

Social Security Schemes and Standard of Living: A Causal Study on Informal Workers in India

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ABSTRACT

This paper is aimed at ascertaining the influence of social security schemes on the standard of living among informal workers. Multinomial Logistic regression is used to ascertain the relationship between the standard of living and the social security schemes. The study revealed the influence of social security schemes on the standard of living of informal sector workers and effect size found to be 77%. The paper uses only the subjective indicator of measuring standard of living among informal sector workers. The influence of social security schemes on standard of living among workers illustrates the importance of government initiatives in improving the living standards. The government should take actions towards increasing the participation of workers in such schemes.

1. Statement of problem

In the informal economy, workers are an unprotected, exploited and have a very low quality of living (Kumari & Singh, 2016). Informal sector work is characterized by low wages (that are often inadequate to meet minimum living standards including nutrition), long working hours, unsafe working conditions, lack of basic services such as first aid, drinking water and sanitation (Dimitrov, Gandhimathi & Siva, 2017). Rural workers migrate to cities due to better urban opportunities and relatively better standard of living (Ayyoub & Gillani, 2017). Most poor and deprived people in the Indian informal sector suffer from quite a lot of limitations in raising their living standards by their own efforts and, therefore, require support (Saini, 2009). Article 47, of the constitution of India requires that the state should regard the raising of the level of nutrition and the standard of living of public health, as among its primary duties. It includes: The elimination of all forms of forced or compulsory labour; The effective abolition of child labour and a view to stimulating economic growth and development, raising levels of living (Dimitrov, Gandhimathi & Siva, 2017). Social security endeavours to set a minimum standard of living for the segment of society covered by the programs (Collier, 1975). The purpose of any social security measure is to provide individuals and families the confidence that their standard of living will not be worn out by meeting with socio-economic contingencies in their life (Oliveboard, 2020). When deprivation or vulnerability is reduced or removed as a consequence of social means social security is achieved. This can be measured by investigating the standard of living and the quality of life of the concerned population (Kurien & Paul, 2001). Thus, this paper aims at measuring the influence of social security schemes on standard of living among informal sector workers.

2. Literature Review

Social security is "the prevention, by social means, of very low standards of living irrespective of whether, these are the result of chronic deprivation or temporary adversity" (Burgess & Stern, 1991). Dreze and Sen (1991) conclude that "economic growth alone cannot be relied upon to deal either with the promotion or with the protection of living standards. The strategy of public action for social security has to take adequate note of the problems that limit what aggregate expansion can do in enhancing living conditions." Social security measures have been broadly divided into two types by Dreze and Sen, (1991) protective measures and promotional measures. The former is concerned with the short-run task of preventing a decline in standards of living and the latter with enhancing the long-term general living standard by raising the basic capability of the person or population. Social security is the provision of benefits to households and individuals through public or collective arrangements to protect against low or declining living standards arising from a number of basic risks and needs (Ginneken, 1999). The objective of social security is to protect the poor and vulnerable and to ensure that they have an acceptable standard of living (Ahmad, 1991). The function of social security is to guarantee people in developing countries an effective contribution to the sustained satisfaction of their basic needs by improving their standard of living which does not conform to an accepted minimum level (Hauff, 2002). Mohanakumar and Singh (2011) suggested that only practical solution to prevent the decline in the living standards of workers is their political mobilisation to exert pressure on the state to increase budgetary allocation for social services and for relief package, at least in the short run. According to Eide, (1999) the right to property serves as the foundation for the improvement of the standard of living, such as the use of land for subsistence farming. In the case of lack of property, people have to rely on the right to work as a means of improving their standard of living. If neither property nor job generates

adequate revenue, for the adequate standard of living, the right of access to social security provides the fallback or supplementary benefit.

Maria Dąbrowa (2011) emphasised the research related to standard of living (so, in a sense, social welfare) should cover economic expenditures and social aspects in parallel. **Birciaková, Stávková and Antošová (2015)** evaluated different economic, environmental and social indicators of standard of living and concluded that population density and size, expenditure on health care and education and emission of carbon dioxide into the atmosphere should be the indicators for measuring living standards. **Gibson and McKenzie (2014)** included subjective view of standard of living in while measuring developmental impact of recognised seasonal employer programme through an economic ladder question. **Semyonov and Gorodzeisky (2008)** used two measures: An Objective Standard of Living Index (Weighted measure of the number of household goods on a scale) and A Subjective Standard of Living Index (Sum of responses for two questions: "How would you assess your family's standard of living compared to the average Filipino family?" and "How would you assess your family's capability in providing for your everyday basic needs?") for measuring standard of living. Economic development of a country should be measured not only by the rate of growth of GNP but also by the wellbeing of its people (**SEWA, 2014**). Social security affects an individual's welfare in ways other than through its direct effect on lifetime income (**Soares, 2005**).

3. Objectives and Methodology

The study was conducted in Varanasi District of Uttar Pradesh state. Purposive sampling technique was followed to collect the data by using a self-structured questionnaire. Participants were 108 workers employed in the informal sector, who were beneficiaries under select schemes (RashtriyaParivarikLabh Yojana, RashtriyaSwasthyaBima Yojana, Aam Admi Yojana and Atal Pension Yojana), were selected. The respondents included 62 per cent males and 38 per cent female workers. More than 60 per cent of participants belonged to 18- 35-year age group. This paper aims at analysing the influence of social security schemes on informal workers in India. On this basis the following hypothesis has been formulated:

Hypothesis: H_0 : "Social Security Schemes do not significantly influence standard of living among informal sector workers."

Statistical Tools: Multinomial Logistic Regression is used to explain the relationship between one nominal dependent variable with more than two levels and one or more independent variables (**Statistics Solutions, 2020**). Hence, it was used to estimate the influence of independent variables (Social Security Schemes Variables) on the dependent variable (Standard of Living) with more than two levels.

Variables:

A. Social Security Schemes: Following statements were selected for understanding the influences of social security schemes on standard of living: Enrolment Process; Beneficiary

Selection; Timely Receipt of Benefit; Benefit Adequacy; Mode of Payment; Assistant Amount; Overall Satisfaction. These variables were measured on five-point Likert type scales ranging from Strongly Disagree to Strongly Agree and Extremely Satisfied to Extremely Dissatisfied. Corresponding statements are present below:

Table 1: Social Security Schemes Statements

S. No.	Statements
1	You were not deliberately troubled in the course of enrolment in the scheme.
2	There is no discrimination in the process of selection of a beneficiary.
3	There is no delay in the receipt of benefit.
4	The benefit provided under the scheme is adequate.
5	Mode of payment of the benefit.
6	Amount of assistance.
7	Overall satisfaction from the scheme.

B. Standard of Living: Under this study subjective view of standard of living has been taken. Respondents were asked whether their standard of living had improved due to the schemes. It was measured on three levels: Increased, partially increased and not increased. Following a subjective approach to measure standard of living two questions were asked from the workers:

- For your normal living costs and needs, how would you rate your cash income from your work?
- In comparison to other people who live locally how would you evaluate yourself?

When asked that how would they rate their income from work for their normal living costs and needs, majority of 71.3 percent of workers considered their income to be less than adequate, about 12 percent considered their income adequate and about 16.7 percent considered their income more than adequate.

When asked about how do the workers consider themselves as compared to other people who live locally 64.8 percent of workers considered themselves to be earning low, 27.8 percent regarded themselves as average and only 7.8 percent considered themselves as well off.

4. Influence of Social Security Schemes on Standard of Living

The existence of a relationship between the dependent and the combination of independent variables is predicated on the statistical significance of the final chi-square model in the table entitled as the model fitting information. The table 2 discloses that the initial log likelihood value obtained for the model with no independent variables (intercept only model) is 193.706. The final log likelihood value acquired for the model considering all independent variables is 72.912. The chi-square value obtained is 120.794. The significant chi-square statistic indicates that the final model gives a significant improvement over the base line intercept only model. Thus, it can be concluded that there is significant impact of social security schemes on standard of living.

Table 2: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	193.706			
Final	72.912	120.794	54	.000

Table 3 is a goodness of fit table which contains Pearson's chi-square statistic for the model (as well as another chi-square statistic based on the deviance). These statistics are intended to test whether the observed data are consistent with the fitted model. It is presumed hypothesis that the fit is good. If this hypothesis is not rejected (i.e. if the p value is large), then it can be concluded that the data and model predictions are

similar which is indicator of a good model. The Pearson and Deviance goodness of fit measure reveal the fact that the model adequately fits the data, the significance value (.474 and .989) being greater than 0.05 level. This suggested that the existence of relationship between the independent variables and the dependent variables are supported.

Table 3: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	88.195	88	.474
Deviance	60.411	88	.989

To assess the impact of social security schemes on Standard of Living the Pseudo R square is used in table 2. A good R² totally depends upon the quality and outcome of the explanatory variables. In this case, Cox & Snell R square, Nagelkerke R-square value and McFadden value provide an indication of amount of variation in dependent variable. In the

table 4, pseudo R² values (e.g. Nagelkerke R² = .771) indicates that 77% of variance in Standard of living is explained by social security schemes Variables. This value represents that there is significant impact of social security schemes on Standard of living.

Table 4: Pseudo R-Square (Standard of Living)

Cox and Snell	.673
Nagelkerke	.771
McFadden	.542

The likelihood ratio test is a statistical test used to compare the goodness of fit of two models, one of which (the null model) is a special case of the other (the alternate model). The test is based on the likelihood ratio, which expresses how many times more likely the data are under one model than the other. The likelihood ratio test evaluates the overall relationship

between an independent variable and dependent variable. Referring to the table 5, there is significant relationship between the independent social security variable and the dependent variables enrolment process (.032), beneficiary selection (.008), timely receipt of benefit (.011), mode of payment (.001) and overall satisfaction (.034).

Table 5: Likelihood Ratio Tests

Effect	Model Fitting Criteria		Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.	
Enrolment Process	89.724b	16.813	8	.032	
Beneficiary Selection	90.252b	17.340	6	.008	
Timely Receipt of Benefit	92.830b	19.918	8	.011	
Benefit Adequacy	84.034b	11.122	8	.195	
Mode of Payment	100.419b	27.507	8	.001	
Assistant Amount	87.235	14.323	8	.074	
Overall Satisfaction	89.569	16.657	8	.034	

Hence, it can be concluded that there is significant relationship between the independent social security scheme variables and the dependent variables: enrolment process; beneficiary selection; timely receipt of benefit; mode of payment and overall satisfaction. The hypothesis formed is rejected as social security variables significantly impact the standard of living.

5. Policy Implications

The influence of social security schemes on standard of living among workers paints a promising picture emphasising the importance of government initiatives in improving the living standards. The government should take actions towards increasing the participation of workers in such schemes. This paper only used subjective measures of standard of living, for further research combination of both objective and subjective measures is proposed.

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