

Impact assessment and performance of Mahatma Gandhi national employment guarantee act (MGNREGA) in Jammu and Kashmir

M. H. WANI¹ AND ARSHAD BHAT^{2*}

Rajiv Gandhi Chair in Contemporary Studies on Livelihood and Food Security,
Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Srinagar

Received: 27 April, 2020

Accepted: 20 June, 2020

ABSTRACT

Mahatma Gandhi National Employment Guarantee Act was launched on 2nd February 2006 as a historic initiative towards pro-poor growth in the country. The Act guarantees 100 days of assured man-days employment in a financial year to any rural household whose adult members are willing to do unskilled manual work. But due to administrative flaws, the performance of MGNREGA at national as well as at state level is very poor. The present study on evaluation of the MGNREGA scheme is intended to assess the performance & impact of this scheme on the overall quality of life of people by assessing different parameters associated with the scheme. The study was carried out in two community development blocks of district Pulwama, viz. block Shadimarg and block Newa. The tools employed on the data for obtaining logical results were descriptive statistics like averages, percentages, t-test, logit regression analysis and propensity score matching. The results of the study reveal less participation of weaker sections in sampled district. The percentage share of SCs, STs and Women stands 0.02 per cent, 4.34 per cent & 29.56 per cent respectively. The study further reveals that block wise financial and physical performance under MGNREGA depicts that the expenditure percentage has improved with the increase in wage rates. Due to better irrigation availability, 77.8 per cent of respondents in block Shadimarg and 80 per cent in block Newa recorded that MGNREGA has positive impact on the increase in agriculture production and productivity. To conclude, the scheme demands a re-orientation so that it can generate productive assets in the economy. It needs a strong planning and some additional features that can enable it to perform well as a scheme to contribute towards the shift of the economy towards full employment path. .

Key words: Poverty reduction, standard of living, improved irrigation, developed roads, employment man-days.

The state of Jammu and Kashmir like centre also adopted planning as an instrument for economic development and for this mission, launched various developmental programmes to alleviate poverty in the state. The Integral Rural

¹Professor, ²Post-Doctoral Research Associate, Rajiv Gandhi Chair in Contemporary Studies on Livelihood and Food Security, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Shalimar, Srinagar-190025.

*Email: bhatarshad09@gmail.com

Development Programme (1981-82) was launched in 75 community development blocks and latter, the programme was extended to all the 119 blocks to raise the income generating potential of various activities (Dandakar and Rath, 1970). Under this programme the small and marginal farmers, agriculture labourers, village artisans, schedule castes and schedule tribes were covered. The programme was equally

funded by centre and state governments and under this programme in Jammu and Kashmir, Rs. 4412.05 lakhs (73.55%) were utilized against an availability of Rs. 5998 lakhs from 1981-82 to 1988-89 (Economic Survey, 2018). About 3,07,541 families (6.37%) have been raised above the poverty line from 1981-82 to 1986-89, out of 4,70,477, who were officially declared as below poverty line families (George, 1984).

As per the official records, the allocation and expenditure of various IRDP schemes for the state as a whole has increased from 7.36 per cent to 11.91 per cent and from 5.04 per cent to 14.30 per cent (percentage of total from 1981-82 to 1988-89 respectively) (Bhat, 1991).

MGNREGA was launched on 2nd February 2006 as a momentous initiative towards pro-poor growth. This Act, guarantees 100 days of employment in a financial year to any rural household whose adult members are willing to do unskilled manual work (Chakravarthy & Sukhamoy, 1977). By this work other number of rural issues will be addressed by generating productive assets and skills thereby boosting the rural economy, protecting the environment, empowering rural women, reducing rural urban migration and fostering social equity, among others. The Act offers an opportunity to strengthen our democratic processes by entrusting principle role to Panchayats at all levels in its implementation and promises transparency through involvement of community at planning and monitoring stages (CRRID, 2009).

The core objective of this programme is to make multi-pronged attack on the problems of rural development with particular emphasis on the removal of poverty (Rajasekhar *et al.*, 2007) and unemployment through the adoption of "family" as a unit of developmental process (Tripathi *et al.*, 1983). In India, there are profound regional variations in resource endowment, levels of development, incidence of poverty (Agro Economic Research centre, 2011). Every

segments of the country possess certain location specific peculiar problems. Hence micro level studies not only provide greater insights on various aspects relating to the impact of the programme but also point out operational changes that are necessary in block level planning on the basis of results of such studies (Bandyopadhyay, 1985).

MATERIALS AND METHODS

For conducting the present study a multi-stage random sampling technique was utilized. There are 334 villages, 8 Tehsils (Pulwama, Awantipora, Tral, Pampore, Kakapora, Aripal, Rajpora & Litter), 11 community development blocks (Tral, Aripal, Dadsara, Awantipora, Pampore, Kakapora, Pulwama, Shadimarg, Achgoze, Lassipora and Newa) and 5 municipal counsels (Tral, Pampore, Khrew, Awantipora and Pulwama). All the community development blocks in the district were taken into consideration and were divided into high, medium and low performance blocks. From the 11 development blocks, Shadimarg and Newa community development blocks were randomly selected. The data was collected from 935 respondents of different villages working under MGNREGA scheme. The respondents were classified into two group's beneficiaries or non-beneficiaries. Among the respondents 303 were beneficiaries and 632 were non-beneficiaries. The data from the respondents was collected on following parameters;

- literacy level
- electrification
- road connectivity
- safe drinking water facility
- availability of health facility and
- percentage of population living below poverty line

The present study was undertaken with the following objective;

To appraise the impact of Mahatma Gandhi National Rural Employment Guarantee Act on income and employment of the beneficiaries.

Collection of Data

For the analytical purposes, the data was collected from both primary and secondary sources. The primary data collected from sampled respondents was collected with the help of a pre-tested schedule. The secondary data for the study was collected from Directorate of Rural Development, Kashmir, Rural Development Department of Jammu and Kashmir, Directorate of Economics and Statistics, Srinagar and other published and unpublished sources. In addition, the officials/Panchayat representatives and bankers were also interviewed for collecting the relevant and necessary data pertaining to MGNREGA.

Tools and Techniques

The study employed descriptive statistics, t-test, propensity score matching and logit regression for the analysis of data so that logical and reasonable results could be achieved.

The t-test utilised for the analysis of the data is of the form;

$$t = \frac{\bar{X} - \mu}{\frac{s}{\sqrt{n}}}$$

where $\bar{X}$ is the sample mean, s is the sample variance, n is the sample size, μ is the specified population mean and t is a Student t quantile with $n-1$ degrees of freedom.

Propensity Score for i^{th} respondent may be symbolically represented as:

$$e_i = \Pr(Z_i = 1 | X_i)$$

Where Z_i is indicator variable for application or non-application of treatment (0 or 1 respectively). Propensity Scores are generally estimated using a logistic regression model, which in this study, is Probit Regression (Rosenbaum *et al.*, 1983).

The Average Impact of the Treatment on Treated (ATT) can be estimated, which is defined as the average effect of treatment on those respondents who ultimately received the treatment. ATT could be represented as:

$$ATT = E(Y_1 - Y_0 | Z=1)$$

In this study, ATT was estimated using four different algorithms, namely Nearest Neighbor Matching (NNM), Kernel Matching Stratified Matching and Radius Matching.

RESULTS AND DISCUSSION

Table 1 shows the overall performance of MGNREGA scheme at National and J&K state during the reference period i.e. 2017-18. The overall scenario of the scheme is overwhelming and is showing progress with certain ill-elements as well. For the smooth and efficient results, there needs to be certain measures and steps that need correction and proper management and fair justice can do wonders through this scheme.

Table1 Performance of MGNREGA at national level and state level

S. No.	Activity	Physical progress	
		National level	J&K
1	Approved labour budget	2582134000	36000000
2	Person days generated so far	1033291000	3539289
3	Percentage of total labour budget	40.02	9.83
4	SC person days percentage as of total person days	19.42	4.56
5	ST person days percentage as of total person days	17.7	17.6
6	Women person days out of total (%)	57.21	28.82
7	Average days of employment provided per household	30.89	30.09
8	Average wage rate per day per person (Rs.)	176.07	188.63
9	Total no. of households completed 100 days of wage employment	248516	340
10	Total households worked	33455000	117606
11	Total individuals worked	46633000	164713

Source: Ministry of Rural Development, Government of India

The availability and expenditure performance under MGNREGA is given in Table 2 which shows that total central release for year 2017-18 was Rs. 31831860000/- and for J&K the release was Rs. 6742176000/- for the same period. Percentage

utilization for overall India was 68.89 and for J&K it was 43.29. The liability of wages for J&K state was much higher than the National average i.e. Rs. 478263311/-.

Table 2 Financial performance of MGNREGA in Jammu and Kashmir (Rs in Lakhs) (2017-18)

S. No.	Activity	Financial progress	
		National level	J&K
1	Total central release	318318600000	6742176000
2	Total availability	328670600000	8902334000
3	Total expenditure	226420123000	3853605290
4	Percentage utilisation	68.89	43.29
5	Wages	193725194000	3184961870
6	Material and skilled wages	26678409000	517870195.52
7	Material (%)	12.1	13.99
8	Total admin expenditure	6016520000	150773222
9	Admin expenditure (%)	266	3.91
10	Liability (wages)	0	478263311.5
11	Average cost per day per person (in Rs)	211.69	387.11

Source: Ministry of Rural Development, Government of India

Table 3 shows the activity wise performance of the MGNREGA scheme in the national and state level. The table shows that during 2017-18, 132386000 job cards were issued to the willing persons in India and against this 1283270 of job cards were issued in J&K state. The total number

of new workers taken up in the country were 12234000 and in J&K state were 75070. The total number of work completed during the reference period in both National and state level were 2122000 & 11463 respectively.

Table 3 Activity wise performance of the MGNREGA Scheme in India via-a-viz J&K

S. No.	Activity	Programme specification	
		National level	J&K
1	Total number of job cards issued	132386000	1283270
2	Total no. of active job cards	76065000	949177
3	Total number of workers	259673000	2204976
4	Total number of active workers	118068000	1492948
5	Total number of workers taken up (New + spill over)	12234000	75070
6	Number of ongoing work	10112000	63600
7	Number of completed work	2122000	11463
8	Number of GPS with Nil expenditure	29028	151
9	Percentage of NRM expenditure (public + individual)	73.5	40.73
10	Percentage of category works	63.92	19.11
11	Percentage on agriculture and allied works	75.47	31.21

Household size of the respondents

Majority of the respondents in the sampled areafall in the average family size of 5-7. In block Shadimarg 65.9 per cent respondents and in block Newa 64.1 per cent beneficiaries were having family size between 5-7 members. In case of non-beneficiaries, 82.0 per cent in Shadimarg

block and 62.0 per cent in Newa block were having family size ranging between 5-7 members. Almost a very low percentage of respondents both in case of beneficiaries and non-beneficiaries fall in the family size of below 5 members.

Table 4 Household size of MGNREGA beneficiaries and non-beneficiaries

S. No.	Block	Beneficiaries (family members)			Non-beneficiaries (family members)		
		Below 5	5-7	7-10	Below 5	5-7	7-10
01.	Shadimarg	12 (3.8)	197 (65.9)	92 (30.3)	19 (3.0)	518 (82.0)	95 (15.0)
02.	Newa	19 (6.1)	194 (64.1)	90 (29.8)	38 (6.0)	392 (62.0)	203 (32.0)
03.	Total	15 (4.9)	194 (64.1)	91 (30.1)	26 (4.0)	476 (75.3)	132 (20.7)

Source: Field Survey Figures in the brackets are percentages

Educational level of respondents in the sampled blocks

Table 5 shows majority of the respondent in the sampled blocks, were having middle and primary level of education. 25.5 per cent were illiterate among beneficiaries in block Shadimarg and 26.4 per cent in block Newa. In block Shadimarg 41.9 per cent were having middle education compared

to 31 per cent on block Newa. Among non-beneficiaries 39.0 per cent were having primary education in block Shadimarg and 14 per cent in block Newa respectively. The beneficiaries in both the blocks were having less percentage of secondary education i.e. 1.0 per cent and 6.1 per cent in block Shadimarg and Newa respectively.

Table 5 Educational level of MGNREGA beneficiaries and non beneficiaries

S. No.	Block	Beneficiaries				Non-Beneficiaries			
		Illiterate	Primary	Middle	Secondary	Illiterate	Primary	Middle	Secondary
01	Shadimarg	77 (25.5)	96 (31.7)	127 (41.9)	4 (1.3)	228 (36.0)	247 (39.0)	158 (25.0)	-
02	Newa	80 (26.4)	104 (34.4)	94 (31.0)	19 (6.1)	190 (30.0)	89 (14.0)	89 (14.0)	13 (2.0)
03	Total	85 (28.4)	81 (26.7)	117 (38.5)	10 (3.4)	231 (37.3)	231 (37.7)	146 (23.3)	5 (0.7)

Source: Field Survey Note: Figures in the brackets are percentages

Impact of MNREGA on agriculture in the sampled area:

Agriculture the main and dominant occupation throughout the state, same is true of both the blocks in the districts. The impact of MGNREGA on agriculture is very important and it was asked from the beneficiary respondents. From the results it can be concluded that about 77.8 per

cent in block Shadimarg and 80.0 per cent in block Nawa were of the opinion that MGNREGA had positive impact on the agricultural production. Similarly, 15.1 per cent beneficiaries in block Shadimarg and 11.8 per cent in block Nawa reported improvement in irrigation facilities due to MGNREGA as shown in Table 6.

Table 6 Perceptions of respondent regarding MGNREGA impact on agriculture

S. No.		Shadimarg	Nawa
1.	Improvement in Agricultural productivity due to MGNREGA	728 (77.8)	748 (80.0)
2.	Improved irrigation	142 (15.1)	111 (11.8)
3.	No impact	67 (7.1)	77 (8.2)

Source: Field Survey

Note: Other respondents did not respond due to low level of knowledge.
Figures in the brackets are percentages

MGNREGA and impact of rural connectivity

The prime aim of the MGNREGA scheme was to make the improvement in the connectivity of the villagers, and hence the perceptions of the respondents were recorded in this regard. The study records that 87.6 per cent respondents in Shadimarg block and eighty per cent in Nawa

block reported overall development due to construction of bridges/culverts/roads/paths etc. Few of the respondents in both the blocks i.e., 12.4 per cent in block Shadimarg and 7.3 per cent in block Nawa reported no impact in this regard as given in Table 7.

Table 7 Perceptions of respondent regarding MGNREGA impact on agriculture

S. No.		Shadimarg	Nawa
1.	Overall development due to construction of bridges/culverts/roads/paths	819 (87.6)	774 (82.7)
2.	No Impact	116 (12.4)	66 (7.3)

Source: Field Survey

Note: Other respondents did not respond due to low level of knowledge,
Figures in the brackets are percentages

Propensity Score Matching Method

The results of the logit model reveals that values of odds ratio of these variables were less than unity which implies that probability of participation is less than that of non-participation. Coefficients of variables of education and livestock are negative and statistically significant. The households having more education and livestock

variables are participating less in MGNREGA. The inverse relationship is true because literates have better employment opportunities outside than that of illiterates in all pursuits of life. Similarly with increase in number of livestock, participation decreases significantly and they get less time for wage employment.

Table 8 Determinations of participation in MGNREGA work based on logit model

Independent variable	Coefficient	P-Value	Odd ratio
Constant	β_0 4.881	0.00	-
Family size X_1	β_1 0.081	0.034	0.993
Age X_2	β_2 -0.027	0.059	0.953
Livestock X_3	β_3 -0.181	0.000	1.204
Education Level X_4	β_4 -2.266	0.000	0.165
Occupation X_5	β_5 0.241	0.208	0.757
OBC Caste X_6	β_6 -0.266	0.317	0.481

Source: Computed from Field data

Number of observations = 685

LR $\chi^2(6) = 51.99$

Prob > $\chi^2 = 0.000$

Pseudo $R^2 = 0.0719$

Log likelihood = -335.31578

Propensity score of beneficiaries and non-beneficiaries

The study was carried out in the district Pulwama with 574 beneficiaries and 536 non beneficiaries of MGNREGA. The propensity score of the beneficiaries in the distribution is given in table 9.

The range of propensity and the number of beneficiaries and non-beneficiaries ranges from .25 to .6. The highest number of both beneficiaries and non-beneficiaries falls in the propensity range of .4 and lowest number falls in the .28125.

Table 9 Propensity score of beneficiaries and non-beneficiaries in the sampled area

Propensity score	Trt		Total
	0	1	
.25	3	2	5
.275	0	3	3
.278125	4	1	4
.28125	1	0	1
.2875	18	0	18
.3	44	36	80
.35	45	9	54
.375	39	71	110
.4	353	364	717
.6	41	50	91
Total	574	536	1083

From the analysis of table 10 after regression of income with the treatment and the beneficiaries, the average income of the farmers in the distribution turns out to be Rs. 14881.58 /- with a standard error of 801.6658 having a t-value 18.56

at 5% level of significance and the income of non-beneficiaries out to the tune of Rs. 81446.78/- with a standard error of 543.5337 and a t-value 149.85 at 5% level of significance.

Table 10 Regression co-efficient of the beneficiaries and non-beneficiaries in the sampled area

Y	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Beneficiaries	14881.58	801.6658	18.56	0.000	13308.7 16454.45
Non-beneficiaries	81446.78	543.5337	149.85	0.000	80380.37 82513.2

Table 11 shows the average treatment effect on treated with different matching methods. In the present study four different matching methods were employed on a group of 1083 observations. The four different matching methods employ different procedures for getting the proper match among the distribution, the nearest neighbour method or nn'match method shows that in the total observation number of beneficiaries where 536 and it could only find 248 non-beneficiaries whole propensity score has been matched with an ATT of 16088.200, standard error 1626.942 and a t-value 9.889 meaning thereby that there a significant

impact at 5 per cent level of significance. The Kernel and radius matching methods, took 536 beneficiaries with 547 non-beneficiaries each for mating and there ATT, standard error and t-value comes out as 14825.096, 848.816 & 17.466, 14831.472, 817.762 & 18.137 respectively. Similarly, the stratification method took 533 beneficiaries and 550 non-beneficiaries with an ATT of 15281.839, standard error of 898.504 and t-value of 17.008 at 5% level of significance. variables are participating less in MGNREGA. The inverse relationship is true because literates

have better employment opportunities outside than that of illiterates in all pursuits of life. Similarly with increase in number of livestock,

participation decreases significantly and they get less time for wage employment.

Table 11 Matching methods and impact on the income of beneficiaries

Matching Method	n. treat.	n. contr.	ATT	Std. Err.	T
Nearest Neighbour Method	536	248	16088.200	1626.942	9.889
Kernal Method	536	547	14825.096	848.816	17.466
Radius Method	536	547	14831.472	817.762	18.137
Stratification Method	533	550	15281.839	898.504	17.008

Table 12 shows the average treatment effect on treated (ATT) calculated from different matching methods employed to the set of observations. The ATT estimated from nearest neighbour method by doing 200 replications to the data set comes out to be Rs. 16088.2/- with a bias of -194.2143 and standard error of 1861.997 at 5% level of significance. Similarly, the average treatment effect of treated (ATT) estimated

through kernel matching method, radius matching method and stratification matching method by doing 100 replications each comes to the tune of Rs. 14825.1/-, Rs.14831.47/-, Rs. 5281.84/- with a bias of 64.24272, 72.16093, 54.06642 and a standard error of 848.8162, 797.765, 898.5044 at 5% level of significance respectively meaning that beneficiaries have increased their income.

Table 12 Average treatment effect on MGNREGA beneficiaries

Variable	Reps	Observed	Bias	Std. Err.	[95% Conf. Interval]
Nearst Neighbour Method	200	16088.2	-194.2143	1861.997	12416.42
					19759.9
					(N)
					12171.06
					19800.38 (P)
Kernal Method	200	14825.1	64.24272	848.8162	12724.48
					20657.29 (BC)
					13151.27
					16498.92 (N)
					13350.75
Radius Method	200	14831.47	72.16093	797.765	16581.46 (P)
					13277.83
					16540.69 (BC)
					13258.31
					16404.63 (N)
Stratification Method	200	5281.84	54.06642	898.5044	13395.88
					16502.14 (P)
					13343.93
					16343.5 (BC)
					13510.03
					17053.65 (N)
					13643.41
					17257.93 (P)
					13621.4
					17010.36 (BC)

Note: N= normal, P=per centile, BC=bias-corrected

Kernel density

Estimating the density with a histogram is easy but it is not smooth enough to get a good enough of a picture of the distribution. In order to get a smoother picture kernel density method is employed. In kernel density the data are divided into non-overlapping intervals, and counts area made of the number of data points within each interval. To be specific in kernel density, the range is still divided into intervals, and estimates of the density at the centre of intervals are produced.

From the fig.1, it can be seen that the density ranges from 0 to 4 as is shown along the y-axis and the scale of propensity is shown along x-axis. The area under the brown line (non-beneficiaries) whose propensity ranges from 0.1 to 0.7 and the majority of the beneficiaries (green line) also fall in 0.3 to 0.7 range, that means almost 70 to 80 per cent of the beneficiaries are falling within the range and finds their common support in the data set and few of the observations are there which does not find their support in the data set.

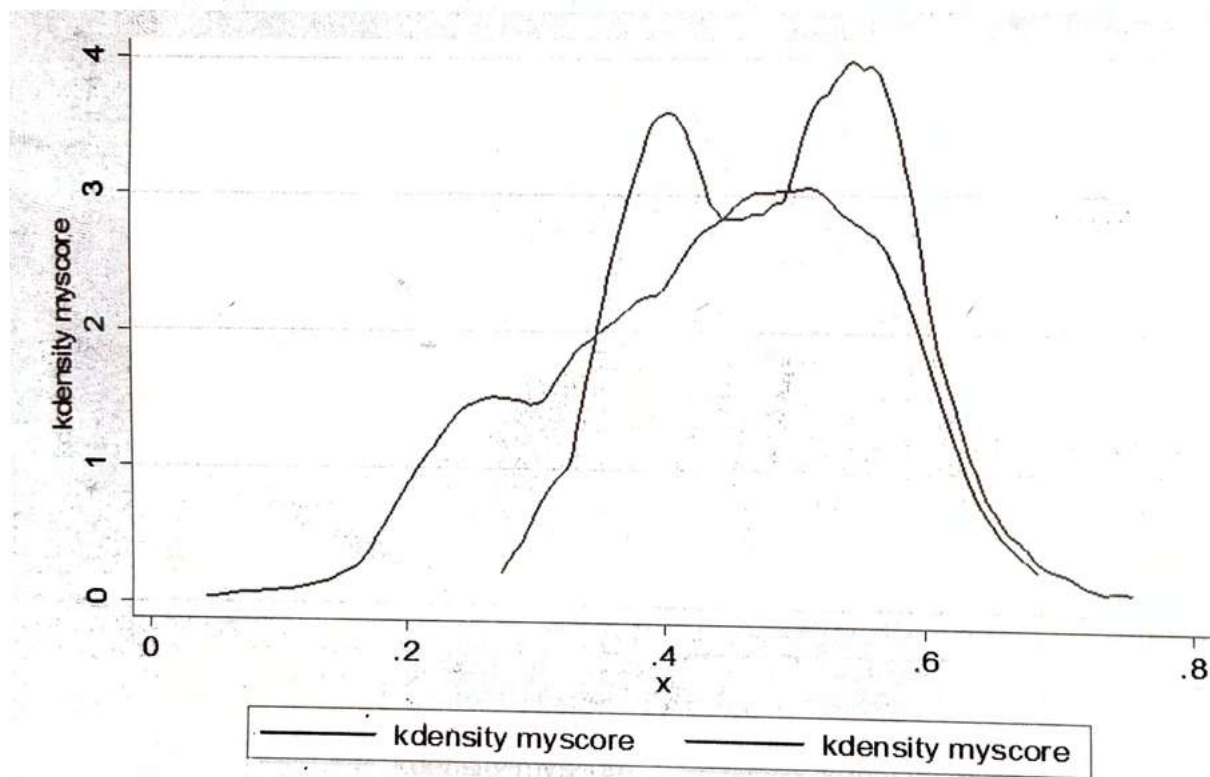


Fig 1 Kernel density map of MGNREGA beneficiaries and non-beneficiaries in the sampled area

Propensity score graph (ps-graph)

The propensity score matching graph is utilised to show the number of beneficiaries and non-beneficiaries who got support and who do not find their support in the distribution. Ps graph shows the beneficiaries in green on top and the non-beneficiaries in brown on bottom and the blue bars show the cases which are non-beneficiaries who do not found any match in the whole

distribution. The fig.2 looks promising, because, almost all the beneficiaries and non-beneficiaries have propensity score ranging from 0.1 to 0.8 and there seems to be less cases having propensity score greater than 0.6 and, similarly, some of the case are there which does not find any support in the distribution and likewise some cases are there in the beneficiaries which not at all have any support in the non-beneficiaries group.

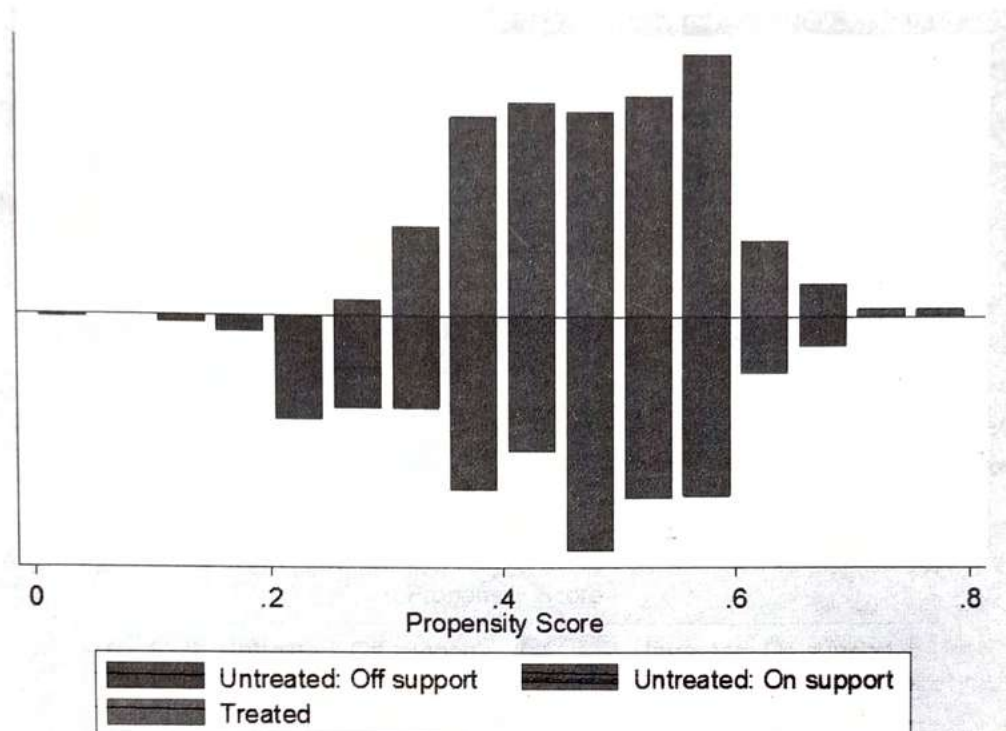


Fig 2 Ps-graph of the beneficiaries and non-beneficiaries' in the sampled area

CONCLUSION

To conclude the MGNREGA scheme has a positive impact on employment, income and living standard of the beneficiaries' in the sampled area. The scheme has made its impact on the agriculture through irrigation and restoration of irrigation canals. Through this scheme, the road connectivity to the villages has improved. Water has been supplied to the every nook and corner in the sampled blocks. The irrigation facility has improved the agricultural pursuits through higher production and productivity. The sachem has also provided a lot of employment avenues to the local people in the sampled area. Though a lot has been achieved on the development front, but, for much better results, the scheme demands a re-orientation so that it can generate productive assets in the economy. It needs a, strong planning, and some additional features that can enable it to perform well as a scheme to contribute towards the shift of the economy towards full employment path.

REFERENCES

- Agro Economic Research centre. 2011. Impact of NREGA on Wage Rates, Foods Security and Rural Urban Migration-A study in Assam, Assam Agricultural University, Jorhat Assam.
- Bandyopadhyay, D. 1985. An Evaluation of policies and Programmes for Alleviation of Rural Poverty in India" in strategies for Alleviating Poverty in Rural Asia, (Ed.). Rizwan-ul-Islam, Bangladesh. Institute of Development Studies, Dhaka.
- Bhat, M.S. and Baskhi, J. K. 1991. IRDP in J&K Some Field Experiences, *Journal of Rural Development*, No. 2.
- Chakravarthy, S. 1977. Development Planning: The Indian Experience, Oxford University Press; Oxford.

- CRRID. 2009. Appraisal of Impact Assessment of NREGS in Selected Districts of Himachal Pradesh, Punjab, Haryana, Sector 9-1, Madhya Marg Chandigarh.
- Dandakar, V. M and Rath, N. 1970. Poverty in India, Allied publishers, New Delhi, P. 12.
- George, K. M. 1984. Rural Development Programme: Its Strength and Weakness, Rajasthan, *Indian Journal of Agricultural Economics*, **39** (3): 266-85.
- Economic Survey. 2018. Ministry of Finance, Government of India, New Delhi.
- Rajasekhar, D. Gayathridevi, K. G. and Satapathy, S. 2007. Good Governance and Poverty Alleviation: A Study of SGSY Programme, Concept, xvi, 184 p, tables, figs, 81-8069-482-8.
- Rosenbaum, P. and Rubin, D. 1983. The Central Role of the Propensity Score in Observational Studies for Causal Effects. *Biometrika*, **70** (1): 41-55.
- Tripathi, R. N. 1983. Benefits to the Rural Poor, Procedure and Problems of IRDP: A Study in Pune District, Orissa, *Journal of Rural Development*, 2.