

Impact of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on Rural Livelihood in Eastern Vidarbha

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ABSTRACT

The study was undertaken with an objective to assess the extent of impact generated by the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on rural livelihood within the four districts of Eastern Vidarbha region of Maharashtra specifically, Bhandara, Gondia, Gadchiroli and Chandrapur. For the study total thirty two villages were selected and a sample size of 320 beneficiaries. Data were collected in face to face situation on a pre-structured interview schedule. The results indicated that before joining MGNREGA only 35.31 per cent beneficiaries reported consumption of nutritious food, but after joining MGNREGA work 62.50 per cent beneficiaries reported improvement in consumption of nutritious food. In respect of material possession there was a significant increase in possession of mobile phones from 2.50 per cent to 69.06 per cent. The renovation work of house was undertaken by 23.43 per cent beneficiaries and 12.18 per cent beneficiaries, reported to have undertaken the extension of house. The level of trust in the society and the local leaders also improved among the beneficiaries. Prior to implementation of MGNREGA, the membership of SHGs was 9.68 per cent; it was increased to 26.25 per cent after the participation in MGNREGA. In nut shell there is significant impact on the livelihood support to the beneficiaries of MGNREGA. The level of impact was of low medium category, among 40.32 per cent beneficiaries, while 29.37 per cent reported high medium level of impact on livelihood support.

Key words : *Impact, MANREGA, Rural employment, Rural livelihood*

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is an Indian job guarantee scheme, enacted by legislation on 25 August, 2005. The act has become operative in the notified districts from 2nd February 2006 with an objective of enhancing livelihood security of rural households by providing at least 100 days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work. In Maharashtra state, first phase of MGNREGA started in 12 districts since 2006. These districts were identified as poorest districts of Maharashtra (Source: www.nrega.nic.in). The present study was carried out amongst four districts namely Bhandara, Gondia, Gadchiroli and Chandrapur located in Eastern Vidarbha region. The MGNREGA programme in selected districts aims to provide livelihood support for the families of landless labourers, small farmers and those from poor households who have irregular income and are often unable to have enough money to purchase their entire month's food quota at the fair price shop, all at once. It is therefore necessary to find out the impact of MGNREGA on their livelihood for better implementation and achieving the objective of scheme.

METHODOLOGY

Locale of the study

Table 1
District wise MGNREGA beneficiaries and selected beneficiaries

Sr. No.	Districts	Total MGNREGA beneficiaries	No. of beneficiaries selected
1	Bhandara	31029	80
2	Chandrapur	42490	80
3	Gondia	46237	80
4	Gadchiroli	36018	80
	Total	155774	320

The study was carried out in Eastern Vidarbha region, which comprises the districts namely Bhandara, Gondia, Gadchiroli and Chandrapur. These four districts are well known for paddy growing belt of Vidarbha region.

Selection of tahsils : The higher number of registered persons since beginning of the scheme was the criterion for selection of the tahsils for the study. The talukas namely 1) Deori, 2) Sadak Arjuni, 3) Lakhandur, 4) Sakoli 5) Nagbhir 6) Brahmapuri 7) Kurkheda 8) Wadsa were observed having more number of registered persons on the job. Hence, these tahsils were selected for the study.

Selection of villages : From each selected tahsil, four villages were selected for the study based on higher number of beneficiaries under MGNREGA working in a selected village. Thus, total thirty two villages were selected.

Selection of beneficiaries : The list of beneficiaries who worked under MGNREGA since five years was obtained from Gram Panchayats of the selected villages and from each selected village ten beneficiaries were selected randomly to constitute a sample size of 320 beneficiaries.

Research design & data collection : An exploratory research design was used. Interview schedule was prepared and pre-tested. Data were collected in face to face situation. The interview with the beneficiaries was conducted at their resident or place with comfort situation.

Computation of impact on rural livelihood : Extent of impact of MGNREGA on rural livelihood of individual beneficiary was worked out as the differences of rural livelihood between before and after working in MGNREGA by an individual beneficiary. Index of impact on rural livelihood was computed by summing up the independent index values of percent change in human capital, physical capital, natural capital, social capital, financial capital and vulnerability and dividing it by six (no. of indices) with following formula.

$$\text{Impact on rural livelihood index (IRL)} = \frac{\Delta \text{HCI} + \Delta \text{PCI} + \Delta \text{NCI} + \Delta \text{SCI} + \Delta \text{FCI} + (\Delta \text{V})}{6}$$

Accordingly, computation of Index of impact on rural livelihood in respect of each respondent was done. The categories were formed on the basis of Mean +_SD.

Sr. No.	Level of impact on livelihood	IRL index range
1	Low impact	Up to 12
2	Low medium impact	13- 19
3	Medium high impact	20- 26
4	High impact	27 and above

Mean = 19.43

SD = 7.

RESULTS AND DISCUSSION

Impact of MGNREGA on rural livelihood : Livelihood indicates the ways and means of living, to meet the basic minimum necessities of the individual beneficiary and his family. To achieve livelihood the combination of roles of different capitals, such as human capital, physical capital, natural capital, social capital, and financial capital are considered as important.

Human capital : It includes the human resources like good health and education required for pursuit of livelihood activities and goals. The quality of human input has definite impact on the efficiency and efforts for livelihood by an individual and his family. The work done through MGNREGA is mostly physical

labour. It requires good health for the person who undertakes the laborious work in extreme weather conditions.

The findings indicate a definite increase in the livelihood support in respect of health care and education of the beneficiaries and their family, after joining MGNREGA, as indicated by the significant Z value. Before joining MGNREGA only 35.31 per cent beneficiaries reported consumption of nutritious food, but after joining MGNREGA work 62.50 per cent beneficiaries reported improvement in consumption of nutritious food. There was a significant increase in number of beneficiaries visiting the private clinic for health care, which offer better medical facilities, after joining MGNREGA. There was significant decrease in seeking medical treatment from traditional/ indigenous medical practioners (Quacks). There was also significant improvement in sanitation facilities in their houses and availment of transport facility during medical emergency. A positive change was observed in respect of education of the family members by the beneficiaries after joining MGNREGA work. Education of the family members, particularly women and children is considered as important element in the human capital for livelihood support system as it gives better access to the information sources, particularly print media. There was a significant increase in percentage of beneficiaries giving more attention to education of family members after joining MGNREGA. Biradar (2008a) revealed that, the number of respondents with high human capital category increased from 15.80 per cent to 49.20 per cent after undertaking income generating activities

Physical capital : The physical resources necessary for living and an important component for supporting the livelihood. The distribution of physical capital resources available with the beneficiaries before and after MGNREGA is presented in the following table.

The findings presented in Table 3 indicate, a definite improvement in the livelihood support in respect of physical capital resources viz. material possession, type of house, energy sources, lighting facility and clothing available with the beneficiaries, after joining MGNREGA, as indicated by the significant Z value. In respect of material possession there was a significant increase in possession of mobile phones from 2.50 per cent to 69.06 per cent. Similarly there was significant increase in percentage of beneficiaries having fan and chairs after joining MGNREGA. The renovation work of house was undertaken by 23.43 per cent beneficiaries and 12.18 per cent beneficiaries, reported to have undertaken the extension of house. Before the

Table 2
Availability of human capital for livelihood before and after MGNREGA

Sr. No.	Human capital	Bene? ciaries (n=320)			
		Before		After	
		F	%	F	%
I	Health				
i	Nutritious food consumption	113	35.31	200	62.50
ii	Consulting doctors for minor ailments	65	20.31	104	32.50
iii	Consulting doctors for major ailments	53	16.56	85	26.56
iv	Ability to avail medical facility				
	a)Traditional / indigenous medical practioner	123	38.43	50	15.62
	b)RMP clinic	95	29.68	92	28.75
	c)AuxiliaryNursingMidwife	65	20.31	91	28.43
	d)PHC	30	09.37	60	18.75
	e)Private clinic	07	02.18	27	08.43
v	Ability to avail transportation facility in emergency	126	39.37	10	03.12
	a)Bullock cart	18	05.62	18	05.62
	b)Tractor	08	02.50	08	02.50
	c)Own vehicle (two wheeler)	69	21.56	124	38.75
	d)Hire Jeep/car/auto	00	00.00	92	28.75
	e) Ambulance				
vi	Sanitation				
	a)Disposal of sewage (drainage system)		12.18	115	35.93
	b)Safe drinking water	39	37.50	159	49.68
	c)Availability of toilet	120	36.56	107	33.43
II	Education of family members				
i	Education of head of the family	143	44.68	143	44.68
ii	Continuation of education of girl	82	25.62	161	50.31
iii	Education of children				
	a) Primary school	103	32.18	81	25.31
	b) Middle school	23	07.18	123	38.43
	c) High school	03	00.93	97	30.31
	d) College education	00	00.00	57	17.81
	Mean index		29.21		32.68
	Z value				27.28**

F - Frequency, % Percentage

Table 3
Availability of physical capital for livelihood before and after MGNREGA

Sr. No.	Physical capital	Bene? ciaries (n=320)			
		Before		After	
		F	%	F	%
I	Material possession				
i	Bicycle	223	69.68	274	85.62
ii	Radio	18	05.62	50	15.62
iii	Television	43	13.43	72	22.50
iv	Almirah	71	22.18	78	24.37
v	Chairs	106	33.12	263	82.18
vi	Fan	22	06.87	184	57.50
vii	Cooler	02	00.62	02	00.62
viii	Mobile phone	08	02.50	221	69.06

II	Type of house				
i	Katcha	309	96.56	309	96.56
ii	Pucca	11	03.43	11	03.43
iii	Renovation of house	00	00.00	75	23.43
iv	Extension of house	00	00.00	39	12.18
III	Energy source				
i	Firewood	300	93.75	193	60.31
ii	Kerosene	15	04.68	90	28.12
iii	L P Gas	05	01.56	37	11.56
IV	Lighting facility				
i	Kerosene lamp / Petromax	109	34.06	27	08.43
ii	Electricity	211	65.93	293	91.56
V	Clothing				
i	Once in a year	134	41.87	00	00.00
ii	Twice in a year	154	48.12	190	59.37
iii	More than twice in a year	32	10.00	130	40.62
	Mean index	22.90		25.25	
	'Z' value	30.08**			

**Significant at 0.01 level of probability

F - Frequency, % Percentage

Table 4
Availability of natural capital for livelihood before and after MGNREGA

Sr. No.	Natural capital	Beneficiaries (n=320)			
		Before		After	
		F	%	F	%
I	Irrigation facilities				
I	No source	297	92.81	246	76.87
Ii	Farm pond	00	00.00	00	00.00
Iii	Dug out wells	04	01.25	18	05.60
Iv	Established pipe line system	03	00.93	18	05.60
V	Lift irrigation	16	05.00	38	11.87
II	Type of cultivation				
I	Rainfed	166	51.87	124	38.75
Ii	Irrigated (seasonal)	20	06.25	55	17.18
Iii	Irrigated (annual)	01	00.31	07	02.18
III	Cropping intensity				
I	Seasonal cropping	186	58.12	171	53.43
Ii	Double cropping	00	00.00	12	03.75
Iii	Biannual cropping	00	00.00	03	00.93
IV	Type of Crop				
I	Cereals/ millets	186	58.12	171	53.43
Ii	Pulses	04	01.25	11	03.43
Iii	Oil seeds	00	00.00	12	03.75
Iv	Cash crops	00	00.00	00	00.00
V	Fruits and vegetables	02	00.62	28	08.75

V	Livestock composition				
I	Farm animal	54	16.87	58	18.12
Ii	Cows/Bufaloes	25	07.81	29	09.06
iii	Goats/sheep	20	06.25	33	10.31
Iv	Poultry	04	01.25	14	04.37
	Mean index	23.41		23.83	
	'Z' value	7.26**			

** Significant at 0.01 level of probability. F-Frequency, % Percentages

inception of MGNREGA, 93.75 per cent beneficiaries were using fire wood as source of energy, but after joining MGNREGA the percentage of beneficiaries using fire wood decreased to 60.31 per cent, as they had shifted to more convenient sources of energy, like kerosene and LPG. Similarly there was a significant increase from 65.93 per cent to 91.56 per cent among the beneficiaries using electricity for lighting. In respect of purchase of clothing 40.62 per cent beneficiaries reported to have purchased clothing for family members more than twice in a year after joining MGNREGA; there were only 10.00 per cent beneficiaries in this category before MGNREGA.

Anonymous (2010) reported that, only 37.00 per cent beneficiaries of NREGA lived in pucca houses and 14.00 per cent lived in huts and 49.00 per cent of them lived in of houses which were covered by tin/asbestos sheets, grass and other locally available material.

Natural capital : The availability of natural resources viz. type of irrigation facilities, type of crops grown, cropping intensity and livestock composition has direct impact on the livelihood support system of the villagers. The distributions of beneficiaries according to natural capital resources available before and after MGNREGA are presented in Table 4.

The findings presented in Table 4 indicate, improvement in the availability of livelihood support, in respect of natural capital after MGNREGA, as indicated by the Z value. The percentage of beneficiaries with dug out wells and lift irrigation facilities increased after MGNREGA. Before MGNREGA 92.81 per cent had no irrigation facilities, but percentage in this category decreased to 76.87 per cent, after MGNREGA. The cultivation under rainfed conditions decreased from 51.87 per cent to 38.75 per cent due to availability of irrigation facility. The percentage of beneficiaries growing pulses and oil seeds also increased to some extent, while the percentage of fruits and vegetable growers among beneficiaries increased, from 0.62 per cent to 8.75 per cent. The percentage of beneficiaries

also increased from 6.25 per cent to 10.31 per cent and 1.25 per cent to 4.37 having sheeps/goats and poultry as a livelihood support, per cent respectively. Das (2011), reported that, among the beneficiaries of NREGA, use of mobile phones increased by about 20.00 per cent. The household assets of the beneficiaries used by 8.00 per cent, 7.00 per cent and 9.00 per cent, in respect of ownership of goats, sheeps and bullock cart respectively.

Social capital : Social relationships provide psychological and material support to various groups and individuals to pursue their livelihood. It forms an effective social support and safety network for improving one's livelihood. The social capital includes relationship with neighbours, trust in the relationships and

Table 5
Availability of social capital for livelihood before and after MGNREGA

Sr. No.	Social capital	Beneficiaries (n=320)			
		Before		After	
		F	%	F	%
I	Neighbour relationship				
i	Good	240	75.00	90	28.12
ii	Fairly good	46	14.37	170	53.12
iii	Very good	34	10.62	60	18.75
II	Extent of trust				
i	In self	15	48.43	45	14.06
ii	In peer group	95	29.68	20	06.25
iii	In society	70	21.87	161	50.31
iv	In local leader	00	00.00	94	29.37
III	Organizational participation				
	Membership				
i	Self Help Group(SHG)	31	09.68	84	26.25
ii	Gram Panchayat	02	00.62	03	00.93
iii	Others	04	01.25	10	03.12
	Office bearer				
i	Self Help Group	00	00	00	00
ii	Gram Panchayat	00	00	00	00
iii	Others	00	00	00	00
IV	Decision				
i	Involvement in strategic decisions	97	30.31	157	49.06
ii	Involvement in regular decisions	12	39.68	228	71.25
	Mean index	30.42		33.87	
	'Z' value	22.07**			

** Significant at 0.01 level of probability. F-Frequency, % Percentages

participation in social organizations and decision making.

The findings presented in Table 5 indicate, improvement in social capital of the beneficiaries after working in MGNREGA, as indicated by the Z value. The neighbour relationships improved from good category to fairly good category among majority of beneficiaries. The level of trust in the society and the local leaders also improved among the beneficiaries. Prior to implementation of MGNREGA, the membership of SHGs was 9.68 per cent; it was increased to 26.25 per cent after the participation in MGNREGA. However, there was no change in the office bearer ship of social organization. The involvement of beneficiaries in the strategic and regular decision making in the social life also increased from 30.31 to 49.06 per cent and 39.68 to 71.25 per cent, respectively. Biradar (2008b) observed that, the percentage of respondents in high social capital category increased from 22.80 per cent to 56.67 per cent, after undertaking income generating activities. Subsequently the percentage of respondents in the medium and low social capital category decreased after undertaking income generating activities.

Financial capital : Financial capital is the backbone of any endeavor undertaken for support of livelihood. The changes in the mode of generating financial resources before and after joining MGNREGA are de-

picted in Table 6.

The findings presented in Table 6, show significant changes, in financial capital of the beneficiaries, before and after working in MGNREGA, as indicated by the Z value. It is observed from the findings that, the percentage of beneficiaries seeking debt from money lenders decreased drastically from 74.06 per cent to 03.43 per cent. Similarly, there was decrease in percentage of beneficiaries seeking loan from SHGs after joining MGNREGA. The tendency towards savings through SHGs increased among the beneficiaries of MGNREGA. However, a tendency towards saving in cash was also prevalent among 42.81 per cent beneficiaries. Majority of beneficiaries had bank accounts where, their wages deposited by the MGNREGA authorities. The purchase of food items was done in cash by majority of beneficiaries, while it was on credit before MGNREGA. This could happen because of availability of cash with the beneficiaries after getting wages from MGNREGA. A study of impact of income generating activities on sustainable rural livelihoods of KAWAD project beneficiaries, Biradar (2008c) observed that the respondents in high financial capital category increased from 6.67 per cent (before) to 59.17 per cent after involving in income generating activities.

The findings presented in Table 7 clearly indicated, the impact of MGNREGA on expenditure ca-

Table 6
Table showing availability of financial capital for livelihood before and after MGNREGA

Sr. No.	Financial capital	Beneficiaries (n=320)			
		Before		After	
		F	%	F	%
I	Source of finance				
i	SHG	237	74.06	30	09.37
ii	Bank /Co-op society	186	58.12	180	56.25
iii	Money lenders	237	74.06	11	03.43
iv	Others	19	05.93	09	02.81
II	Savings				
i	In cash	38	11.87	137	42.81
ii	In bank (related to MGNREGA)	32	10.00	236	73.75
iii	In SHG	63	19.68	122	38.12
iv	In the form of gold	02	00.62	31	09.68
III	Mode of purchase food items				
i	Cash	114	35.62	222	69.37
ii	Credit	206	64.37	98	30.62
	Mean index	32.12		41.60	
	'Z' value	21.46**			

** Significant at 0.01 level of probability F-Frequency % - Percentages

capacity of beneficiaries on items viz. clothing, housing, health, religious functions and traveling has been significantly increased after participation in MGNREGA which clearly implied that there was rise in the income of the beneficiaries which might be due to excess expenses on these items. Similarly, expenditure capacity of beneficiaries on items viz. education, agriculture, taxes and festivals relatively increased, but it might be due to inflation rate and not only due to the impact of

MGNREGA. It also observed that the expenditure on item viz. food and electricity has been reduced after the participation in MGNREGA. The possible reason might be due to the government provide the rice, wheat and electric bill in subsidized rate to the BPL families and most of the beneficiaries availed the benefit from these scheme are BPL .

Vulnerability : The findings presented in Table 8 showed significant changes, in vulnerability of the

Table 7
Expenditure pattern of the beneficiaries on different items before and after MGNREGA

Sr. No.	Items	Before (n=320)		After (n=320)	
		Amount Rs.	Mean	Amount Rs.	Mean
1	Food	5132575.00 (50.00)	16039.29	5736847.05 (43.10)	17927.64
2	Education	422924.00 (04.12)	1321.63	665527.00 (05.00)	2079.77
3	Clothing	1052177.87 (10.50)	3368.00	1605252.33 (12.06)	5016.41
4	Housing	410606.00 (04.00)	1283.14	798633.00 (06.00)	2495.72
5	Health	458852.21 (04.47)	1433.91	718769.00 (05.40)	2246.15
6	Electricity	205303.00 (02.00)	641.57	93173.85 (00.70)	291.16
7	Religious functions	102651.50 (01.00)	320.78	338087.00(02.54)	1056.00
8	Traveling	76988.72 (00.75)	240.58	199658.00 (01.50)	623.93
9	Agriculture	1693749.75 (16.50)	5292.96	2276104.05 (17.10)	71112.18
10	Habits	205303.00 (02.00)	641.57	266211.00 (02.00)	831.90
11	Taxes	51325.75 (00.50)	160.39	79863.30 (00.60)	249.57
12	Festivals	401367.36 (03.91)	1254.27	532422.00 (04.00)	1663.81
	Total	10265150	32078.59	13310550	41595.47

** Significant at 0.01 level of probability F-Frequency % - Percentages

beneficiaries, before and after working in MGNREGA, as indicated by the Z value. Findings indicated that, after working in MGNREGA the vulnerability in respect migration rate of beneficiaries has been considerably reduced. Before working MGNREGA nearly one fourth of beneficiaries (22.81%) were migrated, however after working in MGNREGA, meager per-

centage of beneficiaries took migration (3.44%) outside the village in search of employment opportunities. Similarly, in respect of mean man days generated as per the Govt. of India minimum mean man day require for livelihood is 212 days .It is indicated that from the findings before working in MGNREGA 46.56 per cent beneficiaries family having 212 mean man

Table 8
Distribution of beneficiaries according to vulnerability indicators for livelihood before and after MGNREGA

Sr. No.	Vulnerability	Beneficiaries(n=320) Before			Beneficiaries(n=320) After		
		F	%		F	%	
i	Migration						
1	Not migrated	247	77.19		309	96.56	
2	Migrated	73	22.81		11	03.44	
ii	Employment generation						
	Mean man days	No. of family members work as a labour (n=320) Before			No. of family members work as a labour (n=320) After		
		1-2	3-4	5-6	1-2	3-4	5-6
1	0- 211	151 (47.19)	20 (06.25)	00 (00.00)	56 (17.50)	02 (00.63)	00 (00.00)
2	212 and above	81 (25.31)	58 (18.13)	10 (03.12)	176 (55.00)	76 (23.75)	10 (03.12)
		232	78	10	232	78	10
	Mean	93.30			129.34		
	'Z' value	25.46**					

**Significant at 0.01 level of probability

days but after working in MGNREGA 81.87 per cent beneficiaries families had 212 and above mean man days. Anonymous (2011) a the report of Government of Maharashtra published observed that decreased the migration for income generation from rural area of Nanded district to city like Mumbai, Pune and Hyderabad due to MGNREGA. Also it has been reported that the economic level of beneficiaries had been increased in Deori taluka of Gondia district and decreased the migration due to MGNREGA. Vanitha and Srikantha Murthy (2011) also observed that after the implementation of MGNREGA, average person-days of employment received by participant households increased by 34.52 per cent.

Impact on overall rural livelihood

Table 9
Distribution of beneficiaries according to level of impact of MGNREGA on rural livelihood

Sr. No.	Level of impact	Beneficiaries (n=320)	
		Number	Percentage
1	Low	66	20.63
2	Low medium	129	40.32
3	High medium	94	29.37
4	High	31	09.68
	'Z' value	17.89**	

****Significant at 0.01 level of probability**

The impact on overall livelihood indicates the combined growth in, impact of human capital, physical capital, natural capital, social capital and financial capital, essential for rural livelihood among beneficiaries of MGNREGA.

It is observed from Table 9 that there is significant impact on the livelihood support to the beneficiaries of MGNREGA as indicated by significant Z value. The level of impact was of low medium category, among 40.32 per cent beneficiaries, while 29.37 per cent reported high medium level of impact on livelihood support. It is evident from the findings that, there was a medium level of impact on livelihood support of the beneficiaries. It can be considered as a long term effect of MGNREGA as it would bring positive and lasting effect in their agro- economic condition.

CONCLUSION

It can be concluded that there is significant impact of MGNREGA on the livelihood support to the beneficiaries. The level of impact was of low medium category, among 40.32 per cent beneficiaries, while 29.37 per cent reported high medium level of impact on livelihood support. There is needed to take appropriate steps for increasing the impact on beneficiaries who were in low medium category so as to move them in to high category.

Paper received on : August 13, 2016
Accepted on : September 04, 2016

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