EMPLOYMENT GENERATION AND SOCIAL CAPITAL FORMATION: A STUDY
OF THE IMPACT OF MGNREGA IN ASSAM

Trailokya Deka and Bhagirathi Panda

RESEARCH ARTICLE

EMPLOYMENT GENERATION AND SOCIAL CAPITAL FORMATION: A STUDY OF THE IMPACT OF MGNREGA IN ASSAM

*Trailokya Deka and Bhagirathi Panda

Department of Economics, North Eastern Hill University, Shillong, Meghalaya

ABSTRACT

The National Rural Employment Guarantee Scheme (NREGS) which was renamed as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in 2009 is a flagship employment guarantee programme of the Government of India (GoI). Implemented by the GoI in the year 2005-06, this programme is considered as a game changer in the realm of Indian development practice because of it's rights based approach and comprehensive geographical and social coverage. It has been a year short to a decade that this programme is in operation and has undergone a number of administrative and other changes including new additions with respect to it's cardinal features of administration, operation, scope of work and class of beneficiaries. Assam has been implementing the scheme from the 1st phase of it's implementation. Undertaking the matching methodology- Propensity Score Matching (PSM) and Difference in Difference (D-in-D) methods, this paper analyses the impact of MGNREGA on two of the very important dimensions of development i.e. employment and social capital formation. It's findings clearly support the positive impact of MGNREGA on these two variables and find them to be critical too. It also in a simple way validates MGNREGA's implicit claim to be regarded as novel development practice based on the contemporary concept of development (i.e. sustainable development) and approach (i.e. capability approach) to development.

INTRODUCTION

The National Rural Employment Guarantee Scheme (NREGS) which was renamed as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in 2009 is a flagship employment guarantee programme of the Government of India (GoI). Implemented by the GoI in the year 2005-06, this programme is considered as a game changer in the realm of Indian development practice because of it's rights based approach and comprehensive geographical and social coverage. Originally conceived as an employment guarantee programme for the poor to be implemented in the poorest 200 districts of the country, it was extended to cover all the rural districts of the country in three phases. It has been a year short to a decade that this programme is in operation and has undergone a number of administrative and other changes including new additions with respect to it's cardinal features of administration, operation, scope of work and class of beneficiaries. However, an important evolution that has more implicitly and less explicitly happened during this period is with respect to the dimensions of impact and scope of impact assessment of the programme. Some economists and development specialists have tried to explain and evaluate the programme in the capability expansion framework of Prof. Sen.

The Genesis, Structure And Implementation Of The Act In Brief

India had a history of public employment programmes starting with the Rural Works Programme (RWP) in 1960s to continuing with the Food for Works (FFW) programme in 1970s, National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme in 1980s and JRY an EAS in 1990s. However, many of these programmes were short term in nature, had restricted scope and space, were supply driven through the bureaucracy and had no meaningful transparency and participation provisions. Hence, they could not make much impact on the livelihood security of the poor. Further, post liberalization, during the period 1993-94 to 2004-05, the Indian economy grew at a rate of above 7 percent, whereas the rate of employment growth was only at 1.84 percent. This rate of growth of employment was less than the 2.04 % rate of growth of employment experienced during the pre liberalization period of 1983 to 1992-93. This situation of jobless growth was believed to have a very depressing impact on the marginalized and the poor. A section of prominent academicians, civil society members came down heavily on the then UPA Government and advocated for a rights based comprehensive employment guarantee programme

Corresponding author: **Trailokya Deka**
Dept. of Economics, North Eastern Hill University, Shillong, Meghalaya

for the poor. This led to the very birth of National Rural Employment Guarantee Act (NREGA), which was subsequently in 2009 renamed as MGNREGA.

MGNREGA is 'an Act to provide for the enhancement of livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work and for matters connected therewith or incidental thereto' (Gazette of India, September 07, 2005). It has been hailed by A. K. Sen as, 'a unique event in the pro-poor strategies in the world, as no country in the world has ever given a right (a constitutionally obligatory mandate) of this kind to such a large section of the population' (Hirway 2006).

The Act has been implemented in phased manner. Phase-I was introduced on 2nd Feb 2006 for the most backward 200 districts of the country. An additional 130 districts were included in phase-II on 1st April, 2007 and the remaining 285 rural districts of the country were brought under MGNREGA in phase-III on 28th Sept, 2007 (with the exception to districts that have 100% urban population). Altogether at present it covers 615 rural districts out of 640 (2011) districts of India. Village panchayats are the nodal implementing bodies for MGNREGA. The village panchayat is responsible for planning of works, registering households, issuing job cards and monitoring implementation of the scheme at the village level. The intermediary panchayat is responsible for planning at the block level, and for monitoring and supervision. District panchayat is responsible for finalizing the district plans for MGNREGA, which is a comprehensive plan of action for the scheme for the district.

A Brief Review of Literature

During the past four to five years, good number of evaluative and impact assessment studies on MGNREGA have been undertaken by academicians, development specialists, NGOs, and Government organizations and research institutions. Experiences vary from state to state with considerable success made in states like Andhra Pradesh and Rajasthan to meagre success in states like Jharkhand and Uttar Pradesh. The positive impact of MGNREGA on income and employment has been explained through studies undertaken by Hirway *et al* (2009); Drèze and Oldiges (2009); Khera and Nayak (2009); Jha *et al* (2011); Babu and Rao (2010); K. Banerjee and P. Saha (2010); Dutta *et al* (2012); Ravi and Engler (2013). In the context of North East India, similar positive impact on income and employment has also been found out by Panda *et al* (2009); Panda, B and S Umdor (2011) and Bordoloi, J. (2011). Similarly, the impact of MGNREGA on social capital formation through networking, participation and women empowerment have been studied by Ghosh (2009); Panda *et al* (2009); Dheeraja and Rao (2010); Panda and Umdor (2011); Bordoloi, J. (2011); Shah (2012); MoRD (2012) etc. Again, the positive impact of MGNREGA on the reduction of distress migration has been explained through the studies undertaken by Das, Upasak (2012); Dev (2011); MoRD report (2008); Hirway (2006); Jacob (2008); Report (GoI, 2014) to the people on NREGA, 2005; the midterm appraisal of 11th five year plan

(2010) also explained positive impact of MGNREGA in financial inclusion.

Panda (2014) have made an attempt to put the practice of MGNREGA in the theoretical framework of sustainable development and capability approach of Amartya Sen. Similarly studies undertaken by Tiwari *et al* (2011); Akhtar, Jawed S.M. (2012); Johnson, D. (2009); Centre for Science and Environment (2008); Watershed Organization Trust (2010); Verma (2011) and Indian Institute of Science (2013) have highlighted the encouraging environmental impacts of MGNREGS works on the natural resource base of rural economy.

Significance and Objectives of the present study

Most of the impact assessment studies on MGNREGA have been conducted on states like Andhra Pradesh, Rajasthan, Maharashtra, West Bengal, Bihar, UP and Odisha. When it comes to the North East, their numbers are countable. Even amongst the countable ones, majority happen to be descriptive studies and quick appraisals. Studies with methodological rigor are very limited. Further, the programme is comprehensive both in terms of it's coverage and explicit-implicit objectives. In view of all these, it is time proper to go for an independent evaluation and finding of the effects of implementation in different parts of the North East. Assam happens to be the largest state in the North East and the programme has created a lot of enthusiasm as well as critical media space. Hence, we feel the necessity of undertaking an immediate rigorous impact assessment study of the scheme in the state Assam. The specific objectives of this research study are

1. To assess the impact of MGNREGA on employment generation
2. To assess the impact of MGNREGA on social capital formation (in terms of social mobilization)

METHODOLOGY AND DATA

Establishment of a sound, scientific base of matching among the units (sample or census) under consideration and comparison between the groups is most important as it determines the acceptability of inferences. In this context, a recent improvement in impact analysis techniques in the field of development studies as seen in Chemin 2006; Islam 2009; Love 2003 and Owuor 2009 is the Propensity Score Matching (PSM) and Difference in Difference (D-in-D) techniques. Matching of the two groups guarantees a large matched sample. 'Propensity score' as a concept first appeared in a publication by Rosenbaum and Rubin (1983) which described the estimation of causal effects from observational data. Since then it is widely used in medical science and psychology. Of late it is being used in impact assessment studies of development practices including programmes of microcredit and microfinance.

PSM and D-in-D techniques are applied here for gauging the potency of MGNREGS intervention on employment and social capital formation in the treated/experimental group (TG/EG) in comparison to the non-treated or control group (CG). The

propensity score (PS) is based on logistic regression with a dichotomous dependent variable assuming the value of '1' if the individual is in the treated group and '0' if the individual is in the non-treated group. Logistic regression is used to determine the degree to which the groups are balanced on covariates. Individuals from the treated and non-treated groups having the same PS form the matched sample. They share identical features on the covariates. The outcomes of the matched sample are then compared through D-in-D technique for inference on the impact of MGNREGS.

We have collected relevant data both from working and non working sample units. Both working and non working sample units belong to same or almost similar economic strata. The clients considered for PSM are workers of MGNREGS 'who have registered and working in the current year and worked in the previous year too' and non workers 'who have registered but not worked'. Combining different micro calculations based on different recall and other methods/procedures we have collected relevant macro data. Data are collected randomly in an unbiased way of selection. Pre and Post-intervention data are also compiled here both for working and non working matching sample units. Pre-intervention data are nothing but the annual data for the immediate pre joining period of working and Post-intervention data are the annual current post joining period data for the workers. Again, pre and post intervention data are taken for the same annual periods for the non workers as it is for the workers.

We have taken three sample districts for the collection of primary data from the state of Assam. Three sample districts used for primary data are Lakhimpur (from upper Assam), Morigaon (from middle Assam) and Nalbari (from lower Assam). Lakhimpur has covered by the 1st and Morigaon and Nalbari have been covered by the 2nd phase of MGNREGA implementation. From the selected three sample districts of Assam, purposively we have chosen six blocks (two from each district). From each block one GP has been selected randomly. Altogether thus we have taken six GPs for the whole state for primary data collection. From each GP one village is selected purposively. Finally, thirty five working (EG) and thirty five non-working (CG) i.e. total seventy households from each village have been selected by adopting the method of simple random sampling and looking into the similarity in economic conditions. This way, altogether we have 70×06=420 households (210 working-EG and 210 non-working-CG Hhs) for primary data collection from the entire state of Assam. Secondary data have been collected from publications like reports, abstracts, notifications, documents of government and non-government organizations. Information published by the ministry of rural development at central and state levels is also used for the study. Government and non government organizations', institutions' online data sources are also used here for the study.

Analysis and Findings

In this section, we make first an analysis of the progress of MGNREGA in Assam with respect to some important dimensions based on available secondary data and in the subsequent section, an economic analysis of the impact of MGNREGA on employment, social capital formation is undertaken based on primary surveys.

Progress of MGNREGA: analysis based on Secondary data

In the state Assam through MGNREGA large number of works have been undertaken to push and boost the rural employment opportunities, generate income and eradicate poverty. Following table clearly depict very brief and quick progress report of MGNREGS in the state.

Table 1 Quick progress report of MGNREGS in the state of Assam

Total No. of Districts covered		27	
Total No. of Blocks covered		238	
Total No. of GPs covered		2640	
Worker			
Total No. of Workers (in Lakhs)		64.33	
1. SC worker (% of total Workers)		5.91	
2. ST worker (% of total Workers)		17.62	
Total No. of Active Workers (in Lakhs)		25.7	
Progress	**FY 2014-2015**	**FY 2013-2014**	**FY 2012-2013**
Approved Labour Budget (in Rs. Lakhs)	373.29	353.16	446.2
Total Labour Budget in %	47.09	84.51	70.38
Persondays Generated so far (in Lakhs)	175.77	298.47	314.04
Works			
Total No. of Works Takenup (New + Spill over) (in Lakhs)	0.67	0.76	0.75
Number of ongoing Works (in Lakhs)	0.54	0.5	0.48
Number of Completed Works	13219	25875	27208
% of Expenditure on Agriculture & Agriculture -Allied Works	41.34	37.03	31.29
Financial Progress			
Average Wage rate per day per person(Rs.)	166.98	151.87	135.92
Average Cost Per Day Per Person (In Rs.)	242.41	230.33	214.9

The act is being implemented in all the 27 districts, 238 development blocks and in 2640 GPs of the state. Through the act, 13219 no. of works in the FY 2014-15 have already been completed.

MGNREGA and Employment Scenario

MGNREGA has given rural employment a boost and as high as 15505 no. of Hhs have completed 100 days of wage employment in the FY 2013-14. As on March 2015 in the current FY, MGNREGA has generated 175.77 lakhs of person days in the state of Assam. In the FY 2013-14 the act had generated 298.47 lakhs of person days in the state. Total employment scenario in the last three FYs is explained in the following table

Table 2 Current employment scenario of MGNREGS in the state of Assam

Employment scenario	**FY 2014-2015**	**FY 2013-2014**	**FY 2012-2013**
Persondays Generated so far (in Lakhs)	175.77	298.47	314.04
Average days of employment provided per Household	20.79	23.65	25.43
No. of Hhs completed 100 Days of Wage Employment	7364	15505	9807
Total Households Worked (in Lakhs)	8.45	12.62	12.35
Total Individuals Worked (in Lakhs)	10.62	15.25	14.73
% of Men Worked	68.48	71.01	71.37
% of Women Worked	31.52	28.99	28.63
% of Disabled Persons Worked	0.12	0.16	0.15

Source: MGNREGA site, MoRD, GoI, March 2015

Household demanded and provided employment and completed 100 days of wage employment in the recent FYs both in the state and the country is given in the following table. Hhs provided employment in Assam is 830776 against the national figure 38683096 during 2014-15 (as on Jan, 2015). Better employment record is found during 2013-14 both for Assam and the country as a whole. Hhs completed 100 days of wage employment is very minimum during the two recent FYs.

MGNREGA And Asset Creation

From the day of initiation of MGNREGA large number ofworks has already been finished in the state Assam. A very brief report of works completed and taken up in the state during the recent FYs are given bellow

Works completed was highest in the FY 2012-13. Number of

Table-3 Comparative employment scenario in Assam and the country for the recent FYs

Parameter	2013-2014		2014-2015	
	Assam	India	Assam	India
Households demanded employment	1,321,106	51,799,467	984,939	45,208,453
Households provided employment	1,261,778	47,930,025	830,776	38,683,096
Employment provided to HHs (in %) out of total demand	95.51	92.53	84.35	85.57
Households completed 100 days	15,505	4,659,213	6,624	1,489,763
Percentage of HHs completed 100 days out of total Hhs provided employment	1.23	9.72	0.80	3.85

Source MGNREGA public data portal, Jan 2015

Table-4 Cumulative number of Hhs demanded employment (in nos.)

	2006-07	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12 (As per MIS) provisional**
Total in India	21321481 81	34287442	45516341	52920154	55756087	50911313
ASSAM	798179	1448243	2155349	2139111	1807788	1354868
Assam in % of India	0.037435	4.223829	4.73533	4.042148	3.242315	2.661232

Source Compiled from MGNREGA public data portal

Table 5 No. of Households completed 100 days of Employment in Assam

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 (As per MIS)provisional	2012-13 (As per MIS) till 12/02/2013
ASSAM	185160	239473	176778	130457	45490	15701	2195

Source Compiled from MGNREGA public data portal

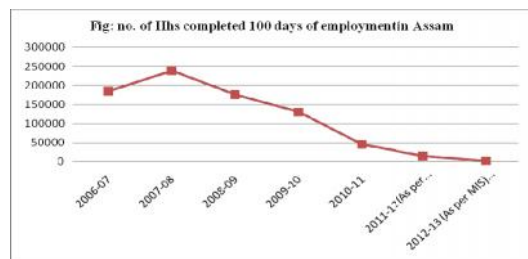**Table 6** Asset creation in the state Assam

Item	FY 2014-2015	FY 2013-2014	FY 2012-2013
Total No. of Works Takenup (New+Spill Over)(in Lakhs)	0.67	0.76	0.75
Number of Ongoing Works (in Lakhs)	0.54	0.5	0.48
Number of Completed Works	13219	25875	27208

Source Compiled from MGNREGA public data portal

In comparison to Assam current national figure is showing better result with regard to the number of Hhs completed 100 days of wage employment. Again, the cumulative no. of Hhs demanded employment from the initiation of the act till today both in Assam and the country as a whole is given in the above table. As on 2011-12, more than 13 lakhs unskilled rural people have demanded employment in the state Assam under the act. It shows peoples response in asking for employment.

Number of Hhs completed 100 days of wage employment in the state Assam from the initiation of the act are also given bellow. As there is existence of continuous supply gap hence no. of Hhs completed 100 days of wage employment in the state Assam is definitely less.

The above situation of Hhs that completed 100 days of wage employment is explained with the help of the graph given bellow-

Figure 1 no. of HHS completed 100 days of employment in Assam

Out of all the sessions the maximum number of Hhs completed 100 days of wage employment is found during 2007-08. After 2007-08 the graph is going downward.

ongoing works in FY 2014-15 is 0.54 lakhs out of 0.67 lakhs of taken up works. Number of works taken up and completed in the state under different categories of work during FY2006-07 to 2011-12 is explained in the above table. More than 50% works completed during the stated period were water related ones.

Table7 Category wise number of works completed in the state from FY2006-07 to 2011-12

Sl. No	Type of work	No. of works completed (lakh)	Works completed (% with total works taken up)
1	Water Conservation and Harvesting (farm ponds, percolation tanks, etc.)	19.5	25
2	Flood Control and Protection (check dams, culverts, etc.)	3.9	4
3	Drought Proofing (afforestation/tree plantation, Agro-forestry, etc.)	5.2	9
4	Irrigation Canals (macro and micro irrigation works, etc.)	5.7	7
5	Renovation of Traditional Water Bodies (desilting of tanks, etc.)	6.6	7
	Total Water related Works (1to 5)	40.9	51
6	Works on lands of SC/ST/ BPL/ SMF and IAY and Land Reform Beneficiaries	13.0	14
7	Land Development (contour bunds, field bunds etc.)	13.9	13
8	Rural Connectivity (village roads)	16.0	19
9	Others (Bharat Nirman Kendras)	2.8	3
	Total Works	86.6	100

Source MGNREGA site. Note: Data for 2011-12 are Provisional

Number of work started, completed and gap in the execution as on 2010-11are explained in the following table. On an average the state work execution gap is 1446.

Table 8 No. of work started, completed and execution gap during 2010-2011 in Assam

	No. of Works Started	No. of Works Completed	Gap (no.) in work execution
Assam Total	44842	5798	39044
State average	1661	215	1446

Source Compiled from MGNREGA public data portal

The existing average state work execution gap clearly indicates the lacking in MGNREGA implementation machinery. Even if there is heavy demand for work and heavy money allocation, only due to unsystematic planning in implementation, average work execution gap is more in the state.

An analysis of impact of MGNREGA based on Primary Data

PSM adequately ensures a match for the two sample sets (experimental and control) and D-in-D scores are used to analyze the MGNREGS impact. PSM gets initiated from the identification of covariates. Covariates provide the basis for deriving a matched sample. Covariates used for this study are age, educational qualification, marital status and family type. Covariates enable the estimation of Logit (z) values through application of 'qualitative response regression model', in which the regressand is qualitative in nature.

Table 9 Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	420	100.0
	Missing Cases	0	.0
	Total	420	100.0
Unselected Cases		0	.0
Total		420	100.0

If weight is in effect, see classification table for the total number of cases.

Table 10 Dependent Variable Encoding

Original Value	Internal Value
CG	0
EG	1

Here, the most popular Logit model is adopted, where Y (regressand) = 1/0, '1' signifies the samples from the EG and '0' samples from the CG. Here, X (regressor) = covariates, where X_1 is age, X_2 is educational qualification, X_3 is marital status and X_4 is family type. These covariates form the profile of all the clients. It provides a base for a valid and reliable estimation of 'Z' using SPSS. Y= f(x) provides running a logistic regression for n = 420 (1 = 210, 0 = 210) samples. Of the covariates, coefficients of age, educational qualification, marital status and family type are given in the following table and significance levels are depicted using the Wald test and form an integral part of the model.

Table 11 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Age	.160	.084	3.624	1	.057	1.173
	Edu	-.058	.091	.408	1	.523	.943
	Mrtlstatus	-.128	.110	1.361	1	.243	.880
	Fmlytype	-.491	.210	5.461	1	.019	.612
	Constant	.633	.487	1.689	1	.194	1.883

Variable(s) entered on step 1: Age, Edu, Mrtlstatus, Fmlytype.

Subsequently, the values of 'Z' is derived for the '420' samples-

$$Z = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4$$

The estimated regression line is-

$$Z = 0.633 + 0.160 X_1 - 0.058 X_2 - 0.128 X_3 - 0.491 X_4$$

Through the process, 420 'Z' values are estimated for all the samples of the EG and CG. Statistically, the 'Z' values vary from (–) to (+) . This signifies that if 'Z' is positive, with the increase in the value of the regressors, the odds that the regress and equals '1' increase and vice versa. The range of 'Z' derived from the covariates under consideration is (–) 0.933 to (+) 1.222 in the EG and (–) 0.011 to (+) 1.327 in CG. Subsequently, propensity scores are derived through the 'logistic function' of 'Z' by the relation inverse Logit where 'e' is the base of the natural logarithm with the constant value 2.718. The score range is 0.2823 to 0.7723 for the EG and 0.3064 to 0.7748 in case of CG. Thus, propensity scores are extracted for the 420 samples from the EG and CG.

Samples from the EG and CG having the same PS are balanced on the covariates. Matching of the two groups on such a basis guarantees a large matched sample. On matching, 159 matched samples are found here spread over 33 different scores. Notably, 06 scores in the EG and 06 scores in the CG were outliners, that is, they fall outside the matching range. Total result found from PSM is explained with the help of the following table.

It is seen from the above table that, because of MGNREGA the days of employment has substantially increased for the EG vis-à-vis the CG. Again, increasing the days of employment, MGNREGS has improved the social structure and bindings of rural villages. Overall livelihood of rural poor has undergone considerable improvement for the EG vis-à-vis the CG in the state of Assam.

More on Employment Impact

We have also collected series of information regarding the days of employment creation before and after the implementation of MGNREGS. Besides PSM we have also used the 'paired-t test' to observe the situation and see various employment impacts of the Act. Following table shows the paired sample statistics wherein total beneficiaries i.e. N=210. Post MGNREGS mean annual employment days are more than the pre MGNREGS mean annual employment days for beneficiaries. Standard deviation and standard error for mean are also given in the following table both for pre and post MGNREGS employment days for the beneficiaries.

Paired samples correlation for both pre and post MGNREGS employment are given in the above table. Correlation is +0.688 depicting positive high correlation between pre and post MGNREGS days of employment.

Various results of the paired sample test are given in the following table. Since P 0.05, at 5% level of significance we may reject the null hypothesis. Hence there are significant difference in the pre and post annual days of employment for the programme beneficiaries. The mean difference is positive. Hence the MGNREGS impact on employment is positive. The t value is 23.781 at the respective df.

Table 12 Results of PSM

Variable	Result	EG (out of 159 samples)		CG (out of 159 samples)		Remark	Ultimate Remark
		No.	%	No.	%		
Days of employment	Increased	106	67	73	46	EG > CG	Increased for EG
	Not increased	26	16	61	38	EG < CG	
	Same as before	26	16	25	16	EG = CG	
	Not comparable	01	00	00	00	EG = CG	
Social structure and bindings	Improved	112	70	84	53	EG > CG	Improved for EG
	Not improved	47	30	75	47	EG < CG	
Livelihood of poor	Improved	126	79	83	55	EG > CG	Improved for EG
	Not improved	14	9	46	28	EG < CG	
	Same	06	4	01	00	EG > CG	
	Not comparable	13	8	29	17	EG < CG	

Table 13a Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Post MGNREGS annual employment for beneficiaries in Assam	76.5810	210	10.60178	.73159
Pre MGNREGS annual employment for beneficiaries in Assam	62.3952	210	11.22842	.77483

Table 13 b Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Post MGNREGS annual employment for beneficiaries in Assam & Pre MGNREGS annual employment for beneficiaries in Assam	210	.688	.000

Table 13c Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Post MGNREGS annual employment for beneficiaries in Assam - Pre MGNREGS annual employment for beneficiaries in Assam	1.41857 E1	8.64443	.59652	13.00974	15.36169	23.781	209	.000

Table-14 Impacts of MGNREGS in social capital formation (comments are in favour of maximum in number and % are with village total sample respondents)

District	Panchayat	Village	Social structure and bindings	Community participation	Social sustainability
Nalbari	53 no. Sanekuchi	Barbukiya	Improved (55%)	Increased (78%)	Exist (73%)
	62 No. Loharkatha Adabari	Sungarbori	Improved (63%)	Increased (82%)	Exist (76%)
Morigaon	Baha Barjari	Khanajan	Improved (67%)	Increased (52%)	Exist (69%)
	Baghara	Baghara	Improved (60%)	Increased (63%)	Exist (72%)
Lakhimpur	Ghilamara	Jalbhari	Improved (67%)	Increased (77 %)	Exist (78%)
	No. 2 Dimaruguri	No. 2 Dimaruguri	Improved (70%)	Increased (74 %)	Exist (75%)
	Overall in the State		Improved	Increased	Exist

Table-15 District and village wise creation of social networking (in number) due to MGNREGS

Items	Nalbari		Morigaon		Lakhimpur		Total
	Barbukiya	Sungarbori	Khanajan	Baghara	Jalbhari	No.2 Dimaruguri	
NGO formation	02	01	01	01	02	03	10
Formation of MFS	04	02	05	03	03	02	19
Formation of SHGs	02	01	01	01	02	01	08
Helped in educational achievement (studied due to MGNREGS income)	06	03	02	03	05	03	22
Helped in the establishment of nonfarm activities (like shops, rickshaw, thela etc)	06	05	04	03	07	08	33

Remained unemployed. Wage and employment scenarios are better than before. Earlier workers were waiting for work and employment but now mahajanas wait for the workers. Mahajanas and landlords now request the workers for private work at the same MGNREGS wage rate. Workers are even charging more wage than MGNREGS wage for private works or employment.

Impact on Social Capital Formation

MGNREGS has created big future capital and social

Surprisingly, around 80% sample workers said about the increasing trend of employment during the days of MGNREGS. Out of all the three studied sample districts of Assam, employment scenario is best in Morigaon. Only about 3% workers mentioned the decreasing trend of employment days. Employment in agriculture being over saturated and non-farm employment being largely skill and knowledge based, the MGNREGS could create the space for employment for the illiterate and unskilled workforce that mainly constitute the socially backward classes. Proximity of workplace from home appears to be very convenient for women and aged old people to work under the scheme, as they have generally very limited scope of mobility away from their homes. Thus the act has been creating employment for those who otherwise would have

networking and social net working in Assamese society by empowering them for decision making, providing income and employment and creating social assets. With respect to social structure and bindings (include people to people contact/ networking, Problem sharing, social harmony and equality) and community participation (include social decision making in gram sabhas, social/public work and voice against corruption) the Act is working very positively, as it is found from our study.

On average, around 70% respondents of all the villages mentioned about the existence of social sustainability in the workings of MGNREGS. Some resultant impacts of MGNREGS in creating social networking are explained above-

About 90% of surveyed women workers are of the opinion that they have been able to gather information on health related problems through interaction with their co-workers while working in MGNREGS. Social structure and bindings are improved, community participation is increased everywhere as it was expected during the initiation of the Act. MGNREGS, thus, is working for the existence of social sustainability.

The shuttle change MGNREGA has brought in the social, economic and environmental space of rural society is commendable. The scheme could also largely reduce the social stigma of confining them to household chores which are unpaid services. Their involvement in MGNREGS works is expected to improve their socioeconomic status in the family as well as in the society leading eventually for empowerment. Road connectivity works undertaken under the scheme of MGNREGS in Assam have really increased social mobility. Protests in front of authorities, complains lodged by the workers, gherao of block/GP functionaries by workers etc. are nothing but the manifestations of social change for better transparency, empowerment and collective action. MGNREGA framework has given the workers of Assam the required platform. Social participation through decision making and empowerment, future development through income for livelihood and education for children are nothing but the social capital formation of MGNREGS in the state Assam. Therefore, we can universally accept the hypothesis 'Positive impact of MGNREGS on social capital formation' in the state Assam. The hypothesis is true.

CONCLUSION

The state Assam has seen over the last nine years a considerable spread of the flagship programme of MGNREGA. An impact assessment of MGNREGA with respect to two of the most important dimensions- employment and social capital formation shows that the programme has considerable positive impact on both these dimensions. This clearly supports the realization of the main objective of the programme i.e. improvement in the livelihood security of the marginalized and the poor. In a broad sense, this also validates the effort of some economists and development specialists to analyse MGNREGA in the theoretical framework of sustainable development and capability expansion of individuals and communities.

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