

# AN ALTERNATIVE MECHANISM FOR FINANCING HEALTH CARE COST IN A PROGRESSIVE SOCIETY

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## *Abstract :*

The health of the people is very important for any country whether developed or developing but state has shown a very little concern for such an important component of total productivity of the workers in both organized and unorganized sectors of the country. Available literature suggests that very few studies are conducted to see the pattern of expenditure of the workers in both formal and informal sectors with respect to health care and their attitude towards it. The present study intends to study the pattern of utilization of health care facilities and attitudes towards health care/insurance by the workers in both the organized and unorganized sectors and suggest some policy implications that can be utilized by the government to make health a universal right. Based on both primary and secondary sources of data, we have done cross tabulation and Probit analysis to show the importance of health care expenditure and thereby evaluating the willingness to pay of the workers towards health care/insurance. Findings suggest that health care expenditure is a very important component of the total expenditure and therefore, state needs to revise its role to provide the health care facilities at a subsidized rate or free of cost and one of the way is to provide health insurance for all.

Key Words: Health insurance, health policy reform, econometric model, willingness to pay

## **I. INTRODUCTION**

A healthy population is indispensable for speedy socio – economic development of the country and hence health care policy reform is a primary part of socio-economic policy reform. In this respect, government needs to strengthen its role and should encourage people to overcome the depressive outlook about health care financing. Certain types of health care have a public good or externality characteristics implying private provision would be inefficient. Health care is not a pure public good but still it has some degree of public good characteristics. The existence of public goods creates problems for a price system and the market will fail to provide the good or to provide it in sufficient quantity. Thus, the responsibilities of the states have become more important. The government must give due weightage to the health of the poor and other disadvantaged group like workers in the unorganized sectors.

But before we go for the policy prescriptions we must know the attitude of the people towards health insurance as a health care financing tool and present study highlights the same.

## **II. REVIEW OF LITERATURE**

The concept of health care and health insurance cannot be separated (Peter Diamond, 1992). R.Ahuja (2004) argued that for as diverse a country like India there cannot be a onetime solution for provision of universal health care and the attitude of the people towards health care is difficult to assess. He further opined that Community Based Health Insurance (CBHI) is more suited than alternate arrangements to providing health insurance to the low-income people living in developing countries thereby taking care of the total health of the people.

In contrast to the near absence of study of the effect of state health regulation on wages, hours, and employment, there have been several studies of the effect of state health insurance regulation on insurance coverage. These studies have examined the effect of state-mandated health insurance benefits on health insurance coverage. Of the five, the analyses of Goodman and Musgrave (1988), Jensen and Gabel(1992), Marsteller et al. (1998), and Jensen et.al (1992), found some evidence that mandated health insurance benefits reduce health insurance coverage. But the evidence was not uniform and was often in-consistent across

studies. The existing literature on small-group reform has studied the topic from different perspectives, but most studies have focused on the prevalence of health insurance coverage as an outcome.

### III. OBJECTIVES

The study proposes to answer the following questions

- i) To find out the conditions that to be met to create interest in a government sponsored health insurance.
- ii) To find out the observed socio-economic, demographic and health care related characteristics that have determined the willingness to pay for a government administered proposed health insurance scheme (PHIS).

### IV. METHODOLOGY

#### 4.1 Sample coverage

The study will be confined to Guwahati (Metro), a district in Assam, only where sample from both organized and unorganized sector workers will be taken on the basis of some criteria like better coverage by other social security schemes and increasing migration from rural areas to the city in search of job and highest growth of employment opportunity in the entire North–East according to 2011 census report.

The sampling procedure used for the household survey was based on purposive cum stratified sampling technique. Literature on employment scenario of Assam and Guwahati shows that more number of workers belongs to unorganized sector. Therefore, out of total 360 households (chosen according to sample size determination formula), 234 are from unorganized sector and 126 from the organised sector depending on the work participation rate of Guwahati city sector wise . The study was undertaken during the period 2015-16.

#### 4.2 Methods

We have done simple tabulation, bar diagram and Probit and Tobit analysis. To know the Willingness to Pay (WTP), a hypothetical market for a Proposed Health Insurance Scheme (PHIS) is developed and Contingency Valuation (CV) method is followed for generating data. First of all, as we do not know the random part of preferences and can make only probability statements about yes or no, we use Binary Probit model to estimate the probability of WTP and secondly since the dependent variable (WTP) is not fully observed, that is censored at zero, we have used Tobit model.

### V. RESULTS AND DISCUSSION

#### 5.1 Health insurance as an alternative mechanism for financing health care

The interview schedule included direct questions on each household's willingness to pay for a hypothetical health insurance scheme. Households were asked to state the willing to pay or not willingness to pay as the case may be for such insurance scheme through CV method. Household's preference for medical benefits was the main basis for the willingness to pay.

About 66.9% of the households out of 360 households are willing to pay for public/ Government health care facilities and they are ready to pay on fulfillment of the following conditions as specified in the table 1..

Majority (54.4%) of the respondents are ready to pay for quality care, while rests of the respondents are willing, provided certain conditions are met. About 12.9% of the households are saying that they are ready to pay if there is no inordinate delay, good quality care and medicines and diagnostic facilities are available. Apart from these three conditions most of them said that if there was less travel time then they could have pay for the services.

#### 5.2 Probit model:

The monthly WTP of the surveyed respondents for an alternative Proposed Health Insurance Scheme (PHIS) are given in figure 1. Out of 360 respondents 238 respondents (65.5%) are interested to pay for the scheme. This is further segregated according to monthly WTP group in both the sectors as shown in the figure 2.

Dependent variable being a dichotomous variable taking either 1 for willing to pay and 0 for not willing to pay, a Probit regression model is developed to evaluate the relationship between household's willingness to

pay for the proposed health insurance scheme and their socio economic and health related characteristics of the head of the households for the total sample as a whole (table 2).

The functional specification of the Probit Model is given as follows:

#### Probit model:

$$y_i^* = \alpha + \beta_1 x_{1i} + \dots + \beta_k x_{ki} + u_i, \quad i = 1, 2, \dots, n \quad (1)$$

$y_i^*$  is unobservable but,  $y_i = \{0 \text{ if } y_i^* \leq 0, 1 \text{ if } y_i^* > 0\}$

$$p(y_i = 1) = p(y_i^* > 0) = p(u_i \geq -\beta_1 x_{1i} + \dots + \beta_k x_{ki}) \\ = F(\alpha + \beta_1 x_{1i} + \dots + \beta_k x_{ki})$$

Where,  $F$  is the cumulative distribution function of  $u_i$ . We are assuming that the probability density function of  $u_i$  is symmetric and normally distributed with 0 mean and  $\sigma^2$  variance.

Since the study is based on cross section data the problem of heteroskedasticity is quite possible. Therefore, before estimating the models, we have checked for the presence of heteroskedasticity in the data set for the formulation by applying Breusch-Pagan test and White test. The tests show the presence of heteroskedasticity in each of the data sets. Subsequently the problem has been corrected by estimating White2 heteroskedasticity consistent robust standard errors.

Economic Status (ES) of the household strongly influenced the decision making process for willingness to pay for the proposed health insurance scheme. It means that with one unit increase in ES reduces the z score by 2.25. This variable is significant at 1% level. So, we can say that households with higher economic status are less likely to pay for such a scheme.

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Age and sex does not have any significant impact on the decision according to survey.

Among the other demographic variables, size of household (HH) also influenced the decision for willingness to pay and it is significant at 1%. This can be interpreted that one unit increase in the size of the households reduces the probability of willingness to pay by 0.285 times. This may be due to the fact that mostly households with larger family size are having more earners who are already under some coverage or provision of such facilities or if number of earners are less; their ability to pay may not permit to be the part of such a scheme.

Among all other health related factors, only one variable namely knowledge seeking about health care is significant at 1 percent level of significance and it is positive. This can be interpreted that one unit increase in the knowledge about health care is going to increase the z score by 0.578.

Again, sector is a very significant variable (1% level) and one unit increase in the households from organized sector reduces the z score by 0.852 then from the unorganized sector. Alternatively, one unit increase in the unorganized sector household will enhance the Z score.

## VI. CONCLUSION

From our study it is revealed that there is an increasing demand for good health care facilities among the people irrespective of their age and gender. With the changing burden of disease pattern more and more people even from the informal sector are willing to and able to pay for any viable health insurance scheme that can safeguard them from unexpected loss. This piece of information can be utilized by the policymakers for future modeling of any such scheme to ensure health security of the people and to make health care a universal right.

## VII. REFERENCE

Ahuja R.(2004). *Health Insurance for The Poor in India*, Working Paper, New Delhi: Indian Council for research on International Economic Relations.

Ahuja and Jutting (2006). Are The Poor Too Poor To Demand Health Insurance, *Journal of Microfinance*, Vol 6, No.1.

Diamond ,P (1992), Organizing The Health Insurance Market, *Econometrica*, Vol. 60, No. 6 (November, 1992), 1233-1254.

Goodman, John C., and Gerald L. Musgrave (1988). *Freedom of Choice in Health Insurance*. National Center for Policy Analysis, Policy Report No. 134. Dallas, Texas: National Center for Policy Analysis.

Jensen, Gail, and Jon R. Gabel (1992). State Man- dated Benefits and the Small Firm's Decision to Offer Insurance. *Journal of Regulatory Economics*, Vol. 4, No.4, 379-404.

Marsteller, Jill A., et al. (1998). *Variations in the Uninsured: State and County Level Analyses*. Unpublished Manuscript, Urban Institute.

Mitchel O. (1982). Fringe Benefits and Mobility. *Journal of Human Resources*, Vol .17 , No. 2, 86-98.

Tietenberg Tom(2002) : *Environmental and Natural Resource Economics*, Sixth Edition, Pearson Education. ISBN:10: 020177027X

## Appendix

Table1 Conditions under which Respondents are Willing To Pay

CONDITIONS	Organised		Unorganised		Total	
	N	%	N	%	N	%
1.Absence of inordinate delay	2	.8	9	3.7	11	4.6
2.Good quality care	11	4.6	120	49.8	131	54.4
3.Availability of drugs and diagnostic facilities	---	---	8	3.3	8	3.3
4.Less travel time	---	---	2	0.8	1	0.4
5.1 and 2	8	3.3	13	5.4	21	8.7
6.1 and 3	---	---	3	1.2	3	1.2
7.2 and 3	1	.4	14	5.8	15	6.2
8.2 and 4	---	---	1	0.4	2	0.8
9.1,2 and 3	1	.4	30	12.4	31	12.9
10.2,3 and 4	---	---	6	2.5	6	2.5
11.1,2,3 and 4	1	.4	9	3.7	10	4.1
12.1,2,3 and 5	---	----	2	0.8	2	0.8
Total	24	10.0	217	90.0	241	100.0

Source: Survey data

Table 2 Definitions of the Explanatory Variables Those Are Likely To Impact On The WTP of the Respondents Willing To Pay

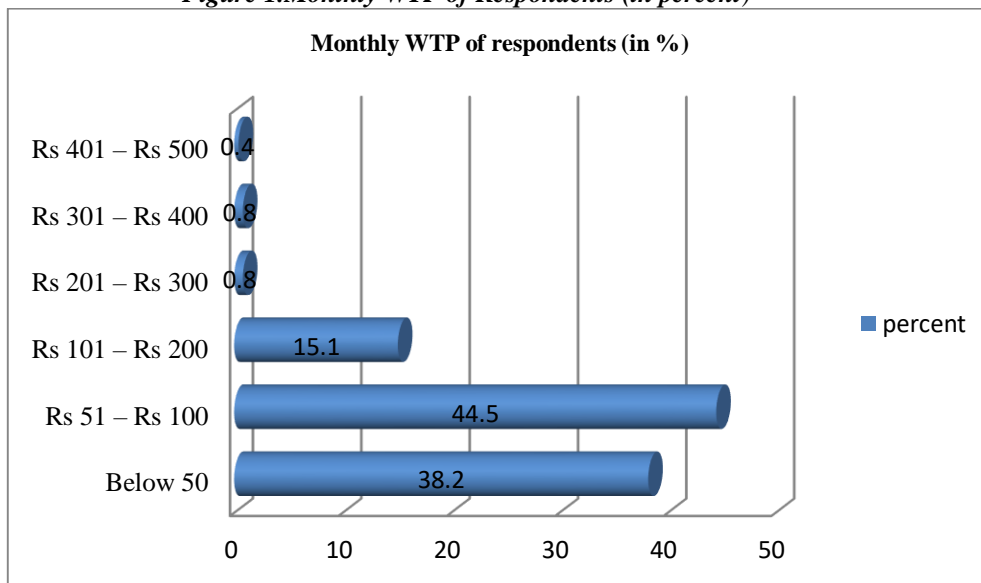
VARIABLES	N=360	Unit	Mean	Std. Deviation	Min	Max
WTP	Willingness to Pay	Rs	70.10	71.146	0	500
<sup>1</sup> Economic Status (ES)	Index of consumption standard based on possession of consumer durables ,weights are given according to price	Index	.311	.25	0	1.00
AGE(AG)	Age of the respondent	Years	43.37	9.900	1	24
SEX(SX)	Gender (1= male)	Categorical	.95	.200	0	1
Household Size (HH)	Number of family member	Number	3.6	1.243	1	8
Education(E)	Literacy level,	Years of schooling	11.23	3.39	0	7
Chronic Sickness reported(CR)	Sickness in the family, (reported=1)	Categorical	.34	.467	0	1
Total medical expenditure (ME)	expenditure incurred for sickness	Rs	8000	2296	00	29000.00
Preferred Treatment source (PTS)	Source of treatment(public=1)	categorical	.56	.490	0	1
Knowledge	Knowledge seeking about	Categorical	.66	.85	0	1

<sup>1</sup> In our study, an index of consumption standard has been constructed as a proxy for the economic status of the household to which the respondents belong on the basis of the consumer durables possessed by them. The value of the index ranges from 0 to 1. If a household possesses all the consumer durables considered in the schedule, then its value will be one and if nothing is possessed, then the value will be 0. Weights are assigned to each of the consumer durables from 1 to 6 depending on the price and the index is calculated by weighted index calculation procedure.

(K)	health care(yes= 1)					
Sector (S)	Organised sector=1	Categorical	.45	.418	0	1

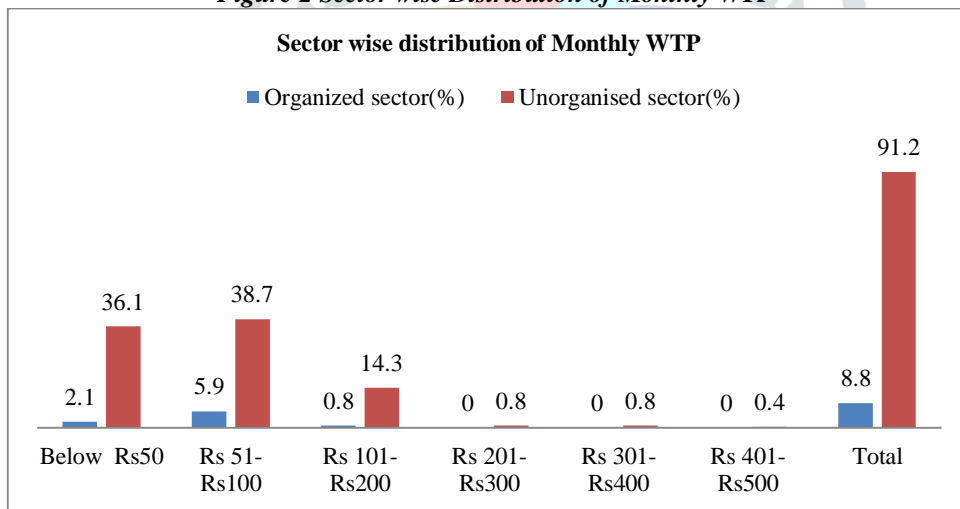
Source: Survey Data

Figure 1. Monthly WTP of Respondents (in percent)



Source: Survey data

Figure 2 Sector wise Distribution of Monthly WTP



Source: Survey data,