

Impact of Mahatma Gandhi national rural employment guarantee scheme on women empowerment in tirunlveli district, Tamilnadu

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ABSTRACT

With the objective of producing a well designed wage employment program to address poverty more effectively, the Government of India formulated the National Rural Employment Guarantee Scheme (MGNREGA), aimed at enhancing the livelihood security of the poor by providing at least 100 days of guaranteed employment in a financial year to every household whose adult members are willing to do unskilled manual work. The MGNREGA has evoked wide interest because of the magnitude of rural poverty which it is expected to reduce by providing an exit pathway. According to the latest statistics, India was home to 355 million people living in poverty out of which 278 million or 78% were in rural areas. The argument for developing and implementing strategies to reduce poverty by increasing productive employment opportunities in rural areas is compelling and has shown results. The present study is made in such away to analyse the consequence of MNREGS on the women empowerment in Tirunelveli district of Tamilnadu. The result showed certain significance in it.

1. Introduction and Problem Discussion

Since independence, one of the major challenges faced by successive governments of India has been the provision of adequate remunerative employment to the vast majority of rural workers who are unemployed or, more commonly underemployed in meager subsistence livelihood activities. The Indian Constitution addressed the issue in the Directive Principles of State Policy. According to Article 39, the state must ensure that "citizens, men and women equally, have the right to an adequate means of livelihood" and Article 41 decrees that "the state, shall within the limits of its economic capacity and development, make effective provision for securing Right to Work". In the first three decades of planning, from the 1950s to the early 1980s, employment growth was seen as incumbent upon faster economic growth. However growth in these decades was too low to absorb the growing labor force. Though there was rising unemployment, the right to guaranteed work did not emerge as a policy priority because of the resource constraints associated with the slow growing economy. However, from time to time the government of India did undertake public works related wage employment programs since the 1960s. These programs were mostly *ad hoc* nature, had limited impact on the generation of employment, and lacked proper planning in relation to the creation of assets. As a result, most, assets created were of poor quality and often suffered from poor maintenance. These programs did not make any lasting impact either on rural unemployment or in improving rural resources.

Beginning with the initiation of economic reforms in 1991, a structural shift has taken place in development strategy towards market driven growth. The reforms did bring about accelerated growth in GDP in the 1990s (6.7%) compared to the 1980s (5.2%) or the much slower growth in the earlier decades. However, there was a deceleration in the rate of growth of employment in the 1990s (1.07%) compared to the

1980s (2.7%). There was actually an increase in unemployment and underemployment and much of what little growth was witnessed was in the informal sector, with formal employment in the private sector stagnating and in the public sector declining. The trickle down that was anticipated did not occur. On the contrary, the rate of decline in poverty decelerated and inequalities increased. There was extensive exclusion of marginalized groups and marginalization of large sections, especially small and marginal farmers due to declining state support measures and exposure to the volatility of market fluctuations. The widespread crisis in agriculture that ensued was marked by the suicides of farmers and distress migration for employment. Of the several public demands, employment creation as a part of the growth process was widely discussed and 'right to work' emerged as an important political agenda. The National Rural Employment Guarantee Act 2005 came into force on 2 February 2006 and was implemented in phases. In the first phase, it was introduced in 200 of the most backward districts. Beginning with 1 April 2007, the second phase brought another 130 districts under its fold. The third phase followed in quick succession, and was launched on 28 September 2007 by extending the Act to the remaining 285 districts. Since then the MGNREGA Scheme 1 has been in operation in all the 615 rural districts of India.

MGNREGS is based on the twin principles of universality and self-selection. It offers the legal right to work at a specified minimum wage. Because of its universal nature the program also eliminates targeting errors. With a people-centred, demand-driven architecture, completely different from the earlier rural employment programs, MGNREGA is expected to augment the intensity of employment in the widespread underemployment conditions of rural India. The process of implementation involves undertaking rural resource development work executed by the Panchayat without engaging contractors or machinery, and community

involvement in the form of planning and social audit. It is also expected to improve participation, transparency and accountability, and reduce, if not eliminate, corruption and malpractices associated with earlier public works programs. Hence, the scheme too have impact on the rural women on their way to enhancement and empowerment mentally and technically. With the above settings, the present study is intended to analyse the impact of MGNREGA on women empowerment in Tirunelveli district of Tamilnadu.

2. Objective of the study

The primary objective of the study is:

- To analyse the impact of Mahatma Gandhi national rural employment guarantee scheme on women household of Tirunelveli district of Tamilnadu.

3. Analysis and Discussion

Impact of MGNREGS on Women Empowerment

The study sought to analyze the empowerment of women through MGNREGS. The respondents are provided with ten different statements pertaining to women empowerment with five distinct parameters. The opinion of respondents about the impact of MGNREGS on women empowerment represents that majority of the respondents have said “ increased to large extent” for the statements numbered W1, W2,W3, W4, W5, W6 W7, W9. Some feel that it “moderately decreased” for the statements numbered WW8,W10, and others opine that it has “moderately decreased” for the statements numbered W10.

Confirmatory Factor Analysis for Women Empowerment

Traditional statistical models normally utilize one statistical test to determine the significance of analysis. However, Structural Equation Modeling (SEM), CFA specifically relies on several statistical tests to determine the adequacy of model fit to the data. EFA and CFA are powerful statistical techniques. EFA could be described as orderly simplification of interrelated measures. When carrying out the EFA no substantive constraints are imposed on the data. Instead, it is assumed that each common factor affects every observed variable and that the common factors are either correlated or uncorrelated.

EFA could be described as orderly simplification of interrelated measures. EFA traditionally, has been used to explore the possible underlying factor structure of a set of observed variables without imposing a preconceived structure on the outcome. By performing EFA, the underlying factor structure is identified.

CFA is a statistical technique used to verify the factor structure of a set of observed variables. CFA allows the researcher to test the hypothesis that a relationship between observed and their underlying latent constructs exists. The researcher uses knowledge of the theory, empirical research or both, postulates the relationship pattern a priori and then tests the hypothesis statistically. CFA specifically relies on several statistical tests to determine the adequacy of model fit to the data. The Chi-square test indicates the amount of differences between the expected and observed covariance matrices. A Chi-square value close to zero indicates little difference between the expected and observed covariance matrices.

It is common to display confirmatory factor models as path diagrams in which squares represent observed variables and circles represent the latent concepts. Additionally, single headed arrows are used to imply a direction of assumed causal influence and double headed arrows are used to represent covariance between two latent variables.

In factor analysis, the researcher always assumes that the latent variable “cause” the observed variables as shown by the single headed arrows pointing away from the circles and towards the manifest variables. The latent variables represent common factors with paths pointing to more than one observed variables. The circles labeled e_i represents unique factors because they affect only a single observed variable. Incorporate all the variance in each V_i not captured by the common factors, such as measurement error. In this model, there is no e_i identification expected to co vary as represented by the two headed arrow.

The Confirmatory Factor Analysis is used to analyse women empowerment through MGNREGS. For this analysis 10 different factor pertaining to women empowerment is taken. CFA is applied for the 10 factors.

Table 1: Latent Factors of Women Empowerment Construct

Factors	Factor loading
W10	.850
W9	.785
W8	.688
W7	.706
W6	.868
W5	.813
W4	.825
W3	.909
W2	.837
W1	.866

From Table, it is concluded that all the 10 factors are highly loaded. If the factor loading is less than 0.60 the researcher may exclude from the analysis. The cut-off value for removing the factors is permissible up to 20% in the same construct. After estimating a CFA the next step is to access how well the model matches the observed data. The user defined model valid is evaluated through some statistical criteria. Therefore, determination criteria indicate acceptable fit while others are close to meet the acceptable fit value. First model fulfill the criteria begins with the Chi-square statistic. Chi-square test describes differences of the observed and expected metrics. Acceptable model fit is indicated by a Chi-square probability value is close to zero or less than 0.05. Another commonly reported statistic is Root Mean Square Error of Approximation (RMSEA) is a measure of fit. The value of about 0.05 or less would indicate a close fit to the model in relation to the degrees of freedom. CFI and NFI values meet the criteria (0.90 or large) for acceptable model fit.

Table 2: Test of Absolute Fit

	Chi-square	Degrees of Freedom	P-Value
Women Empowerment	125.12	35	0.000

Source: Computed Data.

Women empowerment is tested through Chi-square test with the threshold value of 0.05 which indicates the researcher to precede further analysis for validating the model. In test of hypothesis, the model for women empowerment yielded the Chi-square value of 125.12 with 35 degrees of freedom and probability value is closer to 0.05. Therefore the model construct is fit with the collected data. While addressing the Chi-square limitations by developing goodness of fit indices that take practical approach to the evaluation process such as the alternative indices lies on the other statistic named as GFI, AGFI and RMSEA.

The researcher has interpreted only selected part of fit statistic and these measurements are important parts of CFA and SEM and focusing on the first set of statistic named as NPAR(No of parameters), CMIN(minimum discrepancy), DF (degrees of freedom) and CMIN/DF. Table 6.2.3 shows the CMIN/CF statistic.

The researcher has interpreted only selected part of fit statistic and these measurements are important parts of CFA and SEM and focusing on the first set of statistic named as NPAR(No of parameters), CMIN(minimum discrepancy), DF (degrees of freedom) and CMIN/DF. Table 6.2.3 shows the CMIN/CF statistic.

Table 3: CMIN/DF Statistic

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	20	125.12	35	.000	3.5748.

Source: AMOS output

The CMIN represents the discrepancy between the unrestricted sample co variance matrix and the restricted co-variance matrix. The test statistic is most commonly expressed as Chi-Square statistic. As stated earlier, considering the sensitivity of Chi-square, the researcher may move to other alternative indices for evaluating the model.

Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI)

The Goodness of fit index (GFI) is a measure of the relative amount of variances and co-variances which jointly accounts for the model (Joreskog and Sorbom, 1986). This index can be thought of as being roughly analogous to the multiple R squared in multiple regressions. A model is considered to have a better fit when “it has a lower ratio computed as the non-centrality parameter divided by degrees of freedom” (Thomas and Thomas, 1994). The closer the GFI is to 1.00, the better is the fit of the model to the data. The

adjusted goodness of fit statistic is based on the correction of the number of degrees of freedom in a less restricted model that is obtained by freeing more parameters. Both the GFI and the AGFI are less sensitive to sample size than the Chi-square statistic.

Goodness of fit (GFI) is a measure of fit between the hypothesized model and the observed covariance matrix. The table shows the GFI and AGFI output. The Adjusted Goodness of Fit index (AGFI) corrects the GFI, which is affected by the number of indicators of each latent variable. The GFI and AGFI range between 0 and 1 with a value of over 0.9 generally indicating acceptable model fit.

Table 4: GFI/AGFI Statistic

Model	GFI	AGFI
Default model	.966	.911

Source: AMOS output

The women empowerment GFI value is 0.966 and AGFI value is 0.911 Therefore, the present model fulfills the criteria of GFI and AGFI with good fit.

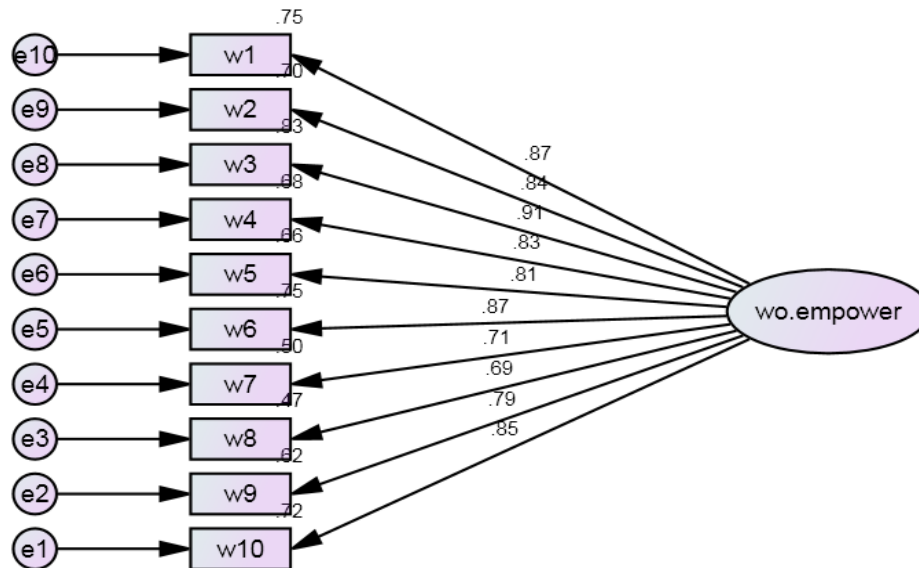
Root Mean Square Error of Approximation (RMSEA)

The next set of fit statistics focuses on the Root Mean Square Error of Approximation (RMSEA). Although this index, and the conceptual framework within which it is embedded, was first proposed by Steiger and Lind (1980), it has only recently been recognized as one of the most informative criteria in co-variance structure modeling. The RMSEA takes into account the error of approximation in the population. RMSEA is expressed per degree of freedom, thus, making it sensitive to the number of estimated parameters in the model (that is complexity of the model); values less than 0.05 indicate goodness of fit, and values as high as 0.08 represent reasonable errors of approximation in the population (Browne and Cudeck (1993). Finally, the researcher will consider the statistic RMSEA, the measure of which indicates the complexity of the model.

RMSEA

Particulars	RMSEA
Women Empowerment	0.0050

Table named as RMSEA clearly shows that the result value is less than the threshold value of 0.05. Therefore, the model is good fit with the data. The graphical representation shows the empirical evidence of present model.



Confirmatory Factor Analysis and Factor Effect Model for Women Empowerment

The above figure shows the various factors of *MGNREGS* within women empowerment construct. The hypothesized model confirmed through CFA and graphical workouts reveal the practical evidence. The values are standardized coefficients and beta values of observed variable. Considering the Figure 1, error variance for the measured variables is simply 1 minus the value of R^2 . R^2 measures the proportion of the variation in the dependent variable accounted by the explanatory variables. For example, factor W1 of women empowerment where R^2 is 0.76 and the error measurement is $1 - 0.76 = 0.24$. Among the ten factors, factor W3 highly influences women empowerment, followed by factor W1, W6 and so on.

4. Conclusion

The researcher has analysed the impact of *MGNREGS* on the women empowerment in Tirunelveli district. The respondents have spent most of the earnings from *MGNREGS* for food and other consumption items. The study further exhibits the assets created are not durable, the works provided are just to provide employment; the income earned has not at all helped them in reducing household indebted; the migration has decreased to some extent; there is no increase in agricultural production instead it indirectly increases the wages for agricultural labourers. It is opined that the income from *MGNREGS* has somewhat increased savings. The decision making skills has not increased and remains the same and the benefits of the scheme are made available to landless households.

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