

Short communication

Impact of labour institution on the household welfare of agricultural labourers- A study on Green Army Labour Bank members in Thrissur district

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Abstract

Green Army Wadakkanchery Block Labour Bank, Wadakkanchery was formed as a labour institution with the intention of protecting the interests of labourers and farmers in Wadakkanchery block in order to improve the welfare of agricultural labourers, reduce the scarcity of agricultural labourers and improve agricultural productivity. A study was conducted during 2013-14 to analyze the impact of GALB on the welfare of the Green army members. There was significant increase in the total annual expenditure and the total number of employment days of Green Army members after joining the Green army. Though there was considerable increase in the monthly expenditure towards food, fuel, health, education, communication, travel and entertainment, electricity charges and clothes, expense towards communication has showed more than 100 per cent increase after joining Green army. Total consumption expenditure is considered to be a good index of measuring household welfare. Multiple regression using consumption expenditure as the determinant showed that size of the family, empowerment imparted by Green Army Labour bank in terms of self-confidence, thrift habit, social consciousness, team work etc, and outstanding loan amount of the family have substantially influenced total consumption expenditure and subsequently the household welfare of Green Army members.

Keywords: Consumption expenditure, Green Army member, Green Army Wadakkanchery block labour bank, Household welfare.

In the present situation and even earlier, agricultural labourers are the most unorganized with low income, tedious work conditions and irregular and periodic employment. They are mostly landless and constitute the poorest segment of the Indian agricultural population (Padhi, 2007). Agriculture in Kerala is faced with the twin problem of farmers as well as labourers abandoning rice cultivation. Labour bank initiatives have been undertaken under the auspices of local governments in many parts of the state to address the problem of labour scarcity and irregular employment opportunities to

labourers. Labour bank formed in Kunnathukal grama panchayat in Thiruvananthapuram district is to cite one. Also an initiative taken up by Kerala Agricultural University through Food Security Army (FSA) have conceptualized the need for an efficient work force for the state for achieving food security and was able to form various Labour Banks in different parts of the state.

Availability of skilled labour at specific times is crucial for ensuring crop productivity and profitability (Anoop et al., 2014). Several initiatives

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like labour banks have been implemented which not only brought in economic development but also women empowerment. Green Army Wadakkanchery Block Labour Bank (GALB) is such an organization formed as a self-sustaining group of skilled labour force fostered by the local body of Wadakkanchery block in Thrissur district in 2008, equipped with modern farm techniques and interventions, and farm machineries to aid farming. By infusing modern methods into conventional farming, the Green Army has become a role model in the state in a short span. GALB has been initiated to ensure regular supply of farm labourers and regular employment. This paper focuses on the impact of GALB on the welfare of agricultural labourers.

Wadakkanchery block in Thrissur district in Kerala was purposively selected as the study area being the area of formation of GALB. Forty Green Army members selected through simple random sampling were interviewed using pre tested structured interview schedule. Various social and economic parameters likely to influence the household welfare before and after joining Green Army Labour Bank viz, income, employment, savings, monthly consumption expenditure, gender, economic and social category, education, age, family size, wages, number of trainings attended, contribution to outstanding loan and empowerment, were collected. The data was statistically analyzed through appropriate statistical tools such as averages, percentages and their validity tested by t-test. The comparisons were attempted both at

current and constant prices, taking 2005 as the base year. The deflator factors for 2008 (before GA) and 2014 (after GA) were 0.833 and 0.502, respectively.

The model used by Dong (2007), adapted from Wodon (1999), was used to measure the change in household welfare of the Green Army members (GA members) before and after joining GALB. The model specification is $\log(Y_i) = \beta_i X_i + u_i$

Where, $\log(Y_i)$ is the log of real expenditure per household; and X_i are categorical variables presenting characteristics of household (given in Table 4 as factors) which are likely to affect the consumption expenditure per household.

Considerable variations in the levels of economic characters of the labourers were observed before and after their joining in the Green Army Labour Bank as evident from Table 1.

The total number of days employed when compared before and after becoming Green Army members increased by about 11 per cent (Table 2), which ultimately increased the average annual family income by 40.51 per cent at current price. Average annual family consumption expenditure and savings were also found out to be increased at current price (by 54.80% and 31% respectively). However, at constant price the change in these parameters showed a declining trend which reflected the extent of inflation which occurred during 2008-2014. Though there was a notable increase in the outstanding loan amount, it was not

Table 1. Economic characteristics of GA Members

Particulars Rs/year	At current price				At constant price			
	Before GA	After GA	Per cent change	't' value	Before GA	After GA	Per cent change	't' value
Average family income	139843	196490	40.51	-9.63**	116489	98638	-15.32	4.561**
Average family consumption expenditure	55850	86458	54.80	-18.31**	46523	43402	-6.71	2.12*
Average outstanding loan	19725	44925	127.76	-1.35 ^{NS}	16431	22552	37.25	-0.49 ^{NS}
Average family savings	83993	110032	31.00	-4.05**	69966	55236	-21.05	3.48**

* - significant at 5%, ** - significant at 1% level of significance, NS – Not Significant

Table 2. Pattern of employment of GA members (Person days/year)

Particulars	Number of employment days		Per cent change
	Before GA	After GA	
Farm-working outside GALB	78 (38)	58 (26)	-25.64
Farm-working through GALB	0 (0)	76 (33)	-
MGNREGS	65 (32)	60 (27)	-7.69
Others	61 (30)	31 (14)	-49.18
Total	203 (100)	225 (100)	10.84

(Figures in parentheses show percentage to total)

statistically significant possibly due to the wide variation in the loan amount availed by the members.

The employment pattern of the GA member before and after joining labour bank is presented in Table 2. Before joining GALB, the labourers had been working almost equally on farm, non-farm and other works like masonry. After becoming GALB members, their employment contribution from other works like masonry reduced by 49.18 per cent. GALB contributed to 33 per cent of the total employment afterwards. The GA members were found to participate less in MGNREGS (49.16%) after joining GALB. As Anoop et al. (2014) also pointed out, it might be because of the competitive wage rates, regular employment and the other welfare incentives offered by GALB which made other works less attractive.

Though noticeable increase in various components could be observed under current price level in all the items analysed to estimate the consumption expenditure (Table 3), a relatively lower reduction in expenditure on food was observed, which is in

agreement with Engel's law: as income increases the proportion of income spent on food falls. The expenditure on education was also found to be reduced probably due to the stoppage of education to higher levels. However, there was noticeable increase in the amount spent for communication at current prices definitely due to the revolutionary changes in communication domain imparted by the advent of mobile phones and other media.

Among the various components of family expenditure, the expenses made towards food constituted the bulk, 55% and 49% before and after joining the Green Army Labour Bank as depicted in Figure 1. Also we can see that more percentage spending on communication, health, fuel, travel and entertainment which indicate the economic upliftment of green army members with corresponding increase in income at current price level (Table 1). The results are in agreement with the Engel's law of family expenditure.

Household welfare was studied choosing expenditure as proxy because expenditure is considered a good proxy for permanent income and

Table 3. Monthly consumption expenditure (Rs.) of GA members

Particular	Before GA	After GA	% change
Food	2540	3545	39.56
Fuel	262	462	76.34
Health	244	421	72.54
Education	526	745	41.63
Travel & Entertainment	253	461	82.22
Communication	218	498	128.44
Others (Clothes, Electricity etc.)	613	1073	75.04
Total (at current price)	4654	7205	54.81
Total (at constant price)	3877	3617	-7.19
Coefficient of variation(CV) %	37.35	25.37	

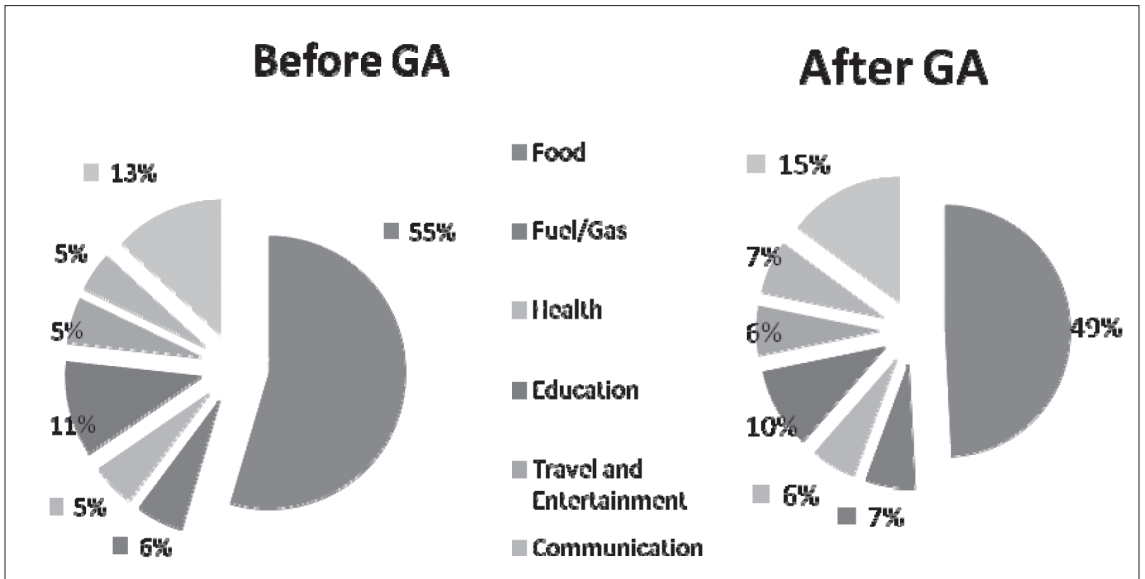


Figure 1. Percentage break down of monthly expenditure of Green Army members at current price level.

thus also for long-term average well-being (Balisacan et al., 2003). Moreover, data on expenditure are less difficult to gather than those on income, as individuals are reluctant to provide their income correctly. Hence in this study, per capita household expenditure is employed as an approximation for household welfare.

Total monthly consumption expenditure (Y) of the household included the expenditure on food and nonfood items, estimated used value of goods owned by the household, rental value of the household, and assets owned by the household. Twelve dependent categorical variables were considered which were likely to influence the total monthly consumption. The regression equations depicting the relationship between total monthly consumption expenditure and the influencing factors before and after joining GALB (Eqn. 1 & 2 below) showed significant influence of selected dependent variables on the expenditure and consequently to the welfare of the Green Army member.

Equation 1. Before joining GALB #

$$\text{In } Y = 4.579 + 0.539X_1 + 0.300X_2 + 0.00004X_3 +$$

$$0.247X_4 + 0.018X_5 + 0.274X_6^{***} + 0.000X_7 - 0.00001X_9 - 0.037X_{11} + 0.00007X_{12}$$

$$R^2 - 0.374$$

* - significant at 10% level, ** - significant at 5%, *** - significant at 1 per cent level

- X_8 and X_{10} are not valid factors to be considered for regression analysis.

Equation 2. After joining GALB

$$\text{In } Y = 5.828 - 0.195X_1 + 0.144X_2 + 0.043X_3 + 0.149X_4 + 0.009X_5 + 0.345X_6^{***} + 0.00008X_7 - 0.067X_8 - 0.00007X_9 - 0.239X_{10}^{**} - 0.019X_{11} + 0.00005X_{12}$$

$$R^2 = 0.544$$

* - significant at 10 per cent level, ** - significant at 5 per cent level, *** - significant at 1 per cent level

where,

Y = Total monthly consumption expenditure (Rs.)

X_1 = Gender

X_2 = Economic category

X_3 = Social Category

X_4 = Education

X_5 = Age of the Green Army member

X_6 = Family size of the Green Army member

X_7 = Wages/month received by the Green Army member (Rs)

Table 4. Micro-determinants of household welfare of Green Army members – Regression results at constant price

Factors	Before GA		After GA	
	Coefficient	t value	Coefficient	t value
(Constant)	4.579	2.434	5.828	5.316
Gender score	0.539	0.888	-0.195	-.665
Economic Category score	0.300	1.465	0.144	1.089
Social category score	0.00004	0.000	-0.043	-0.579
Education score	0.247	1.628	0.149	1.346
Age	0.018	1.242	0.009	0.947
Family size	0.274***	3.161	0.345***	5.374
Wages	0.000	1.292	0.00008	0.906
Trainings	NA	NA	-0.067	-0.584
Outstanding loan	-0.00001	-1.007	-0.00007***	-3.684
Empowerment score	NA	NA	0.239**	2.453
No of employed days	-0.37	-1.506	0.019	-0.847
Savings	0.00007	0.374	-0.00005	-0.535
R ² (adj.)	0.374	0.544		

* - significant at 10%, ** - significant at 5%, *** - significant at 1% level of probability. NA – These variables are not considered

X_8 = Number of trainings attended by Green Army member

X_9 = per month contribution to outstanding loan (Rs)

X_{10} = Empowerment

X_{11} = Number of employment days per month

X_{12} = Savings per month (Rs)

A perusal of the data in Table 4 shows that the family size was having significant influence on the total consumption expenditure irrespective of whether the incumbent was a member of GA or not. This result aligned with the assumption that bigger family leads to higher consumption expenditure which reflects a positive impact on household welfare.

The data collected on empowerment in various attributes such as self-confidence, thrift habit, social consciousness, team work, and general awareness on development programs by Government after joining GALB showed that empowering people, can greatly influence the welfare of the household. The co-efficient of empowerment score was significant at 5% probability level.

The outstanding loan had a negative impact on the total consumption expenditure and subsequently on the welfare of the household. Even though the ratio of 2.50 as estimated from Table 1 between the income and expenditure observed before joining GALB had decreased to 2.27 after joining GALB, availing loan remained as 'a necessary evil' for sustaining the livelihood of the families of ordinary people.

The results of the study conclusively showed significant improvement in the household welfare of Green Army members. Even though mean annual family income, consumption expenditure and savings were found to be decreasing in real terms, they were found to be increasing in nominal terms. The extent of hardships in terms of economic welfare seemed to be reduced due to the intervention of Green army among the agricultural labourers as evidenced by changes in income and consumption expenditure. It would have been much tougher for them to survive but for the support of GALB. GALB could be considered as an employment provider and as a regular supplier of agricultural labour which guarantees further scope for agriculture. Green Army Wadakkanchery Block

Labour bank can be considered as model which can be replicated with suitable modifications to ensure food security.

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