

ESTIMATING URBAN HOUSEHOLD'S WILLINGNESS TO PAY FOR HEALTH INSURANCE IN COIMBATORE

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ABSTRACT

The present study attempts to analyze the willingness of households to join and pay for potential health insurance schemes and explore the various factors which act as impediments to join health insurance. The study was conducted in Coimbatore and it was based on primary data. Around 234 households were randomly selected from general public, out of which 225 were found to be suitable for analysis. The results showed that majority of the respondents are willing to join the health insurance and twelve factors acted as barriers for subscription to health insurance. Moreover significant association exists between the age; education and monthly income of respondents with their willingness to pay for health insurance. The co-efficient of determination was estimated to be 0.56 signifying that nearly 56 percent of the variations in the willingness to pay premium was accounted by monthly income.

Keywords: Health insurance, Problems, Premium, Subscription, Willingness.

INTRODUCTION

Health is considered as fundamental human right. Freedom from illness is an essential for human beings. Health condition of the persons and economic development of the people go hand in hand, because better health conditions will higher the level of their capabilities to develop the economy. Healthcare has always been a problem area for India, a nation with a large population and larger percentage of population living in urban slums and in rural area, below the poverty line. The government and people have started exploring various health financing options to manage problem arising out of increasing cost of care and changing epidemiological pattern of diseases. The control of government expenditure to manage fiscal deficits in early 1990s has led to severe resource constraints in the health sector. Under this situation, one of the ways for the government to reduce under funding and augment the resources in the health sector

was to encourage the development of health insurance. In the light of escalating health care costs, coupled with demand for health care services and lack of easy access of people from low income group to quality health care, health insurance is emerging as an alternative mechanism for financing health care. Health insurance has emerged as one of the financing options to overcome some of the problems of our system. In simple terms, health insurance can be defined as a contract where an individual or group purchases in advance health coverage by paying a fee called "premium". Health insurance refers to a wide variety of policies. These range from policies that cover the cost of doctors and hospitals to those that meet a specific need, such as paying for long term care. Even disability insurance, which replaces lost income if you cannot work because of illness or accident, is considered health insurance, even though it is not specifically for medical expenses. Health insurance is

very well established in many countries, but in India it still remains an untapped market. Less than 15% of India's 1.1 billion people are covered through health insurance. And most of it covers only government employees. At any given point of time, 40 to 50 million people are on medication for major sickness and share of public financing in total health care is just about 1% of GDP. Over 80% of health financing is private financing, much of which is out of pocket payments and not by any pre-payment schemes. Given the health financing and demand scenario, health insurance has a wider scope in present day situation in India. However, it requires careful and significant efforts to tap Indian health insurance market with proper understanding and training.

In India, presently the health insurance exists primarily in the form of mediclaim policy offered to the individual or to any group, association or corporate bodies. Although, total expenditure on health in India is nearly 6 percent of the entire GDP, the government spending is less than 25 percent against the average spending of 30 -40 percent in other developing countries. Penetration of Mediclaim is currently done by state-owned insurance companies, covering only 2.5 million people i.e. less than 0.50 percent of the country's population. The primary health care system in India is managed mainly by the shallow structure of government health care facilities and other public health care system in a traditional model of health funding and provision. But it is unable to justify the demand for health security for 200 million health insurable population mainly due to service costs being out of reach of many people, absence of good and effective number of physicians, low rate of education programs, less number of hospitals, poor medical equipment and over all the poor budget of government towards the health program.

New Theory of Demand for Health Insurance

Nyman (2002) evaluated the theory of demand for health insurance. It holds that people purchase insurance to obtain additional income when they become ill. Health insurance induces individuals to over consume care and that the demand for insurance is primarily driven by individuals' desire to avoid risk. In effect, insurance companies act to transfer insurance premiums from those who remain healthy to those who become ill. Health insurance is substantially more valuable to the consumer under this theory and additional income generates purchases of additional high-value care, often allowing sick persons to obtain life-saving care that they could not otherwise afford. Therefore, if consumers purchase insurance, it is not because they desire to avoid risk. Instead, the new theory suggests consumers simply pay a premium when healthy, in exchange for a claim on additional income (effected when insurance pays for the medical care) if they become ill. It concludes that much of the increase in health care expenditures associated with insurance does not diminish welfare and that individuals' desire to increase their ability to afford health care when they fall ill is an important motivator for the purchase of health insurance. Conventional theory holds that health insurance is demanded because consumers prefer the certainty of a premium payment to an uncertain loss of medical expenditures of the same expected magnitude. The new theory relies on empirical studies that have shown that just the opposite is true: consumers tend to prefer an uncertain loss to a certain loss of the same expected magnitude. Therefore, preferences for certainty, if anything, would lead the consumer not to purchase insurance.

Need for the Study

Today insurance industry is showing a

tremendous growth performance. When the people are unable to meet their health and healthcare expenses they require health insurance. Nowadays without health insurance one may not be able to afford expensive medical and health service. Health insurance can help anyone to get better quality healthcare and health plan of his own. The necessity for health insurance is a must, where the risk concerning health is increasing day by day due to various reasons. Health insurance, being a service oriented area needs to cater to the demands of consumers. In the light of this, a study is taken on "Estimating Urban Households Willingness to pay for Health Insurance in Coimbatore City"

Objectives of the Study

Following are the objectives of the study:

- To examine the socio-economic background of the sample respondents.
- To observe the willingness of households to join and pay for potential health insurance schemes.
- To explore the various factors which act as problem to join health insurance.

Methodology

Primary data was used in the study. The required information was collected with the help of a well structured questionnaire. Multi-stage random sampling method is adopted to select households (HHs), in urban Coimbatore. In Coimbatore there are four blocks each having 18 wards making a total 72 wards. The location of hospitals in each wards were analyzed and based on that 18 streets with the maximum number of hospitals was undertaken. Further 13 households, from these streets, constituting the sample households were adopted in a random manner. After cross-checking and counterfeit our

sample size was confined to 225.

Results and Discussion

The socio-economic condition of a person includes gender, age, marital status, education, occupation and income and this is reflected through the standard of living of a person. Socio-Economic development and health of community are related with each other in such a way that it is impossible to achieve one without other. Table 1 depicts the socio economic characteristics of the selected households.

Table - 1

Socio-Economic Status of the Households

Socio-Demographic Profile		Frequency	Percentage
Gender	Male	128	56.9
	Female	97	43.1
Age (in Years)	Below 30	69	30.6
	30-45	98	43.6
	45-64	42	18.7
	Above 65	16	7.1
Marital status	Unmarried	78	34.7
	Married	124	55.1
	Widowed	12	5.3
	Divorced	11	4.9
Educational status	Illiterate	19	8.4
	Primary	26	11.6
	Secondary	69	30.7
	Higher Secondary	60	26.7
	Degree/Diploma	45	20.0
	Professional	6	2.7
Occupation	Agricultural activity	9	4.0
	Job in organized sector	33	14.7
	Trade/business	171	76.0
	Selfemployed	12	5.3
Monthly income (in rs)	Below 20000	129	57.3
	20001-40000	69	30.7
	40001-60000	21	9.3
	Above 60000	6	2.7
Total		225	100.0

Source: Primary Data

In the above table, a significant proportion of the sample was male members. Majority of the respondents belonged to the age groups of 30-45 years and were married. Maximum respondents were completed secondary education followed by higher secondary. The study found that very less percentage (2.7) has done their professional course. It was interesting to observe that a majority (76 percent) of the sample respondents was involved in business and 5.3 percent of them were self-employed. As far as level of income is concerned a major percentage of the respondents were having income of less than Rs. 20000. Further it was noticed that 2.7 percent of the respondents were earning above Rs.60, 000 and they are none other than the professionals.

Chi-Square Analysis

In order to investigate the relationship between willingness to join health insurance and socio economic profile (gender, age, marital status, education, occupation and monthly income) of the user, Pearson's chi-square test was done. The null hypothesis framed was:

H₀: There is no significant association between socio-economic profile of respondents and their willingness to join health insurance.

H_a: There is significant association between socio-economic profile of respondents and their willingness to join health insurance.

The calculated chi-square values are shown in table -2

Table-2

Relationship between the Willingness to Join Health Insurance and Socio- Economic Profile

Variable	Chi-square value	Degrees of freedom	Asymptotic significance	Inferences
Sex	2.377	3	.498	Accept H ₀
Age	53.086	35	.026	Reject H ₀
Education	11.610	5	.041	Reject H ₀
Occupation	6.856	3	.077	Accept H ₀
Monthly Income	89.350	26	.000	Reject H ₀

Source: Estimation based on Field Survey

The study found no significant association between the willingness to join health insurance and sex and occupation of the respondents. However, age, education and monthly income were found to have significant association with the willingness to join health insurance. This implies that higher level willingness to join health insurance was found among respondents with higher education and having high monthly income.

Regression Results on the Willingness to Pay Premium and Monthly Income of the Respondents

Rising health care costs, coupled with demand for health care services, lack of easy access of people from low income group to quality health care, health insurance is emerging as an alternative mechanism for financing health care. Even if an individual is healthy and has never had any major problem, it is not possible to predict what may happen in the future. In case of a medical emergency, cost of hospital room, doctor's fees, medicine and related health services all add up to a huge sum. In such times, health insurance provides the much needed financial relief, so there is need to know the willingness of health insurance among the respondents. A linear regression model was fitted to determine the factors that influence willingness to pay for premium among the sample respondents.

Dependent variable: willingness to pay premium

Independent variable: monthly income

R²: 0.560

F value: 285.515

t value :.000**

Table -3
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	sig
	B	Std. Error	Beta		
Constant	.585	.058	10.101	.000	
Monthly Income	7.148E-5	.000	.749	16.897	.000

a. Dependent Variable: Premium for Willingness
note: denote significant at one percent level**

The co-efficient of determination was estimated to be 0.56 signifying that nearly 56 percent of the variations in the willingness to pay premium was accounted by monthly income. The F ratio was significant at one percent level implying that the model showed a goodness of fit. The regression coefficient of monthly income was positive and significant at one percent level. Thus a unit change in monthly income would cause an increase in willingness to pay by 0.0715. The lack of income of the household prevented them from subscribing to health insurance scheme and hence any improvement in income would motivate the households to pay the insurance for safeguarding their health.

Problems to Join Health Insurance among the Sample Respondents

The escalating cost of medical treatment today is beyond the reach of the common man. The government and people have started exploring various health financing options to manage problem arising out of increasing cost of care and changing epidemiological pattern of diseases. Under this situation, one of the ways for the government to reduce under funding and augment the resources in the health sector was to encourage the development of

health insurance. But there are numerous reasons for not having health insurance i.e. number of factors which act as barriers/problems in the subscription of health insurance. All these reasons/barriers were taken in the form of variables and respondents who are without health insurance were asked to give their response on five point likert scale ranging from strongly agree to strongly disagree. Where 5 signifies strongly agree, 4 signifies agree, 3 signifies indifferent, 2 signifies disagree and 1 signifies strongly disagree.

Factor analysis was used in the present study to identify the underlying pattern of relationship between various problems for not having health insurance and whether these problems can be grouped in terms of a composite variable. The Cronbach's alpha to test the reliability or internal consistency of the scale, gave a value of 0.953 greater than the norm of 0.70 indicating good scale reliability. To determine the appropriateness of applying factor analysis, the KMO and Bartlett's test measure were computed and the results are presented in table 4. KMO statistics is .924 which is signifying higher than acceptable adequacy of sampling. The Bartlett's test of Sphericity was also found to be significant at one percent level providing evidence of the presence of relationship between variables to apply factor analysis.

Table-4
KMO and Bartlett's Test Measures

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.924
Bartlett's Test of Sphericity Approx. Chi-Square	2.273E3
Degrees of freedom	45
Significance level	.000

Source: Estimation based on Field Survey

The communalities for each variable were assessed to determine the amount of variance accounted by the

variable to be included in the factor rotations and the results are shown in table 4.1.

Table-4.1
Communalities

Reasons	Initial	Extraction
Low salary/non availability of funds	1.000	.805
Saving in some other areas to meet health care needs	1.000	.846
Not taken by friends, relatives etc	1.000	.833
Lack of knowledge about the health insurance schemes	1.000	.804
Difficulty to approach insurance agents	1.000	.755
Lack of Availability and Accessibility of Services		.712
Lack of comprehensive coverage	1.000	.787
Lack of reliability and flexibility	1.000	.831
Lack of diseases/illness	1.000	.850
Difficulty in availing services in hospitals	1.000	.857
Poor coordination between companies and hospitals	1.000	.866
Conditions are very narrow to buy health insurance schemes	1.000	.790

Source: Estimation based on Field Survey
Extraction method: Principal Component Analysis

All the variables had value greater than 0.50 signifying substantial portions of the variance accounted by the factors. Table 4.3 enlists the Eigen values, their relative explanatory powers and factor loadings for 12 linear components identified within the data set.

Table-4.3
Rotated Component Matrix

Reasons	Component	
	1	2
Low salary/non availability of funds		.840
Saving in some other areas to meet health care needs	.877	
Not taken by friends, relatives etc		
Lack of knowledge about the health insurance schemes	.826	
Difficulty to approach insurance agents	.767	
Lack of Availability and Accessibility		

of Services	.841	
Lack of comprehensive coverage		
Lack of reliability and flexibility		.757
Lack of diseases/illness	.792	
Difficulty in availing services in hospitals		
Poor coordination between companies and hospitals		.848
Conditions are very narrow to buy health insurance schemes	.789	
Eigen value	7.046	1.032
Percentage of variance	70.460	10.325
Cumulative percentage	70.460	80.784

Source: Estimation based on Field Survey
Extraction method: principal component analysis
Rotation method: Varimax with Kaiser Normalization,
rotation converged in 3 iterations

The Kaiser rotated component matrix presented in table reveals that factor one had significant loadings on five dimensions namely 'saving in some other areas to meet health care needs', 'lack of knowledge about the health insurance schemes', 'difficulty to approach insurance agents', 'conditions are very narrow to buy health insurance schemes', 'lack of availability and accessibility of services' and 'lack of diseases/illness'. Factor one was very powerful because it explains 70 percent of the variance. Factor 2 had significant loadings on three dimensions namely 'low salary/non availability of funds', 'lack of reliability and flexibility' and 'poor coordination between companies and hospitals' and explains only 10 percent of the variance. These are the various factors acting as main problems to join health insurance.

CONCLUSION

The study found out that among sample respondents large part of the respondents are willing to join health insurance after knowing its purpose and role. Age, education and monthly income were found to have

significant association with the willingness to join health insurance. This implies that higher level willingness to join health insurance was found among respondents with higher education and having high monthly income. The regression coefficient of monthly income was positive and significant at one percent level. Moreover it was observed that there are 12 factors which are acting as barriers in the subscription of health insurance. Households will impede spending larger proportion of their total budget on health care if these problems to subscribe the health insurance schemes get decelerated.

SUGGESTIONS

- The medical insurance is not so popular. It should be popularious as a good means of finance for health care expenditure. For this government should educate the community to avail health insurance.
- Appropriate policies need to be formulated to reduce the financial burdens of illness on people so that health insurance might be one of the instruments overcome the unforeseen health expense.
- The existing health insurance programmes such as ESIS and Mediclaim also need substantial reforms to make them more efficient and socially useful. Government should catalyze and guide development of such social health insurance in India.

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