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AN ANALYSIS OF INSURANCE PENETRATION AND INSURANCE DENSITY IN INDIA

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ABSTRACT

The insurance industry offers both domestic and international investors several business prospects. India is ranked 11th largest life insurance and 14th non-life insurance market globally. This article is based on two well-known characteristics that analyse a country's insurance sector's growth and development. Insurance Penetration and Insurance Density are the two metrics in question. Insurance Penetration is the ratio of insurance premium to gross domestic product (GDP) in percentage terms. Insurance density is measured as a ratio of insurance premium to population. This study is based on the secondary data collected from the annual reports of the Insurance Regulatory and Development Authority of India (IRDAI). The study covers data from 2014-15 to 2020-21. The insurance penetration and density are separately collected for life, non-life and industry. The study has used Mean, median, variance and standard deviation,, t-test analysis, correlation and ANOVA for understanding the difference and relationship in the life and non-life categories on the parameters of Insurance Penetration and Insurance Density.

KEYWORDS: *Insurance, Insurance Penetration, Insurance Density, Insurance Premium, Gdp.*

Section 1 - Introduction and Review of Literature

Section 1.1 - INTRODUCTION

Insurance is a risk transfer tool. It is an instrument of protection from financial losses and risks and it is the reimbursement for the loss incurred. Insurance is used for better risk management. It is a hedge against unexpected and contingent losses and risks.

The world economy is recovering strongly from the Covid-19 crisis. The swift deployment of vaccines and large scale fiscal stimulus including unprecedented direct transfers to households and businesses are fuelling a stronger economic bounce back in 2021 than we projected last year[1]. The insurance sector is also growing at a very fast pace. India is ranked 11th among the top 20 life insurance markets globally by premium volume in 2020. In the non-life insurance business, India is ranked 14th in the world, improved by one rank from last year[1]. (Swiss Re, Sigma, 3/2021).

The pandemic has cemented positive paradigm shifts for insurance. High-risk awareness and acceleration in digitalization are positive structural trends for insurance. Global health and protection type insurance premiums increased by 1.9 per cent and 1.7 per cent respectively in 2020 despite social distancing affecting distribution [2].

At the end of March 2021, there are 67 insurers operating in India out of which 24 are life insurers, 27 are general insurers, 5 are standalone health insurers and 11 are re-insurers including foreign reinsurers branches and Lloyd's India[2](Annual Report, IRDAI,2021). Among the life insurers, Life Insurance Corporation (LIC) is the sole public sector company. There are six public sector insurers in the non-life insurance segment. In addition to these, there is a sole national re-insurer, namely the General Insurance Corporation of India (GIC Re). Other stakeholders in the Indian insurance market include agents (individual and corporate), brokers, surveyors, and third party administrators servicing health insurance claims[3].

Section 1.2 - Insurance Penetration and Density in India

Insurance penetration in India increased from 3.76 per cent in 2019-20 to 4.20 per cent in 2020-21, registering a growth of 11.70 per cent. During the first decade of insurance sector liberalization, the sector has reported an increase in insurance penetration from 2.71 per cent in 2001-02 to 5.20 per cent in 2009-10. Since then the level of penetration declined till 2014-15 due to a decline in life insurance penetration [2]. Insurance penetration in the country consistently surged until 2009, when it was at its highest at 5.20 per cent in the country. One major reason for the sudden drop in overall penetration was the 2010 market crash in the industry along with strict regulations put in place to curb the problematic Unit Linked Investment Plans (ULIPs). However, the insurance penetration started again increasing from 2015-16 and reached 4.20 per cent in 2020-21 while the penetration of the life insurance sector has gone up from 2.15 per cent in 2001-02 to 3.2 per cent in 2020-21, non-life insurance penetration has gone up from 0.56 per cent to 1.00 per cent during the same period[2]. Insurance density for life insurance increased from 44 USD in 2014 -15 to 59 USD in 2020-21 and for non-life from 11 USD in 2014 -15 to 19 USD in 2020-21. In the year 2001-02 density was USD 9.10 for life and USD 2.40 for non life respectively.

Section 1.3 - Review of Literature

Susy Cheston (2018) in the study titled "Inclusive Insurance: Closing the Protection Gap for Emerging Customers" stated that emerging consumers present a promising market for insurance, and creative insurance companies have been developing promising models to reach this market for years. Since the 1990s, the microinsurance movement has demonstrated the benefits of insurance for low-income people, as well as exploring new business models to serve these customers profitably in frontier and emerging markets. Microinsurance pioneers, as well as social insurance programs, targeted customers in the informal economy who were underserved by mainstream commercial insurance. Microinsurance models matched their premiums and benefits to the needs of these groups. Today, inclusive insurance expands this market and product-development work to all those who have not been served by traditional insurance, including the lower middle class, while retaining a particular emphasis on vulnerable and low-income populations [6].

Alamelu K (2011) in the paper titled "Evaluation of Financial Soundness of Life Insurance companies in India" stated that as financial intermediaries, life insurers tap savings of the public in the form of premium. In order to sustain public confidence, they have to maintain their financial credibility intact. In other words, a strong financial background enables insurance companies to augment the business [4].

Vimala B & Alamelu K (2018) in their study entitled "Insurance Penetration and Insurance Density in India - an Analysis" highlighted that insurance affects the economic development of a country positively. As an economy develops over the years, the insurance business starts making inroads into the various sectors of economic activity in the country [5].

Section 2 - Hypothesis

Hypothesis (H1), there will be a difference in Insurance Penetration and Density's life and non-life in the recent years (2014-2021).

Hypothesis (H2), there will be a significant relationship between Insurance Penetration and Density's life and nonlife in the recent years (2014-2021)

Section 3 - Methodology

This study is based on the secondary data collected from the annual reports of the Insurance Regulatory and Development Authority of India (IRDAI)[2]. The study covers a period of 7 years from 2014-21. The study has used descriptive statistics, t-test analysis, correlation and ANOVA for understanding the difference and relationship in life and non-life categories on the parameters of Insurance Penetration and Insurance Density. Insurance penetration and density are two indicators used to evaluate the sector's potential and performance. Insurance penetration is measured as the ratio of premium to Gross Domestic Product (GDP) and insurance density is the ratio of premium to the total population.

Section 4 - Analysis and Findings

TABLE 1: INSURANCE PENETRATION AND DENSITY (2014-21).

	INSURANCE PENETRATION			**INSURANCE DENSITY**		
YEARS	**LIFE**	**NON LIFE**	**TOTAL**	**LIFE**	**NON LIFE**	**TOTAL**
2014-15	2.6	0.7	3.3	44	11	55
2015-16	2.72	0.72	3.44	43	11.5	54.5
2016-17	2.72	0.77	3.49	46.5	13.2	59.7
2017-18	2.76	0.93	3.69	55	18	73
2018-19	2.74	0.97	3.71	55	19	74
2019-20	2.82	0.94	3.76	58	19	77
2020-2021	3.2	1	4.2	59	19	78
MEAN	2.7943	0.8614	3.6557143	51.5	15.8142857	67.3142857

MEDIAN	2.74	0.93	3.69	55	18	73
VARIANCE	0.03636	0.01605.	0.0853.	46.08333.	13.97476.	109.8081.
STD. DEVIATION	0.19069.	0.12668.	0.29205.	6.78847.	3.73828.	10.47894.
STD. ERROR MEAN	0 .07207	.04788	-	1.41294	4.00574	-
TEST OF SIGNIFICANCE (t)	37.770	17.991	22.34	11.192	16.847	12.18
PEARSON CORRELATION (r)	0.218	0.096	0.6807	276.5	83.849	0.9802
COEFFICIENT OF DETERMINATION (r2)	-	-	0.4634	-	-	0.9608

According to hypothesis (H1), there is a difference in Insurance Penetration and Density's life and non-life in recent years (2014-2021). The analysis of the study accepts the hypothesis by proving that there is a difference among both life and non life values. Penetration (overall) has increased with t-value of (37.770) and (17.991) for each component whereas density is still stuck at (11.192) and (16.847) with the degree of freedom for both is 6. With the inclination and declination for the penetration and density would be because of, as considering the annual report the insurance penetration in India increased from 3.76 percent in the year of 2019-20 to 4.20 percent in 2020-21 registering the growth of 11.70 percent, whereas insurance density started increasing from 2014-15 and gradually kept on increasing during 2019-21 at the level of USD (78). Penetration's t value is (22.34) yet for density it is (12.18), even with such difference both the variables are still significant at the level $p<.01$ and $<.05$, in one and two tailed directions for declaring the positive difference among insurance penetration and density.

Including the hypothesis (H2), there is a significant relationship between Insurance Penetration and Density's life and non-life in recent years (2014-2021). Indeed, the data and values mentioned above declare a positive correlation for both in penetration for life and non-life for (r) = 0.6807 and (r2) = 0.4634 indicating that there is a moderate positive association. However, insurance density (r) = 0.9802 and (r2)= 0.9608 indicate there is a strong positive relationship due to relatively less growth in 2019-21 compared to past years at the level of USD(78).

TABLE 2: ANALYSIS OF VARIANCE IN INSURANCE PENETRATION

Source	SUM OF SQUARES	DEGREE OF FREEDOM	MEAN SQUARE
LIFE	.218	6	.036
NON LIFE	.096	6	.016

TOTAL	0.314	12	0.52
REGRESSION	26.300	2	13.150
RESIDUAL	1.700	4	.425
TOTAL	28.000	6	13.575

According to our previous hypotheses for accepting them and choosing to consider the analysis of variance for insurance penetration in the years from 2014-21 by obtaining the

f-ratio value which is (30.941) and significant at (.004) with (r=0.969) and (r2=.939) for overall life and non-life components indicating that how the insurance sector can grow as the government has taken initiatives such as Pradhan Mantri Jan Arogya Yojana (PM-JAY), the largest health assurance scheme in the world and is funded by the government. Other government initiatives such as Pradhan Mantri Fasal Bima Yojana (PMFBY), Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY) are increasing insurance penetration [7].

TABLE 3: ANALYSIS OF VARIANCE IN INSURANCE DENSITY

Source	**SUM OF SQUARES**	**DEGREE OF FREEDOM**	**MEAN SQUARE**
LIFE	276.500	6	46.083
NON LIFE	83.849	6	13.975
TOTAL	360.349	12	60.058
REGRESSION	25.239	2	12.619
RESIDUAL	2.761	4	.690
TOTAL	28.000	6	13.309

The analysis of variance for insurance density in years of 2014-21 with the values of the

f-ratio value which is (18.279). The significance is at (.010) with r= (.949) and r2= (.901) for overall life and non-life components indicating that how the insurance density has remained constant in the 2019-21 due to the pandemic period as some people lost lives and some lost jobs due to sudden recession which could affect their daily survival too and with the increasing unemployability rate to being unable to afford insurance policies proving these 2-3 years were constant.

According to Table 2 of analysis of variance of insurance penetration and Table 3 of insurance density compared to each other in terms of regression the values being (26.300) and (25.239) whereas residual at (1.700) and (2.761) respectively. The total is (28.000) with degree of freedom (6) as we are analyzing 7 years (2014-21) indicating if the population density would increase or decrease which would impact insurance penetration significantly due to the reasons stated above.

Section 5 - SUGGESTIONS AND CONCLUSION

In India, the perception of the public toward life insurance must be changed. Insurance is used as savings and not as a protection instrument. Pure insurance policies or term insurance policies of private life insurers are showing growth with the help of massive advertisements. Moreover, most private life insurers are selling the term policies online. Therefore, the Life Insurance Corporation (LIC) of India, the only public sector undertaking, should also popularise online term policies. All these factors will increase insurance penetration and density in India.

Life insurers should extend their market areas to cover the rural and backward areas of the country. There is a lot of room for non-life insurance penetration to grow. Both the life and non-life insurance sectors have room for development when it comes to insurance density.

The increase in the Foreign Direct Investment (FDI) in insurance from 49 per cent to 74 per cent announced in the Union Budget (Feb '21) shall further help in driving increased penetration and coverage by enabling additional avenues for capital support required for the expansion of the insurance industry in India[7].

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) is the largest health assurance scheme in the world and is funded by the government. Other government initiatives such as Pradhan Mantri Fasal Bima Yojana (PMFBY), Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY) are increasing insurance penetration [7].

The recent pandemic has emphasised the importance of healthcare in the economy, and health insurance would play a critical role in the effort to strengthen the healthcare ecosystem.

Younger working population proportion and rise in nuclear family structures are driving insurance coverage. An increase in the formalisation of household savings and awareness of financial products also contributed to insurance growth.

The study so far concludes that the net result is the penetration of life and non-life has increased in 2014-21 as considering the annual report the insurance penetration in India increased from 3.76% in the year 2019-20 to 4.20% in 2020-21 registering the growth of 11.70% whereas insurance density did increase in 2016-17 but after that remained same during from 2019-21 at the level of USD (77-78) which is why the density has been affected too due to people showing less interest in investing in insurance policies assuming it as a high-risk factor.

Although there is a significant relationship between penetration and density of life and non-life individually considering both of them have a co-dependency as if the population grows so will the insurance sector or vice-versa.

The growth of the insurance market is being supported by important government initiatives, strong democratic factors, conducive regulatory environment, increased partnership, product innovations, and vibrant distribution channels.There is still a large scope for the insurance industry to grow. Insurance awareness is to be created and people be persuaded to buy insurance, since insurance is still a push product. Besides, people should be encouraged to buy adequate insurance and not under-insure them just for the sake of insurance.

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