# **Empirical Study of MGNREGA's Works and Expenditure**

#### Shriram Kadiya

Research Scholar, Institute of Management, Nirma University, Sarkhej-Gandhinagar Highway, Gota, Ahmedabad 382481, Gujarat, India Email: shrimailing@gmail.com

#### Vivek Bhatt

Faculty, Amrut Mody School of Management, Ahmedabad University, GICT Building Central Campus, Navrangpura, Ahmedabad 380009, Gujarat, India Email : vivek.bhatt@ahduni.edu.in

#### Sapna Parashar

Associate Professor, Institute of Management, Nirma University, Sarkhej-Gandhinagar Highway, Gota, Ahmedabad 382481, Gujarat, India Email: sapna@imnu.ac.in

#### **ABSTRACT**

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a popular public scheme for rural India, covering around 2,50,000 villages. MGNREGA was launched in 2006 with the objective of sustainable development and providing protection to the vulnerable rural people. Along with the guaranteed 100 days of employment, MGNREGA offers livelihood security to the rural people by helping them do useful works such as micro-irrigation, drought proofing, water harvesting and conservation, land development, rural sanitation, renovation of traditional water bodies, rural connectivity and works related to fisheries, Anganwadi and playgrounds. MGNREGA being a pan India scheme requires a large-scale budget for its huge expenditure, the last budget presented by the central government in February, 2018 allocated a staggering INR 55,000 crores to MGNREGA. In the present research, we attempt to understand the expenditure and work completed pattern from a pan India perspective. The study aims to understand and analyse the pattern of expenditure and works completed for 5 zones consisting of 27 states of India and 4 work categories(11 work types). The results highlighted that zone wise expenditure and number of works completed varied for some years and remained insignificantly different for other years. The significant differences were identified due to the reasons such as geography, weather pattern, implementation push, employment opportunities, worksite facilities and limited usage of technology in devising the work plan.

**Keywords:** MGNREGA; rural development; employment; expenditure; states, zones; useful assets.

#### Introduction

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was launched in 2006, it went on to become the world's largest public employment guarantee program in 2015 (World Bank Report, 9 July 2015). MGNREGA's main objective is to provide vulnerable rural people with 100 days of employment in a financial year. As per the MGNREGA website, as many as 76 million rural people worked under MGNREGA during the financial year 2016-17, thus MGNREGA has emerged as a flagship rural development scheme in India (Panda and Majumder, 2013).

Before the launch of MGNREGA, many other rural development schemes were launched by the centre as well as state governments (Keshlata and Fatmi, 2015; Kumar and Mohanty, 2013). Some of the important rural development schemes were: Integrated Rural Development Program (1976), Training of Rural Youth for Self - Employment (1979), National Rural Employment Programme (1980), The Rural Landless Employment Guarantee Programme (1983), Jawahar Rozgar Yojana (1989), Prime Minister Rozgar Yojana (1993), Employment Assurance Scheme (1993), The Programme of Development of Women and Children in Rural Areas (1997), Swarn Jayanti Rozgar Yojana (1997), Sampoorna Grameen Rojgar Yojana (2001), Jai

UNNAYAN : International Bulletin of Management and Economics Volume - X | January 2019

Prakash Rozgar Guarantee Yojana (2002) and National Food for Work Programmee (2014). Programs such as Sampoorna Grameen Rojgar Yojana and National Food for Work Programme were merged in MGNREGA in 2005 (Panda and Majumder, 2013).

Rural development programs introduced before MGNREGA were focused on poverty alleviation, but many such programs failed to bring livelihood security to the participants (Sundaram and Choudhury, 2011). While many of the past program concerning to rural areas had focused on poverty alleviation, MGNREGA's focus remains on much more than the poverty alleviation (Dey, 2010; Raghvan et al., 2008). The strength of MGNREGA lies in its right based structure, MGNREGA is not an executive scheme, it is an Act, and hence it offers the participants equal rights (Khera and Nayak, 2009). MGNREGA is not merely an employment providing or social security program, but it includes multiple objectives of sustainable rural development by constructing valuable assets (Pankaj, 2008).

From the perspective of implementation, MGNREGA is governed by the centre government through the Ministry of Rural Development. The centre government formulates the guidelines and shares it with states to implement it within the state (Raabe et al., 2010; Swain and Sharma, 2015; Viswanathan et al., 2014). The state government then fixes rates for different types of works by consulting the MGNREGA state council (Aiyar and Samji, 2009; Pankaj and Tankha, 2010; Viswanathan et al., 2014). At the district level, District Program Coordinators manage the MGNREGA works (Vij, 2011), further, at the Block level, the Block Panchayat Samiti and Block Development Officer coordinate various tasks such as planning, implementation and spreading awareness (Raabe et al., 2010). The Block level then coordinates with the village level, where the Gram Panchayat (village governing body) stands responsible for implementing the core activities of MGNREGA such as creating awareness, providing villagers with job cards, planning, executing and monitoring the works, providing worksite facilities, keeping the work records and addressing the issues faced by participants (Adhikari and Bhatia, 2010; Sudarshan et al., 2010).

The Gram Panchayat is very instrumental in the proper functioning of MGNREGA, especially for deciding the types of works (Viswanathan et al., 2014). As per the MGNREGA operational guidelines (2013) the Gram Panchayat must conduct periodical survey to assess the demand of work, identifying the works which can benefit and are required in the respective village, prioritizing the works as per their need, execute the works that meet the technical standards and organize Rozgar Diwas at the Gram Panchayat level once a month. At the same time, it should be noted that the Gram Panchayat should act wisely and take up those works which can result into durable assets and strengthen the livelihood of rural beneficiaries (Ranaware et al., 2015). The permissible work categories under MGNREGA includes water conservation, drought proofing, irrigation canal, land development, flood control, rural connectivity, fisheries, rural sanitation, agriculture-related works and aanganwadi related works (MGNREGA operational guidelines, 2013).

# Review of Literature

## MGNREGA's Role in Rural Development

MGNREGA's main objective is to provide rural households with casual employment while creating sustainable livelihoods and useful assets (Swain and Sharma, 2015). Along with providing 100 days employment, the Act aims to address issues such as chronic poverty through employment (Carswell and De Neve, 2014) and works such as drought proofing (Esteves et al., 2013; Shah and Mohanty, 2010), rural connectivity (Ambasta et al., 2008; Das, 2013; Haque, 2011), sanitation (Das, 2016; Srinivas and Pandyaraj, 2016), water conservation (Bassi and Kumar, 2010; Dey, 2010; Ranaware et al., 2015), land development (Esteves et al., 2013; Shah and Mohanty, 2010) and works supporting agriculture (Colaco and Rangamani, 2014; Thakur and Jha, 2011). MGNREGA's powerful empowerment framework plays a substantial role in

empowering marginalized people with its right-based and collaborative approach (Vij, 2011). Ambasta et al. (2008) noted that if implemented carefully, MGNREGA would go long way to ensure livelihood security to the rural poor people through sustainable manner.

Chatterjee (2017) observed that the economic condition of backward class people in West Bengal's East Medinipur district had improved significantly due to MGNREGA, the increased income had also made the locals more conscious for hygiene and health. Many other scholars have also quoted similar accounts of MGNREGA's positive effect on vulnerable communities or sections in rural areas (Ahuja et al., 2011; Stina et al., 2015). On the other side of it, thousands of women participated in MGNREGA as they get to work with their family member/s and that too in or around their villages (Saha, 2014). In the state of Kerala, many women shifted from agriculture works to MGNREGA as the later offered them higher wages, as a result of this, women's weak position in the labour market was upgraded (Poonia 2012).

# MGNREGA: Benefits and Types of Works Carried out in the Different States

MGNREGA offers multiple benefits to the participants. Many researchers have studied the benefits offered by MGNREGA such as employment during the lean period of year (Bhat and Majid, 2014), working with family (Sugapriyan and Prakasam, 2015), earning extra money (Angappapillai and Nithiya, 2014), reducing short-term debt (Deb et al., 2014; Arulselvam and Deepika, 2014), reducing migration from rural areas to urban areas (Prasad, 2012), reducing poverty (Kumar and Mohanty, 2013), participatory and people-centric administration and implementation (Khera and Nayak, 2009) and importantly useful assets creation (Ranaware et al., 2015; Sudarshan, 2011).

Panda and Majumder (2013) noted that MGNREGA had motivated villagers to carry out productive works such as cleaning up water tanks, road construction, soil conservation and irrigation. These activities were instrumental for a village to become a self-sustainable village. Scholars such as Arora et al., (2013) and Krishnan and Balakrishnan (2014) mentioned that MGNREGA had encouraged participation and engagement of local communities, gram panchayat and women, higher participation had helped people to earn more wages and carry out different types of works. Tiwari et al., (2011) emphasized that MGNREGA works have huge potential to make our environment cleaner and greener, some of the MGNREGA works such as soil improvement, building restraints for droughts and floods, sanitation, water and biodiversity conversion are commendable.

Many other researchers have studied the works carried out under MGNREGA in different states, works such as soil and water conservation in Andhra Pradesh (Kareemulla et al., 2009), water management, irrigation and water conservation works in Gujarat, Kerala and Rajasthan (Bassi and Kumar, 2010; Verma, 2011), works such as levelling, wells, farm ponds, bunding in Maharashtra (Ranaware et al., 2015), water harvesting in Rajasthan (Sole, 2014), water tanks, construction of community building, pavements, bus shelter in Telangana (Meerja, 2014) and desilting, digging of ponds, road connectivity, land development in Punjab (Viswanathan et al., 2014).

Various researchers have their studies discussing and analysing the impact of works done under MGNREGA with a focus upon water resource availability, environmental impact and agricultural productivity (Esteves et al., 2013; Verma and Shah, 2012). Jacob (2008) studied the impact of the irrigation related works and concluded that these works immensely helped to increase the agro production.

Bassi and Kumar (2010) analysed the water management related works under MGNREGA, they opined that MGNREGA had the potential to leave an impact on the rural water management situation, as it could provide rural people with water security through water harvesting. Verma (2011) studied water conservation related works in Gujarat, Bihar, Kerala and Rajasthan and concluded that the works had helped to conserve water

which was crucial for irrigation and reducing groundwater extraction costs. A survey conducted in the state of Maharashtra by Ranaware et al. (2015) mentioned that works such as levelling, wells, farm ponds, bunding, irrigation canals and trenches were given priority. Sole (2014) studied MGNREGA works in water scarce state of Rajasthan, the researcher noted that most of the works were related to water conservation and water harvesting, some of the works focused upon renovation of traditional water bodies, flood control, land development and minor irrigation works.

Meerja (2014) carried out research in the state of Telangana's Nalgonda district, the research revealed that most of the works done included water tanks, construction of community buildings, pavement of roads and bus shelters. In the state of Punjab MGNREGA works included desilting, digging of ponds, road connectivity and land development (Viswanathan et al., 2014). In their research for the state of Gujarat, Shah et al. (2011) revealed that most of the works undertaken were pertaining to the water conservation, followed by irrigation related works and rural connectivity works, this was mainly due to the scanty and irregular rainfall in the state of Gujarat.

# MGNREGA: Budget and Expenditure

According to an Economic Times Report (2nd February 2018), the government of India allocated INR 55,000 crores for MGNREGA, which is the highest ever budget allocation for this giant Act. MGNREGA's payment release mechanism follows a hierarchy which starts from the Central government. The flow of the payment starts from the Central government to State government to district panchayat and ends at the gram panchayat or program officer (MGNREGA operational guidelines, 2013). At the beginning of the new financial year, the Central government allocates the funds to the states and districts on the basis of the initial work demand. Subsequent funds are released to the states, and further to districts on the basis of expenditure (Ranjan, 2016). However, profound and descriptive literature was not available on what types of works have been carried out in a state under MGNREGA over the period of time, how many such works were carried out in a year and how MGNREGA works differed from one state to another state. At the same time, profound literature was also not available pertaining to the expenditure incurred for different categories of works in a state.

# Research Objectives

The study aims to understand three aspects: i) Correlation between expenditure and works completed over the period of 2012-13 to 2016-17 ii) Trend for work completion and expenditure over the period of 2012-13 to 2016-17 and iii) Difference among zones and work categories regarding expenditure over the period of 2012-13 to 2016-17.

#### Research Methodology

This study is based on the secondary data collected from the official MGNREGA website mgnrega.nic.in. State-wise data of a number of works completed and expenditure (in Indian Rupee – INR) for the completed works was availed from mgnrega.nic.in. Five years' (2012-13 to 2016-17) work completed and expenditure data has been considered for 27 Indian states. Further, the 27 Indian states were divided into 5 different zones, basis their geographic locations. The completed works under MGNREGA were broken down into 4 different categories, basis their similar patterns. For the North region, 6 states, for East region 11 states, for South region 5 states, for West region 3 states and for Center region 2 states were considered for data computations. Permitted works under MGNREGA with similar characteristics were considered as one category and used for the analysis. Works related to infrastructures such as rural connectivity, playground, Rajiv Gandhi Sewa Kendra and Anganwadi were considered under the Infrastructure category. The same method was used for the

other three categories such as water-related works, land-related works and other works. The details of the same have been elaborated in the tables below:

Table 1: Zone wise division of 27 states

North 6 States	East 11 States		South 5 States	West 3 States	Center 2 States
Jammu & Kashmir	Bihar	Meghalaya	Andhra Pradesh	Gujarat	Madhya Pradesh
Punjab	Jharkhand	Nagaland	Karnataka	Maharashtra	Chattisgarh
Himachal Pradesh	Odisha	Manipur	Kerala	Rajasthan	
Haryana	West Bengal	Mizoram	Tamil Nadu		
Uttrakhand	Assam	Tripura	Goa		
	Arunachal				
Uttar Pradesh	Pradesh				

Table 2: Work categories under MGNREGA

Work Categories					
1. Infrastructure	2. Water- Related Works	3. Land Related Works	4. Other Works		
Anganwadi	Water Harvesting and Water Conservation	Micro Irrigation	Fisheries		
Rajiv Gandhi Sewa Kendra	Drinking Water	Land Development	Rural Sanitation		
Play Grounds	Renovation of Traditional Water Bodies	Drought Proofing	Food Grains		
Rural Connectivity			Coastal Areas		

Figure 1: Geographic locations of five zones



The Federation of India has in total of 29 states and 7 union territories. We have omitted two states Telangana and Sikkim and all the 7 union territories from the data analysis. Telangana was formed recently in 2014 and hence data before 2014 was not available, for Sikkim couple years' data was missing on the official MGNREGA website.

## **Data Analysis**

For the data analysis, we use the three-dimensional model. The model evaluates MGNREGA project with i) correlation between expenditure and work completion ii) trends of work completion and expenditure, and iii) ANOVA to check the significance of difference among work categories and zones. Further, we elaborate the dimension wise data analysis details below:

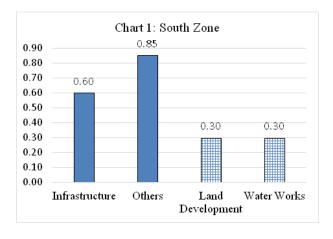
# Part 1: Correlation between expenditure and work completed

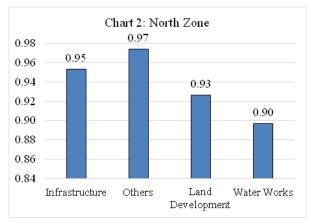
For every zone (viz. North, South, Center, East, and West), we tested Pearson correlation scores between expenditure (in INR) incurred and work completed; indicated by  $\rho_{inf}$  (correlation score for Infrastructure),  $\rho_{o}$  (correlation score for other works),  $\rho_{Id}$  (correlation score for (land development), and  $\rho_{ww}$  (correlation score for waterworks). The objective is to test if the expenditure is a driving variable for completion of work.

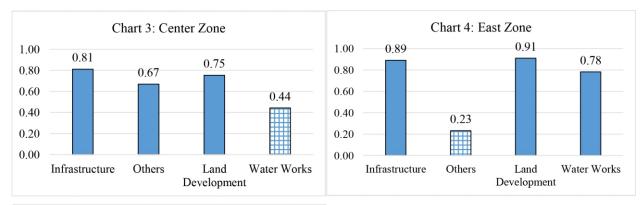
	summa			

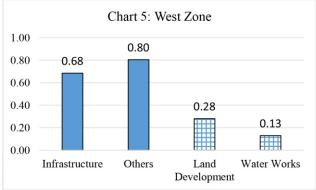
Zones/Correlation Scores	$ ho_{inf}$	$\rho_o$	$ ho_{ld}$	$ ho_{ww}$
North	0.95	0.97	0.93	0.90
South	0.60	0.85	0.30	0.30
Center	0.81	0.67	0.75	0.44
East	0.89	0.23	0.91	0.78
West	0.68	0.80	0.28	0.13

Following are the graphs presenting correlational scores between expenditure and work completed in different work categories; for five zones. <sup>1</sup>









The zone wise figures indicate that water-related works saw the insignificant correlation between expenditure and work completed for South, Center and West zones. Other works category saw insignificant correlation for the East zone. While land development category saw insignificant correlation for West zone and south zone. Infrastructure remained the only category which saw a significant correlation between expenditure and work completed for all the zones.

# Part 2 - Trend for work completion and expenditure

We derived the following Trend models pertaining to work completion and expenditure for four work categories and five zones, over the period of five financial years; i.e. from 2012-13 to 2016-17.

$$\omega_{work} = \alpha + \beta_{work}\vartheta + \varepsilon...(1)$$

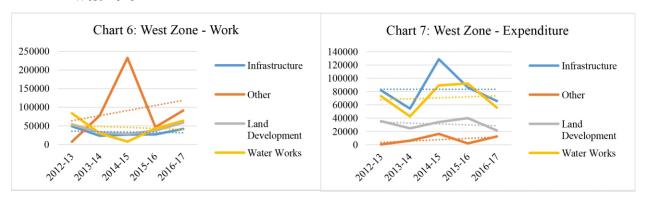
In model (1),  $\alpha$  is intercept,  $\beta_{work}$  is the slope value at which work for a category is increasing or decreasing. And  $\epsilon$  is the error term.  $\theta$  is the time point.

$$\omega_{exp} = \theta + \mu_{exp}\vartheta + \varepsilon \qquad ...(2)$$

In model (2),  $\theta$  is intercept,  $\mu_{exp}$  is the slope value at which expenditure for a category is increasing or decreasing. And  $\varepsilon$  is the error term.  $\theta$  is the time point.

In the following charts and trend models, we can see the pattern of slopes and their significance with respect to the data collected over 5 years.

## West Zone



$$\omega I_{work} = 33503 + (-1037.90)_{work}\vartheta + \varepsilon \omega I_{exp} = 83411.48 + (-38.19)_{exp}\vartheta + \varepsilon$$

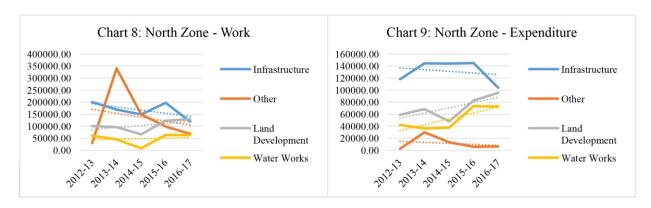
$$\omega O_{work} = 91076 + (13644)_{work}\vartheta + \varepsilon \omega O_{exp} = 7500.91 + (2028.58)_{exp}\vartheta + \varepsilon$$

$$\omega L_{work} = 42048 + (1386)_{work}\vartheta + \varepsilon \omega L_{exp} = 31203.41 + (-1311.91)_{exp}\vartheta + \varepsilon$$

$$\omega W_{work} = 45761 + (-2703.30)_{work}\vartheta + \varepsilon \omega W_{exp} = 79590.63 + (1456.94)_{exp}\vartheta + \varepsilon$$

The results highlighted that for the land development works the expenditure decreased but the works completed increased. For the water-related works category, the expenditure increased but the works completed decreased. For the infrastructure category both the expenditure and works completed saw the downward trend, while for the other work category both the expenditure and works completed saw the upwards trend.

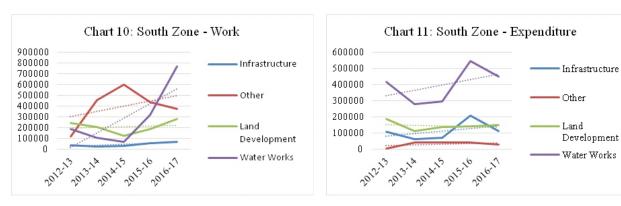
#### **North Zone**



$$\begin{aligned} \omega I_{work} &= 167154.80 + (-13401.30)_{work}\vartheta + \varepsilon \omega I_{exp} = 131282.65 + (-2777.33)_{exp}\vartheta + \varepsilon \\ \omega O_{work} &= 137428.60 + (-16481.20)_{work}\vartheta + \varepsilon \omega O_{exp} = 11608 + (-1676.81)_{exp}\vartheta + \varepsilon \\ \omega L_{work} &= 103274 + (8373)_{work}\vartheta + \varepsilon \omega L_{exp} = 70800.08 + (8731.85)_{exp}\vartheta + \varepsilon \\ \omega W_{work} &= 48403.60 + (2294)_{work}\vartheta + \varepsilon \omega W_{exp} = 52415.88 + (9847.48)_{exp}\vartheta + \varepsilon \end{aligned}$$

North zone produced a balanced pattern for the expenditure and work completed. For the infrastructure and other work categories the expenditure and works completed, both, saw the decrease. While for the land development and water works categories both, expenditure and works completed increased.

# **South Zone**



$$\omega I_{work} = 44972 + (8957.3)_{work}\vartheta + \varepsilon \omega I_{exp} = 111574.11 + (15475.55)_{exp}\vartheta + \varepsilon$$

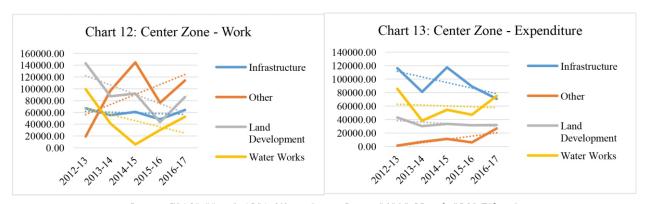
$$\omega O_{work} = 39833.8 + (49257)_{work}\vartheta + \varepsilon \omega O_{exp} = 31005.64 + (5058.446)_{exp}\vartheta + \varepsilon$$

$$\omega L_{work} = 208487.4 + (5989.5)_{work}\vartheta + \varepsilon \omega L_{exp} = 144968.396 + (-3879.714)_{exp}\vartheta + \varepsilon$$

$$\omega W_{work} = 288438.4 + (136496.3)_{work}\vartheta + \varepsilon \omega W_{exp} = 397006.464 + (33279.601)_{exp}\vartheta + \varepsilon$$

In the South zone it was identified that increase in expenditure and increase in works completed go hand in hand for three categories that is infrastructure, other works and water related works. While for the land development works, expenditure decreased but the works completed increased.

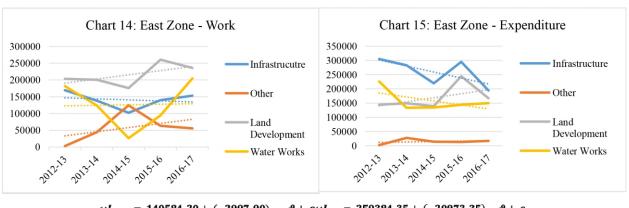
#### Center Zone



$$\begin{split} \omega I_{work} &= 59140.80 + (-1281,60)_{work}\vartheta + \varepsilon \omega I_{exp} = 94908.32 + (-8248.79)_{exp}\vartheta + \varepsilon \\ \omega O_{work} &= 90300.60 + (16956.20)_{work}\vartheta + \varepsilon \omega O_{exp} = 10511.91 + (4990.47)_{exp}\vartheta + \varepsilon \\ \omega L_{work} &= 90475.20 + (-15791)_{work}\vartheta + \varepsilon \omega L_{exp} = `34064.56 + (-2113.44)_{exp}\vartheta + \varepsilon \\ \omega W_{work} &= 45791.40 + (-10467.20)_{work}\vartheta + \varepsilon \omega W_{exp} = `60174.27 + (-1246.47)_{exp}\vartheta + \varepsilon \end{split}$$

For the Center zone it was observed that decrease in expenditure and relative decrease in works completed for the categories that are infrastructure, land development and water works. While for the other works category we could observe increase in expenditure and increase in works completed.

#### East Zone



$$\begin{split} \omega I_{work} &= 140584.20 + (-2997.90)_{work}\vartheta + \varepsilon \omega I_{exp} = 259384.35 + (-20973.35)_{exp}\vartheta + \varepsilon \\ \omega O_{work} &= 58019.60 + (12399.80)_{work}\vartheta + \varepsilon \omega O_{exp} = 15077.51 + (1517.20)_{exp}\vartheta + \varepsilon \\ \omega L_{work} &= 215294.20 + (12499.10)_{work}\vartheta + \varepsilon \omega L_{exp} = 168884.97 + (14122.73)_{exp}\vartheta + \varepsilon \\ \omega W_{work} &= 126228.60 + (1610.40)_{work}\vartheta + \varepsilon \omega W_{exp} = 157599.18 + (-14101.37)_{exp}\vartheta + \varepsilon \end{split}$$

For the East zone the result highlighted that increase in expenditure and relative increase in works completed for the categories of land development and other works. For the infrastructure categories we could observe increase in expenditure and increase in works completed as well. While for the water works category we could observe decrease in expenditure but increase in works completed.

## Part 3 - Difference among zones and work categories regarding expenditure

We use two factors ANOVA to check the significance of the difference between work categories and zones. Our basic premise for the hypothesis is as under:

For Expenditure: Ha: Zone wise no differences in the expenditure; Hb: Work category wise no differences in the expenditure

For Work Completed: Hc: Zone wise no differences in the work completed: Hd: Work category wise no differences in the works completed

Table 4: Analysis of Variance and P-Value (The detailed output of ANOVA is presented in Appendix A).

Variables	Sub-variables	P-Value				
2012 – 13						
	Zone	0.090708				
Expenditure	Work Category	0.031401				
	Zone	0.163781				
Work Completed	Work Category	0.053676				
	2013-14					
	Zone	0.027034				
Expenditure	Work Category	0.118745				
	Zone	0.043414				
Work Completed	Work Category	0.478752				
	2014-15					
	Zone	0.206378				
Expenditure	Work Category	0.038135				
	Zone	0.420599				
Work Completed	Work Category	0.030969				
2015-16						
	Zone	0.082114				
Expenditure	Work Category	0.088074				
	Zone	0.053342				
Work Completed	Work Category	0.839045				
2016-17						
	Zone	0.11221				
Expenditure	Work Category	0.09345				
	Zone	0.04341				
Work Completed	Work Category	0.47875				

In table 4, values in bold represent a significant difference.

As we can observe from the Table 4 that for the financial year 2012 - 13 there was a significant difference in the expenditure of four work categories viz infrastructure, land development, other works and water-related works. For the financial year 2013-14, there was a significant difference in the zone wise expenditure and zone wise works completed as well. In the financial year 2014-15, we could observe, a significant difference in the work category wise expenditure and work category wise works completed as well. For the financial year 2015 - 16, there was no difference in the zone wise and work category wise expenditure as well as the works completed. While for the year 2016 - 17, there was a difference in the zone wise works completed. Overall, what emerges from the Table 4 data is the inconsistency in the expenditure and works completed in respective zones and respective work categories. Hence, we could further infer that numerous factors would be playing important role in creating these inconsistencies between five financial years under consideration.

#### **Results and Discussions**

From the data analysis, it was inferred that every zone has displayed different types of characteristics on the basis of types of works completed and expenditure utilized. North zone did not see any inconsistency between the works completed and expenditure utilized. While in other zones inconsistency for land-related works, water-related works and other works were noticed. Similarly, year on year data revealed that zone wise differences in expenditure and works completed were noticed in the year 2013-14 and 2016-17, while work category wise differences between expenditure and works completed were noticed in the year 2012-13 and 2014-15. However, for the year 2015-16, no significant differences were noticed.

The result of the trend line and correlation analysis indicated that the demand for a specific work category varied over the period of 2012-13 to 2016 – 17. One of the major factors behind the demand for MGNREGA works is the employment opportunity (Dey, 2010; Khera and Nayak, 2009; Meerja, 2014). Thousands of rural people go out of the work during the summer time, as without the availability of water they do not get employment in the agriculture-related works (Ranaware et al., 2015; Sole, 2014). Demand for the works is also heavily affected by the awareness of various aspects of MGNREGA amongst the rural people. Most of the rural people, especially those from the backward class, are illiterate and possess half or unclear information about the Act (Dey, 2010; Raabe et al., 2010; Viswanathan et al., 2014). Poor information about the Act leads to lots of misunderstanding about the scheme's functioning and keeps many prospective villagers either away from it or not interested in it (Raghvan et al., 2008). Vij (2011) emphasized that regular and high-frequency communication dissemination, awareness of rural peopleand public pressure for better implementation are crucial for offering more employment and benefits under MGNREGA.

The results of ANOVA indicated that there was a significant difference in the expenditure of four work categories, authors such as Dreze and Khera (2013) and Haque (2011) have mentioned this fact in their research works. State wise and regional differences in MGNREGA's expenditure and works completed has remained quite stark. For the states such as Odisha, Bihar, West Bengal, where poverty is widespread, but work demand and job days generated under MGNREGA is very low. Whereas other states such as Andhra Pradesh, Rajasthan and Tamil Nadu have been leading in smooth and transparent payment mechanism and employment generation as well (Dreze and Oldiges, 2009; Khera and Muthiah, 2010).

With the aforesaid background, the assumption that more expenditure for specific work would result in more works in that category does not stand true for most of the works. Few of the reason why MGNREGA works expenditure and work completed might not be consistent with each other could be the volatile work demand pattern (Chopra, 2014), employment in agriculture activities (Chowdhury, 2011), scale and the material

required for the work (Prasad and Rao, 2015), need of the work in specific village (Carswell and De Neve, 2014), implementation push by the local governing body (Natesan and Marathe, 2014), delay in payment (Afridi and Iversen, 2014) and malpractices (Miwu and Ehili, 2014).

## References

- Adhikari, A and Bhatia, K. (2010) 'NREGA wage payments: can we bank on the banks?' Economic and Political Weekly, Vol. 48, No. 1, pp.30-37
- Afridi, F. and Iversen, V. (2014) 'Social Audits and MGNREGA Delivery: Lessons from Andhra Pradesh', India Policy Forum, Vol. 10, No. 1, pp. 297-341.
- Ahuja, U., Tyagi, D., Chauhan, S., and Chaudhary, K. (2011) 'Impact of MGNREGA on Rural Employment and Migration: A Study in Agriculturally-backward and Agriculturally-advanced Districts', Agricultural Economics Research Review, Vol. 24, pp. 495-502.
- Ambasta, P., Shankar, P. V., and Shah, M. (2008) 'Two years of NREGA: The Road Ahead', Economic and Political Weekly, Vol. 43, No. 8, pp. 41-50.
- Angappapillai, A.B. and Nithiya, D. (2014) 'An Analysis of Impact off MGNREGS on Saving, Investment and Indebtedness in Krishnarayapuram Taluk of Karur District', International Journal of Management and Social Science Research Review, Vol. 1, No. 4, pp. 197 – 202.
- Arora, V., Kulshreshtha, L and Upadhyay, V. (2013) 'Mahatma Gandhi National Rural Employment Guarantee Scheme: A Unique Scheme for Indian Rural Women', International Journal of Economic Practices and Theories, Vol.3, No.2, pp.108-114.
- Arulselvam, K. and Deepika, S. (2014) 'A Study on Problems faced by the Rural Women Workers in MGNREGA', Intercontinental Journal of Human Resource Research Review, Vol.2, No. 12, pp.74-81.
- Bassi, N. and Kumar, M.D. (2010) 'NREGA and Rural Water Management in India: Improving the Welfare Effects', Institute for Resource Analysis and Policy, Occasional Paper No. 3.
- Bhat, F.A. and Majid, P. (2014) 'MGNREGA in Jammu and Kashmir: Some Field Experiences', Indian Journal of Economics and Development, Vol. 10, No. 1, pp. 40-46.
- Carswell, G. and De Neve, G. (2014) 'MGNREGA in Tamil Nadu: A Story of Success and Transformation?' Journal of Agrarian Change, Vol. 14, No. 4, pp. 564-585.
- Chatterjee, S. (2017) 'National Rural Employment Guarantee Act and Its Impact on Rural Society-A Socio-Economic Study in Khejuri, East Medinipur, West Bengal', International Research Journal of Multidisciplinary Studies, Vol. 3, No.7, pp. 1–9.
- Chopra, D. (2014) 'They Don't Want to Work' versus 'They Don't Want to Provide Work': Seeking Explanations for the Decline of MGNREGA in Rajasthan'. ESID Working Paper No. 31.
- Chowdhury, S. (2011) 'Employment in India: What Does the Latest Data Show?' Economic and Political Weekly, Vol. 46, No. 32, pp.23-26
- Colaco, F.X. and Rangamani, K.T. (2014) 'Sustainability of Microfinance through Self Help Groups', LBS Journal of Management & Research, Vol. 12, No. 1, pp. 30-37.
- Das, T.K. (2016) 'Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) as Social Safety Net: Analysis of Public Works in Odisha, India', Review of Economic Perspectives, Vol. 16, No. 4, pp.337-360.

- Das, U. (2013) 'Rationing and its Implication on Targeting in India: The Case of the Rural Employment Guarantee Scheme'.
- Deb, U., Nagaraj, N., Kumar, R., Bhattarai, M., Padmaja, R., Parthasarathy Rao, P. and Bantilan, C. (2014) 'Dynamics of Rural Labor Markets in India: Implications for Inclusive Development Strategy', International Crops Research Institute for the Semi-Arid Tropics Policy Brief, No. 27, pp.1-12.
- Dey, M. (2010) 'National Rural Employment Guarantee Act (NREGA). A Range of Possibilities', International Journal of Rural Studies, Vol.17, No. 2, pp. 1-7.
- Drèze, J. and Khera, R. (2013) 'Rural poverty and the public distribution system', Economic and Political Weekly, Vol. 47, No. 45-46.
- Dreze, J. and Oldiges, C. (2009) 'A Comparison of the First Two Years of the Implementation of the NREGA Show That Some Questions Still Remain', Frontline, Vol. 26, No. 4.
- Esteves, T., Rao, K.V., Sinha, B., Roy, S.S., Rao, B., Jha, S., Singh, A.B., Vishal, P., Sharma, N., Rao, S. and Murthy, I.K. (2013) 'Agricultural and livelihood vulnerability reduction through the MGNREGA', Economic and Political Weekly, Vol. 48, No.52, pp.94-103.
- Haque, T. (2011) 'Socio-economic Impact of Implementation of Mahatma Gandhi National Rural Employment Guarantee Act in India', Social Change, Vol. 41, No. 3, pp.445-471.
- Jacob, N. (2008) 'The impact of NREGA on rural-urban migration: field survey of Villupuram District, Tamil Nadu', Centre for Public Policy Research, New Delhi.
- Kareemulla, K., Reddy, K.S., Rao, C.R., Kumar, S. and Venkateswarlu, B. (2009) 'Soil and water conservation works through National Rural Employment Guarantee Scheme (NREGS) in Andhra Pradesh: An analysis of livelihood impact', Agricultural Economics Review, pp.443-450.
- Keshlata, Fatmi, S. (2015) 'The Contribution Of MGNREGA In The Empowerment Of The Scheduled Tribes Through Poverty Alleviation And Rural Development In The Sheopur District Of Madhya Pradesh: An Analytical Study', International Journal of Humanities and Social Science Invention, Vol. 4, No. 2, pp. 58-71.
- Khera, R. and Muthiah, K. (2010) 'Slow but steady success', The Hindu.
- Khera, R. and Nayak, N. (2009) 'Women Workers and perceptions of the National rural employment Guarantee Act', Economic and Political Weekly, Vol. 44, No. 43, pp. 49-57.
- Krishnan, S and Balakrishnan, D. (2014) 'MGNREGA Marching towards achieving the millennium development goals-an analysis', Journal of International Academic Research for Multidisciplinary, Vol.2, No.1, pp.18-27.
- Kumar, B. and Mohanty, B. (2013) 'Awakening Rural Consumers towards Sustainable Consumption: A Micro Level Study', International Journal of Advanced Research in Computer Science and Management Studies, Vol. 1, No. 6, pp. 22–30
- Meerja, N.B. (2014) 'People's perception on the implementation of Mahatma Gandhi National Rural Employment Guarantee Scheme in Nalgonda district', International Research Journal of Management Sociology & Humanities, Vol. 5, No. 1, pp. 56–70.
- MGNREGA Official Website [Online] http://www.nrega.nic.in/netnrega/home.aspx(Accessed 2 November, 2018).

- MGNREGA Operational Guidelines 2013 [Online] http://nrega.nic.in/Circular\_Archive/archive/ Operational guidelines 4thEdition eng 2013.pdf(Accessed 25 October, 2018).
- Miwu, R., and A. L. Ehili. (2015) 'Social Audit in MGNREGA: A Tool for Controlling Corruption in Arunachal Pradesh'. National Seminar on Trend and Danger of Corruption in India with special reference to Arunachal Pradesh, Department of Political Science and Economic, Rajiv Gandhi University in collaboration with ICSSR, NERC Shillong and All Nyishi Student Union (ANSU).
- Natesan, S.D. and Marathe, R.R. (2017) 'Evaluation of MGNREGA: data envelopment analysis approach', International Journal of Social Economics, Vol. 44, No. 2, pp.181-194.
- Panda, S. and Majumder, A. (2013) 'A Review of Rural Development Programmes in India', International Journal of Research in Sociology and Social Anthropology, Vol. 1, No. 2, pp. 37-40.
- Pankaj, A. (2008) 'Processes, institutions and mechanisms of implementation of NREGA: Impact assessment of Bihar and Jharkhand', Institute for Human Development, Delhi.
- Poonia, J. (2012) 'Critical Study of MGNREGA: Impact and women's participation', International Journal of Human Development and Management Sciences, Vol.1, No. 1, pp. 35-55.
- Prasad, K.V.S. (2012)' Performance of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA): An Overview', International Journal of Management & Business Studies, Vol. 2, No. 4, pp.99-103.
- Prasad, P. and Rao, M.K.S. (2015) 'Betterment of SC and ST Communities in Villages of Andhra Pradesh with reference to MGNREGA – A Case Study of Chadalavada Village in Guntur District', International Journal of Multidisciplinary Advanced Research Trends, Vol. 2, No. 1, pp. 113 – 120.
- Raabe, K., Birner, R., Sekhar, M., Gayathridevi, K., Shilpi, A., and Schiffer, E. (2010) 'How to Overcome the Governance Challenges of Implementing NREGA Insights from Bihar Using Process-Influence Mapping', International Food Policy Research Institute, IFPRI Discussion Paper 00963.
- Raghvan, K., Singh, N., Das, S., Bist, S., Das, S., Gajjar, U. and Singh, V. (2008) 'National Rural Employment Guarantee Scheme West Bengal: A Study of Sustainable Livelihood Models', Mudra Institute of Communication, Entrepreneurship Development Cell, Ahmedabad.
- Ranaware, K., Das, U., Kulkarni, A. and Narayanan, S. (2015) 'MGNREGA Works and their impacts', Economic and Political Weekly, Vol. 50, No.13, pp.53-61.
- Ranjan, A. (2016) MGNREGA and Women Empowerment. Prabhat Prakashan.
- Saha, S. (2014) 'Women Work Issues in Rural Development: A Case of MGNREGA Implementation in West Bengal, India', Global Journal of Human-Social Science Research. Vol. 14, No 3 C, pp. 48 52.
- Shah, D. and Mohanty, S. (2010) 'Implementation of NREGA during Eleventh Plan in Maharashtra: Experiences, challenges and ways forward', Indian Journal of Agricultural Economics, Vol.65, No. 3, pp.540–551.
- Sole, N.A. (2014) 'Public Policy for Rural Employment in Neo-Liberal Era: A Study of MGNREGA in Rajasthan, India', Public Policy and Administrative Research, Vol. 4, No. 12, pp. 69–75.
- Srinivas, P. and Pandyaraj, K. (2016) 'Employment Generation and Asset Creation through MGNREGA in Andhra Pradesh,' Journal of Global Economy, Vol. 12, No. 4, pp. 277-285.

- Stina, K., Sarkar, A., Singh, R and Singh, R. (2015) 'A Study on the Performance of MGNREGA in Manipur', International Journal of Social Science, Vol. 4, No. 4, pp. 297 305.
- Sudarshan, R., Bhattacharya, R and Fernandez, G. (2010) 'Women's Participation in the NREGA: Some Observations from Fieldwork in Himachal Pradesh, Kerala and Rajasthan' IDS Bulletin, Vol. 41, No.4, pp.77-83
- Sudarshan, R.M. (2011) 'India's National Rural Employment Guarantee Act: Women's Participation and Impacts in Himachal Pradesh, Kerala and Rajasthan', Center for Social Protection, Research Report, No. 6.
- Sugapriyan, G. and Prakasam, S. (2015) 'Analyzing the Performance of MGNREGA Scheme using Data Mining Technique', International Journal of Computer Applications, Vol. 109, No. 9, pp. 11 -15.
- Sundaram, J.K. and Chowdhury, A. (2011) Poor Poverty: The Impoverishment of Analysis, Measurement and Policies, Bloomsbury Academic.
- Swain, M. and Sharma, S. (2015) 'Impact of mnrega on employment of disadvantaged groups, wage rates and migration in Rajasthan', Indian Journal of Agricultural Economics, Vol.70, No. 3, pp. 231 245.
- Thakur, A. and Jha, D.M.K. (2011) 'A study on MGNREGA and its impact on wage and work relation'.
- The Economic Times Report (2 February, 2018). [Online] https://economictimes.indiatimes.com/news/economy/policy/key-highlights-from-budget-2018-ease-of-living-is-new-catch-phrase/articleshow/62735935.cms (Accessed 13 October, 2018)
- Tiwari, R., Somashekhar, H.I., Parama, V.R., Murthy, I.K., Kumar, M.M., Kumar, B.M., Parate, H., Varma, M., Malaviya, S., Rao, A.S. and Sengupta, A. (2011) 'MGNREGA for environmental service enhancement and vulnerability reduction: rapid appraisal in Chitradurga district, Karnataka', Economic and Political Weekly, Vol. 46, No. 20, pp.39-47.
- Verma, S. (2011) 'MGNREGA Assets and rural water security: synthesis of field studies in Bihar, Gujarat, Kerala and Rajasthan', International Water Management Institute. Anand, India.
- Verma, S. and Shah, T. (2012) 'Labour Market Dynamics in Post-MGNREGA Rural', Water Policy Research Highlight.
- Vij, N. (2011) 'Collaborative governance: Analysing social audits in MGNREGA in India', IDS Bulletin, Vol. 42, No. 6, pp.28-34.
- Viswanathan, P., Mishra, R and Bhattarai, M. (2014) 'Gender Impact of MGNREGA: Evidence from 10 Selected Semi-Arid Tropics (SAT) Villages in India', pp.1-19.
- World Bank Report: MGNREGA becomes the world's largest public works programme. (India Today. 9 July, 2015). http://indiatoday.intoday.in/education/story/mgnrega/1/450310.html (Accessed 18 October, 2018)
- Shah, V., Makwana, M and Sharma, S. (2011). 'Impact of NREGA on wage rates, food security and rural-urban migration in Gujarat', Agro-economic Research Centre, Sardar Patel University, Vallabh Vidyanagar.