92891	10103	3571510	486384
2009-2010	12758	126479	10782	3682439	499628
20010-2011	15271	165353	15682	3790342	497686
20011-2012	19659	158187	18656	3965394	490383
20012-2013	24809	157215	21597	4245429	486478
20013-2014	29553	147475	23496	4689842	501045
20014-2015	30114	158899	24002	4734571	521125
20015-2016	34987	162345	25113	4911053	540012
20016-2017	39225	163211	23499	5211013	541110
20017-2018	39227	163213	23499	5211015	541112

Source: Handbook on Indian Insurance Statistics and Centre for monitoring Indian Economy from 2005-2006 up to 2017 to 2018 Website: http://www.irda.gov.in

The table one above shows the figures of dependent variable Y (Moto insurance premium), and four independents variables X1, X2, X3 and X4(Automobile sales, Auto claims incurred, Road length and Road accidents).

Table two: shows the summary of results

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.993172215
R Square	0.986391048
Adjusted R Square	0.978614505
Standard Error	1641.286338
Observations	12

The table two above depicted that the value of multiple R is 0.993172215. This means that statistically there is a positive strong relationship which is near perfect relationship between the dependent and independents variables.

Secondly, the table also depicted that the value of R square is **0.98639.** This signified that the dependent variable Y (Moto insurance premium) is influence by independent variables X1,X2,X3 and X4 (Automobile sales, Auto claims incurred, Road length and Road accidents) by about **99%.** That is to say that 99% of the changes in dependent variable Y ((Moto insurance premium) is accounted by independents variables X1, X2, X3 and X4 (Automobile sales, Auto claims incurred, Road length and Road accidents) , only **0.01%** is explained by other independents variables that were not included in the model and can be taken care of by residual.

Table three: shows the ANOVA of the regression analysis and it is one of the important tables.

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	1366756663	341689166	126.8418301	1.30911E-06
Residual	7	18856745.9	2693820.84		
Total	11	1385613409			

The table three above revealed that the significance level of the model is 0.000001. This value is used for the test of hypothesis. Hence, since the level of significance is **0.000001** which is less than the alpha value (0.05) the null hypothesis (HO) is to be rejected and alternate hypothesis (HI) is accepted. Therefore, statistically there is a strong evidence to conclude that there is a strong relationship between dependent variable Y (Moto insurance premium) and independent variables X1, X2, X3 and X4 (Automobile sales, Auto claims incurred, Road length and Road accidents).

Table four: showing the parameters of the model

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-44525.5	18675.8385	-2.3841225	0.04858675	-88686.8	-364.14618	-88686.82722	-364.146
Automobile sales	-0.05384	0.03203731	-1.68049682	0.13674852	-0.12959	0.0219176	-0.12959478	0.021918
Auto claims incurred	0.529728	0.36535026	1.44991935	0.19036252	-0.33419	1.39364449	-0.334187673	1.393644
Road length	0.011067	0.00401199	2.75852221	0.02815589	0.00158	0.020554	0.001580314	0.020554
No. Road accidents	0.037639	0.05722846	0.65769046	0.53176105	-0.09769	0.17296242	-0.097685194	0.172962

Dependent variable motor insurance premium

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$

$Y = -44525.5 - 0.05384X_1 + 0.529728X_2 + 0.011067X_3 + 0.037639X_4$

Where Y is the Dependent variable (Motor Insurance Premium) which is to be predicted, X_1, X_2, X_3 and X_4 are the Independent variables (Automobile Sales, No. of Road Accidents, Road Length and Auto Claims Incurred) on which predictions are to be based and a, B_1, B_2, B_3 and B_4 are parameters, the value of which are to be determined. This mean that the values of the parameters of explanatory variables Automobile Sales, No. of Road Accidents, Road Length and Auto Claims Incurred are capable to predict and determine the changes in dependent variable Y(Motor Insurance Premium).

CONCLUSION AND RECOMMENDATIONS

Motor Insurance is one of the most important branches of insurance which has direct impact on the life of general public all over the world and India in particular. The study concluded that the motor insurance companies are prone to accidental claims and its bottom line is always under wonderful pressure. In recent times Insurance Regulatory and Development Authority (IRDA) has taken very essential and bold steps by increasing the premium rate of third party liability. From First April 2015, IRDA has almost doubled third party motor insurance premium of all classes of vehicles. This will help in realizing profit and meaningful growth on Auto insurance sector. With better technological expertise coming in from the foreign partners and involvement by the IRDA the Motor insurance market in India should turn-around and grow at a faster pace and in a profitable way and manner. And also based on the outcome of the analysis the study concluded that there is a statistically significance relationship between explained variable Y(Motor Insurance Premium) and explanatory variables X1, X2, X3 and X4 (Automobile Sales, No. of Road Accidents, Road Length and Auto Claims Incurred).Thus, about the dependent variable Y (Moto insurance premium) is influence by independent variables X1,X2,X3 and X4 (Automobile sales, Auto claims incurred, Road length and Road accidents) by about **99%.** That is to say that 99% of the changes in dependent variable Y ((Moto insurance premium) is accounted by independents variables X1, X2, X3 and X4 (Automobile sales, Auto claims incurred, Road length and Road accidents) , only **0.01%** is explain by other independents variables that were not included in the model and can be taken care of by residual. Therefore, it is recommended that company should focus on location, branch network, effective service delivery, simplicity in opening account, interest rates, infrastructure so as to effectively satisfy customers' wants. And also, appropriate marketing strategies to retain and stimulate potential customers in order to ensure that their market share is continuously increasing and there should be effective and efficient management that is saddled with the responsibility of analysing all the identified factors and due attention to these factors. There should be effective method of educating the customers about the benefits of insurance services their investment opportunities in terms higher return earnings. Creative advertisement with fear appeal is recommended in order to motivate customers who are not having interest to purchase insurance policies. Finally, insurance companies in India have to take in to consideration the dynamism and innovations.

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