

Impact of MGNREGA on income, expenditure, savings pattern of beneficiaries in North–Eastern Karnataka

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ABSTRACT

This study was undertaken to assess the impact of the scheme on change in the income, savings pattern and extent of employment after the implementation of the scheme in Kalaburagi district of Karnataka state. Kalaburagi district was covered during the third phase of implementation of MGNREGA which was selected for the study with the pre set objective of analyzing the impact of MGNREGA on the participant households. For evaluating the specific objectives designed for the study, required primary data was collected from the participants for the agriculture year 2013-14. MGNREGA fully implemented village farmers (₹ 18718/year) were earning significantly higher income (74.48%) than that of partially implemented MGNREGA village farmers (₹ 4775/year). The average amount of savings made in SHGs was ₹ 2,380, in fully implemented MGNREGA villages, whereas in partially implemented MGNREGA villages it was ₹ 1,543. The savings was made in banks ₹ 12, 000 by the participants in fully implemented MGNREGA villages. Whereas, in case of partially implemented MGNREGA villages the savings was made by participants ₹ 8,120 it was less compared to fully implemented MGNREGA villages.

Keywords: Income, expenditure, savings, MGNREGA, saving

One of the flagship poverty alleviation programmes of Government of India is MGNREGA. MGNREGA is not only a welfare initiative but also a development effort

that can take the Indian economy to a new prosperity. MGNREGA aims to provide a steady source income and livelihood security for the poor, vulnerable and marginalised. Providing employment to the rural poor enhances their livelihood security by increasing their earnings as well as the expenditure and thereby improves their standard of living. MGNREGA was providing vital employment opportunities to the rural poor and helping to revive the local economy. MGNREGA is not just about drought relief but relief against drought. MGNREGA has huge potential for regenerating village economy in India.

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Enhancement of livelihood security in rural areas by guaranteeing 100 days of wage employment in a financial year to every registered household, creating productive assets, protecting the environment, reducing migration, empowering rural women and the poor through the provision of a right-based law, fostering social equity, to create strong social safety net for the vulnerable groups by providing employment source, when other alternative are inadequate. It brings prosperity in rural economy via increased consumption demand. Thus, MGNREGA can be considered as a growth engine. This study was undertaken to assess the impact of the scheme on change in their income, savings pattern and extent of employment after the implementation of the scheme in Kalaburagi district of Karnataka state. The present findings of this study would greatly help in correcting snags and bottlenecks thereby strengthening the effective implementation of MGNREGA by minimizing negative implications on scheme.

DATABASE AND METHODOLOGY

Kalaburagi district was covered during the third phase of implementation of MGNREGA which was selected for the study with the pre set objective of analyzing the socio-economic impact of MGNREGA on the participant households. Based on the amount of expenditure made under MGNREGA, number of person days of employment generated, which were found higher in the two villages namely Karolli and Sulepeta in Chincholi taluka and lower in Mallkhed and Neelahalli in Sedam taluka were selected through Multi-stage sampling. A multistage sampling procedure was adopted for the selection of sample respondents. Two villages from each taluka of fully and partially implemented villages and from each village 30 participants were selected randomly. Thus, totally 120 sample respondents (60 from fully and 60 from partially implemented MGNREGA villages) were selected. For evaluating the specific objectives designed for the study, required primary data was collected from the participants for the agriculture year 2013-14. The data related to income, savings and consumption expenditure was collected through structured and pre-tested schedules.

The objective of studying the socio-economic features of MGNREGA participant's households in terms of wage

income from MGNREGA among women, men, SC/ST and non SC/ST participant households involved testing of equality of means. For this purpose, the following procedure was adopted. The hypothesis of equality of two population means was tested by applying student 't' test. However, the crucial assumption of the test namely equalities of the two population variances was first verified by 'F' test. The null hypothesis (H_0) and the alternate hypothesis (H_1) constructed for testing the equality of two means were,

$$H_0: M1=M2$$

$$H_1: M1>M2$$

Where M1 and M2 are the averages of the statistic for wage income from MGNREGA among women, men, SC/ST participant households further equality of means was tested using 't' test.

't' test was done to compare equality of mean wage income from MGNREGA of men and women participants and also to compare wage income from MGNREGA of SC/ST participant households of fully and partially implemented MGNREGA villages.

$$\text{Test statistic, } t = \frac{\bar{x} - \bar{y}}{\sqrt{sp(1/n_1 + 1/n_2)}}$$

$$\text{The estimate, } Sp^2 = [(n_1 - 1) * s_1^2 + (n_2 - 1) * s_2^2] / (n_1 + n_2 - 2)$$

Where, (X-Y) = difference between the two means.

S_1^2 and S_2^2 = Variances of sample 1 and sample 2.

n_1 and n_2 = Sample sizes of sample 1 and sample 2

When the observed 't' value was less than table value at the given degrees of freedom at 5 per cent level of significance, it was concluded that the difference between the two means were non-significant.

Regression analysis is used in order to analyse the contribution of independent variable in determining the variations in the dependent variable. A multiple regression model was employed to estimate the determinants of total annual income of the respondents. The empirical model was:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 \quad (1)$$

Where,

Y_1 = Total annual income

X_1 = Proportion of irrigated area in acres

X_2 = Per capita person days of employment

X_3 = Family size

X_4 = Crop output

X_5 = Area under cultivation

RESULTS AND DISCUSSION

The annual income of the farmers from different sources is given in the Table. 1 The annual net income of the MGNREGA participant farmers of the partially implemented MGNREGA villages was ₹ 49,360 when compared to ₹ 63,967 for fully implemented MGNREGA villages it was less. However, the difference in net income was statistically non significant. It is very evident from the table that there was no significant difference in the income of the farmers from all the sources except

for income from MGNREGA work. MGNREGA fully implemented village farmers (₹ 18718/year) were earning significantly higher income (74.48 %) than that of partially implemented MGNREGA village farmers (₹ 4775/ year).

The major source of farmers income was come from crops in both fully implemented (27.59 %) and partially implemented (43.55 %) MGNREGA villages respectively. The fully implemented MGNREGA village farmers were earning more income than their counterparts in partially implemented MGNREGA villages, from rent of machinery (13.74 %), rent from land (17.54 %), agricultural labour work (33.92 %), and business like hotel, *kirana* shop (20.46 %). Similarly, the partially implemented MGNREGA village farmers were earning more income than the farmers of high implemented MGNREGA villages from income from crops (21.81 %), livestock's (15.08 %) and non-farm labour work (10.10 %). However, the difference in income was statistically non significant.

Table 1: Source of farmer's income in MGNREGA implemented villages

Sl. No.	Particulars	Partially implemented	Fully implemented	% change in highest implemented over lowest implemented	't' Value
		Net income (₹)	Net income (₹)		
1	Crops	21500 (43.55)	17650 (27.59)	21.81	0.98 ^{NS}
2	Livestock	4356 (8.82)	3785 (5.91)	15.08	0.64 ^{NS}
3	Rent of machinery	1537 (3.11)	1782 (2.78)	13.74	0.15 ^{NS}
4	Rent of land	752 (1.52)	912 (1.42)	17.54	0.24 ^{NS}
5					
A	Agriculture labour	7425 (15.04)	11238 (17.56)	33.92	1.87 ^{NS}
B	Non –farm labour	4162 (8.43)	3780 (5.90)	10.10	0.72 ^{NS}
C	MGNREGA work	4775 (9.67)	18718 (29.26)	74.48	4.03*
D	Business	4853 (9.83)	6102 (9.53)	20.46	0.46 ^{NS}
6	Total	49360 (100.00)	63967 (100.00)	22.83	0.28

Note: * Significant at 5 per cent level, NS-non significant

Fully implemented MGNREGA village participant households were earned significantly higher income from MGNREGA works as the scheme was better implemented than that of partially implemented MGNREGA villages. Income from crops was the major source of farmer's income in both fully and partially implemented MGNREGA villages. The net income from crop was higher in partially implemented MGNREGA villages as cost of cultivation lower than that of fully implemented MGNREGA village though the difference was statistically non-significant.

The partially implemented MGNREGA villages were earned higher income from livestock's as they were having higher livestock population in comparison with fully implemented MGNREGA villagers.

Table 2: Estimates of the impact of MGNREGA on income of the sample respondents

Sl. No.	Dependent variable	Total income	Regression coefficients	't' value
	Independent variables	Parameters		
1.	Intercept	A	18232.34	
2.	Proportion of Irrigated area	X ₁	6214.73** (3.21)	2.09
3.	Per capita persondays of employment	X ₂	173.69* (6.01)	1.68
4.	Family size	X ₃	5730.00* (5.32)	1.86
5.	Crop output	X ₄	7100.00* (3.48)	1.92
6.	Area under cultivation	X ₅	4260.00** (4.07)	3.01
7.	Dummy variable (fully implemented=1, partially implemented=0)		-10896.00**	2.18
8.	N		120	
9.	R ²		0.93	
10.	F-statistic		6.79	

Note: figures in parentheses indicate the standard error

*Significant at 10 % level, **Significant at 5 % level,

*** Significant at 1 % level

Similarly, fully implemented MGNREGA village participant households were earned higher income from

hiring out of machinery and land due to higher rates of rent because of more demand for land and machinery in comparison with partially implemented MGNREGA villages.

Fully implemented MGNREGA village participant households were earning relatively higher income from business like hotel, Kirana shop etc. As better business opportunities prevailed in fully implemented MGNREGA villages and the villages were comparatively big and residing near to the towns. The findings of the study are in confronts with Kumar and Prasanna (2008) who reported that beneficiaries worked for 44 days under MGNREGA and earned an income ₹ 2860 at the rate of ₹ 65 per day. Thus, MGNREGA had led to an increase in annual income of ₹ 7260 which was used for education and health of his family members.

The contribution of independent variables responsible for measuring the variation in income of respondent households was analysed by using linear multiple regression model. The estimated regression model for studying the impact of MGNREGA on income of participant household was,

$$Y_1 = 18232.34 + 6214.73X_1 + 173.69X_2 + 5730X_3 + 7100X_4 + 4260X_5 - 10896D_1$$

The results as revealed in the Table 2. irrigated area in acres was significant at 5 per cent level implied that for every one acre increase in the irrigated area irrespective of the MGNREGA participant household in the fully and partially implemented MGNREGA villages, the total annual income increased by ₹ 6,214.73. The per capita person days of employment was also found significant at 10 per cent level, it indicated that for every person day increase in the per capita employment irrespective of men and women of participant households, the total annual income increased by ₹ 173.69. The family size was also found significant at 10 per cent level, indicated that increase in the family size the total income increased by ₹ 5730. The crop output was also found significant at 10 per cent level, it indicated that increase in the crop output the total income increased by ₹ 7,100. The area under cultivation was also found significant at 5 per cent level implied that increase in the cultivated area the total annual income increased by ₹ 4,260. If we observed the overall model the R² value was (0.93) shows model was well fitted.

Table 3: Consumption expenditure of sample respondents in fully and partially implemented MGNREGA villages

Particulars	Fully	Percentage	Partially	Percentage
	implemented (₹)		implemented (₹)	
Food items	25735	44.22	14895	43.86
Cloth	3400	5.84	2289	6.74
Education	3200	5.49	1360	4.00
Health	1500	2.58	750	2.21
Agricultural activities	13850	23.80	8290	22.01
Non -agricultural activities	9760	16.77	5864	17.28
Others	750	1.29	480	1.41
Total	58195		33928	

Table 4: Savings pattern of the participants in MGNREGA implemented villages

Particulars	Unit	Fully	Partially
		implemented	implemented
Number of Sample Household Being Member of SHGs	No.	39 (65.00)	28 (46.67)
Savings made in SHGs	₹ / Year	2380 (16.55)	1543 (15.96)
Banks	₹ / Year	12000 (83.44)	8120 (84.03)
Total	₹ / Year	14380	9663

Note: Figures in parentheses indicate percentage to the total

The average consumption expenditure of participant households was indicated in Table 3. It was ₹ 58,195 in case of fully implemented MGNREGA villages, out of which 44.22 per cent was spend on food items, 5.84 per cent on cloth, 5.49 per cent on education, 2.58 per cent on health, 23.80 per cent incurred for the development for agricultural activities, 16.77 per cent on non-agricultural activities, 1.29 per cent constitute for other day to day activities in the fully implemented MGNREGA villages. Similarly, in case of partially implemented MGNREGA villages, the average total consumption expenditure was ₹ 33,928, out of which 43.86 per cent was on food, 6.74 per cent on cloth, 4.00 per cent on education and 2.21 per cent on health, 22.01 per cent incurred for the development for agricultural activities, 17.28 per cent on non- agricultural activities and 1.41 per cent constitute other expenditure in the partially implemented MGNREGA villages respectively (Table 3.) In fully and partially implemented MGNREGA villages since proportion of educated persons in their families is

comparatively higher. Expenditure made on education was the least both in case of participant households as most of their children went to Government schools. The BPL families were higher in participant category and household average income per annum was substantially higher in case of fully implemented MGNREGA villages.

The detailed information on savings pattern by sample respondents through MGNREGA in fully and partially implemented villages is presented in Table 4. the total number of sample households being members of SHGs was 39 in case of participant households in the fully implemented MGNREGA villages and whereas in case of partially implemented MGNREGA villages the total number of sample households being members of SHGs was 28 respectively. The average amount of savings made in SHGs was ₹ 2,380, in fully implemented MGNREGA villages. Whereas, in partially implemented MGNREGA villages it was ₹ 1,543. The savings was made in banks ₹ 12,000 by the participants in fully

implemented MGNREGA villages. Whereas, in case of partially implemented MGNREGA villages the savings was made by participants ₹ 8,120 it was less compared to fully implemented MGNREGA villages. Around 65.00, 46.67 per cent of MGNREGA participants were members of SHGs in fully and partially implemented MGNREGA villages respectively, which indicates that participation in SHGs has increased with participation in MGNREGA in fully implemented MGNREGA villages as compared to partially implemented MGNREGA participants.

CONCLUSION

The study has revealed that participation in the MGNREGA increases with increase in the income in fully implemented MGNREGA villages as compared to partially implemented MGNREGA villages. The average amount of savings made in SHGs was also increased in fully implemented MGNREGA villages as compared to partially implemented MGNREGA villages. The average consumption expenditure in case of participant households was more on food items, cloth, education, health, agricultural equipments, non-

agricultural equipments and other expenditure in the fully implemented MGNREGA villages was more as compared to partially implemented MGNREGA villages.

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