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INTRODUCTION

REVIEW OF LITERATURE

NEED/IMPORTANCE OF THE STUDY

STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

CONCLUSIONS

SCOPE FOR FURTHER RESEARCH

ACKNOWLEDGMENTS

REFERENCES

APPENDIX/ANNEXURE

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- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
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CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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WEBSITES

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DETERMINANTS OF LIFE INSURANCE IN ETHIOPIA

ADERAW GASHAYIE AYALIEW
LECTURER
MANAGEMENT DEPARTMENT
BUSINESS AND ECONOMICS FACULTY
GONDAR UNIVERSITY
GONDAR

ABSTRACT

The insurance sector can play a critical role in financial and economic development. By reducing uncertainty and the impact of large losses, the sector can encourage new investments, innovation, and competition. As financial intermediaries with long investment horizons, insurance companies can contribute to the provision of long-term instruments to finance corporate investment and housing. There is evidence of a causal relationship between life insurance sector development and economic growth in developing country. However, there is no study examining the factors that affect the development of life insurance industry in developing country like Ethiopia. This paper contributes to the literature by examining the determinants of life insurance for a time series data for the period 1991-2010. The results show that life insurance is determined by per capita income, life expectancy, real interest rate and inflation. Life insurance is explained by this factor at 98%. It is suggested that life insurance industry in Ethiopia seriously consider these factors to bring growth in the insurance industry.

KEYWORDS

Determinants, life insurance, Ethiopia.
.

1.1 INTRODUCTION

Life insurance is one of the service sectors that are expected to continue to drive growth in the economy. Thus, the life insurance market continues to play an important role in supporting economic and social development (Li, Moshirian, Nguyen & Wee, 2007).

However, the life insurance sector of Ethiopian is significantly less mature compared to international life insurance markets. This can be explained by low level of life insurance penetration and density and insurance company assets to GDP (Birritu, 2010). For instance, as of 2007 and 2010 relative to 14 insurance markets, Ethiopia is ranked last as shown in table I and I.a.

TABLE I: ETHIOPIA RELATIVE INSURANCE PERFORMANCE

Country	Life insurance(2007)		Life insurance(2010)	
	penetration	density	penetration	Density
Australia	3.9	1650	3.1	1766.3
Bangladesh	.5	2.5	.7	4.4
China	1.7	41	2.5	105.5
India	4.1	29.7	4.4	55.7
Indonesia	.9	16.8	1	30.9
Malaysia	3.1	211.2	3.2	282.8
Pakistan	.3	2.6	.3	3.2
Philippines	.9	14	.7	14.3
Singapore	11.3	3788.7	4.6	2101.9
South Koea	5.9	1181.5	7	1454.3
Sri Lanka	.6	9.2	.6	13.7
Taiwan	11.7	1926.8	15.4	2756.8
Thailand	2.3	84.2	2.6	121.9
Vietnam	1	8.4	.6	8.3
Ethiopia	.00031	.706	.00026	1.296

TABLE 1.a: ETHIOPIA INSURANCE PERFORMANCE COMPARED TO THE WORLD AVERAGE INSURANCE MARKET

Region	Life insurance(2010)	
	Penetration	Density
North America	1620.9	3.4
Latin America and Caribbean	93.5	1.1
Europe	1110.6	4.5
Asia	208.1	4.5
Africa	45.8	2.7
Oceania	1109.7	2.8
World	364.3	4
Ethiopia	1.296	.00026

As of June 2010, Life insurance density is 1.296 and Life insurance penetration is 0.00026 which shows the sector's low contribution to the country's GDP. In the same year, the insurance sector contributes only 0.041% for the country's GDP (Birritu, 2010).

The possible factors responsible for such a low figure in Ethiopia are not investigated. There for this study explores the possible factors that are responsible for this situation and provide empirical evidence on some selected factors.

1.2 PROBLEM STATEMENT

The problem for this study is stated as **what are the determinants for life insurance in Ethiopia? and empirically to test which among the selected factor to become the strongest indicator?**

To address these issues, the following basic research questions were raised:

1. What is the proposed model for life insurance determinants in Ethiopia?
2. How well do the five selected variables (income, real interest rate, life expectancy for male, dependency ratio, or inflation) predict life insurance premium per capita/density/? How much variance in predict life insurance premium per capita can be explained by scores on these variables?

3.   From the selected variable which is the best predictor of life insurance premium per capita?

1.3 OBJECTIVES OF THE STUDY

The general objective of this study is to develop a model for determinants of life insurance and to identify the relationship for selected determinants of life insurance in Ethiopia.

The specific objectives are:

1.   To determine the sign of coefficient for selected determinants (between life insurance premium per capita and income, real interest rate, dependency ratio and life expectancy for males and inflation)
2.   To identify whether there is significant of coefficient of selected determinants (Between life insurance premium per capita and income, real interest rate, dependency ratio, life for expectancy for males and inflation).
3.   To develop a new model for determinants of life insurance.
4.   To identify major life insurance determinants.

1.4 SCOPE OF THE STUDY

This study will focus on the factors determining the life insurance and the relationship of life insurance and on some selected independent variables (income, real interest rate, dependency ratios and life expectancy for males). This study also will analyze the change of certain explanatory variables that can affect the demand for life insurance.

The study will focus on the years observed which is from 1991 to 2010 as the data is available from those years.

1.5 SIGNIFICANT OF STUDY

The study will give benefit for the following bodies.

The Public and Private: The public / society and private sector will also get benefit through this study by gaining some information about factors that affecting life insurance consumption through this information, insurance company may also use this information to improve insurance industry performance as well as to increase confidence among consumers.

The Government: The Government will be more aware and concern on the factor that lead to the people demand on life insurance. This is because life insurance growth will contribute to GDP as well as it has fund to stabilize country's economy and improve productivity.

1.6 LIMITATIONS OF THE STUDY

Some of relevant information are confidential and need to be officially permitted. For example, during internet searching some website consisting data and journals must be entered or logged in by registered member.

1.7 ORGANIZATION OF THE STUDY

This study is organized into five main chapters. Chapter one provides the problem. Chapter two devoted to review related literatures similar with this investigation. Chapter three presents research methodology and design. Chapter four provides the presentation and analysis of the data and finally the summary, conclusion, and recommendations of the study were presented in chapter four.

2 LITERATURE REVIEWS

This chapter presents an overview of the literature that relates to the topic under investigation and research model/framework for the study.

2.1 THE CURRENT STATUS OF LIFE INSURANCE IN ETHIOPIA

Insurance business in general and life assurance in particular has not yet developed in Ethiopia. On average, only 6% of the total premium portfolio is collected from life assurance business. Moreover, the low level of development of the sector can also be explained by low level of insurance per capita, and penetration, which as of June 30, 2010 registered 1.29 and 0.00026, respectively. Currently, one state owned and 13 private insurance companies are operating in Ethiopia. The state owned insurer (Ethiopian Insurance Corporation) has the lion's share of the market due to its historical background and the opportunity and wider space it has in the market place. The rest of the actors take 48% of the share in premium production. Among these companies, seven operate life and non-life insurance (composite business), six are operating non-life insurance and one exclusively running life insurance. As of June 30, 2010, the annual gross written premium generated from non-life and life insurance reached Birr 1.83 billion and Birr 103 million, respectively. Life assurance registered an average growth of 26% the same year. Thus, the insurance penetration and density is so low and significant proportion of the total population has no access to insurance services with insurance business contributing only 0.041% for the country GDP (Birritu 111,2010).

2.2 LIFE INSURANCE PER CAPITA/DENSITY

Life insurance density (defined as per capita premium expenditure) is used to measure the consumption of life insurance in this study. It is deviated that using premium income as a proxy for life insurance consumption is inappropriate, because premiums represent total revenues which are equal to price times output (Cummins, Tennyson, and Weiss, 1999). Indeed, differences in the price of products across insurance companies may give rise to misleading inferences about life insurance expenditures across countries. Benefits paid to policyholders could have been used as an alternative to measure life insurance consumption. This study acknowledges the existence of the problem incurred using premium income to represent the quantity of life insurance demanded. However, no claims data are available. In view of an interrelationship between life insurance and the national economy, premium income is vital to channel domestic savings into long-term investment, and the life insurance industry accumulates policy reserves, generated from life insurance premiums, for investment. Moreover, premiums provide a consistent standard for life insurance consumption and have been used in several international studies, and this allows this study to be more easily compared with other associated studies (Truett and Truett, 1990; Ward and Zurbruegg, 2002). Using dollar-based premiums enables a comparison with previous studies to be drawn.

2.3 DETERMINANTS OF LIFE INSURANCE

The following discussion is organized by taking into consideration the limitation of literature on life insurance. From the literature review, the following are the economic and socio-demographic factors which determine life insurance.

1. ECONOMIC FACTORS

Income: Evidence from literature shows that the income variable has been identified to significantly affect life insurance (Neaumann, 1969; Campbell,1980; Goldsmith, 1983; Truett & Truett 1990; Gandolfi & Miners, 1996; Hwang & Gao 2003; Li, Moshirian, Nguyen & Wee, 2007; Liebenberg, Carson & Hoyt, 2010; Curak & Gaspic, 2011). As income progresses to higher levels, substitutes for individual life insurance again become available (Hammond, Houston & Melander, 1967) and as income increases, life insurance becomes relatively more affordable (Brown & Kim, 1993). Similar results are consistent with previous studies which state that when income rises insurance becomes more affordable and the demand for life insurance increases (Redzuan, Abdul Rahman & S.H.Aidid, 2009).The empirical evidence from Cyprus showed that for every C£100 million increase in GDP there would be a C£10 million increase in life insurance premiums (Savvas, 2006). However, despite a low income level in China and considerable variation in the levels of economic development among areas, the rapid economic growth as a whole over the past ten years has played an important role in encouraging people to purchase life insurance products (Hwang & Gao 2003).

Inflation: Inflation has been identified as one of the factors that influence life insurance demand. Consumers are found to be sensitive to inflation, be it expected or realized, by reduced purchasing of life insurance (Babbel, 1981). It can be summarized that the cost of life insurance protection would increase with anticipated inflation resulting in a decline in life insurance sales. However, most studies reveal that the relationship between inflation and the demand for life

insurance is not significant (Neumann, 1969; Chang, 1995; Hwang & Gao 2003; Savvides, 2006; Li,Moshirian, Nguyen & Wee, 2007; Redzuan, Abdul Rahman & S.H.Aidid, 2009; Liebenberg, Carson & Hoyt,2010). Inflation is documented having an insignificant relationship because inflation itself can erode the value of life insurance, making it a less desirable good (Brown & Kim, 1993; Redzuan, Abdul Rahman & S.H.Aidid, 2009) as well as making it a less attractive product (Fortune, 1973).The negative impact of inflation also confirms that anticipated inflation depresses the value of financial assets and therefore reduces the attractiveness of life insurance products (Li, Moshirian, Nguyen & Wee, 2007). On the other hand, there is no evidence found that the life insurance impact over the periods of high inflation in Ethiopia. This is because the period of high inflation was also a period of high economic growth, and in line with that, consumers were less sensitive to the negative impact of inflation as inflation did not have a detrimental effect on people's living standard (Hwang & Gao, 2003).

Real Interest Rate: Several researchers have studied whether the interest rate variable plays a role in influencing life insurance demand. From the studies, it also helps to know whether consumers are really concerned with the market rates of interest when making decisions to purchase life insurance. The interest rate has shown different results in which some of the studies identified that there is a significant positive relationship between demand and interest rate (Chang, 1995; Beck & Webb, 2003; Haiss & Sumegi, 2008; Redzuan, Abdul Rahman & S. H. Aidid, 2009). However, other studies discovered that the interest rate is not a significant variable in determining life insurance demand and were found to be negatively correlated with the interest rate (Williams, 1986; Outreville,1996; Savvides, 2006).The demand for life insurance increased with higher interest rates in the short run situation, but was inconclusive in the long run situation (Headen & Lee, 1974). Literature supports that a short term interest rate resulted in a significant relationship with universal life insurance, whereas current interest rates have a strong positive relationship with universal life insurance because the current interest rate of universal life insurance have been kept higher than the short term bases (Chang, 1995); domestic interest rate is statistically significant but inversely related to life insurance demand by supporting that a rise in real domestic interest will divert savings from long term funds to short term funds which tends to decrease life insurance demand (Ibiwoye, Ideji, Oke, 2010). The people are not attracted by lower price to increase the purchase of life insurance, but appear to take advantage of higher real rates in order to reduce the investment in life insurance and the real rates measure the preference for immediate as opposed to deferred consumption (Li, Moshirian & Nguyen, 2007).

Financial Development: The findings from empirical study document a positive relationship between life insurance demand and the level of financial development (Ward & Zurbruegg, 2002; Savvides, 2006; Chui & Kwok, 2008). As the financial system matures as a whole, this would lead to a better supply of insurance products and thus raise the demand further (Sen, 2008). It was also shown that the financial intermediary sector is to complement insurance consumption in developed economies (Ward & Zurbruegg, 2002); the countries with well-being developed banks have higher levels of life insurance consumption as well as increased consumer confidence in other financial institutions (Beck & Webb, 2003); and as more financial assets are accumulated, the people will also purchase more life insurance (Li, Moshirian, Nguyen & Wee, 2007). Due to this, financial development was introduced as financial intermediation which can be an important source of growth in the insurance.

Savings: Saving instruments are the alternative that represents competing products of life insurance. The life insurance might be boost if savings plus life insurance products are sold (Sen, 2008). The impact of savings on life insurance demand has been studied in the past (Chang, 1995; Beck & Webb, 2003; Sen, 2008; Ibiwoye, Ideji, Oke, 2010). Evidence from literature suggests that savings has a negative impact on life insurance demand (Beck & Webb, 2003; Savvides, 2006; Redzuan, Abdul Rahman & S. H. Aidid, 2009). Consumers prefer to consider other alternatives of saving if the effective return within an insurance policy is lower compared to those offered by other saving instruments (Redzuan, Abdul Rahman & S. H. Aidid, 2009); there is a wealth-replacement effect which means that higher private savings displace life insurance and the higher the savings that an individual has, the less would be the motive to buy life insurance to supplement these financial resources in order to reach a targeted level of wealth for retirement or for bequeaths (Savvides, 2006). Other results show that saving variable has a positive relationship with life insurance demand (Sen & Madheswaran, 2007; Sen, 2008) and suggested that an increase in saving activity will enhance life insurance demand by increasing per capita insurance expenditure. Another result provided an ambiguous priority in the effect of personal savings rate on life insurance sales because an individual may have other investment alternatives besides the demand for life insurance (Chang, 1995).

Unemployment: Unemployment rate is defined as an indicator of income uncertainty and is also viewed as an uncertainty variable. A few studies have been carried out to explain the relationship between the demand for life insurance and unemployment rate (Mantis & Farmer, 1968; Savvides, 2006). Results from the studies suggest that unemployment rate has a negative impact on life insurance demand (Mantis &Farmer, 1968; Lenten & Rulli, 2006; Savvides, 2006).

Pensions: Pension is a source of financing retirement and is considered as an alternative to private provisions. The growth of pensions has contributed to the decline in labour force participation at older ages (Samwick, 1998). Having adequate old-age pensions helps to encourage workers to retire earlier (Savvides, 2006).The existence of both private pensions as well as social security appears to have a negative effect on individual savings (King &Mireaux, 1981).The estimated coefficients positive with regard to pensions variable, but in most models, they are not statistically significant (Savvides, 2006).

Price of Insurance: The relationship between price of insurance and life insurance demand has been studied in the past (Depamphills, 1975; Outreville, 1996; Hwang & Greenford, 2005; Sen & Madheswaran, 2007). However, the indicator of price of life insurance is not available in the most of the studies because it is difficult to determine the price of insurance with the various customised nature of policies (Outreville, 1996; Savvides, 2006). The findings of these studies indicates that price of insurance is positively related to life insurance demand (Mantis & Farmer, 1969; Depamphills, 1975; Ward & Zurbruegg, 2002); the price of insurance variable is positive and statistically insignificant in the fixed effects model and is found negatively and statistically insignificant in the pooled cross-sectional model (Hwang & Greenford, 2005).This is because the longer life expectancy which is used to proxy the price of insurance has a positive effect on life insurance demand by resulting in a reduction in the price of insurance which leads the people to use life insurance (Outreville, 1996); the researcher suggested that the lower the price of insurance, it is expected to encourage more life insurance demand (Hwang & Greenford, 2005).Other empirical results showed that price of insurance are negatively related to life insurance demand (Outreville, 1990; Brown & Kim, 1993); whereas another study concluded that price situation does not affect life insurance demand at all (Sen &Madheswaran, 2007).

2. SOCIO-DEMOGRAPHIC FACTORS

Life Expectancy: Life expectancy is described as the number of years the average individual in a country is expected to live (Brown & Kim, 1993). It is also described as the average time span a human has before death, calculated from the time of birth (Neterova, 2008). Life expectancy is measured by life expectancy of males at birth in the time-series estimations and measured by the age of the head of household in the cross-sectional regressions (Savvides, 2006). The relationship between life expectancy and life insurance has been studied by many researchers (Brown & Kim, 1993; Beck& Webb, 2003; Ward & Zurbruegg, 2005; Sen & Madheswaran, 2007; Sen, 2008; Hussels, Li, Moshirian, Ngyuen &Wee; 2009). Some empirical studies document a positive impact of life expectancy on life insurance demand (Outreville, 1996; Savvides, 2006; Nesterova, 2008). Life expectancy was found to have a positive relationship with life insurance demand which was contrary to their expectation (Li, Moshirian, Ngyuen & Wee, 2007). Life expectancy is found to positively related to the demand for life insurance, but it not statistically significant and has been removed from the estimation in their study (Lim & Haberman, 2004).The positive relationship between life expectancy at birth and the demand for life insurance is explained as populations with a longer life span tend to buy life insurance policies because they expect to enjoy a lower cost for insurance, a greater incentive for human capital accumulation since the cost is being spread over a longer period and the cash value is being accumulated for a longer duration (Lim & Haberman, 2004). This positive relationship is explained through the expectation that the longer the retirement span either due to earlier retirement or due to longer life expectancy, than the higher the share of income that people seek to save during their working life time to ensure adequate resources for retirement (Savvides, 2006).

It also implies that the longer life duration reduces the price for life insurance and gives stimulus to purchase more of it in order to accumulate more capital through savings, therefore, the demand for life insurance products would be increased (Sen, 2008). However, some research (Brown & Kim, 1993, Beck & Webb, 2003) has shown that life expectancy is found to negatively relate to life insurance demand.

Dependency Ratio: The dependency ratio is described as the demographic structure of the average household in terms of the number of family members dependent on the main source of income (Lenten & Rulli, 2006). Empirical studies have shown that the dependency ratio is positively related to the demand for life insurance (Brown & Kim, 1993; Curak & Gaspic, 2011); and it has been found that the dependency ratio has a positive impact on foreign life insurance participation (Ye, Li, Chen & Moshirian, 2009).The increasing number of dependents shows that the person needs to buy more life insurance (Chui & Kwok, 2011).

In line with this, findings of past studies have indicated that young dependency ratio is negatively related to life insurance demand (Beck & Webb, 2003; Sen & Madheswaran, 2007).It is expected that a young dependency ratio will increase the demand for mortality coverage and decrease the demand for savings through life insurance and annuities (Beck & Webb, 2003).Whereas, an old dependency ratio is found to be positively related to the demand for life insurance (Beck & Webb, 2003; Sen, 2008). This can be explained as the older population grows, there will be a higher demand for savings (Beck & Webb, 2003).

Education: The findings on the relationship between education and the demand for life insurance was found to have a positive effect (Hammond, Houston & Melander, 1967; Ferber & Lee, 1980; Burnett & Palmer,1984; Brown & Kim, 1993; Hau. 2000; Hwang & Gao, 2003; Baek & Devaney, 2005; Savvides, 2006; Lin & Grace, 2007; Yusuf, Gbadamosi & Hamadu, 2009; Curak & Gaspic, 2011); but in other studies, education was found to be negatively related (Duker, 1969; Anderson & Navin, 1975; Auerbach & Kotlikoff, 1989). Higher education increases life insurance demand because people can better identify the types of life insurance available as well as have a strong desire to provide protection for dependents against risks (Truet & Truet, 1990; Baek & Devaney, 2005); and increase the insurance mindedness that helps to purchase life insurance products more objectively (Hau, 2000). The educational level of the household also represents a positive attitude toward life insurance demand (Yusuf,Gbadamosi & Hamadu, 2009). This may suggest people to have a greater awareness which can lead to an increase in the understanding of the importance of life insurance (Brown & Kim, 1993; Hwang & Gao, 2003; Savvides, 2006, Lin & Grace, 2007; Nesterova, 2008; Curak & Gaspic, 2011).

However, the findings in other studies reveal that education is negatively related (Anderson & Navin, 1975; Auerbach & Kotlikoff, 1989); and an insignificant relationship has been found between education and life insurance demand (Outreville, 1996; Beck & Webb, 2003; Tan, Wong & Law, 2009). The education level was found not to have a significant factor to determine life insurance demand because the people acquired the knowledge about life insurance from respective insurance agents and not from the formal education system (Tan, Wong & Law, 2009).

Age: In some literature, the findings showed that age is positively related to life insurance demand (Truet & Truet, 1990; Yusof, Gbadamosi & Hamadu, 2009; Liebenberg, Carson & Hoyt, 2010). This is because an increase in age indicates a higher positive attitude toward insurance and people who are towards the end of an active life are more conscious of life after retirement (Yusof, Gbadamosi & Hamadu, 2009). But, it was disclosed that when people grow up they have a greater awareness on the need of life insurance but the need of life insurance will decline as the people reach beyond a certain age. Evidence supports that age was found to have negative impact on life insurance demand (Goldsmith, 1983; Chen, Wong & Lee, 2001; Savvides, 2006; Liebenberg, James & Randy, 2010). This can perhaps be explained as people are more likely to purchase life insurance for morbidity as well as for retirement purposes which vary with their affordability and not age (Chen, Wong & Lee, 2001); as the average age of people increased the cost of obtaining coverage also increased and this can reduce the desirability of purchasing life insurance (Goldsmith, 1983); and for older people they are less likely to become involved in long-range planning (Savvides, 2006).

On the other hand, there are also some studies which indicate that age was not a significant factor influencing life insurance demand (Duker, 1969; Gandolfi & Miners, 1996). One of the studies produced mixed result, for example, age becomes statistically significant in both low and middle income groups but not in the high income class (Hammond, Houston & Melander, 1967).

Urbanisation: The relationship between the urbanization and life insurance demand has been identified in the previous studies (Neumann, 1969; Hwang & Gao, 2003; Savvides, 2006; Nestrova, 2008). The findings indicate that the urbanisation is statistically significant in which thedemand for life insurance is likely to increase as there is a higher degree of urbanization (Hwang & Gao, 1969;Savvides, 2003; Sen & Madheswaran, 2007). The result of determinants for 12 Asian Economies found that the urbanisation variable is significant but it suggests that the life insurance demand decreased because of the migration of rural poor into the urban areas; whereas the result of determinants for India suggested that urbanisation has a positive coefficient because the more urban an area, the demand for life insurance would increase (Sen & Madheswaran, 2007; Sen, 2008). The urbanisation has a positive relation because the increasing urbanisation level together with the economic progress can reduced the number of children and change the traditional economy as well by which the parents have to save funds in order to meet their retirement needs (Hwang & Gao, 1969); and it is expected that the consumers who lived in an urban area also have a higher level of life insurance demand as costs related to marketing, premium collection underwriting and claim handling are reduced even though the result cannot explain the variation in life insurance penetration (Beck & Webb, 2003).

However, in the other studies the results indicated that urbanisation has a negative coefficient (Neumann, 1969); the urbanisation level is found to be insignificant because it does not have a robust link to life insurance demand (Nestrova, 2008).

Household Size/Family Size/Number of Children: The relationship between household size or number of children and life insurance demand has been studied by several researchers (Hammond, Houston & Melander, 1967; Anderson & Navin, 1975; Goldsmith, 1983; Burnett & Palmer, 1984; Gandolfi & Miners, 1996; Savvides, 2006). Empirical studies have shown that the demand for life insurance is positively related to household size or family size (Hammond, Houston & Melander, 1967; Shower & Shotick,1994; Savvides, 2006). The number of children is a positive significant variable because households with a large number of children have a greater demand for life insurance (Ferber & Lee, 1980; Burnett & Palmer, 1984). It was found that household size is a good predictor of life insurance demand (Savvides, 2006); as the household size increased by one person, the current purchasers of insurance also increase (Shower & Shotick, 1994); and as the number of children increased, the amount of insurance also increased (Burnett & Palmer, 1984).

In other studies, the relationship between the household size and life insurance demand is weak (Gandolfi & Miners, 1996); the impact of household size on life insurance demand is found to be ambiguous and the larger households are less likely to purchase life insurance because the increase in household income due to an additional dependent is opposed by an increase in the cost of supporting a larger household (Goldsmith, 1983). Besides, the other findings showed that there is no significant impact between household size and the life insurance demand (Duker, 1969 ;Anderson & Navin, 1975).

Employment Status: The relationship between employment status and the life insurance demand has been studied in the past (Goldsmith, 1983; Skinner & Dubinsky, 1984; Savvides, 2006; Liebenberg, James & Randy, 2010); where the variables also include the labor force participation (Gandolfi & Miners, 1996); and the occupation as well (Hammond, Houston & Melander, 1967; Duker, 1969; Ferber & Lee,1996). Result from the studies suggest that employment status is a good predictor that influences the purchasing decision which can encourage life insurance demand (Black & Skipper, 1993; Savvides, 2006); and the employment status of an individual also influence the life insurance purchasing decision (Black & Skipper, 1993). Evidence has shown that both full and part time work has a positive impact on group life insurance ownership (Gandolfi & Miners, 1996). The purchasing of face amounts of life insurance is influenced positively by a wife's working status (Ferber & Lee, 1996); a wife's employment status is an important factor in a family decision to purchase life insurance (Skinner & Dubinsky, 1984); a household head's occupation was determined to be significant except for the middle and high income subgroups (Hammond, Houston & Melander,1967); and those who started with a new job were more likely to purchase life insurance (Liebenberg, James & Randy, 2010). The employment status is positively related to life insurance demand because the higher status of people represents the people who are future oriented, more financially sophisticated and more concerning in educating their children (Duker, 1969); which accounted for a greater awareness of the need for life insurance (Hammond, Houston & Melander, 1967).

2.4 PROPOSED FRAMEWORK

Based on the pertinent literature discussed earlier, a conceptual framework for the determinant of life insurance is developed (see Figure 1). This study suggests that several factors such as income, interest rate, financial development, pensions, stocks, price of insurance, life expectancy, dependency ratio, education, age, urbanisation, household size, employment status, inflation and savings are considered important factors that determine life insurance. The proposed framework for life insurance determinants is presented in figure 1.

FIGURE 1: PROPOSED FRAMEWORK FOR LIFE INSURANCE DETERMINANTS
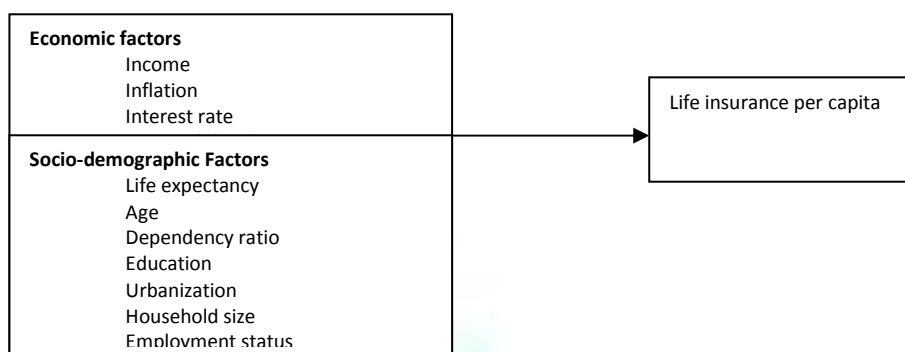
From the above, the condition of life insurance suggests that:

✓ there are positive relationships between variables such as financial development, education, urbanization, household size and employment status with life insurance.
✓ there are negative relationships between variables such as price of life insurance, inflation, savings and unemployment rate with life insurance.
✓ there are ambiguous relationships between variables such as income, real interest rate, pensions, life expectancy, dependency ratio and age with life insurance.

Hence, this conceptual paper seeks to test the proposed framework of life insurance in the context of Ethiopia. It is worthwhile to do empirical studies to examine whether these factors are considered important and significant as mentioned in the proposed framework. However due to constraints of data, I selected five determinants to test empirically in Ethiopian context. These are income, real interest rate, dependency ratio, life expectancy for males and inflation. Except inflation all selected variables has ambiguous relationships with life insurance premium.

3. RESEARCH METHODOLY AND DESIGN

DATA COLLECTION: The study will use the secondary data that has been collected from World Bank reports, National Bank of Ethiopia annual reports, magazines and other relevant website.
SAMPLE SIZE: This study will use the sample size of 20 based on time series data that is collected and observed annually from the year 1991 to the year 2010.
DATA ANALYSIS: multiple regression analysis is used to predict the variance in the dependent variable by regressing the two or more independent variables against it.
THE THEORETICAL LINEAR REGRESSION MODEL: In the majority of empirical studies, the functional form of the demand equation is assumed to be either log linear or linear. In this study, the researcher will use linear demand Model.

INS $= \beta_0 + \beta_1 GDP - \beta_2 INT - \beta_3 DR + \beta_4 LIFEXP + €$
INS   = life insurance premium per capita
GDP   = Gross Domestic Product represented as Consumer's personal disposable income
LIFEXP   = Life expectancy for males
DR   = Dependency ratio
INT   = Real interest rate represented as saving deposit rate

The researcher chooses this demand equation as multiple linear regressions due to the linear relation.

PROCEDURES
Coefficient of Correlation (r): It is used to indicate the strength and the type of relationship between the dependent and independent variables. Coefficient of correlation is used to measure the closeness of the linear relation of two variables. The value of r can be varied whether positive or negative and lies between negative 1 and positive 1 ($1 \leq r \geq 1$).According Field (2004) two variables with absolute value of correlation coefficient 0 to 0.29 is rated as having weak relationship, 0.30 to 0.49 is having medium relationship, 0.5 to 0.90 as having strong relationship and more than 0.90 is having very strong relationship which indicates as having high multicollinearity.
Coefficient of Determination (R^2): It is used to measure the proportion of the total variation present in the y values. The main usage of R^2 is to test how well the fitted regression line is. R^2 describes the explanation of independent variables in determining dependent variable. It ranges from 0 to 1. There is another measurement of coefficient of determination which is Adjusted R2, in which measure the goodness of fit that is adjusted for the number of explanatory variables in the model. This enables the researcher to compare two regressions that have the same dependent variable but a different number of independent variables.
T-Test: A t-test will determine if there is a significant relationship between dependent and independent variables whether it is positive or negative relationship. If the t-value is more than 2, therefore there is a significant relationship exists between the two variables.
F-test or ANOVA: It is used to test whether the independent variables as a group are significant or not in determining the dependent variable.
MULTIPLE REGRESSION MODEL ASSESSMENTS
This study will later analyze and discuss the problems that might occur in the model analysis. There are two most common problems that may arise. **These are:**
Multicollinearity: This is the problem when the explanatory variables are nearly or highly correlated. This usually happens when the researcher put two variables that nearly similar meaning in determining the dependent variable. One way of solving this problem is by eliminating or drop the variable that is considered to have multi-colinearity.
Autocorrelation: This is the problem that can be defined as correlation between members of observations ordered in time as in time series data. This will be identified through a test called Durbin Watson test, in which the d-value lie between 0 to 4 and a good model will indicate the d value around 1.5 to 2.5.

4. ANALYSIS AND INTERPRETATION OF DATA

This chapter will explain the detailed discussion about the regression that had been run. The findings consist of the interpretation of coefficients, scatter plots of the relationship between variables, the regression's problems and the solution or corrective way for the problems.
4.1 DATA ANALYSIS
MULTIPLE REGRESSION ANALYSIS ASSUMPTIONS
The standard or simultaneous multiple regression model is applied for this research in order to see and analyze the relationship between dependent and independent variables. Regression model analysis should meet all the seven Classical Assumptions such as:

i.   The regression model is linear, is correctly specified, and has an additive error term.
ii.   The error term has a zero population mean.
iii. All explanatory variables are uncorrelated with the error term.
iv.   Observations of the error term are uncorrelated with each other (no serial correlation)/ not auto correlated.
v.   The error term has a constant variance (no heteroscedasticity).
vi.   No explanatory variable is a perfect linear function of any other explanatory variables(s) (no perfect multicollinearity)

vii.   The error term is normally distributed

SPSS version 20 Software is used to analyze in this study. SPSS are a new version of a set of tools for manipulating time series data. SPSS provide sophisticated data analysis, regression, and forecasting tools on Windows based computers.

4.2 THE ESTIMATED LINEAR REGRESSION MODEL

In the beginning, the researcher was used multiple linear regression model for this study that contain five variables: Inflation, income, real interest rate (saving), dependency ratio and life expectancy for males. The regression equation from SPSS is as shown below:

$$\text{Lifeinsper} = -.003 - 0.0000001863 * INFLAT - 0.00000407 * RINTE + 0.000005 * GDPPCAP + .000021 * LIFEXP + .000020 * POPDEP$$

The equation shows that GDP per capita/ income (GDPPCAP), life expectancy for males(LIFEXP) and population dependence(POPDEP) has positive sign with life insurance premium per capita(Lifeinsper) whereas Inflation(INFLAT) and real interest rate (saving) has negative sign with life insurance premium per capita. Except inflation, other variables relation with life insurance is not consistent with the expected sign which was stated in the earlier of this study.

TABLE II: TABLE OF COMPARISON BETWEEN EXPECTED SIGNS AND RESULT SIGNS

Variables	Expected Sign	Result Sign	Coefficient of correlation	P value of coefficient of correlation
Inflation	-	-	0.54	0.013
Real interest rate	ambiguous	-	-0.589	0.006
GDP per capita/income	ambiguous	+	0.976	0.000
Life expectancy	ambiguous	+	0.916	0.000
Population dependency	Ambiguous	+	0.943	0.000

TABLE III: RESULT FOR REGRESSION MODEL

Variables	Coefficient of multiple regression	Probabilistic Value of mult. Reg.	Significance α = 0.05
Inflation	0.0000001	0.898	Insignificant
Real interest rate	-0.000004	0.149	Insignificant
GDP per capita/income	0.000005	0.004	Significant
Life expectancy	0.000021	0.014	Significant
Population dependency	0.000020	0.629	Insignificant
R-squared		.985	
Durbin-Watson stat		2.54	

From the table above, we can see the p-value for Inflation, real interest rate and Population dependency ratio are **insignificant** based on 5 percent level at 95 percent confidence interval. It means that these three independent variables were accepted the null hypothesis which stated no relationship with the life insurance premium per capita. Then the problem of multicollinearity and autocorrelation existed in this model based on the high R-squared value but low of ratio of Durbin Watson stats between 1 and 3(Field suggested that value between 1 or 3 are not serially correlated residuals). In order further evaluation to investigate whether this is the best model or not, the researcher will perform multicollinearity,and autocorrelation test.

PROBLEMS IN MULTIPLE REGRESSION MODEL

Multicollinearity: During running the regression using SPSS, the researcher was found a problem of muliticollinearity after analyze the significance of the variables. Multiclollinearity is a violation of the assumption that no independent variables are nearly or highly correlated. High correlation among independent variables will makes it hard to separate the effects of individual variables.

The problem can be detected by looking at the goodness of fit of the model (R²) and t-ratio. When there is multicollinearity problem, the R² may be high and t-ratio will be low. High correlation coefficients (r) between independent variables is detected with the assumption if 'r' more than 0.90, there is a multicollinearity problem. Another detection of multicollinearity problem is by looking at the Variance Inflation Factors. Multicollinearity will inflate the variance of an estimator. Of the value of VIF is greater than 10 or Tollerance level less than 0.1, serious multicollinearity problem exist (Field, 2009).

TABLE IV: DETECTION MULTICOLLINEARITY

Variable	Collinearity Statistics	
	Tolerance	VIF
Inflation, consumer prices (annual %)	.208	4.799
Real interest rate (%)	.108	9.243
Income/GDP per capita (constant 2000 US$)	.056	17.890
Life expectancy at birth, male (years)	.143	7.011
Population dependency	.045	22.035

From the Table IV, we can see that income and dependency ratio has value of VIF more than 10, shows that there is serious multicollinearity exists. To solve that problem the researcher decides to drop the income or population dependency. When the variable " income" is dropped the result of multicolliniarity is as shown in Table V.

TABLE V: SOLVING MULTICOLLINEARITY PROBLEM BY DROPPING INCOME

Variable	Collinearity Statistics	
	Tolerance	VIF
Inflation, consumer prices (annual %)	.230	4.342
Real interest rate (%)	.152	6.563
Life expectancy at birth, male (years)	.204	4.895
Population dependency	.099	10.069

Still variable Population dependency has VIF greater than 10 and has the problem of multicolliniarty. Let me again drop variable population dependency. The result of the regression analysis is as follow:

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TABLE VI: SOLVING MULTICOLLINEARITY PROBLEM BY DROPPING POPULATION DEPENDENCY

Variable	Collinearity Statistics	
	Tolerance	VIF
Inflation, consumer prices (annual %)	.212	4.717
Real interest rate (%)	.228	4.384
Income/GDP per capita (constant 2000 US$)	.122	8.175
Life expectancy at birth, male (years)	.144	6.953

By referring the table VI, we can see that the value of VIF is below than 10, shows that there is no more multicollinearity problem exists. This model is the best model after the researcher drop the population dependency variable and use linear regression.

Autocorrelation: Autocorrelation violates the assumption that observed errors are independent of each other. This problem is usually present in time series data. Autocorrelation can be detected by using the graphical methods in which the researcher has a plot the residual against lagged residuals.

However, there is a method that mostly used to detect the existence of autocorrelation problem which is Durbin-Watsson'd' test. Durbin-Watson statistics has a range from 0 to 4, and the closer it is to 2, the less chance for autocorrelation problem exist. From the regression result that is derived from SPSS, the Durbin – Watson statistics is 2.403. Therefore, the researcher had checked the model not violated for autocorrelation.

4.3 THE BEST MODEL

After make a corrective and evaluating the model, the researcher has to rerun the regression again without two independent variable/income and population dependency ratio/ and finally one of two independent variable was being drop is population dependency. Then the best model come out by using linear regression as shown below:

$$\text{Lifeinsper} = -.001 - 0.000000277 * INFLAT - 0.000005 * RINTE + 0.000006 * GDPPCAP + .000021 * LIFEXP$$

From the findings, an interpretation of the relationship can be made. It is shown the income and life expectancy has positive relationship with life insurance premium per capita while real interest rate and inflation has negative relationship with life insurance premium per capita. It means that changes in the income per capita and real interest rate will cause changes in life insurance premium per capita in the direct movement. For changes, real interest rate and inflation will cause change in life insurance premium per capita in the opposite direction.

Based on the equation, the researcher may able to interpret the coefficient of the independent variables. The interpretation of the coefficients is shown as follows:

- ✓ β_0=-0 .001 means the average insurance premium per capita.
- ✓ β_1 = -0.00000277 means when the inflation decreases by 1%, the life insurance premium per capita increases by 0.000277%
- ✓ β_2 = - 0.000005 means when the real interest rate decreases by 1%, the life insurance premium per capita will decreases by .0005%.
- ✓ β_3= +0.000006 means when the income increases by 1%, the life insurance premium per capita will increases by .0006%.
- ✓ β_4=+ .000021 means when life expectancy increases by 1%, the life insurance premium per capita will decreases by .0021%.

4.3.1 INTERPRETATION OF COEFFICIENTS

Correlation of Coefficient (r): Correlation coefficient is used to indicate the strength and the direction of linear relationship between variables. It also used to measure the closeness of the linear relation between two variables. From the SPSS, the researcher found that the derived correlation of coefficient for each independent variable in the regression as shown in table VII:

TABLE VII: ZERO ORDER CORRELATION

Dependent Variable	Independent Variable	Zero OrderCorrelation	ProbabilisticValue of Correlation	sig
Life Insurance Premium Per Capita	Inflation, consumer prices (annual %)	-0.540	0.013	Sig
	Real interest rate (%)	-0.589	0.006	Sig
	Income/GDP per capita	0.976	0.000	Sig
	Life expectancy at birth, male (years)	0.916	0.000	Sig

TABLE VIII: RESULT OF MULTIPLE REGRESSION AFTER SOLVING MULTI CO LINEARITY PROBLEM

Variables	Coefficient of multiple regression	Probabilistic Value of mult. Reg.	Significance α = 0.05
Inflation	-0.0000001	0.841	Insignificant
Real interest rate	-0.000005	0.014	Significant
GDP per capita/income	0.000006	0.000	Significant
Life expectancy	0.000021	0.010	Significant
R-squared		.98	
Durbin-Watson stat		2. 403	

Correlation of Coefficient: An interpretation can be made from the table above. The value of 'r' in zero order correlation for the income is 0.976; therefore, it is considered that income has strong positive relationship with the life insurance premium per capita. For real interest rate, it has medium negative relationship with life insurance premium per capita which it -0.589. The 'r' value of inflation is 0.540, which indicate inflation has a medium positive relationship with the life insurance premium per capita. The 'r' value of life expectancy is 0.916, which indicate Life expectancy at birth, male has a strong positive relationship with the life insurance premium per capita.

Coefficient of Determination (R^2): Goodness of fit of the estimated multiple linear regressions can be measured by coefficient of determination. It is represented by R^2 and adjusted R^2. The interpretation of the adjusted R^2 is more preferable because of the advantage of comparing the goodness of fit of two models with the same dependent variable but with the differing number of independent variables.

TABLE IX: COEFFICIENT OF DETERMINATION AND ADJUSTED R^2

Coefficient of Determination; R^2	Adjusted R^2
0.985	0.980

The value of adjusted R^2 that is derived from the SPSS program is 0.985. Therefore, it means that 99% of the life insurance premium per capita in Ethiopia is explained by the independent variables which are income per capita, real interest rate and life expectancy. The adjusted R^2 measures the percentage of the variation of life insurance premium per capita around its mean that is explained by the regression equation, adjusted for degrees of freedom. The value of the adjusted R^2 is shown as 0.980.

4.3.2 HYPOTHESIS TESTING

Hypothesis testing attempts to examine whether the relationship between dependent variable and independent variables truly exists. Hypothesis testing is used to test the relationship and significance of individual independent variable that is represented by t-test and independent variables as a group that is called Z-test. Based on the regression resulted from SPSS, the researcher will make analysis and conclusion on the relationship between dependent variable and independent variables. The hypothesis was change due to the changes of one variable which is population dependency. The new model will come out with the new regression equation derived from the SPSS as follow:

$$Lifeinsper = -.001 - 0.000000277 * INFLAT - 0.000005 * RINTE + 0.000006 * GDPPCAP + .000021 * LIFEXP$$

The new model above contains four independent variables that are income, inflation, real interest rate (saving) and life expectancy. Among the four variables, real income, GDP per capita and life expectancy significantly determine life insurance in Ethiopia. Of the determinants of life insurance in Ethiopia 98% is explained by these factors. Inflation is not a significant determinant of life insurance in Ethiopia. Life expectancy and GDP per capita has a positive impact on life insurance in Ethiopia but real interest rate has negative on life insurance in Ethiopia.

5. CONCLUSION AND RECOMMENDATION

5.1 CONCLUSIONS

As stated in the earlier chapter of this study, the primary objective of this study is to determine the sign of coefficient between life insurance premium per capita and income, inflation, real interest rate, dependency ratio and life expectancy for males. However, one independent variable was changed due to problem of multicollinearity and autocorrelation (Population dependency). The dependency ratio has been removed to eliminate the multicollinearity problem and the problem of multicollinarity is solved.

Thus, the new model come out with one less variables and the objective has change to determine the sign of coefficient between life insurance premium per capita and income, inflation ,real interest rate and Life expectancy at birth, male . The sign of coefficient for the four independent variables summarized as table below:

TABLE X: TABLE OF COMPARISON BETWEEN EXPECTED SIGNS AND RESULT SIGNS

Variables	Expected Sign	Result Sign
Inflation	-	-
Real interest rate	Ambiguous	-
GDP per capita/income	Ambiguous	+
Life expectancy	Ambiguous	+

Based on the table above, the researcher found out that income has positive sign with life insurance premium per capita whereas real interest rate and inflation have negative sign with life insurance premium per capita. Finally life expectancy and life insurance premium has conflicting result with what the researcher expects.

Then the researcher will proceed to explain further regarding the second objective of this study. The significant of coefficient between life insurance premium per capita and four independent variables as stated below:

Life insurance premium per capita and income: The income variable is significantly positive correlated with the life insurance premium per capita in Ethiopia which supports previous study findings (**Lewis 1989, Truett and Truett 1990; Browne and Kim 1993, Beck and Webb 2003**). Several reasons explain why life insurance consumption should rise with income. Firstly, there is no reason to believe that insurance is anything other than normal good, which the consumer purchases more with an increases in income (**Salvatore N.D.) .**Also, if consumption levels fall relative to income, there follows a need for financial instruments to absorb surplus funds, enabling greater accumulation of wealth (**Hwang and Goa, 2003).** Secondly, as a person's level of income rises, the desire to maintain living standards of dependents generates larger policies (**Liam & David, 2003**).

Life Insurance premium per capita and real interest rate: The *real interest rate* variable is significantly negative related with life insurance premium per capita. This is because higher interest rates might be expected to reduce demand as higher yields on alternative savings products makes life insurance less attractive (**Lim & Haberman, 2004**). High real interest rates do not persuade people to buy more insurance because of higher preferences for immediate consumption relative to deferred consumption. People prefer to save money in bank account due to easily to withdraw if anything happen and one of the reason why people now still prefer to invest or save money to traditional financial instrument because of benefit from a feeling of being more financially secured. In addition, as modern financial investment are not as popular in Ethiopia as in developed economies, people tend to use saving as a mechanism to achieve security.

Life Insurance premium per capita and inflation: Based on the equation, there is a negative sign between the life insurance premium per capita and inflation that the result is consistent with the previous study (**Browne & Kim 1993, Lim & Haberman, 2004**). It means that when the inflation becomes more and more, it tends to discourage people from owning life insurance policies or they do not afford to pay the cost of life insurance.

Life Insurance premium per capita and Life expectancy : Life expectancy and life insurance premium found to be positively related in Ethiopian context. This is supported by some previous studies (Truet & Truet, 1990; Yusof, Gbadamosi & Hamadu, 2009; Liebenberg, Carson & Hoyt, 2010).This is because an increase in age indicates a higher positive attitude toward insurance and people who are towards the end of an active life are more conscious of life after retirement (Yusof, Gbadamosi & Hamadu, 2009).

5.2 RECOMMENDATIONS

The researcher will recommend some alternatives to promote and increase demand for life insurance in Ethiopia. As we know, life insurance is sub-sector under financial sector that become an important role as contributor to economic growth. The growth in life insurance will bring a lot of benefit in economy as well as society as a whole.

The government should promote life insurance as financial plan to the society by holding a campaign on the importance of life insurance, directly or holding awareness campaign in rural area. They can organize insurance fair by cooperate with health ministry especially in rural area. The reason is the rural area most of the people did not know about this life insurance and it importance as financial instrument which give certainty. Besides, the government should use media, internet and billboard as a medium of promoting the life insurance and made a program such true story regarding the life insurance. This program will give big impact to society about how important the life insurance to their family as extra saving in the future such health, education and job losses.

6. REFERENCES

1. Anderson, D. R., & Navin, J. R. (1975). Determinants of Young Marrieds' Life-Insurance Purchasing Behaviour: An Empirical Investigation. Journal of Risk and Insurance, 42(3), 375-387. http://dx.doi.org/10.2307/251694
2. Auerbach, A. J., & Kotlikoff, L. J. (1989). How Rational is the Purchase of Life Insurance. National Bureau of Economic Research, 1-44.
3. Babbel, D. F. (1981). Inflation, Indexation, and Life Insurance Sales in Brazil. Journal of Risk and Insurance,48(1), 111-135. http://dx.doi.org/10.2307/252655
4. Baek, E., & DeVaney, S. A. (2005). Human Capital, Bequest Motives, Risk, and the Purchase of Life Insurance. Journal of Personal Finance, 4(2), 62-84.
5. Beck, T., & Webb, I. (2003). Economic, Demographic, and Institutional Determinants of Life Insurance Consumption Across Countries. World Bank Economic Review, 17(1), 51-88. http://dx.doi.org/10.1093/wber/lhg011
6. Brown, M. J., & Kim, K. (1993). An International Analysis of Life Insurance Demand. Journal of Risk and Insurance, 60(4), 616-634. http://dx.doi.org/10.2307/253382

7. Brown, M. J., & Kim, K. (1993). An International Analysis of Life Insurance Demand. Journal of Risk and Insurance, 60(4), 616-634. http://dx.doi.org/10.2307/253382

8. Burnett, J. J., & Palmer, B. A. (1984). Examining Life Insurance Ownership through Demographic andPsychographic Characteristics. Journal of Risk and Insurance, 51, 453-467. http://dx.doi.org/10.2307/252479

9. Campbell, R. A. (1980). The Demand for Life Insurance: An Application of the Economics of Uncertainty. Journal of Finance, 35, 1155-1172. http://dx.doi.org/10.2307/2327091

10. Campbell, R. A., 1980, The Demand for Life Insurance: An Application of the Economics of Uncertainty, Journal of Finance, 35: 1155-72.

11. Chang, D. H. (1995). Economic Analysis of the Development of Universal Life Insurance in the 1980s.Journal of American Society of CLU & ChFC, 49(1), 82-87.

12. Chui, A. C. W., & Kwok, C. C. Y. (2008). National Culture and Life Insurance Consumption. Journal of International Business Studies, 39, 88-101. http://dx.doi.org/10.1057/palgrave.jibs.8400316

13. Cummins, J. D., S. Tennyson, M. A. Weiss, 1999, Consolidation and Efficiency in the US Life Insurance Industry, Journal of Banking and Finance, 23: 325-57.

14. Curak, M., & Kljakovic, M. (2011). Economic and Social Determinants of Life Insurance Consumption– Evidence from Central and Eastern Europe. Journal of American Academy of Business, 16(2), 216-222.

15. Curak, M., & Kljakovic, M. (2011). Economic and Social Determinants of Life Insurance Consumption– Evidence from Central and Eastern Europe. Journal of American Academy of Business, 16(2), 216-222.

16. D., & Zurbruegg, R. (2002). Law, Politics and Life Insurance Consumption in Asia. Geneva Papers on Risk and Insurance, 27(3), 395-412. http://dx.doi.org/10.1111/1468-0440.00181

17. Depamphilis, D. M. (1977). Variation in Individual Life Insurance Premium Revenues: An Econometric Approach. Journal of Risk and Insurance, 44(1), 67-76. http://dx.doi.org/10.2307/251857

18. Duker, J. M. (1969). Expenditures for Life Insurance among Working-Wife Families. Journal of Risk and Insurance, 36(5), 525-533. http://dx.doi.org/10.2307/251159

19. Fischer, S., 1973, A Life Cycle Model of Life Insurance Purchases, International Economic Review, 14: 132-52.

20. Fortune, P. (1973). A Theory of Optimal Life Insurance: Development and Tests. Journal of Finance, 28, 587-600. http://dx.doi.org/10.2307/2978631

21. Gandolfi, A. S., & Miners, L. (1996). Gender-Based Differences in Life Insurance Ownership. Journal of Risk and Insurance, 63(4), 683-693. http://dx.doi.org/10.2307/253478

22. Goldsmith, A. (1983). Household Life Cycle Protection: Human Capital versus Life Insurance. Journal of Risk and Insurance, 50(3), 473-485. http://dx.doi.org/10.2307/252438

23. Haiss, P., & Siimegi, K. (2008). The Relationship between Insurance and Economic Growth in Europe: A Theoretical and Empirical Analysis. Empirica, 35(4), 405-431. http://dx.doi.org/10.1007/s10663-008-9075-2

24. Hammond, J. D., Houston, B. D., & Melander, R. E. (1967). Determinants of Household Life Insurance Premium Expenditures: An Empirical Investigation. Journal of Risk and Insurance, 34(3), 397-408. http://dx.doi.org/10.2307/250854

25. Hammond, J. D., Houston, B. D., & Melander, R. E. (1967). Determinants of Household Life Insurance Premium Expenditures: An Empirical Investigation. Journal of Risk and Insurance, 34(3), 397-408. http://dx.doi.org/10.2307/250854

26. Hau, A. (2000). Liquidity, Estate Liquidation, Charitable Motives, and Life Insurance Demand by Retired Singles. Journal of Risk and Insurance, 67(1), 123-141. http://dx.doi.org/10.2307/253680

27. Headen, R. S., & Lee, J. F. (1974). Life Insurance Demand and Household portfolio Behavior. Journal of Risk and Insurance, 41(4), 685-698. http://dx.doi.org/10.2307/251963

28. Hwang, T., & Gao, S. (2003). The Determinants of the Demand for Life Insurance in an Emerging Economy – The Case of China. Journal of Managerial Finance, 29(5/6), 82-96. http://dx.doi.org/10.1108/03074350310768779

29. Hwang, T., & Greenford, B. (2005). A Cross-Section Analysis of the Determinants of Life Insurance Consumption in Mainland China, Hong Kong, & Taiwan. Risk Management & InsuranceReview，8(1), 103-125. http://dx.doi.org/10.1111/j.1540-6296.2005.00051.x

30. Ibiwoye, A., Ideji, J. O., & Oke, B. O. (2010). The Determinants of Life Insurance Consumption in Nigeria: A Co-Integration. International Journal of Academic Research, 2(4), 351-358.

31. Lenten, L. J. A., & Rulli, D. N. (2006). A Time-Series Analysis of the Demand for Life Insurance Companies in Australia: An Unobserved Components Approach. Australian Journal of Management, 31(1), 41-66. http://dx.doi.org/10.1177/031289620603100104

32. Li, D., Moshirian, F., Nguyen, P., & Wee, T. (2007). The Demand for Life Insurance in OECD Countries. Journal of Risk and Insurance, 74(3), 637- 652. http://dx.doi.org/10.1111/j.1539-6975.2007.00228.x

33. Liebenberg, A. P., Carson, J. M., & Dumm, R. E. (2010). A Dynamic Analysis of the Demand for Life Insurance. Journal of Risk and Insurance, 1-28.

34. Liebenberg, A. P., Carson, J. M., & Dumm, R. E. (2010). A Dynamic Analysis of the Demand for Life Insurance. Journal of Risk and Insurance, 1-28.

35. Lim, C. C. and S. Haberman (2004), "Modeling Life Insurance Demand from a Macroeconomic Perspective: The Malaysian Case", Paper presented at The 8th International Congress on Insurance: Mathematics & Economics, Rome, 2004, http://www.ime2004rome.com/fullpapers/Chee%20PAPE.pdf.

36. Lin Y. and M.F. Grace. 2006. Household Life Cycle Protection: Life Insurance Holdings, Financial Vulnerability and Portfolio Implications. Available at SSRN: http://ssrn.com/abstract=974914

37. Mantis, G., & Farmer, R. N. (1968). Demand for Life Insurance. Journal of Risk and Insurance, 35(2), 247-256. http://dx.doi.org/10.2307/250834

38. National Bank of Ethiopia. Annual report ,2010

39. National Bank of Ethiopia.Birritu magazine ,2010,issue no. 111.

40. Nesterova, D. (2008). Determinants of the Demand for Life Insurance: Evidence from Selected CIS and CEE Countries. National University "Kyiv-Mohyla Academy", 1-49.

41. Neumann, S. (1969). Inflation and Saving Through Life Insurance. Journal of Risk and Insurance, 36(5), 567-582. http://dx.doi.org/10.2307/251163

42. Outreville, F. J. (1996). Life Insurance Markets in Developing Countries. Journal of Risk and Insurance, 63(2),263-278. http://dx.doi.org/10.2307/253745

43. Outreville, J. F. (1990). The Economic Significance of Insurance Markets in Developing Countries. Journal of Risk and Insurance, 18(3), 487-498. http://dx.doi.org/10.2307/252844

44. Redzuan, H., Rahman, Z. A., & Aidid, S. S. S. H. (2009). Economic Determinants of life insurance Consumption: Evidence from Malaysia. International Review of Business Research Papers, 5(5), 193-211.

45. Samwick, A. A. (1998). New Evidence on Pensions, Social Security, and the Timing of Retirement. Journal of Public Economics, 70, 207-236. http://dx.doi.org/10.1016/S0047-2727(98)00022-X

46. Savvides, S. (2006). Inquiry into the Macroeconomic and Household Motives to Demand Life Insurance: Review and Empirical Evidence from Cyprus. Journal of Business and Society, 19, 37-79.

47. Sen, S. & Madheswaran, S. (2007). Are Life Insurance Demand Determinants valid for Selected Asian Economies and India? Paper for Presentation at Annual Meeting of APRIA, 1-27.

48. Sen, S. (2008). An Analysis of Life Insurance Demand Determinants for Selected Asian Economies and India. Working Paper, 36, 1-44. [Online] Available: http://www.mse.ac.in/pub/working%20paper%2036.pdf

49. Tan, H. B., Wong, M. F., & Law, S. H. (2009). The Effect of Consumer Factors and Firm Efficiency on Malaysian Life Insurance Expenditure. International Journal Business and Society, 10(1), 59-73.

50. 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(2), 321-328. http://dx.doi.org/10.2307/253306

51. 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(2), 321-328. http://dx.doi.org/10.2307/253306

52. Truett, D. B., and L. J., Truett, 1990, The Demand for Life Insurance in Mexico and the United States: A Comparative Study, Journal of Risk and Insurance, 57: 321-28.

53. Williams, C. A. (1986). Higher Interest Rates, Longer Lifetimes and the Demand for Life Annuities. Journal of Risk and Insurance, 53(1), 164-171. http://dx.doi.org/10.2307/252274

54. Yusof, T. O., Gbadamosi, A., & Hamadu, D. (2009). Attitudes of Nigerians towards Insurance Services: An Empirical Study. African Journal of Accounting, Economics, Finance, and Banking Research, 4(4), 34-46.

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