

An Analytical Study on Individual and Group Health Insurance Claim Settlement of Private and LIC in India.

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Abstract - Insurance claims are vital in the current polluted environment. Claims of individual and Group are essential and the selection of right insurance company in this regard is vital and essential. The aim of the paper is to study the claim settlements of LIC and private under Individual and group health insurance companies and to analyze the settlement and predict the claims settlement of the insurance companies which helps for a right decision in selection of a health insurance policy. The methodology applied for the study is descriptive and the model applied is classification analytics through R. The outcome of the paper is that the claims paid by most of the insurance companies are minimal compared to total claims and also found the predicted claims paid are closely associated with the actual claims paid.

Keywords - Analytics, Classification analysis, health insurance, claims

I. INTRODUCTION

Insurance is a necessary than an option in the current polluted world and as such it can be noted that only a small percentage of Indian large population have knowledge or have taken health insurance. In the current fast culture environment people give importance for mobiles, vehicles and other electronics items by taking an insurance but not insured enough for the illness. which makes their family to suffer if he is the sole breadrunner of the family. There are multiple private insurance companies in India

II. REVIEW OF LITERATURE

1. Minal Kalani, Harshal A Salunke, Mukesh B. Ahirrao (2013) : The authors have made an analysis with regards to the existing claim settlement policy available in LIC and other private insurance companies, by using primary data collected from the staffs of the corporation and the questioner filled by the LIC customers, which was helpful in claim settlement process and improvement in operational efficiency. The study has used IRDA annual reports data from 2009-10 & 2010-11 as secondary data to compare the claims settled and the tenure taken by LIC to clear the claims. The study has also categorized different types of claims and the procedure to claim the settlement. It also expects to reveal that, although number of private insurance companies have emerged into India life insurance market, Life Insurance of India seems to be the first choice of the

investors due to the extra-ordinary customer services provided and the safety associated with it.

2. Saudamini Tiwari and Dr. Sanjay Gupta (2014): observed the customer's loyalty and the awareness about the health policies. The study also explains which insurance company has more market shares by comparing top 6 companies survey reports. To understand this primary data was collected from a survey conducted in Gwalior market. The study also have explained the need for health policies and other benefits of having health policies. The research found that LIC had more reliability and customer's preference for LIC. The study also observed that proper communication channels is necessary and have to be clear and true. So that the customer loyalty will increase with the particular company.

3. ET Bureau Jan 20, (2016) : According to the report of IRDA's 2014-15, LIC of India has emerged as the top-ranked insurance player in terms of death claims with a settlement ratio of 98.19% compared to 89.4% clocked by private life insurers. The private sector has also shown improvement as its average claim settlement ratio has increased upto 89.4% in 2014-15 from 88.31%.

4. Rakesh K Yadav (2014): The study has explained the process of collected the death and the maturity claims accordingly and on a timely basis. It also explained that claim settlement is one of the most important parts of the life insurance services. For any insurance company sales of insurance policies is the biggest source of revenue and if claim are not properly settled then it will affect its sales. The study is based on the secondary data collected from IRDA annual report and it shows that LIC of India continue to grow due to its prompt claim settlement, highest insurance premium collections and highest number of policies sold.

5. Rakesh K Yadav and Mohania (2013): Observed that LIC of India is still leading life insurance provider. The strong management framework of claim settlement and uses of intranet technology, claims settlements are done in proper manner and within said durations. It also explained the various types of life insurance services. It also considered the claim settlement process and its ratio while buying any life insurance product. If not aware then employees of LIC of India provides information along with their support at the time of sell and claim settlement, which helps in increasing the sales. Chi-square test is applied in the paper to check the authenticity of data given by respondents. This study is focused on the claim settlement process, quality of services

provided by LIC and its impact on the sales of life insurance policies.

6.B.N. Lalith chanadra and Smt. T. Lavanya Kumari(2015): The study has used the data published by IRDA in their annual reports reveals that the total claims under individual death claims The reports publish the data on individual death claims for LIC, Private Insurers-company-wise- and for the total insurance industry. The present analysis deals with the above three aspects at macro-level and with a comparison at insurance industry. The analysis covers, as said in the methodology, covers a period of 8 years i.e from 2006-07 to 2013-14. More specifically the study has observed that insurance authorities are using "Claims Settlement Ratio" as one of the important measure to attract and satisfy the people and policyholders.

7.Dr. A.G. Vijayanarayanan, Mr. Sathish Kumar.V(2018) : Observed Insurance sector is growing rapidly in India and has huge market. The present scenario of private sector life insurance companies gives tough competition to Life Insurance Corporation. This paper deals with the marketing strategies to cope up the competition. The technology, tangibles and augmented product delivered by private sector life insurance companies make them robust and improve the service quality. The paper is empirical in nature and has identified some of the marketing strategies consisting of eleven variables. The paper finds that marketing strategies may be progressed by catering to middle income group and usage of vigilant technology for the millennial generation.

8.Dr. I. Meenakshi (2018): Observed there are currently, a total of 24 life insurance companies in India. Of these, Life Insurance Corporation of India (LIC) is the only public sector insurance company. All others are private insurance companies. The Life Insurance Corporation of India (LIC) is the largest life insurance company in India and also the country's largest investor. More and more new private insurance companies are coming up year after year. And, these new and private life insurance companies adopt aggressive marketing strategies to introduce their products and to tap the potential policyholders. The researcher takes pride in concluding the study with her vision of 'India' with fully, insured individuals by 2020' since life insurance protects every individual both during one's existence and even beyond one's existence.

III. RESEARCH GAP

From the extensive review of literature done it is found that an extension of existing topic through prediction of exact claims settlement can be obtained for decision making as to the selection of Individual or group health Insurance.

Statement of the problem: Problem statement on the title "An Analytical study on Individual and group health insurance claim settlement of Private and LIC in India".Includes the study of individual and group health insurance claims of private and LIC and to predict the claims settled for strategic decision making.

IV. OBJECTIVES OF THE STUDY

1. To study the claim settlement of LIC and private under Individual and group health Insurance companies.
2. To analyse the settlements under individual and group settlements.
3. To predict the claims paid for strategic decision making.

Interpretation on Descriptive details - S x Residual standard error: 0.5943 on 16 degrees of freedom (1 observation deleted due to missing ness)

Multiple R-squared: 0.9917, Adjusted R-squared: 0.9845
F-statistic: 137.2 on 14 and 16 DF, p-value: 6.238e-14

Table 1: showing the Predicted values and the residuals

y_ prediction	Actual Value	Residuals
89.63595	82.96	6.67595
89.6359	89.34	0.2959
95.36723	89.4	5.96723
91.61853	96.8	-5.18147
93.96126	98.84	-4.87874
99.22895	97.31	1.91895
96.99589	99.2	-2.20411
98.80465	98.19	0.61465
99.04819	99.69	-0.64181

Interpretation - From the above analysis it can be concluded that the predicted values and the actual values are close enough indicating the efficiency of the model used for prediction. The above table numerically indicates a predicted value of 89.63% v/s its actual value of 82.96 in the year 2008-09 and in the year 2015-16 the values of predicted and actuals are 99.04819% and 99.69% respectively. The above analysis helps us in the accurate prediction for further periods.

Table 2: showing Total claims and Total claims paid

Total Claims	Total Claims Paid
Min. :100	Min. :82.96
1st Qu. :100	1st Qu. :93.12
Median :100	Median :97.17
Mean :100	Mean :95.33
3rd Qu. :100	3rd Qu. :98.46
Max. :100	Max. :99.92
NA's :1	NA's :1

Interpretation - Interprets the total claims and total claims paid as per the data taken from IRDA. It compares the total amount of claims in 1st quarter, its Mean, its Median and the 3rd quarter of private sectors and LIC towards death insurance claims. The minimum, 1st quarter, Mean and Median value is 100 which has been determined as total

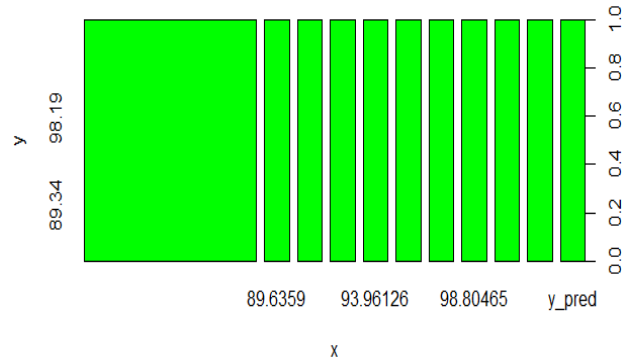
claims by using the statistical tools. The minimum total claims paid value is 82.96, 1st quarter value is 93.1.2, Median value is 97.17, Mean value is 95.33, 3rd quarter value is 98.46 and the Maximum value as 99.92. The above table gives a comparison between the mean. Media and the minimum and the maximum value of total claims expected and total claims paid to the customers by LIC and private sectors.

is 1.825, its Median value is 0.950 and the 3rd quarter value is 2.805 and the maximum value is 7.750 of private sectors and LIC towards death insurance claims. These values has been derived by using different statistical tools as a base to compare the claims pending by both LIC and private sectors.

Table 3: showing the Total claims Repudiated and Claims Written back

Total. Claims repudiated	Claims written back
Min. :0.0000	Min. : 0.0000
1st Qu. :0.3275	1st Qu. : 0.0000
Median :1.1250	Median : 0.0350
Mean :2.6162	Mean : 0.1718
3rd Qu. :4.5725	3rd Qu. : 0.1700
Max. :9.9700	Max. : 1.2100
NA's :1	NA's : 1

Graph 1: Bar Graph Representing Total Claims And Total Claims Paid By Public Sector And LIC



Interpretation: Interprets the total claims repudiated or rejected by the insurance company because of any legal factors or any other un satisfied factors that makes the insurance company to reject the insurance and the total claims written back (i.e. the total amount of claims which was not been claimed by the customers) as per the data taken from IRDA. As per the outcome the total amount of claims rejected in 1st quarter value is 0.3275, its Mean value is 2.6162, its Median value is 1.1250 and the 3rd quarter value is 4.57 and the maximum value is 9.9970 of private sectors and LIC towards death insurance claims. The minimum value of claims written back is 0.00, 1st quarter value is 0.00, Mean value is 0.1718 and Median value is 0.0370 which has been determined as the total amount of claims which remained unpaid to the customers by using the statistical tools.

Graph 2: Bar graph showing the increase and decrease of Claims paid Vs total claims

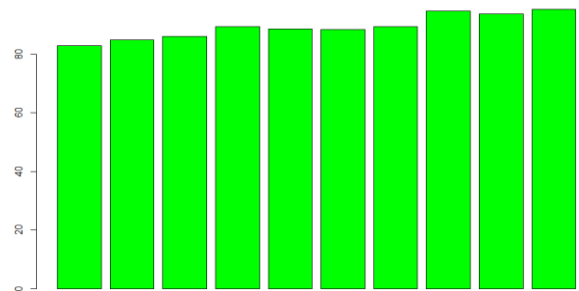
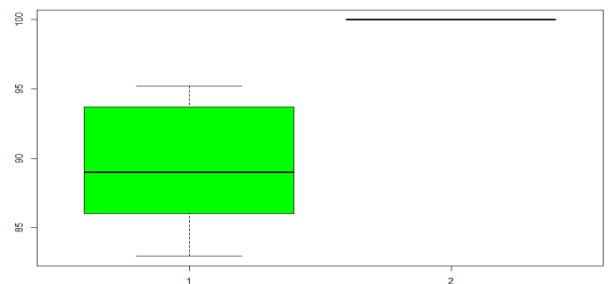


Table 4: Showing the claims pending at the end of the year.

Claims pending at the end of the year
Min. :0.010
1st Qu. :0.405
Median :0.950
Mean :1.825
3rd Qu :2.805
Max. :7.750
NA's :1

Graph 3: Boxplot showing the claims paid and total claims paid



Interpretation - Table 4 interprets the total amounts of claims pending at the end of the year as per IRDA data. As per the outcome the total amount of claims pending at the end of the year in 1st quarter value is 0.405, its Mean value

Interpretation - The above graphs indicate the increase in claims settled by most of the insurance companies along with its TPA's and the Box plot indicate the huge

difference between the insurance paid and the total claims paid. The individual and the group who apply for claims are high whereas the claims settled by most of the companies is lesser which has to be picked up by most of the individual and group insurance companies.

V. FINDINGS OF THE STUDY

1. It is found that the claims of LIC is maximum compared to private
2. The network hospitals added to various TPAs like paramount, Emeditek, Heritage Health TPA Pvt. Ltd, Focus Healthcare Pvt. Ltd etc have been added over the years indicating the competition and necessity of health insurance.
3. The data is divided into training and test data and the regression model was applied to predict the target variable Cash settlements.
4. The claims settled by insurance companies are less compared to claims applied by individual and group.
5. The Predicted and actual values of claims paid are closely associated indicating the efficiency of the model applied for the study.
6. The claims repudiated are minimal and companies should address the claims pending at the end of the year.
7. It is found that the mean claims paid Vs total claims is 95.33% but the claims are high for group than individual which has to be addressed by the companies.
8. The adjusted R square is greater indicated the accuracy of the model and P value is greater than 5% level of significance indicating the volatility in the claims paid.

VI. FURTHER SCOPE FOR RESEARCH

1. The data has to be for specific Private Insurance or LIC
2. The data considered should be high for better accuracy of the model
3. Comparison and prediction of Private and LIC claims paid Vs total claims can be computed.
4. Structured questionnaires can be used and computed along with secondary sources.

VII. CONCLUSION

Insurance plays a vital role in today's polluted world. The study emphasized on the prediction of claim settlement between private and LIC over 10 years. The claims settled and network hospitals are criteria considered in majority cases by most from the individual and group health insurance companies apart from the benefits which are added everyday by most of the companies due to peer competition and regulations from IRDA. The Predicted values are closely associated with the Actual thereby nullifying the residuals and the mean values of 95.33% indicating the claims settlement by most of the insurance companies which increases the confidence of most of the people to buy the insurance policies which saves the life of human and protect the family in case of hospitalization.

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