DETERMINANTS OF ENROLMENT FOR HEALTH INSURANCE SCHEMES AMONG INDUSTRIAL WORKERS IN COIMBATORE: A LOGISTIC REGRESSION ANALYSIS

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"What can be added to the happiness of a man, who is in health, out of debt, and has a   clear conscience?"(Adam Smith- An Inquiry into the Nature and Causes of the Wealth of Nations, 1776)

Abstracts

In this paper the determinants of enrolment for health insurance among informal industrial workers in Coimbatore is analysed. The current study explains the importance of educational status that plays an important role in enrolment of health insurance among informal industrial workers. The distinctiveness and overlaps in health insurance and enrolment in health insurance are also highlighted in this study. The study comprises 750 sample respondents from different foundry/engineering and textile industries in Coimbatore were interviewed by the researchers. Logistic Regression Technique is used to analyse the determinants of enrolment in health insurance schemes among industrial workers. Results have implication that education plays a lead role in determining enrolment in health insurance among industrial workers. The escalating cost of medical treatment today is beyond the reach of a common man. This study gives suggestions such as the health insurance company could provide precise policy and Government to implement still better health insurance schemes for informal industrial workers. Most of the respondents were of the opinion that government should come out with a clear cut policy, where the public can be made to contribute compulsorily to a health insurance scheme to ensure unnecessary out-of-pocket expenditures and also better utilization of their health care facilities.

Keywords: Health insurance, Informal industrial workers and Logistic Regression Technique.

Introduction

Health is the most basic and primary need of an individual that enables the nation to progress in the socio-economic, scientific, literary and cultural spheres. A long life and

good health are the greatest blessings that human beings can pray for. Good health and safety performance ensures an accident free industrial environment. A healthy workforce is vital for sustainable social and economic development on a global, national and local level. Health and Safety of the employees are important aspects of an organization's smooth and effective functioning. Occupational Health, as defined by a joint committee of World Health Organization and the International Labour Organization (ILO), involves the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations (David Koh, Dean Baker 2009). Labour is an important aspect of the industrial system for the future economic growth of the country. Therefore, there is a great need for a clear understanding of the various labour problems. The problems of industrial workers are very much complex and dynamic. Their complexity is a matter of concern for the partners of industry, scholars and academicians, planners and policy makers, labour leaders and social workers. During recent years there has been a growing awareness of the existence, importance and needs of the unorganized workers. The National Commission for Enterprises in the Unorganised Sector (NCEUS) has estimated that during 2004-05, 49 per cent of the workers shown in the organised sector were actually unorganised/informal workers; they were not provided any job or social security by the employer. During 1999-2000, the corresponding figure was 46 per cent (Kannan, 2007).

Statement of the problem and Need for the Study

The unprotected and unorganized workers are, by definition, disadvantaged workers. The degree of disadvantage, if one may say so, varies from segment to segment. There have been a large number of researches in the field of unorganized labour. But very few studies have been carried out about the unorganized industrial workers belonging to textile and foundry units, who form a sizeable proportion of the total labour population engaged in the informal sector. With the increasing in formalization of the work force and the large number of persons below the poverty line, there is an urgent need to focus occupational health safety for unorganized industrial workers. In India, occupational health safety has so far benefited, by and large, only the workers from the formal sector. The vast informal sector of the country has never been touched by the very sophisticated labour laws of the country.

The health insurance is a vital method of financing the spiraling costs of medical care. The high cost of health services coupled with the unpredictability of health needs and the inadequacy of personal savings is the primary reason for the growing importance of insurance as a means of financing health services. But, In spite of the growing importance of health insurance schemes, the number of people covered by health insurance is very less in India. It has been found that one of the major reasons for low health insurance coverage in India is the lack of awareness of the health insurance schemes among the people. Currently in India, only 2 million people (0.2 per cent) of the total population of 1 billion

are covered under Mediclaim, the most popular health insurance scheme in India, whereas in developed nations like U.S. about 75 percent of total population are covered under one or the other insurance schemes (Ramanujam, 2009). Income may limit household's access to health care, whereas insurance may guarantee higher access to health care as reimbursements from insurance company reduces the Out of Pocket Expenditure (OOP). On the other hand, insurance may lead to moral hazard problem and individuals having insurance may not have incentive to take care of their health and invest in the preventive care. At the same time, health insurance might increase economic access to better and expensive health care. This may increase the probability of getting ill and thus expenditure on health will be higher. Unpredictability of health needs and inadequacy of personal savings together create the need for health insurance. Against this background, this study aims to analyse the determinants of the industrial worker's enrolment in health insurance schemes.

Data Sources and Methodology

In the present study, the methodology consists of area of the study, Sampling frame and sampling size, and data collection procedures. The unorganised sector is an enterprise-based concept and does not reflect the characteristics of the jobs or employment relationships. It is possible that some workers in the unorgansied sector do not enjoy any job security, work security or social security. In order to identify such categories of workers, it is necessary to complement the definition of unorganised sector with a definition of unorganised/informal employment. All the casual workers and unpaid family workers in all enterprises, irrespective of the sector, are being considered as unorganised workers.

(i) Area of the Study

The study was confined to Coimbatore of Tamil Nadu, the second largest city of the State. Coimbatore is one of the most industrialized cities in Tamil Nadu and is known as the textile capital of South India or the Manchester of the South. Among all the districts of Tamil Nadu, Coimbatore district is one of the most affluent and industrially advanced districts of the State. It has more than 40,000 small, medium and large-scale industries, which serve the engineering needs of the major parts of the country. The city is known for its dynamic people and excellent infrastructure. The entrepreneurial spirit of the business community here is renowned across the country. Besides Textiles, the city today has evolved itself into a diversified economy with Engineering, Auto Components, Pumps and Motors (Out of every two water pumps produced in the country one is from Coimbatore), Foundries (One among the six major centres in India) and the educational institutions (the highest density in the country: 84 in 75 Square Km) which produce about 40,000 graduates of various disciplines a year. Coimbatore is well known for its textile and engineering industry, which consists of units turning out a variety of products needed by different types

of industries, as inputs. Apart from supplying components to major units, many engineering units are engaged in producing consumer durables too. The unorganised workers of these units are prone to unhealthy working and living conditions.

(ii) Sampling Frame and Size

In the study area, the sample unprotected workers in the organised sector are mainly in the categories of regular, casual and contract workers who remain unprotected because of non-compliance of the provisions of the existing laws. This is a growing segment in the organised sector and this forms the universe of the present study. The study of unorganised workers with special reference to foundry and textile units in Coimbatore is an empirical one. The study is based on survey research technique. The information on workers in the informal sector has been gathered form extensive survey of field investigation. As working labour informal sector of Coimbatore constitute a heterogeneous group, stratified disproportionate sampling has been undertaken while collecting the sample workers. In order to get sufficiently large sample from both the selected industrial units under consideration, it was decided to get a sample of 10 per cent of the workers for the study, for which again Systematic Sampling Method was adopted (taking into consideration the number of workers in each selected industrial establishment). The researcher was able to contact 750 sample respondents only from whom detailed information was collected for the present study.

Health Insurance

The health insurance is a vital method of financing the spiraling costs of medical care. The high cost of health services coupled with the unpredictability of health needs and the inadequacy of personal savings is the primary reason for the growing importance of insurance as a means of financing health services. In spite of the growing importance health insurance schemes, the number of people covered by health insurance is very less in India. It has been found that one of the major reasons for low health insurance coverage in India is the lack of awareness of the health schemes by the people. Currently in India, only 2 million people (0.2 per cent) of the total population of 1 billion) are covered under Mediclaim, the most popular health insurance scheme in India, whereas in developed nation like U.S about 75 per cent of total population are covered under one or other insurance schemes (Ramanujam, 2009).

The workers in the unorganized sector constitute about 93 per cent of the total work force in the country. The Government has been implementing some social security measures for certain occupational groups but the coverage is miniscule. Majority of the workers are still without any social security coverage. One of the major insecurities for workers in the unorganized sector is the frequent incidences of illness and need for medical care and hospitalization of such workers and their family members. Despite the expansion in the health facilities, illness remains one of the most prevalent causes of human

deprivation in India. It has been clearly recognized that health insurance is one way of providing protection to poor households against the risk of health spending leading to poverty. However, most efforts to provide health insurance in the past have faced difficulties in both design and implementation. The poor are unable or unwilling to take up health insurance because of its cost, or lack of perceived benefits.

Table 1
Logistic Regression Results on Respondents' Enrolment of Health Insurance

Explanatory Variables	Beta	Exp (B)	Level of Sig.
Age *(Ref: ≤ 24 Years)*	--	1.000	--
25 – 34 Years	-0.694	0.400	**0.01**
35 and Above	-0.593	0.553	0.186
Gender *(Ref: Males)*	--	1.000	--
Females	-0.754	0.461	**0.001**
Marital Status *(Ref: Unmarried)*	--	1.000	--
Married	2.297	9.943	**0.001**
Caste *(Ref: Scheduled Castes / Tribes)*	--	1.000	--
Most Backward Castes	-0.627	0.534	**0.05**
Backward Castes	-0.107	0.898	0.617
Forward Castes	-0.746	0.474	0.474
Educational Status			
(Ref: Uneducated / Primary School)	--	1.000	--
Middle School	-0.805	0.447	**0.001**
Higher Secondary School	1.555	4.736	**0.001**
Diploma / Degree	1.319	3.742	**0.001**
Monthly Income (in Rs.)	--	1.000	--
(Ref: ≤ 6000) ≤≤	0.649	1.914	0.131
6001 - 8000			
Satisfaction with Salary *(Ref: No)*	--	1.000	--
Yes	0.109	1.115	0.657
Nature of Employment *(Ref: Temporary*			
<3 days / One Week)	--	1.000	--
Contract	-0.124	1.642	**0.01**
Permanent	0.496	1.115	0.657
- 2 Log likelihood	720.850		
Chi-square (df)	293.333 (14)		
Significance Level	0.001		
N	750		
Cox & Snell R Square	32.4		
Nagelkerke R Square	43.7		

Determinants of Enrolment for Health Insurance

As stated earlier, the gross differentials of any phenomenon would give a rough idea about the association between the dependent variable and selected background characteristics. However, such gross differentials are less conclusive and generalizations drawn from such analysis have their own limitations. Therefore, in the present section an attempt is made to find out the major factors that are likely to determine the respondents' enrolment of health insurance. For this purpose, the respondents' enrolment for health insurance has been considered as dependent variable, which is dichotomous in nature viz., if the respondent enrolled himself / herself for health insurance (a score of '1' is assigned) and he / she didn't enrolled for such insurance (a score of '0' is given). All the selected independent variables are categorised in nature. In such a condition, application of the logistic regression analysis is justifiable. Results based on such an analysis are presented in Table

Among the sample respondents, it is conspicuous to note that 6 out of 8 explanatory variables under consideration have exhibited statistically significant net effects on the respondents' enrolment for health insurance. Controlling for all the variables used in the model, it is striking to observe that the odds of enrolling for health insurance by the respondents are about 10 times higher (OR = 9.943) among those who are currently married as against those who are unmarried / widowed, and such net effect is statistically turned out as significant to a higher extent (p<0.001). Likewise, it is also pertinent to note that the odds of enrollment of respondents for health insurance are much higher (OR = 4.736) among those have completed education up to higher secondary school and above as well as among those who have studied up to Diploma / Degree (after higher secondary school) as compared to those who are illiterates (p<0.001 in each case). However, such significant higher odds are found to be fairly lower among those respondents who studied up to middle school level as against to the illiterates, and the t-test results too turned out as highly significant in this regard (p<0.001). Thus, with an exception, by and large, these findings establish the fact that educational status of the respondents plays a vital role in respondents' enrollment for health insurance. Greater awareness about the importance of health insurance and the demand for the health insurance would be higher among educated respondents, especially among those who go beyond secondary school and above and thereby, large number of such persons enrolled themselves for health insurance.

Next to these, current age of the respondents appears to be one of the factors in deciding whether the respondents get enrolled themselves for health insurance or not. For instance, compared to those younger at age (24 years or less), respondents who ever are at their prime working ages (25-34 years) have shown lesser tendency to take a health insurance policy and this result has been turned out as highly significant (p<0.01). Another pertinent point to be noted here is that the likelihood of enrolling for health insurance is much lower among female respondents than among their male counterparts and also found

to be statistically highly significant (p<0.001). Another interesting point noted here is that that the probability of respondents enrolling themselves for health insurance is observed to be reasonably lower among those who are working on contract basis (OR = 1.1642) as compared to those working on temporary basis and such net effect has turned out as highly significant (p<0.01). On the other hand, such net effect is positive in the case of those who are permanent employees, but the finding lacks statistical significance. Finally, though the respondents who earn fairly higher income as well as who are stated to be satisfied with their salary / earnings are more inclined to enroll themselves for health insurance as compared to their respective counterparts, these results didn't turn out as statistically significant.

Conclusions

The findings clearly establish the fact that educational status of the respondents plays a vital role in respondents enrolling for health insurance. Greater awareness about the importance of health insurance and the demand for the health insurance would be higher among educated respondents. The escalating cost of medical treatment today is beyond the reach of a common man. In case of a medical emergency, cost of hospital room rent, the doctor's fees, medicines and related health services can work out to be a huge sum. In such times, health insurance provides the much needed financial relief. An investment in health insurance scheme would be a judicious decision. The health insurance scheme could either be a personal scheme or a group scheme sponsored by an employer. The health insurance companies should come out with clear cut policy details, as many of the respondents had vague ideas about the various benefits and risks involved in a policy. The middle and low socio-economic groups are a potential market to be tapped as they are ready to spend a reasonable amount as premium payable per annum rather than huge medical expenses in case of any adversities. If the private insurance players want to venture in the market, they should try to imbibe trust in the people as most of the respondents preferred government health insurance schemes, the reason being guarantee for their capital. To develop a viable health insurance scheme, it is important to understand people's perceptions and develop a package that is accessible, available, affordable and acceptable to all sections of the society. Most of the respondents were of the opinion that government should come out with a clear cut policy, where the public can be made to contribute compulsorily to a health insurance scheme to ensure unnecessary out-of-pocket expenditures and also better utilization of their health care facilities.

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