CU Global Management Review
Volume 5, Issue 2, July-December 2016, pp. 40-55

Demographic Analysis of life Insurance demand in India

- DR. SILENDER SINGH, Assistant Professor, Department of Commerce, Chaudhary Devi Lal University, Sirsa, Haryana.
- AMANPREET KAUR, Research Scholar, Department of Commerce, Chaudhary Devi Lal University, Sirsa, Haryana.

Abstract:

Indian life insurance sector witnessed tremendous growth towards the end of first decade of this millennium supporting strongly economic growth via its capital and financial markets with new rays of hope. But after 2010 it showed volatile trends in spite of promising and opportune demographic trends. Besides, Indian life insurance consumption levels lagged far behind the levels of developed nation's league. This paper is an attempt to make re-assessment of demographic factors shaping demand of life insurance sector in India, using the annual aggregate data series from 1995-2014. The study examines the impact of education, urbanization and population as independent variables through OLS regression technique, on life insurance demand. The outcomes of the study may facilitate; insurers, in devising suitable marketing strategies to expand their business; regulator and the government, in taking policy decisions to realize its dream project of "Insurance Inclusion". A closer introspection of demographic profile of Indian economy,loaded with huge potentialmay possibly uplift life insurance consumption, and ultimately sponsor economic development of the country.

Key Words: Life insurance demand, Demographic factors, OLS regression, India.

1. Introduction:

Social and demographic profile of a country has profound implications in shaping up its insurance fortune. Variations in the structural and demographic configurations of the society spearhead in streamlining financial security systems. Indian conventional family cohesiveness for economic security has decayed due to diffusion of joint family system. Furthermore, there is reduction in the number of children per family, agricultural sector is shrinking, share of service sector in economy is expanding, urbanization and literacy levels are scaling, life expectancy of Indian populace is improving and above all, population index is intensifying. These demographic shuffles certainly have implications on the demand of long term financial planning and risk management instruments like life insurance.

In India, regulatory moves of globalization, deregulation of life insurance business and frequent life threats from terrorist attacks has brought life insurance products in vogue these days. Despite the glimpses of tremendous improvement in life insurance penetration and density levels during the first decade of this millennium, Indian life insurance market largely remains under penetrated with 80% of its population devoid of life insurance cover (consumerforumindia, 2011). Even prevalent market is primarily reliant on push, tax incentives and enforced buying for sales (Ernst & Young, 2012).Furthermore, Eurozone crisis has detracted the growth voyage of the industry, and is struggling with de-growth to the tune of 6.32% in terms of First Premium Income in the year 2012-13 (Majumdar, July, 2013). Confronted challenge of decaying penetration and density levels (IRDA Annual report 2013-14) along with exploring vast untapped potential in the industry can be combatted, if handled properly and strategically and can make a marked difference in current scenario.

The demographic "sweet spot" of Indian life insurance sector projects a lucrative picture of the industry with 1.24 billion second largest population of the world among whom 65 per cent are in the productive age group of 15-64(Bansal, Jalan, &Sabhlok, 2014). Gigantic reservoir of uninsured or underinsured population, in consort with Just 35 million people having life insurance cover as against 570 million of insurable population is lying dormant. This statistic is expected to swell around 750 million in 2020, is furthermore enticing (Business Standard, 2013, September 20). Heedless of these promising demographics, Indian life insurance industry is confronting choppy growth trends with dampening demand configurations. The situation indicates towards the need of closer introspection, understanding and analysis of demographic profile of determinants impacting life insurance demand. This may provide a useful insight to insurers in devising suitable life insurance marketing mix and thus elevating life insurance demand in the country to instigate its societal and economic growth.

2. Literature Review:

Since long time back researchers recognized the importance of the area concerning factors affecting life insurance demand owing to its contribution in financial development of an economy. So, several country peculiar and cross-country investigations have been conducted from time to time evaluating various social, demographic and economic aspects shaping life insurance consumption.

Mantise and Farmer (1968) revealed that marital status, births, personal disposable income, population size, employment level and relative price index influence life insurance purchase decisions.

Anderson and Nevin (1975) examined life insurance buying behavior among young and newly wedded couples for the period of 1968-1971. Investigations conducted on twenty independent variables revealed that net worth, wife's insurance portfolio before marriage and insurance agent are most influential variables determining purchase of life insurance products.

Burnett and Palmer (1984) scrutinized the influence of certain demographic and psychographic factors on life insurance demand. Among demographic factors education, number of children and income were observed the most significant variables.

Lewis (1989) the study added a new dimension to the array of factors affecting life insurance demand. Empirical findings of the study revealed that the expected utility and risk aversion of the policy's beneficiaries i.e. spouse or offspring's has implications in deriving life insurance consumption.

Truett and Truett (1990) attempted to compare life insurance growth pattern in Mexico and United States during the period 1964 to 1984. Among the demographic variables under analysis age of insured, population size and education level found to have significant bearing on life insurance consumption decisions in both the countries.

Browne and Kim (1993) explored the impact of economic and social components on life insurance demand in the study based on 45 countries, using regression analysis in 1980and 1987. The observations revealed a significant impact of income, social security expenditure by government whereas dependency ratio, education and life expectancy turned out insignificant.

Outreville (1996) on the basis of cross-sectional analysis of 45 developing countries, this study evaluated various social and economic explanatory factors for the period of 1986 among social factors life expectancy at birth was found positive but insignificant. Similarly dependency ratio also turned out non-significant. The study also explored the impact of agricultural and health status of the country on life insurance consumption.

Beck and Webb (2002) conducted a research over 68 countries using panel data for the period of 1961-2000 while incorporating various economic, demographic and institutional factors. In demographic suite the variables education, life expectancy, young dependency ratio, and size of social security system did not indicate any robust influence on the life insurance consumption.

Hwang and Greenford (2005) assessed impact of life insurance demand determinants in China, Hong Kong and Taiwan. Investigations revealed a positive impact of income, education and economic development and negative impact of social structure and one child policy on life insurance consumption whereas; social security expenditure and price remained insignificant.

Li et al. (2007) the study analyzed cross section data of 30 OCED countries during 1993-2000. Conclusions of the study revealed a positive relationship of income, number of dependents, education level, financial development and degree of competition with life insurance demand. On the other hand, life expectancy, expenditure on social security system, inflation and real interest rates accounted for decrease in life insurance consumption across OECD countries.

Sen (2007) investigated economic, social and demographic determinants of life insurance demand of 12 selected Asian economies along with cross checking the validity of these determinants in Indian case for the period 1965-2004. The study explored that most of the determinants regulating the demand for insurance in the cross country analysis fail to justify the Indian scenario. The demographic variables like dependency ratio, life expectancy at birth, urbanization and crude death rate remained significant in cross country analysis whereas only urbanization had some significant relation to the demand proxies in India.

Nesterova (2008) applied scanner on Ukraine and 14 countries of the region, both CEE (Central and Eastern Europe) and CIS (Commonwealth of Independent States) to filter out life insurance demand for the period 1996-2006. Penal results on several economic, demographic and institutional variables revealed education, old dependency ratio and life expectancy positively and significantly impact life insurance consumption. On the other hand urbanization, young dependency ratio could not reflex any significant impact amid demographic factors.

Celik and Kayali (2009) the study examined the determinants of demand for life insurance in cross section analysis of 31 European countries for the period of 2000-2006. The investigations revealed a positive impact of income and population and negative impact of inflation and education level on life insurance consumption.

Mitra and Ghosh (2010) conducted a study on economic and demographic variables to evaluate the Post economic reform era (1991-2008) and its impact on demand of life insurance in Indian conditions. Amongst demographic range of variables urbanization and life expectancy revealed insignificant impact on life insurance demand and education showed a significant impact but with an inverse relation.

Kjosevski (2012) investigated life insurance demand elements of 14 countries in Central and South Eastern Europe (CSEE) for a period of 1998-2010. During the scrutiny of various economic, demographic, social and institutional factors, the study highlighted the positive influence of education and a negative linkage of young dependency ratio on life insurance consumption.

3. Research objective:

The key objective of this study is to screen out the demographic determinants of life insurance demand that can best fit to Indian conditions through their re-examination in present context.

4.Research Methodology:

The study is conducted on a sample size of annual aggregate time series data of 20 years from 1995 to 2014.

4a. Data Sources: The research is developed on descriptive research design reviewing documentary data from secondary sources. The data pertaining to life insurance penetration and density are obtained from various secondary sources like issues of Sigma, a publication from Swiss Re., Sigma explorer, annual reports of IRDA, IRDA Hand Book of Insurance Statistics 2013-14. Demographic data are obtained from World development indicators 2015 released by the World Bank.

4b. Selection of Variables:Definitions and Measurements:

Dependent Variables: To measure the demand for life insurance, life insurance density and life insurance penetration is being used as dependent variables. These variables are internationally recognized by IMF and World Bank to determine the global insurance consumption.

Life Insurance Penetration (LIP): Life insurance penetration is described as the ratio of total life insurance premium volume to GDP. Penetration is the product of price and quantity of insurance policies. It measures the contribution of life insurance sector in the total economy in terms of GDP.

Life Insurance Density (LID): Life insurance density is measured as ratio of gross premium volume to total population in a country. In other words it is per capita life insurance premium of inhabitants of a country.

Although, for calculating both life insurance penetration and life insurance density gross premiums are used, still dissimilarity exists among the two as the penetration reflects life insurance consumption relative to the size of the economy, whilst the density compares life insurance consumption amongst countries without adjusting for income. These dependent variables has been extensively used by numerous researchers like Truett and Truett (1990), Browne and Kim (1993), Outerville (1996), Beck and Web (2003), Hwang and Greenford (2005),Sen (2007), Mitra and Ghosh (2010) to represent the consumption of life insurance in their researches.

Independent Variables: On the basis of literature reviewthe following demographic factors have been selected as explanatory variables impacting life insurance demand in India for the purpose of this study.

Population: Total population data is used for the purpose of this study. It is based on the world development indicators definition of population, which counts all residents regardless of legal status or citizenship -except for refugees not permanently settled in the country of asylum, which are generally considered part of the population of their country of origin.

Urbanization: The ratio of population residing in urban area to total population has been used in this study to measure the impact of urbanization on life insurance demand.

Education: Gross secondary enrollment ratio has been used to proxy for education in the study. It is described by World development indicators as total enrollment in secondary education regardless of age, expressed as percentage of total population.

4c. Model Specification:

On the basis of selected demographic variables for determining life insurance demand the following estimation equation has been developed.

QLID =*fn*[Ubn, Edn, Pop]

Where,

QLID - Quantity of Life Insurance demanded in the market;

Ubn - Urbanization;

Edn - Education;

Pop - Population;

4d. Research hypotheses

$H0_1$: There is no significant relation between Population and life insurance demand.

$H0_2$: There is no significant relation between Education and life insurance demand.

$H0_3$: There is no significant relation between Urbanization and life insurance demand.

4e. Initial Estimation Equations of Life insurance Demand

The present analysis consists of two different regression models as initial estimation equations

represented by two dependent variables to characterize demand for life insurance.

Life Insurance Penetration (premium as a percentage of GDP)

Life Insurance Density (premium per capita USD)

QLID (Penetration) = a + b1* Ubn + b2* Edn + b3* Ln (Pop) + e_1

QLID (Density) = a+ b1* Ubn + b2* Edn + b3* Ln (Pop) + e_2

Where,

a = the intercept

(b1...b3) = slope coefficients

e_1 &e_2= error term

Ln = natural log

4f. Transformation of Variables:

Variable of level value i.e. population is transformed by taking natural logarithm whereas variables of rate value i.e. education, urbanization, life insurance penetration and life insurance density are not transformed as they are already in the preferred form.

4g. Time Series Graph: In order to have a rough idea about the stationarity nature of variables time series graphs are plotted for each of the variables examined in this study, before pursuing a formal test of stationarity.

The dependent variables, i.e. life insurance penetration and life insurance density presented a volatile tendency during the period 1995-2014. On the other hand the explanatory variables education and its transform (Edn); urbanization and its transform (Ubn) and population tend to exhibit an upward trend throughout the period of investigation.

4h. Testing Unit Root: After graphic visualization, all the time series variables are subject to a statistical test to examine their univariate properties. Augmented Dickey-Fuller (ADF) Unit Root Test is used to detect whether data series are stationary or non-stationary.After conducting ADF unit root test, if variables are found non-stationary, a co-integration study using ADF is also been done to corroborate that the variables are co-integrated before running the regression.

The ADF unit root test results shows that the dependent and independent variables have unit root at their level values at 1%, 5% and 10% significance level i.e. the series are non-stationary. The results of the ADF unit root tests are given in the table below:

Table 1: Summary Results of ADF test:

Variables	H0	ADF Test Stats.	Prob.*	Critical Values			Result
				1%	5%	10%	
QLID (Penetration)	QLID (Penetration) has unit root	-1.24	0.8721	-4.53	-3.67	-3.28	H_0 Accepted
QLID (Density)	QLID (Density) has unit root	-2.87	0.1989	-4.73	-3.76	-3.33	H_0 Accepted
Education	Education has unit root	-2.20	0.4626	-4.53	-3.67	-3.28	H_0 Accepted
Urbanization	Urbanization has unit root	-3.07	0.1428	-4.57	-3.69	-3.29	H_0 Accepted
Population	Population has unit root	-2.29	0.4137	-4.67	-3.73	-3.31	H_0 Accepted
* MacKinnon (1996) one-sided p-values							

From the above table it is clear that the computed ADF test statistics for all the data series are greater than the critical value and hence the null hypothesis for all the data series is accepted, which means all the series have a unit root problem and the series are non-stationary.

Since the series under study is a non-stationary we can't run regression unless the variables of the series are co-integrated. Therefore a co-integration test is conducted using ADF test. Engel and Garner (1987) pointed out that the two or more non-stationary variables can be used in regression if they are co-integrated or linear combination of two or more non-stationary

variables is stationary. Hence after creating linear combination of non-stationary variables, e_1 and e_2 are calculated and stationarity of e_1 and e_2 has been checked by the ADF unit root test, the results are given below -

Table 2: SUMMERY RESULTS OF CO-INTEGRATION TEST

Variables	H0	ADF Test Stats.	Prob*	Critical Values			Result
				1%	5%	10%	
e_1 (Penetration)	e_1 (Penetration) has unit root	-3.38	0.0020	-2.69	-1.96	-1.61	**H_0 Rejected**
e_2 (Density)	e_2(Density) has unit root	-3.17	0.0033	-2.69	-1.96	-1.61	**H_0 Rejected**
* MacKinnon (1996) one-sided p-values							

From the table given above it is observed that the computed ADF test statistics for both e1 and e2 is smaller than the critical values hence H0 is rejected and it is concluded that e1 and e2 does not have unit root problem and the e1 and e2 are stationary and hence non-stationary variables are co-integrated and can be used in OLS regression.

4i. Correlation Test: Correlation test is applied between dependent variables life insurance penetration (% of GDP), life insurance density (premium per capita USD) and independent variables Education, Urbanization and Population. A highly significant positive correlation is found between both the dependent variables and the explanatory variables.

Table 3: SUMMERY RESULTS OF CORRELATIONS

	Life insurance Penetration (% of GDP)	Life insurance Density (premium per capita USD)
Urbanization	0.850 ***	0.936 ***
Education	0.839 ***	0.963 ***
Population	0.865 ***	0.919 ***

*** Level of significance at 1%

4j. Multiple Regressions with OLS Estimation: Multiple regressions is applied between dependent variables (life insurance density and life insurance penetration) and three independent variables viz. education, degree of urbanization and size of population using OLS (Ordinary Least Squares) technique to determine the demographic factors affecting the life insurance demand. Two separate regression models are constructed for the study since life insurance demand is level by two diverse dependent variables that is life insurance penetration and life insurance density

4ji. Model 1:

QLID (Penetration) = a + b1* Ubn + b2* Edn + b3* Ln(Pop) + e1

Dependent Variable: Quantity of Life Insurance Penetration

Independent Variables: Urbanization, Population and Education

Table 4: MODEL SUMMERY

R^2	Adj. R^2	DW- Statistics	F
0.902	0.814	1.51	23.334 (***)

*** Level of significance at 1%

It is observed from the table-4 (Model-1) that, independent variables- Ubn, Edn and Pop collectively explain 90.2% variation in dependent variable (life insurance penetration) along with the adjusted R2 at 81.4%. Hence both the R2 values show that a significant variation in dependent variable is explained by selected independent variables. So, finally the model is found statistically highly significant ($F = 23.334$, $p<0.001$). The DW- statistic is 1.51, which signifies there is no autocorrelation problem in the error terms.

Table 5: Coefficient Summary

Variable	b	SE	β	t	Result
Constant	-616.137	222.005	-	-2.775	*
Urbanization	-1.762	0.839	-2.643	-2.101	NS
Education	0.167	0.076	1.161	2.192	*
Population	73.089	26.804	2.401	2.727	*

Table 5 shows unstandardized and standardized beta coefficients of independent variables with their level of significance. The table shows two independent variables that significantly affecting quantity of life insurance demanded (penetration) are education ($t = 2.192$, $p<0.05$) and population (2.727, $p<0.05$). The coefficient suggests that with unit increase in education the life insurance penetration increases by 0.167 units and with unit increase in population life insurance penetration increases by 73.089 units. Urbanization turned out to be insignificantly affecting life insurance penetration with inverse relationship.

Estimation Equation:

The estimated results of demand function representing life insurance penetration as dependent variable obtained in Table 3 are as follows:

QLID (Penetration) = – 616.137 – 1.762 (Urbanization) + 0.167 (Education) + 73.089 (Population)

4jii. Model 2:

QLID (Density) = a + b1* Ubn + b2* Edn + b3* Ln(Pop) + e2

Dependent Variable: Quantity of Life Insurance Density

Independent Variables: Urbanization, Population and Education

Table 6: Model Summary

R^2	Adj. R^2	DW- Statistics	F
0.966	0.932	1.46	73.33 (***)

*** Level of significance at 1%

It is observed from the table-4 (Model-2) that, independent variables- Ubn, Edn and Pop collectively explain 96.6% variation in dependent variable (life insurance density) along with the adjusted R2 at 93.2%. Hence both the R2 values show that a significant variation in dependent variable is explained by selected independent variables. So, finally the model is found statistically highly significant ($F = 73.33$, $p<0.001$). The DW- statistic is 1.46, which signifies there is no autocorrelation problem in the error terms.

Table 7: Coefficient Summary

Variable	b	SE	β	t	Result
Constant	-2292.148	2083.978	-	-1.100	NS
Urbanization	-6.784	7.876	-0.654	-0.861	NS
Education	2.415	0.717	1.078	3.369	**
Population	263.406	251.611	0.556	0.311	NS

Table 7 shows unstandardized and standardized beta coefficients of independent variables with their level of significance. The table shows sole independent variable that significantly affects quantity of life insurance demanded (density) is education ($t = 3.369$, $p<0.01$). The coefficient suggests that with unit increase in education the life insurance density increases by 2.415 units. However, urbanization and population both turn out to be insignificantly affecting life insurance density.

Estimation Equation:

The estimated results of demand function representing life insurance density as dependent variable obtained in Table 5 are as follows:

QLID (Density) = –2292.15 – 6.784 (Urbanization) + 2.415 (Education) + 263.41 (Population)

5. ResearchFindings:

Statistical Investigations of the ongoing research verify a positive significant relation between life insurance consumption and education level in the country in both regression models. Increased level of education results in enhancing both life insurance penetration and density levels of life insurance. The findings are in line with Mantis and Farmer (1968), Burnett and Palmer (1984),Truett and Truett (1990), Browne and Kim (1993),Outreville(1990 and 1996), Ward and Zurbruegg (2002), Beck and Webb (2003), Hwang and Gao (2003); Hwang and Greenford (2005); Li et al. (2007), Nesterova (2008),Kjosevski (2012). However, the results are in contradiction with the findings of Anderson and Nevin (1975), Celik and Kayali(2009), Mitra and Ghosh(2010). All of them found negative alignment between education and life insurance demand. So, the estimated outcomes of the study support the alternate hypothesis that education

is significantly and positively linked to demand for life insurance in India. Therefore, the null hypothesis that there is no statistical significantrelationship between education and demand for life insurance can be rejected.

Although, population is positively related to life insurance consumption in the study of Mantis andFarmer (1968), Outreville (1996), Hwang and Greenford (2005), but in the present study variable population showed divergent results in both of the models. It indicates significant and positive variation in life insurance demand in model 1 representing Life Insurance Penetration whereas, it turned out insignificant in model 2 describingLife Insurance Density. So, Due to variance in results, findings remain inconclusive regardingpopulation todeterminatelife insurance demand.

Furthermore, the research findingsdivulge insignificantfunction of urbanization in elevating life insurance penetration and density levels leading to acceptance of null hypothesis of the study H03; that there is no significant relation between Urbanization and life insurance demand.Statistical outcomes are inconsistent withmost of the empirical papersSzablicki (2002), Hwang and Gao (2003), Esho et al. (2004),Hwang and Greenford (2005), Sen (2008), Chen, Lee and Lee (2011),Park and Lemaire (2011); they all find a positive impact of expanding urbanization on life insurance demand. But results are consistent with Beck & Webb (2003), whose findings could not discover a significant role of urbanization to excel life insurance penetration in its cross-country and Panel Analysis.Consequently, the null hypothesis of the studyH03; that there is no significant relation between Urbanization and life insurance demand is accepted.

7. Suggestions:

The major outcome of the study is positive association of education with life insurance demand. Improving education level creates a positive attitude among masses in appreciating the value of life protection products and leads to greater degree of risk aversion. Government can accelerate the impact of this factor by adding financial and insurance literacy in the curriculum at school level and thereby this may support in realizing the most cherished mission of Modi government 'Jan Dhan Se Jan Suraksha' (financial inclusion to insurance inclusion). Furthernegativeand insignificant affiliation between urbanization and life insurance consumption may be due to diversion of funds in alternate financial planning instruments by urbanites of the country. This raises an alarm to the industry players in devising suitable marketing policies and strategies in luring urban population to capture their demand potential. Above and beyond, there is need to focus on capturing unmet demand potential in rural and informal segments, which are largely virgin to life insurance.

References:

Anderson, D. R., &Nevin, J. R. (1975). Determinants of young marrieds' life insurance purchasing behavior: An empirical investigation.Journal of Risk and Insurance, 42(3), 375-387.

Bansal, A., Jalan, V., &Sabhlok, R. (2014, July). India's life insurance market is primed for growth: Are You Ready? Emphasis, (2), 27. Retrieved from towerswatson.com

Beck, T., & Webb, I. (2003).Economic, demographic, and institutional determinants of life insurance consumption across countries.World Bank Economic Review, 17(1),51-88. Retrieved from http://dx.doi.org/10.1093/wber/lhg011

Browne, M. J. & Kim, K. (1993).An international analysis of life insurance demand.Journal of Risk and Insurance, 60(4), 616-634.

Burnett, J. J., & Palmer, B. A. (1984).Examining life insurance ownership through demographic and psychographic characteristics.Journal of Risk and Insurance, 51(3),453-467.

Celik, S., & Kayali, M. M. (2009). Determinants of demand for life insurance in European countries.Problems and Perspectives in Management,7(3), 32-37.

Chen, P.F., Lee, C.C.,& Lee, C.F., (2011, Forthcoming). How does the development of the life insurance market affect economic growth?Some international evidence.Journal of International Development.

Consumer forum india. (2011, December 8). The insurance sector and the related problems in India.Retrieved from https://consumerforumindia.wordpress.com/2011/12/08/.Retrieved on 10.10.2015.

Curak, M., Loncar, S.,&Poposki, K. (2009).Insurance sector development and economic growth in transition countries.International Research Journal of Financeand Economics, 34(1), 29-41.

Dougherty, C. (2001), Introduction to Econometrics: “Simple Regression Analysis”, III Edition, Oxford, pp: 46-57.

Enders, W. (2015), Applied Econometric Time Series: “Stationary Time Series Models”, Wiely Student Edition, New Delhi, India,pp: 49-57.

Ernst & Young. (2012). Insurance industry: Challenges, reforms and realignment. Retrieved from www.ey.com

Esho, N., Kirievsky, A., Ward, D.,&Zurbruegg, R. (2004).Law and the determinants of property-casualty insurance.Journal of Risk and Insurance, 71(2), 265-283.

Gujarati , D. N. and Porter, D. C. (2009), Basic Econometrics, McGraw Hill Series Economics, 5th Edition, New Delhi, India, pp:233-246.

Hwang, T., &Gao, S. (2003). The determinants of demand for life insurance in an emerging economy: The case of China.Managerial Finance, 29, 82-96.

Hwang, T., & Greenford, B. (2005).A cross section analysis of the determinants of life insurance consumption in mainland China, Hong Kong, and Taiwan.Risk Management and Insurance Review,8(1), 103-125.

Insurance Regulatory and Development Authority of India. (2014, March 28). Handbook On Indian Insurance Statistics 2012-13. Retrieved from www.irda.gov.in

Insurance Regulatory and Development Authority of India. (2014, November 28). Annual Report 2013-14. Retrieved from www.irda.gov.in

Kjosevski, J. (2012). Determinants of life insurance demand in central and southeastern Europe. International Journal of Economics and Finance, 4(3), 237-247. Retrieved fromhttp://dx.doi.org/10.5539/ijef.v4n3p237

Lewis, F. D. (1989).Dependents and the demand for life insurance.American Economic Review, 79(3), 452-467.

Li, D., Moshirian, F., Nguyen, P., & Wee, T. (2007).The demand for life insurance in OECD countries.The Journal of Risk and Insurance,74(3), 637-652. Retrieved from http://goliath.ecnext.com/coms 2/gi_0199-6949849

"Life insurance sector to see 12-15% CAGR over five years". (2013, September 20). Business Standard. Retrieved from www.business-standard.com

Majumdar, N. (2015, June). There is business opportunity at the bottom of pyramid. IRDA Journal, 14(6), 11-14.

Mantis, G.,& Farmer, R. N. (1968). Demand for life insurance.Journal of Risk and Insurance, 35(2), 247-256.

Mishra, M. K. (2014). Demand analysis for life insurance in India: Some empirical observations.International Journal of Advanced Research, 2 (5), 704-814.

Mitra, D., & Ghosh, A. (2010).Determinants of life insurance demand in India in the post economic reform era. International Journal of Business Management, Economics & Information Technology, 2 (1), 19-36.

Nesterova, D. (2008). Determinants of the demand for life insurance: Evidence from selected CIS and CEE Countries.Dissertation. Ukraine: National University "Kyiv-Mohyla Academy". Retrieved from http://kse.org.ua/uploads/file/library/2008 /nesterova.pdf

Outreville, J.F. (1990). Whole-life insurance lapse rates and the emergency fund hypothesis.Insurance Mathematics and Economics,9(4), 237–306.

Outreville, J. F. (1996). Life insurance markets in developing countries.Journal of Risk and Insurance, 63(2), 263-278.

Park, S.C., & Lemaire.J. (2011).Culture matters: Long-term orientation and the demand for life insurance (Insurance and Risk Management Working Paper2011-01). Philadelphia, PA: University of Pennsylvania.

Sen, S. (2008). An analysis of life insurance demand determinants for selectedAsian economies and India (Working paper 36/2008). Retrieved from Madras School Economics Website:www.mse.ac.in

Swiss Re. Economic Research & Consulting.(2013). Sigma World Insurance Database from year 1980-2015. Available at www.Sigmaexplorer.com

Szablicki, R. (2002). Growth and the life insurance market(Draft Paper). Department of Economics: Vienna University of Business Administration and Economics.

The World Bank, World Development Indicators (2015, July 1). Retrieved from http://data.worldbank.org/indicator

Truett, D.B., &Truett, L.J. (1990).The demand for life insurance in Mexico and the United States: A Comparative Study.Journal of Risk and Insurance, 57, 321-328.

Ward, D., & Zurbruegg,R. (2002).Law, politics and life insurance consumption in Asia.Geneva Papers on Risk and Insurance, 27(3), 395-412.doi: http://dx.doi.org/10.1111/1468-0440.00181