A STUDY OF THE IMPACT OF NATIONAL RURAL EMPLOYMENT GUARANTEE SCHEME ON MIGRATION IN CACHAR DISTRICT OF ASSAM

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Abstract *The study investigates the impact of National Rural Employment Guarantee Scheme (NREGS) on migrationin Cachar district of Assam. The findings of the study relating to the impact of NREGS on migration draw upon information from field survey of 240 households which completed the 100 days of employment in the scheme in the district during 2007-08 to 2009-10. We applied the Log it regression taking migration as the response variable and, per capita income and percentage of employed members in NREGS out of total employed family membersas explanatory variables to test the relationship. The results show that higher values of income decrease the odds that a household would migrate after joining NREGS and vice versa. The results also showed that percentage of employed members in NREGS out of total employed has statistically significant and negative impact on the probability that a household would migrate. This implies that higher the percentage of employed members in NREGS the lower is the migration to towns during the non-agricultural season. Thus, the study has found statistically significant impact of NREGS on seasonal out migration of poor low skilled labours in the context of Cachar district.*

Keywords: *NREGS, Migration, Logit Regression*

INTRODUCTION

The National Rural Employment Guarantee Scheme (NREGS) is the largest labour intensive wage employment programme in Indian history of employment generation programmes after independence. The scheme is the product of the National Rural Employment Guarantee Act (NREGA) passed by the Indian parliament in September 2005.The scheme was introduced on 6th February 2006 in 200 poor districts of India followed by 130 districts in April 2007 and the remaining districts of the country were covered under the scheme from 1st April 2008 (Ministry of Rural Development, 2008). It was renamed after Mahatma Gandhi on 2nd October 2009 to be called as MGNREGS. Being a demand driven programme in nature, this scheme for the first time brings the role of the Govt. as employer of the last resort within the reach of the beneficiaries themselves. Moreover, for the first time, it provides for provisions for penalising the Govt. if it fails to provide employment within the stipulated period of 15 days. The NREGS differs from earlier wage employment programmes introduced in India as it provides legal guarantee of employment for at least 100 days in a year on demand.

One of the main objectives of the NREGS is to arrest out-migration of unskilled, landless labour force from the rural areas to urban areas by ensuring up to 100 days of wage employment within their native jurisdiction so that these 100 days guaranteed wage employment can be judiciously and rationally utilised by the landless peasants during lean and distress seasons.

In this study, we analyse the impact of NREGS on migration in Cachar district of Assam. The present study assumes migration as a negative force focusing on temporary distress migration. Rural-urban migration is a response to diverse economic opportunities across space (Jacob, 2008; Kote & Honnakeri, 2012). Lack of adequate employment opportunities generally induces migration from rural to urban areas (Kareemmulla *et al*., 2013). Though the migrants and their households get benefit greatly from migration, it is seen that this individual benefit occurs at the cost of net loss to both rural and urban areas, and a decline in social welfare, through overcrowding and increased population in urban destination areas and a greater regional concentration of wealth,

income and human capital. Migration can be described as a destabilising factor-economically and socially-labourers are at the mercy of contractors who often exploit them (Jacob, 2008). The agricultural sector of Cachar district of Assam is characterised by both disguised unemployment and seasonal unemployment due to high pressure of population on agriculture, small holdings and scarcity of employment during the lean season. As a result, there is distress migration of low skilled labours from one village to another, from countryside like Kashipur, Rongpur, Gossaipuretc to Silchar town, the district head quarter during the lean season and migration of youths to other states of India like Maharashtra, Karnataka and Kerala for sustainable livelihood. Thus, the NREGS with legal guarantee of minimum 100 days of employment in a financial year when other employment opportunities are scarce can address the issues of inter district and interstate migration in Cachar. Against this background, the present study focuses on whether the NREGS has helped in stopping migration in Cachar. The Cachar district is one of the backward regions of India, facing poverty, unemployment and lack of infrastructure. At the same time, poor implementation of Govt. sponsored schemes in this region is a problem in achieving the objectives of such programmes. The NREGS if implemented properly has the potential to go a long way towards strengthening infrastructure and providing livelihood safety net when employment opportunities are scarce. So, the Cachar district is appropriate for an impact assessment of NREGS. The paper is organised in five sections. The second section is devoted to overview of literature. The third section deals with methodology of the study. The fourth section shows the results of the study and the fifth and final section is devoted to conclusionof the study.

Overview of Literature

The NREGS is the biggest public employment scheme in terms of coverage, employment generation and expenditure in the world. The scheme has attracted attention of both Indian and foreign researchers since its commencement in February 2006. Within the short span of seven years of NREGS, there are some studies to provide the impact of NREGS on migration. The study by Ahujaet al. (2011) investigated the impact of NREGS in two districts of Haryana ---Karnal and Mewat. The study has found that despite being a source of employment, NREGS has not been able to reduce the migration from the developed region because of higher market wage rates at destinations. The authors concluded that farmers owning large size of landholdings and more number of animals are not much interested in participating in NREGS works.In a similar study, Ravi *et al*. (2012) show that the NREGS has significantly reduced rural to urban migration in India. Decomposing across different sectors of the economy, the study reveals that NREGS reduced rural to urban migration into service sector by 26 percent while migration into manufacturing sector was unaffected. Similarly, the study by Karremmulla *et al*. (2013) reveals that seasonal migration of rural labour has reduced significantly after NREGS. Though we find some studies to provide the impact of NREGS on migration, not a single study has so far been conducted focusing on the impact of NREGS on migration in the context of Cachar district which was covered under the scheme in second phase (2007-08). The present study intends to bridge the research gap arising in impact assessment of NREGS of high quality in Cachar district. The present study is different from the earlier ones as it investigates into the impact of the scheme on migration covering households completing 100 days of employment in a year in the context of Cachar district using quantitative techniques.

Methodology

Data Sources

The present study is based on both primary and secondary data. The impact of NREGS on migration has been analysed based on the data collected from 240 households which completed 100 days of employment in a year during the reference period 2007-08 to 2009-10. The data were collected by the researcher through structured questionnaire during November 2010 to April 2011. The data for seasonal pattern of employment generated and expenditure incurred under NREGS in Cachar district during the period 2007-08 to 2009-10 have been collected from district office of Management Information System (MIS).

Sampling Design

A total of 4881 households (70 in 2007-08, 3991 in 2008-09 and 751 in 2009-10) completed 100 days of employment in a year in Cachar. Sample size in the study is 240 taking 5% of the population.There are 15 development blocks in Cachar. However, the samples numbering 240 have been selectedtaking 5% of the households completing 100 days of employment from 11 blocks (8 from Banskandi, 16 from Binnakandi, 29 from Borjalenga, 16 from Borkhola, 77 from Kalain, 12 from Katigora, 22 from Narsingpur, 4 from Palonghat, 25 from Sonai, 22 from Tapang and 9 from Udharbond).The remaining 4 blocks namely Lakhipur, Rajabazar, Salchapra and Silchar with very low number of households getting 100 days of employment during 2007-08 to 2009-10 in the district have not been selected from the study. The final samples have been selected from villages (with households completing 100 days of employment) of each of the 11 blocks during the reference period.

Methods and Tools

The study makes estimation of the economic impact of the scheme on migration using Logit regression of change in out-migration as dependent variable (response variable) and change in per capita income and percentage of employed household members in NREGS out of total household employed members for households completing 100 days of employment in order to test whether the scheme is helpful in stopping out migration. In this regard, we worked out change in per capita income based on data relating to monthly income before and after NREGS. Change in out-migration has been worked out with value 1 for migration of any adult member and 0 if no member of the household migrated before and after NREGS.

The Logit model specified in this study in order to analyse household's decision about whether or not to migrate after NREGS is expressed as

$$L_i = \ln() = \alpha_i + \beta 1\, X_{1i} + \beta_2 X_{2i} + \varepsilon_i$$

$$i = 1, 2, \ldots\ldots\ldots, 240 \qquad (1)$$

where L is the logit--- the log of the odds ratio() for migration; P_i is the probability for migration that y=1, X_1 is the change in per capita income; X_2 is the percentage of employed family members in NREGS out of total employed in the household (PEMPNREGS), $\beta_1$and β_2 are slope coefficients, α is the intercept term and $\varepsilon_i$is the random error term.

In Logit regression model of migration as specified above, each β value in the model shows partial slope coefficients and measures the change in the value of the explanatory variables i.e. β_1 and β_2 measures the change in the Logit due to change X_1 and X_2 respectively.

RESULTS

Socio-Economic Background of the Respondent Households

Generally, less affluent sections of the rural population are the ones doing manual wage earning who participate in NREGS. Therefore, one of the important aspects in understanding NREGS would be to know the social background; age, education, caste, economic profile etc. of the workers. Table 1 reflects the breakup of different social groups such as SC, ST, OBC, General category beneficiaries. The distribution of respondent households by social group reveals that households getting 100 days of employment are mostly from General category. Such figures create suspicion of dominance by upper caste over the NREGS scheme and vis-a-vis marginalization of lower caste. However, such caste-based reflection may or may not be of much relevance on economic ground. The economic aspect of the above composition of people – completing 100 days of work --- has been targeted inTable 2.

Table 1: Distribution of Households by Social Group

Sl. No.	Social Group	No. of Households
1	SC	45
2	ST	0
3	OBC	74
4	GEN	121
Total		240

Source:Field Survey
Notes: SC-Scheduled Caste; OBC-Other Backward Class
ST-Scheduled Tribe

Table 2: Distribution of Respondent Households by Occupation

Sl. No.	Social Group	No. of Households
1	Agricultural Labour	30 (12.5%)
2	Farmers	57 (23.75%)
3	Business	17 (7.08%)
4	Daily Worker	89 (37.08%)
5	Tea Garden Worker	47 (19.58%)
Total		240 (100%)

Source: Field Survey

Figures in parentheses are percentage of column total

Table 2 reveals that out of 240 households, 37.08% of the workers are daily workers and 23.75% are from the small farmer category and 19.58% are from the tea garden workers and rest of them belong to agricultural labours and business category. The occupation wise analysis of the respondents represents that the NREGS is targeting mostly the vulnerable sections of the population in Cachar. Thus, the study finds no evidence of programme capturing by the economically stronger section under NREGS in Cachar district.

The NREGS is universal poverty alleviation cum employment guarantee programme. The decision to participate or not participate in the scheme depends on the willingness of the households. Despite being universal employment guarantee programme, the NREGS is assumed to cover mostly the illiterate and semi-literate poor people as the employment guarantee programme guarantees unskilled manual work. Table 3 has been designed to make a perusal of the NREGS targeting in practice in terms of level of education of respondents in the area under study.

Table 3: Distribution of Respondent Households by Education

Sl. No.	Educational Qualification	No. of Households
1	Illiteracy	66 (27.5%)
2	5th Grade & Below	60 (25%)
3	5th-8th Grade	45 (18.75%)
4	8th-10th Class	43 (17.92%)
5	H.S. (10th-12th Class)	23 (9.58%)
6	Graduate	3 (1.25%)
Total		240 (100%)

Source: Field Survey

Figures in parentheses are percentage of column total

Table 3 represents that the survey respondents were largely illiterate or semi-literate. Around 1% had studied up to graduation, 10% up to higher secondary, 18% up to secondary, 19% up to middle school, 25% below primary, around 28% had attended non-formal education (illiterate). The higher participation of semi-literate and illiterate people in NREGS in Cachar has implication that the unskilled manual work under NREGS has attracted illiterate low skilled people to the scheme; the educated youths in the rural areas who look for white collar jobs are indifferent to avail the job opportunities of NREGS.

Impact of NREGS on Migration

Table 4 shows the estimates of logistic regression of Equation (1). A perusal of the estimates of logistic regression of migration shows that the estimated logistic regression coefficient on per capita income after NREGS is statistically significant at 5% level and negative. The negative sign of the coefficient on per capita income implies that if per capita income increases by a rupee, the log odds of migration decreases by 0.0017 or by 0.17%. The estimated logistic regression coefficient on percentage of employed members in NREGS is significant at 1% and negative implying that for a unit increase in percentage of employed family members in NREGS decreases by 0.055 or by 5.5%.Based on the regression results,we fitted the following regression equation:

$$L_i = 3.16 - 0.0017\ X_1 - 0.055\ X_2. \quad (2)$$

In the equation, L_i stands for estimated log of the odd ratio for migration, X_1 is the per capita income and X_2 is the percentage of employed members in NREGS.

The interpretation of logistic regression can be more appropriate in terms of odd ratios. Table 5 shows the odd ratios of logistic regression of migration.The odd ratio for per capita income with 95% confidence interval of (0.996, 0.999) is 0.99 and that for percentage of employed family members in NREGS with 95% confidence interval of (0.918, 0.974) is 0.94. Both the odd ratios are less than 1. This implies that the odds of migration decreases for a rupee increases in per capita income keeping percentage of employed family members in NREGS unchanged and the odds of migration decreases for a unit increases in proportion of employed family members in NREGS keeping per capita income unchanged. Such relationship between migration and per capita income and between migration and percentage of employed members in NREGS are correct from theoretical point of view suggesting that the more the per capita income of a household, the lower is the odd in favour of migration or similarly the higher the participants in NREGS in terms of employment from a household, the lower is the odd for migration. This apart, the log likelihood chi^2 statistic of 23.88 with 2 degrees of freedom is significant (p value = 0.0000). This implies that the model is statistically significant-the per capita income and percentage of employed members in NREGS have significant impact on migration.

Table 4: Logit Regression of Migration: Coefficient

Dependent Variable: Migration

Variable	Coefficient	Value of coefficient	p value
Constant (α value)		3.160192	
Per capita Income	β_1	-0.0017208**	0.018
PEMNREGS	β_2	-0.0552498*	0.000
Log likelihood Ratio		23.88*	0.0000
Pseudo R^2		0.1731	
No. of Observations		240	

N.B. * Significant at 1% (p<0.01) ** Significant at 5% (p<0.05)

Table 5: Logit Regression of Migration: Odd Ratios

Dependent Variable: Migration

Variable	Odd Ratios	95% Confidence Interval	
Per Capita Income	0.9982812	0.9968549	0.9997096
PEMNREGS	0.9462488	0.918595	0.974735
Log likelihood Ratio		23.88*	0.0000
Pseudo R^2		0.1731	
No. of Observations		240	

In order to check whether the estimated logistic regression model fits good, we applied the Hosmer-Lemeshow goodness of fit test. The results of the Hosmer-Lemeshow goodness of fit test are shown in Table 6. The χ^2 value of 10.07 on 8 degrees of freedom with p value = 0.26 in the

Hosmer-Lameshow test of goodness of fit reveals that the estimated logistic regression of migration fits good.

Table6: Logit Regression of Migration: Hosmer-Lameshow Goodness of Fit Test

No. of Observations	240
No. of Groups	10
Hosmer-Lameshow χ^2	10.07
Degrees of Freedom	8
P Value	0.2602

Conclusion

The point that emerges from the results of the present study is that the households who were migrating to the nearby village or Silchar town in Cachar district in the absence of NREGS have got jobs in their own village after the introduction of the employment guarantee programme. Thus, income support to the poor households through govt. sponsored wage employment programmes like NREGS in the rural areas is helpful in reducing migration. We conclude that the more employment generated in rural areas, the less is migration of people from rural to urban areas. In Cachar, one major problem is of seasonal unemployment, i.e. a large number of people especially farmers face lack of subsidiary employment during non-agricultural season. Because of scarcity of gainful employment during non-agricultural season, many people migrate seasonally to Silchar town/ nearby village in search of work.The NREGS can be more effective in reducing out migration if the employment is mostly provided during the lean season in Cachar where agriculture is the main occupation of most of the rural population (70%).

References

Ahuja, U. R., Tyagi, D., Chauhan, S., & Chaudhary, K. R. (2011). Impact of MGNREGA on rural employment and migration: A study in agriculturally-backward and agriculturally advanced districts of Haryana. *Agricultural Economics Research Review, 24* (Conference Number), 495-502.

Barbhuiya, M. U. (2013). *An assessment of national rural employment guarantee scheme (NREGS) in Cachardistrict of Assam*.Unpublished Ph.D. Thesis. Assam: Assam University Silchar.

Gujarati, D. N. (2004). *Basics econometrics*. New Delhi: Tata McGraw Hill.

Hosmer, D. W., & Lemeshow, S. (2004). Applied Logistic Regression. Retrieved from booksgoogle.co.in/books

Jacob, N. (2008). The impact of NREGA on rural-urban migration: Field survey of Villupuram District, Tamil Nadu. CCS Working Paper No. *202*. New Delhi: Centre for Civil Society.

Kareemmulla, K., Ramasundaram, P., Kumar, S., & Rama Rao, C. A. (2013). Impact of National Rural Employment Guarantee Scheme in India on Rural Poverty and Food Security. *Current Agriculture Research Journal, 1*(1), 13-28.

Kote, A. K. B., & Honnakeri, P. M. (2012). The impact of MGNREGA scheme on rural-urban migration in rural economy with special reference to Gulbarga district in Karnataka state. *Indian Streams Research Journal, 2*(1), 7-12.

Ministry of Rural Development (2008). *NREGA Operational Guide Line.* New Delhi: Department of Rural Development, Government of India. Retrieved from Planningcommission.nic.in/aboutus/committee/…/rd/wgrep_mgnrega.pdf