Vol. 5 No. 4 September 2017 ISSN: 2319-961X UGC Approval No: 44192 Impact Factor: 3.104

DETERMINANTS OF HEALTH STATUS OF THE INFORMAL SECTOR WORKERS IN COIMBATORE - TAMILNADU

Article Particulars

Received: 28.7.2017 Accepted: 29.8.2017 Published: 30.9.2017

P.DINESH KUMAR
Ph.D Research Scholar,
PSG College of Arts and Science, Coimbatore
Tamil Nadu, India

Abstract

India has witnessed an impressive GDP growth rate of over 6 per cent since the 1980s. Growth has been particularly rapid since the post reform period of the 1990s. This high growth has contributed to a sustained increase in per capita income and a decline in absolute poverty, as well as modest improvement in standards of living. It has also brought important changes in employment conditions in the country. The structure of the labour market, patterns of employment growth and labour-market institutions play an important role in shaping development patterns and outcomes. Today, India is counted among the most important emerging economies of the world but employment conditions in the country still remain poor (Labour and Employment Report 2014).

Keywords: *GDP, per capita income, informalization, labour market, Labour and Employment Report, employment growth*

Labour Market and Employment Conditions in India

Even today the large proportion of workers engaged in agriculture (about 49 per cent) contribute a mere 14 per cent to the GDP. In contrast, the service sector which contributes 58 per cent of the GDP barely generates 27 per cent of the employment, and the share of manufacturing in both employment (13 per cent) and GDP (16 per cent) is much lower than in East Asian and South-East Asian countries. This unbalanced pattern of growth is at variance with not just the experience of the fast growing economies of East and South East Asia but also the economic historical experience of the present day developed countries of the West. An overwhelmingly large percentage of workers (about 92 per cent) are engaged in informal employment and

a large majority of them have low earnings with limited or no social protection. This is true for a substantial proportion of workers in the organized sector as well. Over half the workers are self-employed, largely with a poor asset-base, and around 30 per cent are casual labourers seeking employment on a daily basis. About 18 per cent of those employed are regular workers, and amongst them less than eight per cent have regular, full-time employment with social protection.

There has been increasing informalization of the workforce. The transfer of workers from agriculture to non-agriculture has been slow, with some acceleration in recent years, but most of the employment generated has been informal and insecure. To illustrate, the percentage share of contract workers in organized manufacturing sector has increased from 13 per cent in 1995, to 34 per cent in 2011. The growth of regular, protected jobs is also slow. Labour market inequalities are large and disparities and inequalities have generally increased. The most striking is the disparity between the regular/casual and organized/ unorganized sector workers. The increasing 'informalization' of employment has gradually eroded the strength of trade unions (Labour and Employment Report 2014).

Prominence of Unorganised Sector in India

It has been widely acknowledged that the informal sector in India suffers from a low productivity syndrome, compared to the formal sector. The prominent features of the sector are lower real wages and poor working/living conditions. Further, the sector is characterised by excessive seasonality of employment (especially in the farm sector), preponderance of casual and contractual employment, atypical production organisations and work relations, absence of social security measures and welfare legislations, negation of social standards and worker rights, denial of minimum wages and so on. Poor human capital base (in terms of education, skill and training) as well as lower mobilisation status of the workforce further add to the vulnerability and weaken the bargaining strength of workers in the informal sector. Thus, the sector has become a competitive and low cost device to absorb labour, which cannot be absorbed elsewhere, whereas any attempt to regulate and bring it into more effective legal and institutional framework is perceived to be impairing the labour absorbing capacity of the sector.

With the advent of globalisation and resultant reorganization of production chains led to a situation where production systems are becoming increasingly atypical and non-standard, involving flexible workforce, engaged in temporary and part time employment , which is seen largely as a measure adopted by the employers to reduce labour cost in the face of stiff competition. A growing body of literature suggests that these flexible workers in the new informal economy are highly vulnerable in terms of job security and social protection, as they (unlike their counterparts in conventional occupations) are not deriving any of the social protection measures stipulated in the existing labour legislations. The insecurities and vulnerabilities of these modern informal sector labour

(for instance, those in the new service sector occupations) are on the rise, as there is a visible absence of worker mobilisation and organised collective bargaining in these segments, owing to a multitude of reasons (Remesh, 2004).

The alarming expansion of informal sector, in recent times, has adversely affected employment and income security for the large majority of the workforce, along with a marked reduction in the scale of social welfare/security programmes. Thus, an important challenge raised by the exploding informal economy is the need for ensuring adequate social safety nets and welfare measures to provide social security to the growing segment of unorganised sector workers. Accordingly, during the past decades, government in India (both at the centre and state levels) have been striving towards designing and implementing more effective measures to strengthen and expand the social protection in the unorganised sector workers. In this backdrop, a discussion of the recent social security initiatives in the country would be meaningful. To contextualize such a discussion, the following section of the essay would attempt a brief but critical analysis of social security measures launched by the government till the recent year.

The labour market in the informal sector is supposed to be unregulated and highly competitive because of absolute freedom to the entry in the sector. The supply of labour in the informal sector consists of mostly new entrants in the informal sector in-migrants or young persons entering the labour force. Since the opportunities for getting a job in the formal sector become restricted, they move towards a small establishment in the informal sector. As a result situation of underemployment and depressed wages prevail in the informal sector (Mazumdar, 1977).

Working Conditions of the Informal Sector Workers

The majorities of the urban informal sector workers live in poor areas, lack basic health and welfare services and social protections and work in an unhealthy and unsafe working environment. For many informal sectors, their home and workplace are one and the same place. Poor health and different types of diseases result from a combination of undesirable living and working conditions. Actually the conditions under which most informal workers operate are precautionary and unsafe. The area in which the enterprises operate most of the times lack sanitary facilities or have poor waste disposal.

In the informal sector, the distinction between working and living conditions often become blurred and both are related to broader problems of poverty and underdevelopment. The interaction between occupational hazards and poor living conditions generate health problems of the informal sector workers. According to some surveys of International Labour Organisation (ILO) carried out in Philippines, Nigeria, Senegal and Tanzania, the hazards varied according to occupations. Some of the most prevalent problems are poor lightings, lack of ventilation, excessive heat, poor

house keeping, and inadequate working place. Apart from this the workers have to face lack of protective equipment, harmful chemicals and dusts and long hours of work. The most prevalent health impairments are muscular-skeleton disorder and low back pain, allergic reaction and other respiratory disorder, physical strains, fatigue. Injuries are also very frequent. Studies revealed that most of the workers do not posses normal vision in both eyes. These labourers can not afford to buy spectacles with their limited income. Hazardous chemicals use has been associated with respiratory problems while exposure to organic dusts have been associated with frequent headaches, respiratory disorders, skin irritations and burns from bleaching and dying.

The studies by Visaria and Gumber (1994) show that, the poor are forced to spend a higher proportion of their income on health care than the better off. The burden of treatment is unduly larger on them when seeking inpatient care. The high incidence of morbidity cuts their household budgets both ways i.e. not only do they have to spend a large amount of money and resources on medical care but also unable to earn during the period of illness. Very often they have to borrow funds at very high interest rates to meet both medical expenditure and other household consumption needs. So it is observed that the burden of expenditure on health care is however heavy for households belonging to the informal sector workers, indicating the importance of a potential health insurance scheme for such sections of the society. It is estimated that only nine per cent of the Indian workforce is covered by some form of health insurance through Central Government health insurance scheme, employees' state insurance scheme and Medi-claim. But a majority of the work force from the informal sector does not get any benefit from it. The public insurance companies are also very much interested to bring this labour force in any positive health insurance scheme.

Health Status

Health status is multidimensional in nature and difficult to measure precisely. It is captured through a range of indicators such as mortality, morbidity, anthropometric measures (study of origins and development of human beings), nutritional status or calorie intake, and life expectancy at birth. Among these, mortality and life expectancy at birth are widely used to measure the health status of a population, as they are easily observed, objective and less prone to measurement errors. However, morbidity may be a more useful indicator than mortality, since it is related to the pain and sufferings of the people, while mortality is a terminal event. But the problem with morbidity is that it is difficult to measure without bias. Despite these well-recognized problems and difficulties of measurement, there can be little doubt that good information on morbidity is extremely useful (Amartya Sen, 1998).

Health status, in general, and morbidity, in particular, are primarily influenced by the behavioral decisions of the individuals or family, besides genetically inherited health endowments and the health environment in which they reside. Thus, illness is not a

random event, but one that is systematically related to the household- and community-level factors. In the event of an illness, a majority of individuals seek some form of treatment. The choice of curative healthcare (public, private, self-treatment and no treatment) depends upon the type of illness, access to service provider, information about the provider, economic status of the individual/household, among others (Duraisamy, 2001).

Health and healthcare services have a major influence on the well being of individuals and societies, and are an important part of a nation's politics and economy. Ill health and poor health services are increasingly recognized as major dimensions of poverty in their own right, so that efforts to combat poverty ought to consider the role of health. It is now widely recognized that health is both an input and an outcome of broader social and economic development. It is also well known that achievements in health do not simply depend on the health sector, but arise out of improvements in standard of living, social stability, education, housing, water supply, sanitation, and other environmental factors. These are amenable to change by actions taken by households, communities and governments, and are usually outside the domain of the health system. Good health also improves educational attainment, and fosters economic growth and political participation. Yet unhealthy behavior, sickness, malnutrition, and high fertility are also significant causes of poverty (Marilyn Bergner, 1985).

Determinants of Health Status

Experts generally believe that the level of health status of persons in a nation is a robust reflection of the state of development of the nation. Based on experience and logical thought process, it can be concluded with a fair amount of certainty that a nation with good health tends to be productive and that productivity tends to uplift economic and societal developments. Economic and societal developments, in turn, tend to improve the indicators of health status and quality of life. Void of the befitting and long-term considerations of such interactive process using scientific measures, analysis of indicators of economic development in isolation tends to project false and meaningless statistics. The definition of health is said to be often overcast with too many intellectual and idealistic notions that are not testable under objective norms, it is essential to define health under a norm of minimum objective criteria. A generally important factor in the consideration of status of health in relation to the overall developmental process is the health among women and children in the total population. The merit of this doctrine is easily understood in terms of biological norms of growth potential, and growth succession in children and reproductive energy utilization in women. Under the above-mentioned norms and based on consideration of available indicators of health, it appears that the present state of health in India is poor.

Many factors combine together to affect the health of individuals and communities. Whether people are healthy or not, is determined by their circumstances and environment. To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of health care services often have less of an impact.

The determinants of health include:

- The social and economic environment
- The physical environment and
- The person's individual characteristics and behaviours

The contexts of people's lives determine their health, and so blaming individuals for having poor health or crediting them for good health is inappropriate. Individuals are unlikely to be able to directly control many of the determinants of health.

Data Sources and Methodology

At the first stage, a survey of the engineering industries was carried out to find the types of industries and the number of units in each industry. In the second stage– foundry industries was chosen for the study based on number of units and also employed very large number of people. Details collected from Indian Institute of Foundry Men (IIFM), South Indian Engineering Manufacturers' Association (SIEMA), Coimbatore District Small Scale Industries Association (CODISSIA), Coimbatore Foundry Industry Owners Association (COFIOA), Coimbatore Tiny, Small and Medium Foundry Owners Association (COSMAFEN), Coimbatore revealed that there were 490 units (small – 410; medium – 61 and large – 19) in the foundry industry within the limits of Coimbatore Corporation. The foundry industry employed 17,910 workers. To make the study reliable, the sample size was restricted to 30 per cent in case of engineering units (123) and 30 per cent in the case of workers (3660) on a random basis. The number of workers who constitute the sample was 1098, out of which 699 were male and 399 female workers.

In the third stage, an interview schedule – prepared for the purpose of data collection – consisted of questions relating to personal and household characteristics, Health Status, Health Seeking Behaviour. Health Status was assessed using Self Assessed Health Status (SAHS) of the respondent with the help of Ordered Probit model. Healthcare seeking behaviour and Choice of healthcare provider were analyzed by using Multinomial Logit (MNL) model.

Health Status by Ordered Probit Model

Grossman, who made a distinction between the demand for health and demand for healthcare, proposed the first formal economic model of the determinants of health. Grossman constructed a model where individuals use medical care and their own time to

produce health. Individuals were assumed to invest in health production until the marginal cost of health production equalled the marginal benefits of improved health status. Health status was assumed to affect utility directly by the value that individual place on good health per se and indirectly through increasing healthy time and, hence, labour income. The researcher used health status as a self-reported categorical measure of health status. The advantage of using such a measure is that it is based on a very simple survey question that has a high reliability. First the demand for health was estimated with an ordered probit model.

a) A latent variable model

The ordinal regression model is commonly preseed as a latent variable model. Defining y* as a latent variable ranging from $-\infty \ to \ \infty$, the structural model is

$$y_i^* = X_i\beta + \varepsilon_i$$

Or, for the case of a single independent variable,

$$y_i^* = \alpha + \beta x_i + \varepsilon_i$$

where *i* is the observation and ε is a random error discussed further below.

The measurement model for binary outcomes is expanded to divide *y** into *J* ordinal categories:

$$y_i = m \qquad if\ T_{m-1} \le y_i^* < T_m \qquad for\ \ m = 1\ to\ J$$

where the cut points T_1 through T_{J-1} are estimated. (Some authors refer to these as thresholds). We assume $T_0 = -\infty$ and $T_J = \infty$ for reasons that will be clear shortly.

Described by the respondent about their health is; possible responses are: 1=Very Poor (VP), 2=Poor (P), 3=Average (A), 4=Good (G) and 5= Very Good (VG). The continuous latent variable can be thought of as the propensity to good and very good health of the respondent. The observed response categories are tied to the latent variable by the measurement model:

$$y_i = \begin{cases} 1 \Rightarrow Very\ Poor & if\ \ T_0 = -\infty \le y_i^* < T_1 \\ 2 \Rightarrow Poor & if\ \ T_1 \le y_i^* < T_2 \\ 3 \Rightarrow Average & if\ \ T_2 \le y_i^* < T_3 \\ 4 \Rightarrow Good & if\ T_3 \le y_i^* < T_4 \\ 5 \Rightarrow Excellent & if\ \ T_4 \le y_i^* < T_5 = \infty \end{cases}$$

Thus, when the latent y crosses a cut point, the observed category changes.*

b) Dependent Variable

The researcher used an indicator of Self-Assessed Health (SAH) as a measure of health status, which is widely used in health economics. SAH is a subjective measure of health that provides an ordinal ranking of perceived health status. The advantage of using such a measure is that it is based on a very simple survey question that has a high reliability. However, SAH measure is not perfect, when compared with continuous measurement like objective health measure. One advantage of categorical measurement is that in some degree it can mitigate measurement error problem. After reviewing relevant studies, Idler and Benyamini (1997) concluded 'self-rating represent a source of very valuable data on health status'. Helmer *et al*. (1999), Kaplan and Camacho (1983), find this categorical health variable contains important information on individual's health.

Self-reported specific morbidities are more likely to be identified by the respondent in a survey if these morbidities have already been diagnosed by the medical care system. However, in most societies access to the medical system varies by region and across socioeconomic classes, introducing systematic reporting bias (Strauss *et al*. 1995).

Table 1 Descriptive Statistics for Ordered Probit Model

	Minimum	Maximum	Mean	Std. Deviation	N
Overall Health Status	1	5	3.57	.863	1098
Monthly Household Income	2000	32300	8580.53	3818.979	1098
Never Married=1; Otherwise =0	0	1	.25	.433	1098
Married=1; Otherwise =0	0	1	.60	.489	1098
Widowed/ Divorced /Separated=1; Otherwise =0	0	1	.08	.266	1098
Individual Family=1; Otherwise=0	0	3	1.09	.956	1098
Joint Family=1; Otherwise=0	0	3	.75	1.092	1098
Hindu=1; Otherwise=0	0	1	.54	.498	1098
Christian=1 ; Otherwise=0	0	1	.38	.487	1098
Gender Male = 1; Otherwise =0	0	1	.64	.481	1098
Age	15	68	35.32	9.293	1098
Rural=1; Otherwise=0	0	1	.65	.477	1098
Illiterate =1; Otherwise =0	0	5	.26	.565	1098
Primary School =1; Otherwise =0	0	5	.31	.584	1098
Middle School =1; Otherwise =0	0	5	.37	.601	1098
Secondary =1; Otherwise =0	0	5	.19	.528	1098
Valid N (samples) 1098					

Model for Ordered Categorical Data: Ordered Probit

In the last few years researchers have evolved new techniques to analyse social science data problem, such as the study of multiple choice variables (Greene, 2003; Jones, 2000). In particular, we focus our analysis on individual's Self-Assessed Health Status (SAH). This variable takes four values that vary from "excellent health" to "poor health". The logit or probit models take into account of binary form variables having two choices and they cannot take into account of an ordered variable. In our case the dependent variable takes an order of four, which can not be accommodated by logit or probit model. An appropriate tool for analyzing such ordered categorical data is the ordered probit model (Gerdtham and Johannesson, 1999; Greene, 1993, 2002 and Jones, 2000).

The Ordered probit model can be used to model a discrete dependent variable that takes ordered multinomial outcomes, e.g. Y =1,2....,m. A common example is self-assessed health, with categorical outcomes such as Very Poor, Poor, Average, Good and excellent. Examples of ordered probit models include Kenkel (1995) who has categorical measures of self-reported health status and of activity limitation from the health promotion/disease prevention module of the 1985 U.S. National Health Interview Survey. Gredtham and Johannesson (1999) used this model to analyse three-scale self rated health status and four-point scale method used by Balasubramanian from his unpublished thesis.

Table 2 Ordered Probit Model: Maximum Likelihood Estimation Results

Dependent Variable: Health Status {SAHS Categorical: Very poor (1) to Excellent (5)}

SAHS	Coef.	Std. Err	Z	P>z|
Genmale	0.0174568	0.0709632	0.2460	0.80568
Respage	0.0060319	0.00400306	1.5068	0.13186
Marsta1	0.151089	0.153495	0.9843	0.32495
Marsta2	0.150282	0.150568	0.9981	0.31823
Marsta3	0.13208	0.182774	0.7226	0.46990
Famnatur1	0.0316142	0.0491899	0.6427	0.52042
Famnatur2	0.091671	0.0441448	2.0766	0.03784 **
Relgone	-0.075724	0.140827	0.5359	0.59201
Relgteo	0.0184793	0.143816	0.1285	0.89776
Nativ1	0.0248641	0.0731891	0.3397	0.73406
Eduone	0.0593329	0.0667657	0.8887	0.37418
Edutwo	0.115249	0.0626023	1.8410	0.06563**
Eduthre	-0.048118	0.0595594	0.8079	0.41915
Edufour	-0.151784	0.0758598	2.0009	0.04541**

Monincome	6.61313e-06	9.07134e-06	0.7290	0.46599
/cut1	-1.77896	0.269125		
/cut2	-1.30066	0.265377		
/cut3	-0.46619	0.263113		
/cut4	1.55885	0.267509		
LR chi2(20) = 22.3375				
Prob > chi2 = 0.0993				
Log likelihood = -1214.524				
Number of valid observations (N) (Correctly Predicted) = 665				

Significant level (* P < 0.01for 10% level; ** 0.01<p<0.05 for 5%level)

Note: 1 please note that the coefficients estimated in this study refer to changes in probability, since the ordered probit coefficients are difficult to interpret.

Table 2 gives the changes in probabilities within category pairs have the same pairs. Therefore, the interpretation of the coefficients presented in (Coef.) is straight forward. Negative sign shows that increase in the respective variables rises the probability of very good rather than good health status and lowers the probability of a very poor health and rather poor health. The negative sign of the coefficients indicates that increase in the respective variable improves the probability of very good health status and lowers the probability of very good health. The key exogenous variables are variables that should enter empirical models according to the Grossman Model: income, education and age. We also include different socio-economic variables such as Marital status, Education, Native, Religion, Type of family and Monthly income of the sample respondents.

In the case of the Nature of the Family, we can see that Joint Family demands more than the Individual Family. In the case of education, it can be seen that Primary Education health demands more than the Secondary Education. Another explanation is that education changes tastes or preferences in a manner that favors health relative to certain other commodities. Alternatively, causality may be opposite, meaning that healthier people obtain education more easily (Grossman, 1999). From the Ordered Probit result, type of family-Joint family, Primary Education and Secondary Education is said to be statistically significant at five per cent level. Income, type of family and age are negatively significant which impose the probability of very good health status and lowers the probability of a very poor health (Andres Vork 2000).

Conclusion

Predominance of informal employment has been one of the central features of the labour market scenario in India. While the sector contributes around half the GDP of the country, its dominance in the employment front is such that there were more than 90 per cent of total workforce found to be engaged in the informal employment during

1980's and even prior to that period. As per the estimates of the National Commission for Enterprises in the Unorganised Sector the unorganized sector/informal sector workers comprise about 86 per cent of workforce in the Indian economy in 2014-2015 and informal employment, both in the organised and unorganized sector as 94 per cent.

The ordered probit model explains that Nature of the Family and Education of the respondent are statistically significant to determine the health status of the respondents. Among the explanatory variables educational level- Primary Education and Joint Family System are positively significant which depict that they are the ultimate determinants of health status of the respondents. The study concludes that education and Nature of the family are the determinants of health status.

References

1. Anders Vork (2000) "An Empirical Estimation of the Grossman Health Demand Model Using Estonian Survey Data" Term Paper in Doctrol Course in Health Economics, University of Bergen pp.1-14.
2. Duraisamy P. (2001) "Health Status and Curative Health Care in Rural India" Working Paper Series No.78. pp. 1-40.
3. Gerdtham and U-G, Johannesson (1997) "The Demand for Helath: Results from New Measures of Health Capital" European Journal of Political Economy, 15:501-521.
4. Labour and Employment Report (2014) Published by Academic Foundation New Delhi and Institute of Human Development, New Delhi.
5. Labour and Employment Report (2016) Published by Academic Foundation New Delhi and Institute of Human Development, New Delhi
6. Mazumdar (1997) "Segmented Labour Market in Low Developed Countries", Economic Review, Vol 73. No.2.
7. Ramesh bhat and Sumesh K Babu (2004), "Health Insurance and Third Party Adminisration Issues and Challenges" Economic and Political Economy.
8. Sen, Amartya (1998) Reason Before Identity (The Romanes Lecture for 1998), Oxford, Oxford University Press, ISBN 0-19-951389-9.
9. Strauss, J and Thomas (1998) "Human Resouces: Empirical modeling of Household and Family Decisions" In Behrman J.R, Srinivasan T.N (Eds.) Handbook of Development Economics, Vol.III A, Chap.34, North-Hollanf Pub Co., Amsterdam, pp.1183-23.
10. Visaria and Gumber (1994) "Health Insurance in India: Introspects and prospects" The ICFAI Journal of Risk & Insurance, Vol.4, No.3, pp.58-68, July 2007.