



LABOUR – IMPACT ON AGRICULTURE

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ABSTRACT

The labour scarcity being felt as a major impediment in agriculture, this study has probed into its magnitude, impacts, causes and possible solutions. The study has revealed that prevalence of acute labour scarcity has affected the productivity levels of almost all crops and is even leading towards the permanent changes in the cropping pattern. The important reasons identified for the labour scarcity include higher wages in other locally-available jobs, seasonal nature of agricultural jobs and presumption of an agricultural job to be of low esteem. The level of adoption of labour-saving implements and technologies by the farmers is very low for the reasons of higher cost, lack of skill and smaller size of holdings. The study has suggested that agricultural extension system of the country should be geared-up, to bring out farmers from the conventional methods of cultivation and to educate them on adoption of labour-saving implements and technologies. Also, a community level approach should be encouraged among farmers for adopting / availing highly expensive labour-saving technologies and implements cooperatively. In addition, agricultural jobs should be made more remunerative by increasing the wages at least at par with other jobs available locally.

Keywords: Labour, Labour-saving, Technology, Wages.

Introduction

With the rate of unemployment touching the 10 per cent mark, pressure mounted on the government to implement some new and productive measures which could keep unemployment and poverty under check. Under such a situation, the Government of India launched the National Rural Employment Guarantee Scheme, the largest ever public works programme in the world. The scheme provides guaranteed employment for 100 days in a financial year to one member of eligible household. The Act which came into force in February 2006, was rechristened as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on 2nd October 2009. After six years of its implementation, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is regarded as a 'boon to the poor' as it has conferred several benefits, especially to the rural poor. A rural family can utilize its manpower to earn an annual income of say ` 10000/-. The scheme has also enhanced the socio-economic status of both men and women from the weaker sections. The scheme has created precious assets



and infrastructure in the rural areas. However, despite this success, the scheme faces criticism from several corners. One of the major criticisms is that it has adversely affected the availability of labourers in the agricultural sector and has hiked their wages. It is also alleged that labourers prefer works in MGNREGS over other labour, owing to its less toil, less supervision and provision of other facilities. The extent of seriousness of the issue became evident when the Ministry of Agriculture had to request the Ministry of Rural Development to put a hold on the scheme during the harvesting period so as to make labourers available for the harvest. This directive has raised many questions like: Is MGNREGS really responsible for the shortage of labourers in the agricultural sector? Is it responsible for the hike in the labour wage in the agriculture sector? Is the scheme really successful in its declared objective of poverty alleviation and empowerment of the weaker sections (the SC/ST and rural women)?

Thus, this study was undertaken with the following specific objectives:

- Evaluation of the impact of MGNREGA on employment, income and savings of the MGNREGA workers, and
- Analysis of the impact of MGNREGA wages on labour availability for agriculture and on workers' gender and age.

Methodology

Database

The primary data related to demand for agricultural labour, productivity of different crops in labour-scarcity affected and unaffected farms and labour-saving technology-adopted and non-adopted farms, reasons for labour scarcity and reasons for non-adoption of labour-saving technologies were obtained from the farmer respondents. The primary data related to the average man days of work delivered per month by the agricultural labourers were obtained from the sample agricultural labourers.

Analytical Strategies / Tools

The analytical strategies / tools used in the study were: (i) Supply-demand gap analysis, (ii) Markov chain analysis, (iii) Productivity gap analysis, and (iv) Garrett ranking technique.

Supply – Demand Gap Analysis

The month-wise supply of labour was assessed by considering the available agricultural labour force in a village and average mandays of work delivered in a month by each labour. The month-wise demand for labour was



assessed by considering the area under each crop and labour requirement for various cultural operations to be carried out in each month. Estimates were obtained by availing both primary and secondary data. Markov Chain Analysis. The structural changes in the cropping pattern due to labour scarcity were examined by using the Markov chain approach

Productivity Gap Analysis

The unpaired t-test was employed to assess the statistical significance of the difference in the mean productivity levels of labour-scarcity-affected and unaffected farms and labour-saving technology-adopted and non-adopted farms, respectively. Assumptions made for classifying labour-scarcity affected and unaffected farms and labour-saving

Impact of MGNREGA on Employment of the Beneficiaries

After working under MGNREGA programme, the number of labour days worked on their own-farm remained the same at 61.68, but the number of days worked outside the farm has marginally decreased from 112.04 to 108.87, reflecting a decrease of 2.8 per cent. However, the difference is not significant with pairedt value of 1.15. The number of days worked under MGNREGA programme was 32.41, thus the total number of days employed after working under MGNREGA programme was 201.82 days. In other words, out of the total number of days worked in a year, they were engaged for about 30 per cent of the days on their own-farm, 54 per cent of days on outside own-farm and 16 per cent under MGNREGA programme. The ratio of number of days worked on their own-farm to that on the outside was 0.55, indicating for every two days of work outside, worker did work on his own-farm for only one day. Similarly, the ratio between the own-farm working days and the number of days worked under MGNREGA programme was 1.9, indicating for every two days of work on his own-farm, he did work under MGNREGA programme for only one day. Before the implementation of MGNREGA programme, the sample respondents were employed on their own-farm to the extent of 35 per cent of their total number of working days in a year. The labour absorption in agriculture was lower because of its seasonal nature, small size of landholdings and operation under dryland agriculture. The remaining 65 per cent of their employment was on outside own-farm, particularly during the off-season. In the study area, people were often engaged in the coconut business, house construction, carpentry, etc. as a subsidiary occupation. But, the subsidiary occupation of the workers was not adequate to keep them employed throughout the year. Thus, implementation of MGNREGA programmes have been of much help to the needy households by providing employment which increased modestly by



16.17 per cent being employed under the employment programme, the number of days, employment on their own-farm was not reduced, as agriculture provided them livelihood security and MGNREGA complimented their income from agriculture. Similarly, the number of days worked outside the farm has not come down substantially due to the fact that a MGNREGA programme provides employment only for one hundred days. In some cases MGNREGA has failed to provide hundred days of employment per household because of inefficiency in implementation and procedures followed by the Gram Panchayats. Similar observations have been made by Raghuraman (2009) in his macro level study, indicating that the average number of days for which each household could get employment was only 45 against the promised 100. Regarding nature of work, it is evident from the Table 3 that the maximum number of days the workers were employed was on road construction, accounting 27.47 per cent of the total number of days employed (32.01). On the contrary, employment was for the least number of days for digging works, accounting for 6.50 per cent of the total number of days employed. The strong preference by the Gram Sabha for road construction works was due to lack of road connectivity across neighbouring villages. Since the tanks were silted up not being used to their full potential and falling groundwater table, construction of water harvesting structures was the second choiced work (18%). Further, hard works requiring digging was not preferred due to shortage of male labour and secondly, use of machines for work was not allowed.

Factors Influencing Period of Employment under MGNREGA Programmes

The number of days, the beneficiaries worked under MGNREGA programmes was regressed on the factors like age, gender, education, family size and landholding size of the workers to analyse the relationship between the number of days worked under the programme and the contributing factors (Table 1). The coefficients of variables like age and family size were non-significant, indicating that they are not significantly contributing to the change in the dependent variable, viz. the number of days the beneficiaries worked under MGNREGA programme. But, the coefficients of other variables like gender, education and landholding size were significant. The coefficient for the variable gender was -0.805, indicating that if the worker was a male, the number of working days decreased by 0.80 days. Similarly for education, coefficient was -11.82, indicating, if a worker was literate, the number of working days under MGNREGA programme decreased by 11.82 days. The coefficient with respect to landholding size was -0.783, implying that if landholding size increased by 1 acre, the number of days worked



decreased by 0.78 days. The adjusted R² value for the model was 0.65, indicating a good fit, explaining 65 per cent of the total variations in the dependent variable. Impact of MGNREGA on Income of Beneficiaries The annual income of the sample workers from different sources is given in the Table 5. Before working under MGNREGA programme, the annual income of the workers from agriculture and non-agriculture (income earned as agricultural labourers, carpentry and coconut business) was of ` 21,422 and ` 10,185, respectively, which added to ` 31,607.

Table 1
Determinants of number of days beneficiaries worked under MGNREGA programmes

Dependent variable: Number of days worked under the MGNREGA programmes

Variable	Coefficient	T-stat
Constant	41.814***	4.43
Age	0.0105 NS	0.04
Gender	-0.80495**	4.52
Education	-11.824 *	2.43
Family size	-3.5912 NS	1.34
Size of landholding	-0.7831**	6.31
Adjusted R*	0.65	
N= 90 workers		

Note: *, ** and *** indicate significance at 1per cent, 5 per cent and 10 per cent levels, respectively

Impact of MGNREGA on income of beneficiaries

Particulars	Annual income (` Rs.)			Total
	Agriculture	Non-Agriculture	From MGNREGA programme	
Before MGNREGA	21,422	10,185		31,607
After MGNREGA	21,400	10,084	2,775	34,467
Net change	-22	-101	2775	2,860
Per cent change	0.10	0.99		- 9.04
t-value (paired- t)	1.4109NS	0.9684NS -		11.8506***



After working under MGNREGA programme, the income earned from agriculture was ` 21,400, which was almost the same as before. The income earned from non-agriculture after being employed under MGNREGA programme was also statistically non-significant. The percentage increase in the income earned after working under MGNREGA programme was 9.04 and this increase was statistically significant. In total income, the share of agricultural income was highest (63%), followed by income from non-agriculture (29%) and income from MGNREGA (8%).

Impact of MGNREGA on Labour Availability for Agriculture

The MGNREGA provides guarantee of 100-day wage employment in a year to every rural household who is ready to do unskilled manual work. This unique feature of the programme has absorbed not only the labour having no employment but also the labourers working earlier in the agricultural fields, making it difficult for the farmers to carry out agricultural operations. Major crops grown in the study area were sunflower, finger millet (ragi) and cotton in kharif; sorghum, chick pea and chilly in rabi; tomato and brinjal during summer. Major operations were defined for each of these crops and accordingly information on prevailing wage rate, labour required per operation per acre, labour availability before and after MGNREGA implementation was collected from the sample farmers to compute labour scarcity before and after MGNREGA implementation and also scarcity absolutely due to MGNREGA.

Conclusions

The total number of days worked in a year after implementation of MGNREGA programme significantly increased to 201 days, reflecting 16 per cent increase. Regression analysis has revealed that gender, education and family size of the workers significantly influence the worker's employment under the Program. The annual income of the workers has increased by 9.1 per cent with the implementation of the Program. In the total income, the contribution of agricultural income was highest (63%), followed by non-agricultural income (29%) and MGNREGA income (8%). Thus, MGNREGA has contributed to increase in the consumption expenditure reducing the debt burden of the beneficiaries. The study has shown that MGNREGA programme often poses the problem of labour scarcity for some of the agricultural operations linked to market wage rates. As a consequence, farmers have brought down their acreage under different crops, leaving the land fallow. Hence, the issue has to be debated to see that 100-day employment guarantee under MGNREGA be confined strictly to months when there is no harvesting or sowing activity.



References

1. Gladson, D. (2008) Plougher cut - Impact of NREGA. Tehelka Magazine, 5(37): 12-13.
2. GoK (Government of Karnataka) (2009) Chikmagalur District at a Glance, Bangalore.
3. Harish, B.G. (2010) An Economic impact analysis of MGNREGA in Chikmagalur District of Karnataka. Master's Thesis (Un-published). University of Agricultural Sciences, GKVK, Bangalore. Ramesh, G. and Krishnakumar, T. (2009)
4. A study in Karimnagar district in Andhra Pradesh. Kurukshetra, 58 (2): 29-30. Shankar, Raghuraman (2009) NREGA is a promise half-kept. Times of India: 13 September