

## A COMPARATIVE STUDY ON THE PERFORMANCE OF MGNREGS AS PERCEIVED BY THE BENEFICIARIES IN MADURAI AND USILAMPATTI TALUKS

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### Abstract

*Mahatma Gandhi National Rural Employment Guarantee Scheme was launched by Government of India in all Gram Panchayats of Districts Mahendergarh and Sirsa on 2<sup>nd</sup> February, 2006 and this scheme was also extended in two more districts namely Ambala & Mewat w.e.f. 1<sup>st</sup> April, 2007. The remaining districts of the State have been covered under the scheme w.e.f. 1.4.2008.*

*Keywords: MGNREGS, family income, random sampling method, Likert Scale, Chi- Square Test, Garret Ranking Technique*

### Progress of MGNREGA during the year 2006-07 to 2011 - 12

The Act was notified in 200 districts in the first phase with effect from February 2<sup>nd</sup> 2006 and then extended to additional 130 districts in the financial year 2007 - 2008 (113 districts were notified with effect from April 1<sup>st</sup> 2007, and 17 districts in UP were notified with effect from May 15<sup>th</sup> 2007). The remaining districts have been notified under the MGNREGA with effect from April 1, 2008 covering 34 states and Union Territories, 614 districts, 6096 blocks and 2.65 lakhs gram panchayats. Thus MGNREGA covers the entire country with the exception of districts that have a hundred per cent urban population.

The main objective of the research paper is to assess the contribution of beneficiaries towards family income and to assess the performance of MGNREGS as perceived by the beneficiaries with reference to Madurai district.

### Sample Size

The primary data were collected from 400 respondents through interview schedule by way of stratified random sampling method.

### Tools of Analysis

#### Logit Model

Logit model has been used to evaluate the economic impact and to assess the beneficiaries' contribution towards family income. The model used in the study is

$$Li = \ln \frac{P_i}{1 - P_i} = \beta_1 + \beta_2 x_i + u_i$$

Where  $L_i$  is the log of the odds ratio.

$P_i$

----- = is the odds ratio.

$1 - P_i$

#### Summated or Likert Scale

For the fifth objective, summated or likert scale has been used to study the performance of MGNREGS as perceived by the beneficiaries.

- Summated sale consists of statements that express either a favorable or unfavorable attitude toward the object of interest.
- The respondents is asked to answer good or poor with each statement
- Each response is given a numerical score to reflect its degree of attitude favorableness the scores are totaled to measure the respondents attitude.

It this study, a five point scale is used. A scale value of 1 indicates very poor and 5 as very good.

The calculations based on the basis of the scale value and the totals are considered as follows:

| Response Categories | Scale Value | No. of Respondents (fx) |
|---------------------|-------------|-------------------------|
| Very good           | 5           |                         |
| Good                | 4           |                         |
| Satisfactory        | 3           |                         |
| Poor                | 2           |                         |
| Very Poor           | 1           |                         |
| Total               |             | ( $\sum fx$ )           |

Based on the Totals, ( $\sum fx$ ) comparative analysis of response patterns to each statement by members is made.

#### Chi- Square Test

This test was used to analyse the fifth objective. The following formula is used for  $\chi^2$  value.

$$\chi^2 = \frac{\sum(O - E)^2}{E}$$

$\chi^2$  - Chi-square test

O - Observed frequency

E - Expected frequency

Formula for calculating the expected frequency is,

$$E = \frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}}$$

### Garret Ranking Technique

To analyse the sixth objective of the study namely “To study the problems faced by the beneficiaries under MGNREGS”, Garret Ranking Technique has been used.

The ranking given by the respondents is converted into percent position by using the following formula.

$$\text{Percent Position} = \frac{100 (R_{ij} - 0.50)}{N_{ij}}$$

where,

$R_{ij}$  - Rank given for the  $i^{\text{th}}$  factor  $j^{\text{th}}$  individual

$N_{ij}$  = Number of factors ranked by  $j^{\text{th}}$  individual

The percent position of each rank thus obtained was converted into scores by referring the table given by Garret. The scores of all respondents for each factor was then added together and divided by the number of respondents experiencing that particular constraint. The mean score of each factor thus arrived at, were arranged in a descending order and the corresponding ranks allocated.

### Analysis and Interpretation

#### Beneficiaries' Contribution towards Family Income

In order to assess the contribution of beneficiaries to family income, the log linear multiple regression model of the following form was used

$$\text{Log } Y = \log \beta_0 + \beta_1 \log X_1 + \beta_2 \log X_2 + u$$

where,

Y - Total Family Income (in rupees)

$X_1$  - Earning of beneficiaries (in rupees)

$X_2$  - Earning of their spouses (in rupees)

U - Error term or unexplained variation of total family income associated with the left out variables.

$\beta_0$ ,  $\beta_1$ , and  $\beta_2$  are the parameters to be estimated. The above model was estimated separately for beneficiaries in Madurai (N) and Usilampatty Taluks by the method of least squares. The estimated results are presented in Tables 1 and 2.

**Table 1: Estimated Regression Results for Women Beneficiaries in Madurai (N) Taluk**

| Variables           | Madurai (N)      |
|---------------------|------------------|
| Intercept           | 1.5781           |
| $X_1$               | 0.1087* (4.6580) |
| $X_2$               | 0.0971* (3.1687) |
| $R^2$               | 0.8051           |
| F-value             | 65.51            |
| No. Of Observations | 200              |

Source: Computed Data

Note: Figures in the brackets represent t-values.

\* indicates that the co-efficients are statistically significant at 5 percent level.

It could be observed from table 1 that in Madurai (N) Taluk  $R^2$  indicates 80 per cent variations in total family income are explained by the two independent variables included in the model. Both the variables were statistically significant at 5 per cent level. For One per cent increase in the earning of the beneficiaries increase, total family income increases by 0.1087 per cent and 0.971 per cent respectively. The F value indicates that estimated regression model is statistically significant at one per cent. Thus, it can be concluded that the contribution of beneficiaries towards family income is more or less equal to that of their spouses in Madurai (N) Taluk.

Table 2 shows the estimated values of regression equations for the beneficiaries in Usilampatty Taluk.

**Table 2: Estimated Regression Results for Women Beneficiaries in Usilampatty Taluk**

| Variables           | Usilampatty      |
|---------------------|------------------|
| Intercept           | 1.9964           |
| $X_1$               | 0.0989* (2.876)  |
| $X_2$               | 0.0886* (3.2691) |
| $R^2$               | 0.8145           |
| F-value             | 60.81            |
| No. of Observations | 200              |

*Source: Computed Data.*

*Note: Figures in the brackets represent t-values.*

*\* indicates that the co-efficients are statistically significant at 5 percent level.*

Table 2 reveals that in the Usilampatty Taluk  $R^2$  indicates 0.8145 variations in the dependent variables are explained by all the explanatory variables. The variables namely earnings of the beneficiaries and earnings of their spouses were statistically significant at 5 per cent level. It implies that for one unit increase in these variables, total family income could be increased 0.0989 per cent and 0.0886 per cent respectively. As per F-value given in table, the regression model fitted has been found to be significant at one per cent level. Thus, it can be concluded from the analysis that the contribution of beneficiaries towards family income has been more than the earnings of their spouses. Therefore, the earnings of beneficiaries contribute significantly towards family income.

**Table 3: Estimated Regression Results for Overall Beneficiaries in Both Madurai (N) Taluk and Usilampatty Taluk**

| Variables           | Madurai (N) and Usilampatty |
|---------------------|-----------------------------|
| Intercept           | 1.4312                      |
| $X_1$               | 0.0986* (3.1078)            |
| $X_2$               | 0.0705* (2.6817)            |
| $R^2$               | 0.6131                      |
| F-value             | 60.10                       |
| No. of Observations | 400                         |

*Source: Computed Data.*

*Note: Figures in the brackets represent t-values.*

*\* indicates that the co-efficients are statistically significant at 5 percent level.*

Table 3 depicts the estimated values of regression equations for overall beneficiaries both in Madurai (N) Taluk and Usilampatty Taluk. It has been found that the co-efficient of multiple determinations ( $R^2$ ) has been 0.6131 indicating 60.71 percent variation in total income.

The regression co-efficient of variables namely earnings of beneficiaries and their spouse's earnings were statistically significant at 5 percent level. It means that an additional unit of these variables could increase total family income by 0.0986 per cent and 0.0705 per cent respectively. The F value indicates that estimated regression model has been statistically significant at one per cent level.

The family size, family income and spouses' income have influenced the income of the respondents both in Madurai (N) and Usilampatty.

The regression analysis revealed that the contribution of beneficiaries towards family income had been equal to that of their spouses in Madurai (N) Taluk, whereas in the Usilampatty Taluk their contribution has been more than the earnings of their spouses.

#### Performance of MGNREGs as Perceived by the Beneficiaries

To assess the performance of MGNREGS as perceived by the beneficiaries of both the Taluks in the study, select variables were rated by the respondents on a five point scale ranging from very good to very poor. To qualify the rating, numerical scores is assigned to each of the itmes in the rating scale as given below:

**Table 4: Rating Score**

| Rating       | Score |
|--------------|-------|
| Very Good    | 4     |
| Good         | 4     |
| Satisfactory | 3     |
| Poor         | 2     |
| Very Poor    | 1     |

Based on the responses obtained from the respondents for each variable under consideration, the average score in respect of each item Taluk-wise is arrived and the results are presented in the Table 4.

**Table 5: Performance of Mgnregs as Perceived by the Beneficiaries (Taluk-Wise Scoring)**

| Variables  | Performance Scores |             | Average Score |
|--|--------------------|-------------|---------------|
|  | Madurai (N)        | Usilampatti |               |
| Process of Registration                                    | 7.10               | 5.63        | 6.36          |
| Issue of Job Cards   | 7.00               | 5.43        | 6.22          |
| Selection of Work  | 6.7                | 4.10        | 5.40          |
| Relevance and usefulness of the work to the village people | 6.91               | 5.64        | 6.28          |
| Execution of the work                                      | 7.50               | 5.9         | 6.70          |
| Quality of the work executed                               | 6.15               | 5.10        | 5.63          |
| Supervision at the work spot                               | 7.43               | 5.21        | 6.32          |
| Support of Government Officials                            | 7.81               | 6.11        | 6.96          |
| Facilities at the work spot                                | 5.63               | 5.41        | 5.72          |
| Mode of distribution of wages                              | 6.99               | 6.90        | 6.95          |
| Transparency   | 6.87               | 5.82        | 6.35          |
| Grievance Redressal  | 6.91               | 5.10        | 6.01          |
| Participation of People                                    | 5.84               | 5.31        | 5.56          |
| Benefits occurred to the Panchayat                         | 7.00               | 5.60        | 6.30          |
| Benefits to the households                                 | 6.93               | 4.71        | 5.82          |

*Source: Computed Data*

The table 5 indicates that the process of registration is done with utmost care by the village panchayat in both the Taluks. The aggregate average score is 6.36. Between the two Taluks the registration process was carried out in a much better manner in Madurai (N) (7.10) than Usilampatty (5.63).

With regard to the issue of job-cards, the respondents rated the performance is very good in Madurai (N) (7.0). It shows that the registration and issue of job-cards are done to the satisfaction of the primary stakeholders of the programme.

The selection of works under the scheme by two Taluks has been rated as very good - the average score being (5.4) Taluk wise analysis shows that the respondents in Madurai (N) are found to have rated highly the selection of work compared to Usilampatti Taluk. Group discussions with the stakeholders in all Gram Panchayats revealed that works to be taken up were decided by the people in the Gram Sabha meeting.

Regarding relevance and usefulness of the work to the people and to the Taluk, the respondents rated it is very good. Taluk-wise analysis shows that respondents in Madurai (N) are found to have given high rating (6.91) when compared to Usilampatti (5.64). It means functionaries' in-charge of MGNREGS selected only those works which are relevant and useful to the people.

The execution of work and the quality of work executed has been rated as 'good' in general - the score being (6.7) Taluk-wise analysis indicates that respondents in Madurai (N) have given a higher score and rating as very good.

Regarding quality of the work executed in Madurai (N) reveals that the quality of assets created has been rated (6.15) only as 'good' which means there is a need for improvement where as in Usilampatti it is poor (5.10).

Supervision at the workspot is by and large, rated as good by the respondents of Madurai (N).

Support and guidance of the Government officials, especially from BDO is quite essential for the smooth implementation of the scheme. The respondents rated the support from officials as very good - the average score being (6.96).

Regarding the facilities at the work spot from the two Taluks rated as poor. The focus group discussion revealed that shed for dressing, drinking water, toilets, first aid box are not available at work site in both the taluks.

Regarding distribution of wages, respondents rated it as 'good' in the study taluks, the average score being (6.95). It is understood from the discussion with respondents that wags are paid directly as cash.

Transparency is another important factor which brings quality of the implementation of activities by avoiding misutilization and misappropriation of funds under the scheme. Respondents have given a score (6.35) for transparency - rating is good.

Grievance redressal is yet another aspect which assumes smooth implementation of the scheme. Grievance arises in respect of timing, the quantum of work done, work turn out of the other members of the group and payments of wages. Timely redressal is important to keep the programme going as envisioned. It was found that in both the study Taluks complaints have been registered. All the grievances have been addressed, sorted out and settled either at the Panchayat level or through the intervention of the block level officials. No complaint has taken the shape that could not be handled locally. The performance of the scheme with reference to grievance redressal has been rated as 'good' - average being (6.01) Taluk-wise analysis indicates more or less the similar rating.

With regard to participation of people, benefits occurred to the Panchayat and benefits to the households, the respondents rated the performances of MGNREGS as good in both the Taluks average score being (5.56) (6.30) and (5.82) respectively.

#### **Hypothesis Testing - 1**

There is no association between number of days employed under MGNREGS and the size of landholding of the workers.

**Table 6: Relationship between Number of Days Employed and Size of Landholding**

| Number of Days employed | Size of Landholding |            |            | Total       |
|-------------------------|---------------------|------------|------------|-------------|
|                         | 0-1 Acre            | 1 -2 Acres | 2 -4 Acres |             |
| Less than 25 days       | 10 (3.04)           | 5 (8.47)   | 8 (61.54)  | 23 (5.75)   |
| 25 -50 days             | 30 (9.14)           | 7 (11.86)  | 5 (38.46)  | 42 (10.5)   |
| 50 - 75 days            | 161 (49.08)         | 36 (61.02) | -          | 197 (49.25) |
| 75- 100 days            | 127 (38.74)         | 11 (18.65) | -          | 138 (34.5)  |
| Total                   | 328 (100)           | 59 (100)   | 13 (100)   | 400 (100)   |

Source: Computed Data

Table 6 shows the relationship between number of days employed under MGNREGS and the size of landholding. It has been observed that out of 328 respondents who hold 0-1 acre of land 3.04 percent worked less than 25 days, while another 49.08 per cent worked for about 50 -75 days. For 38.74 per cent of respondents, the numbers of days were ranging from 75 - 100. To only 9.14 percent of respondents, the number of days were 25-50 days. Out of 59 respondents who hold 1 - 2 acres of land, 11.86 per cent worked in the range of 25 -50 days, whereas 8.47 per cent worked for less than 25 days and 61 and 18.65 per cent reported that they worked for about 50 - 75 days and 75 -100 days respectively. It is observed that, out of 13 respondents who hold 2-4 acres of land, 8 respondents worked for less than 25 days and only 5 respondents worked for 25-50 days.

In order to find out whether there is any relationship between number of days employed under MGNREGS and size of land holding, chi-square test has been applied. The results are furnished below.

- Calculated  $X^2$  value 40.16
- Table value at 5 per cent significant level 12.59
- Degrees of freedom 6

The calculated value of Chi-square is greater than table value. So the hypothesis is rejected. Hence there is a relationship between size of landholding of the MGNREGS workers and number of days employed.

#### Hypothesis Testing - II

There is no relationship between number of days employed under MGNREGS and literacy level of the workers.

**Table 7: Relationship between Number of Days Employed and Literacy Level**

| Number of Days Employed | Educational Qualification |            | Total       |
|-------------------------|---------------------------|------------|-------------|
|                         | Literate                  | Illiterate |             |
| Less than 25 days       | 20 (7.84)                 | 9 (6.20)   | 29 (7.25)   |
| 25 -50 days             | 54 (21.18)                | 25 (17.24) | 79 (19.75)  |
| 50 - 75 days            | 130 (50.98)               | 98 (67.59) | 228 (57.00) |
| 75- 100 days            | 51 (20.00)                | 13 (8.97)  | 64 (16.00)  |
| Total                   | 255 (100)                 | 145 (100)  | 400 (100)   |

Source: Computed Data



Table 7 shows the relationship between number of days employed under MGNREGS and literacy level of workers. Out of 255 literate respondents, majority of respondents i.e., 50.98 per cent worked for about 50 - 75 days, while 7.84 per cent worked for less than 25 days. Another 21.18 per cent worked for about 25- 50 days and 20 per cent reported 75 - 100 days of work. In case of illiterate people majority i.e., 67.59 per cent worked for 50 - 75 days, 6.2 per cent worked for less than 25 days and 17.25 per cent fall under the category of 25- 50 days and only 8.97 per cent comes under the category of 75- 100 days.

In order to test the relationship between numbers of days employed and literacy level, chi-square test has been applied. The results have been shown as below.

- Calculated  $X^2$  value 23.667
- Table value at 5 per cent significant level 7.81
- Degrees of freedom 3

The calculated value Chi-square is greater than table value. Hence the hypothesis is rejected and concluded that there is a relationship between number of days employed and literacy level.

#### Hypothesis Testing - III

There is no relationship between number of days employed under MGNREGS and social group of the workers.

**Table 8: Relationship between Number of Days Employed and Social Group**

| Number of Days Employed | Social Group |            |             |            | Total       |
|-------------------------|--------------|------------|-------------|------------|-------------|
|                         | FC           | BC         | MBC         | SC/ST      |             |
| Less than 25 days       | 2 (100)      | 9 (8.91)   | 8 (3.83)    | 7 (7.95)   | 26 (6.5)    |
| 25 -50 days             | -            | 12 (11.88) | 15 (7.18)   | 8 (9.09)   | 35 (8.75)   |
| 50 - 75 days            | -            | 67 (66.34) | 157 (75.12) | 64 (72.73) | 288 (72.00) |
| 75- 100 days            | -            | 13 (12.87) | 29 (13.87)  | 9 (10.23)  | 51 (12.75)  |
| Total                   | 2 (100)      | 101(100)   | 209 (100)   | 88 (100)   | 400 (100)   |

*Source: Computed Data*

The above Table 8 shows the relationship between number of days employed under MGNREGS and social group of workers. It has been noticed that out of 101 backward community respondents, majority i.e., 66.34 per cent worked for 50 - 75 days, 11.88 per cent reported 25- 50 days, while 8.91 per cent worked for less than 25 days. Another 12.87 per cent comes under 75 -100 days of work.

As far as most backward community is concerned, 3.83 per cent of them worked for less than 25 days.

In case of schedule caste workers, majority i.e., 72.73 per cent worked in the range of 50 -75 days. Less than 25 days of work was reported by 7.95 per cent, 9.09 per cent comes under 25 - 50 days and 10.23 per cent comes under 75 -100 days.

The majority of the respondents i.e., 75.12 per cent worked for 50 -75 days. The rest of 7.18 and 13.87 per cent respondents worked for 25.50 days and 75- 100 days

respectively. Out 400 respondents, only 2 of them belong to forward community and they worked for less than 25 days.

To verify the relationship between number of days worked under MGNREGS and social group of workers, chi-square test has been applied. The results are furnished below.

- Calculated  $X^2$  value 32.161
- Table value at 5 per cent significant level 16.919
- Degrees of freedom 9

The calculated value of chi-square is greater than table value at 5 percent significant level. So the hypothesis is rejected. Hence there is a relationship between number of days employed under MGNREGS and social group of workers.

### Conclusion

Thus, the earnings of beneficiaries in Madurai (N) contribute significantly towards the family income than that of women beneficiaries in Usilampatty Taluk. With regard to participation of people, benefits occurred to the Panchayat and benefits to the households, the respondents rated the performances of MGNREGS as good in both the Taluks. It is also inferred that those who are holding more land are less likely to engage themselves in MGNREGS works, as they are employed in their own land for most of time. Besides, MGNREGS favoured less advantaged and under privileged group especially SC's respondents in providing employment opportunities and to reduce poverty.

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