

Implementation of Wage Employment Programme in District Anantnag (J&K)

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Abstract: Government of India is implementing a number of Centrally Sponsored Schemes in the areas of rural development throughout the Country, including Jammu and Kashmir. The main objectives of all these schemes are to generate employment, reduce poverty & economic inequality and improve the quality of life. Besides, some of these schemes aim at creation of basic infrastructure and assets essential for economic development in rural areas. Despite the fact that huge allocations have been made by the Central Government through Rural Development Programmes in Jammu and Kashmir, the development in basic infrastructure and improvements in amenities/facilities has not been adequate, especially in rural areas of the state. The standard of living of the people has not improved to the desired extent and the employment opportunities for the youths are few and far between. Hence, it becomes imperative at this stage to know as to what extent these schemes have been in a position to achieve the stated objectives. Such an exercise will help to identify the problems/short comings in implementing these schemes. It will also help the policy makers and implementing agencies to introduce the necessary interventions to enhance the efficiency of the programmes and to ensure better utilization of the resources. It is in this context that present study titled; "Appraisal of Post 1999 Rural Development Programmes in District Anantnag" was undertaken, taking 2011-12 as reference year. The Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (NREGA) guarantees 100 days of wage employment in a financial year to any rural household whose adult members are willing to participate in unskilled manual work. The Act is an important step towards realization of the right to work and aims at arresting out-migration of rural households in search of employment simultaneously enhancing people's livelihood on a sustained basis, by developing the economic and social infrastructure in rural areas.

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Objectives of the Study

The present study was undertaken with following objectives:

1. To appraise the impact of rural development programmes on income and employment position of the beneficiaries.
2. To explore and explain the difficulties in the implementation of Rural Development Programme and to suggest measures.

Design of the sample

The selection of the sample units for the study has been made by using multistage random sampling technique. All the blocks in the district were divided into two groups of high and low performance based on the information on key indicators of development. The indicators were literacy level, electrification, road connectivity, safe drinking, water facility, availability of health care facility and percentage of population living below poverty line. One block from each of the two groups viz Breng (Low Performance Block) and Qaimoh

(High Performance Block) were selected. From each of these two blocks, 10% of the villages were randomly selected and from each of the selected village 100% of the targeted families were intensively studied (Table 1). For MGNREGA, Control Group (Non beneficiaries/ Non workers) were selected from Non-MGNREGA Job Card holders who were doing/ willing to do unskilled work. Information in this regard was collected from official records and knowledgeable persons of sampled villages. The study is based on both primary and secondary data. The primary data from the sampled households has been collected through a schedule designed for the purpose. The secondary data has been collected from District Rural Development Agency, Directorate of Rural Development, Kashmir, Rural Development Department of Jammu and Kashmir, Directorate of Economics and Statistics, Srinagar and MORD website.

Collection of the data: To understand the various aspects of implementation of Rural Development

programmes, the officials/ Panchayat representatives and bankers were also interviewed. Besides number of Govt. publications were extensively used in the course of this research work.

Tools: For data analysis tools like regression analysis, double difference method, paired t- test, and effect size were made in use.

Table No: 1 Sample Size Selected for MGNREGA Schemes in Breng and Qaimoh Block

Scheme	Block	Beneficiaries	Non-Beneficiaries
MGNREGA	Breng	290	100
	Qaimoh	245	50

The performance of MGNREGA at national, state level & in sampled district highlights that there has been less participation of weaker sections .Percentage share of SCs, STs and Women in employment under MGNREGA were 19.24%, 22.68% & 45.01% at all India level during 2011-12. These figures were

comparatively low in respect of J&K state wherein percentage share of SCs, STs and Women stands 4.43%, 16.76% and 21.58% respectively. In district Anantnag percentage share of SCs, STs and Women works out to be 0.03%, 6.55% & 30.55% respectively.

Table No: 2 Performance of MGNREGA at National Level, State level and in Sampled District during 2011-12

Performance Criteria	India	District Anantnag	J&K State
Employment provided to Households	0.84 Crores	0.27294 lakh	1.7409lakh
Employment provided to households person days	14.61Crores	13.06 lakh	56.4 lakh
Shares of SCs in Employment	2.8(19.24%)	0(0.03%)	2.5(4.43%)
Share of STs in Employment	3.31(22.68%)	0.86(6.55%)	9.46(16.76%)
Share of women in Employment	6.58(45.01%)	3.99(30.55%)	12.17(21.58%)
Others	8.49(58.08%)	12.2(93.43%)	44.45(78.81%)
Total no. of works taken up	84.86	8752	122310
Works completed	0.98	572	16083
Works in progress	83.88	8180	106227

Source: Downloaded on MORD website on 20/7/2013

Determination of Participation in MGNREGA Works

Participation in MGNREGA depends upon various attributes which in term are mainly governed by socio economic factors. To know the various factors influencing the participation in MGNREGA, a binary

$$P_i(Y = 1 / X_1, X_2, \dots, X_n) = F(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6)$$

$$P_i(Y = 1 / X_1, X_2, \dots, X_k) = 1 / 1 + e^{(\beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5 + \beta_6)}$$

Y = It is a binary variable taking 1 for MGNREGA job card holder and 0 other wise.

The description of dependent and independent variables is given as under:

Dependent variable: It is binary, taking 1 for households of MGNREGA job card holder and 0 otherwise.

Independent variables:

Family Size: Number of family members

Age: In years

Livestock: Numbers

Education Level: 0 for Illiterate, 1 for Primary, 2 for Middle & 3 for Higher

Occupation dummy: 1 for farming, 0 for non-farming

Cast dummy: 1 for OBC & 0 for others

The results given in Table 3 reveal that explanatory variables like age, live stock, and

logistic regression model was used. The factors / explanatory variables selected were size of family, age, OBC Caste, live stock, occupation and education.

education and OBC caste have negative sign, inferring thereby that participation in MGNREGA is negatively affected by these variables. Only variables i.e., family size and non-farming occupation have positive sign inferring thereby that households deriving their income from non-farm activities and having large family size are participating in MGNREGA but these coefficients are not statistically significant.

In order to give a more precise explanation, odd ratios of point estimates of the factors influencing participation were also worked out. The values of odds ratio of these variables were less than unity which implies that probability of participation is less than that of non participation. Coefficients of variables of education and livestock are negative and statistically significant. Those households having

more education and livestock variables are participating less in MGNREGA. The inverse relationship is true because literates have better employment opportunities outside than that of

illiterates. Similarly with increase in number of live stock, participation decreases significantly and they get less time for wage employment.

Table No: 3 Determinations of Participation in MGNREGA work based on logit model

Independent variable	Coefficient	P-Value	Odd ratio
Constant	β_0 (4.881)	0.00	-
Family size (X_1)	β_1 (0.081)	0.034	0.993
Age (X_2)	β_2 (-0.027)	0.059	0.953
Live stock (X_3)	β_3 (-0.181)	0.000	1.204
Education Level (X_4)	β_4 (-2.266)	0.000	0.165
Occupation (X_5)	β_5 (0.241)	0.208	0.757
OBC Caste (X_6)	β_6 (-0.266)	0.317	0.481

Source: Computed form Field data

Number of observations = 685

LR $\chi^2(6)$ = 51.99

Prob > χ^2 = 0.000

Pseudo R^2 = 0.0719

Log likelihood = -335.31578

N = 535

In block Qaimoh average monthly income of beneficiaries during pre MGNREGA period was Rs. 1754.49 which increased to 2309.95 during post MGNREGA period as given in Table 5.40a. Income of non- beneficiaries as calculated by the researcher

has increased from Rs. 1365 to Rs. 1532. The difference in difference average as computed from the data is equal to Rs.388.46 which is the net increase income.

Table No: 4(a) Paired Samples Statistics of Pre-MGNREGA Income & Post-MGNREGA Income of Beneficiaries in Block Qaimoh

		Mean	N	Std. Deviation	Std. Error of Mean
Pair 1	Post MGNREGA Income of Beneficiaries in Block Qaimoh	2309.55	245	853.01178	54.49692
	Pre MGNREGA Income of Beneficiaries in Block Qaimoh	1754.49	245	576.20174	36.81218

Source: Field Survey

Table No: 4(b) Paired Samples Test of Pre MGNREGA Income of Beneficiaries & Post MGNREGA Income of Beneficiaries in Block Qaimoh

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error of Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post MGNREGA Income of Beneficiaries in Block Qaimoh Pre MGNREGA Income of Beneficiaries in Block Qaimoh	5.55469E2	614.90860	39.28507	478.08825	632.85052	14.139	244	.000

Source: Field Survey

Since t- value is 14.139 & P- value 0.000 (If P value is <0.05 then it is significant) which depicts that impact on income is significant as given in Table

$$r = \sqrt{t^2/t+df}$$

where in, t=t-Statistic

4b. Effect size denoted by r is calculated using the following formula:

df= degrees of freedom

r (effect size) = 0.557 which is large effect.

Thus impact on income is not only significant but also substantive.

Impact on Employment

In block Qaimoh, impact on employment using paired “t” test is given in Table No: 5a & 5 b as given below:

Table No: 5 (a) Paired Samples Statistics of Pre MGNREGA Employment of Beneficiaries & Post MGNREGA Employment of Beneficiaries (in number of days) in Block Qaimoh

		Mean	N	Std. Deviation	Std. Error of Mean
Pair 1	Post MGNREGA Employment of Beneficiaries in Block Qaimoh	15.8898	245	3.77873	.24141
	Pre MGNREGA Employment of Beneficiaries in Block Qaimoh	13.2408	245	2.60107	.16618

Source: Field Survey

Table No: 5 (b) Paired Samples Test Pre MGNREGA Employment of Beneficiaries & Post MGNREGA Employment of Beneficiaries (in number of days) in Block Qaimoh

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error of Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post MGNREGA Employment of Beneficiaries in Block Qaimoh – Pre-MGNREGA Employment of Beneficiaries in Block Qaimoh	2.64898	3.08208	.19691	2.26113	3.03683	13.453	244	.000

Source: Field Survey

While mean monthly employment of beneficiaries has increased from 13.24 days to 15.88 days (Table 5a). Table 5b shows ‘t’ value is equal to 13.45 & P value is less than 0.5 which shows that impact on employment is also significant and effect size i.e ‘r’ is 0.65 which is large effect.

In block Breng average income of beneficiaries has increased from Rs. 1690.34 during pre MGNREGA period to Rs. 2033.27 in post

MGNREGA period (Table 6a) while that of non-beneficiaries’ income, as computed by the researcher, has increased from Rs. 1874 to Rs. 1984.5. Thus difference in difference average income is Rs. 232.43 which is net increase in income. Table 6b as given below shows t-value is equal to 10.477 with P value less than 0.5 which shows that impact on income is significant. Also effect size ‘r’ is 0.52 indicates that impact is also substantive.

Table No: 6 (a) Paired Samples Statistics of Pre MGNREGA Income of Beneficiaries & Post MGNREGA Income of Beneficiaries (in Rupees) in Block Breng

		Mean	N	Std. Deviation	Std. Error of Mean
Pair 1	Post MGNREGA Income of Beneficiaries in Block Breng	2033.27	290	1054.17507	61.90329
	Pre MGNREGA Income of Beneficiaries in Block Breng	1690.34	290	744.60683	43.72482

Source: Field Survey

Table No: 6 (b) Paired Samples Test of Pre MGNREGA Income of Beneficiaries & Post MGNREGA Income of Beneficiaries (in Rupees) in Block Breng

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error of Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post MGNREGA Income of Beneficiaries in Block Breng – Pre MG NREGA Income of Beneficiaries in Block Breng	342.31	557.37586	32.73024	278.51117	407.35090	10.477	289	.000

Source: Field Survey

Similarly average monthly employment of beneficiaries has increased from 12.82 days in pre MGNREGA period to 14.11 days in post MGNREGA period (Table7a). t-value for

employment in block Breng is equal to 9.909 with P value less than 0.05 (Table 7b) .Also effect size r is 0.50 (computed) which indicates that impact on employment is also significant and substantive.

Table No: 7 (a) Paired Samples Statistics of Pre MGNREGA Employment of Beneficiaries & Post MGNREGA Employment of Beneficiaries (in number of days) in Block Breng

		Mean	N	Std. Deviation	Std. Error of Mean
Pair 1	Post MGNREGA Employment of Beneficiaries in Block Breng	14.1172	290	4.89474	.28743
	Pre MGNREGA Employment of Beneficiaries in Block Breng	12.8276	290	3.86689	.22707

Source: Field Survey

Table No: 7 (b) Paired Samples Test of Pre MGNREGA Employment of Beneficiaries & Post MGNREGA Employment of Beneficiaries (in number of days) in Block Breng

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error of Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post MGNREGA Employment of Beneficiaries in Block Breng – Pre MGNREGA Employment of Beneficiaries in Block Breng	1.28966	2.21638	.13015	1.03349	1.54582	9.909	289	.000

Source: Field Survey

Although MGNREGA had positive impact on income and employment yet majority of the respondents were poor. In order to make this scheme pro-poor and more effective following suggestions as conveyed by different agencies are recommended

- States be allowed to make the wages under MGNREGA compatible with the prevailing market wage rates.
- Training programmes needs to be organised for Panchayat members to be organized at appropriate level i.e. district, block and at

Panchayats level. The training content should include: Convergence of works; MGNREGA Act, guidelines;

- Technical support in plan preparation; Social Auditing and RTI Act; Involvement of other departments
- Panchayat representative suggested that other departments like agriculture, irrigation, horticulture, forest, P.W.D education and health should also be involved in MGNREGA implementation so that proper convergence with their schemes can be done.
- There is a need for involvement of common people in the preparation of annual plan so that real needs of the people are addressed.

To sum up, MGNREGA needs a new orientation to serve as a scheme that generates productive assets in the economy. It needs a medium- to long-term perspective and goals, strong planning, and some additional features that can enable it to perform well as a scheme that contributes towards the shift of the economy to a full employment path. An employment guarantee scheme can address several issues in multiple ways. It can address the present employment challenge directly and indirectly by guaranteeing work at the lowest level on the one hand and by expanding the labour absorbing capacity of the mainstream economy on the other. The challenge is to maximize these benefits by maximizing the value of multipliers—employment, output, and income—by selecting the right kind of works and by ensuring the use of productive assets.

Notes

Paired “t”

In order to compare variation in generation of income and employment position of sample beneficiaries between the base year and current year, paired ‘t’ test is employed with the following formula.

$$t = \frac{\bar{d}}{\left(\frac{s^2}{n}\right)^{1/2}} \sim tn - 1$$

Where \bar{d} = the mean differences = the standard deviation of differences

$$\bar{d} = \frac{\sum d}{n}$$

$$S = 1/n \sqrt{[\sum d^2 - (\sum d)^2]}$$

Calculation of effect size

The effect size is calculated on the basis of the formula used by Rosenthal (1991) Rosnow and Rosenthal (2005) and Field A., (2005). The effect size is an objective and standardized measure of the magnitude of the observed effect. Field (2005: pp.32) quotes Cohen J’s widely accepted suggestions as to what constitutes a large or small effect. Accordingly, $r = 0.010$ (represents a small effect)

- Panchayat need technical support from some agency for making projects, which can be funded through MGNREGS.
- Flow of Funds to GPs should be regular, and not at the fag end of the year for the timely utilization of funds.
- Need for more trained staff, particularly technical staff.
- Nature of works to be decided at the State level.
- Convergence of works under different schemes (Merger of Hariyali with MGNREGS).

$r = 0.30$ (represents a medium effect)

$r = 0.50$ (represents a large effect)

Thus while 0.3 is considered the threshold of a medium effect, 0.5 represents the threshold of a large effect.

Effect size denoted as r is calculated using the following formula:

$$r = \sqrt{t^2/t+df}$$

Where in, t = t-Statistic

df = degrees of freedom

Difference-in-Difference Method: We have used Double-difference over time. The data requirement for this design is observations before and after the implementation of the programme, for both the treatment and the comparison group.

The key assumption for the validity of the method is that the difference between before and after in the comparison group is a good counterfactual for the treatment group.

It involves following steps:

- a. Compute the difference before-after for the comparison group:

$$\bar{y}_{c1} - \bar{y}_{c0} = \frac{1}{N_c} \sum (y_{j1} - y_{j0}) \dots (1)$$

The above eq. (1) represents the change in outcome due to natural trend and all other events.

- b. Compute the difference before-after for the treatment group:

$$\bar{y}_{t1} - \bar{y}_{t0} = \frac{1}{N_t} \sum (y_{j1} - y_{j0}) \dots (2)$$

The eq. (2) represents the change in outcome due to natural trend and all other events, and the program.

- c. The impact of the program can be found by:

$$\text{Impact} = (\bar{y}_{T1} - \bar{y}_{T0}) - (\bar{y}_{C1} - \bar{y}_{C0}) \dots (3)$$

Besides results of multiple regression and logit model have been obtained by using statistical software packages like STATA9.0 version and SPSS 16.0 version has been used.

Logit Model

To study the factors influencing the participation in NREGA, logit model has been used.

$$P_i (Y = 1 / X_1, X_2 \dots X_n) = F (\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5)$$

$$P_i (Y = 1 / X_1, X_2, \dots, X_k = 1 / 1 + e^{(\beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5)}$$

Odds Ratio= $P_i/1-P_i$. It is the ratio of probability of participation to that of non participation.

Y = is a binary variable taking 1 for MGNREGA job card holder and 0 other wise.

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