

A Dissertation

On

**IMPACT OF MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT
GUARANTEE ACT (MGNREGA) ON AGRICULTURE:
A CASE STUDY OF HOSHIARPUR DISTRICT**

Submitted to

LOVELY PROFESSIONAL UNIVERSITY

In fulfilment of the requirement for the award of the degree of
MASTER OF PHILOSOPHY IN ECONOMICS

Submitted by:

Harpreet kaur

Reg. No. 11412673

Supervised by:

Dr. Gautan Sinha

Assistant professor

LOVELY SCHOOL OF BUSINESS

LOVELY PROFESSIONAL UNIVERSITY

PUNJAB

DECLARATION

I, HARPREET KAUR, hereby declare that the Dissertation entitled “**Impact of Mahatma Gandhi National Employment Guarantee Act (MGNREGA) on Agriculture: A Case study of Hoshiarpur District**” submitted for the M.Phil Degree is entirely my original work and all ideas and references have been duly acknowledged. This Dissertation has not formed the basis for the award of any other degree or diploma.

Date: _____

Harpreet Kaur
Research Scholar

CERTIFICATE

This is to certify that Miss Harpreet Kaur has completed the M.Phil Dissertation titled **“Impact of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on Agriculture: A case study of Hoshiarpur District”** under my guidance and supervision. To the best of my knowledge, the present work is the result of her original investigation and study. No part of the dissertation has ever been submitted for any other degree and diploma. The dissertation is fit for the submission for the partial fulfilment of the conditions for the award of M.Phil Economics.

Date: _____

Signature of Supervisor

Name: Mr. Gautam K Sinha

Designation Lecturer of Economics

Department of Economics

Lovely Professional University,

Phagwara (Punjab)

ABSTRACT

The study related to the positive impact of MGNREGA on lives of rural poor and adverse impacts on agriculture in Hoshiarpur district of Punjab. MGNREGA leads to rise in the agricultural labour cost and leading to labour shortage. The study conducted in one of the districts of Punjab- Hoshiarpur, only one district of Punjab where the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was initiated in the beginning on February 2, 2006 and the other district where the programme was implemented at the later stage on April 1, 2008. Another reason for the selection of the district belongs to less economically developed area. Out of Hoshiarpur district of Punjab eight villages from four blocks (Hoshiarpur- 1, Bhunga, Hoshiarpur- 2 and Tanda) have been selected using the Stratified Random Sampling method (two villages from each block). From these eight villages 240 respondents are selected for study the impact of MGNREGA on agriculture. Keeping in mind the objectives of the study 240 respondents have been selected (120 MGNREGA beneficiaries and 120 farmers) and two crops (Wheat and Paddy) are selected from all the eight villages. The study revealed that agricultural labour mostly employed under MGNREGA. It was observed that out of total sample, 88 per cent respondents have occupation as an agricultural labour. 60 per cent respondents were having owned pakka house and 27.5 per cent respondents were having semi- pakka houses. Out of the total respondents, 84 respondents (70 per cent) said their economic condition highly improved due to MGNREGA. The opinions of the farmers related to the shortage of labour for agricultural operations, the farmers opined that 32 per cent highly shortage, 34 per cent extreme shortage and 35 per cent extreme shortage of labour for kharif (paddy) season in 2012-13, 2013-14 and 2014-15 respectively. Thus the data revealed the more shortage of labour for Kharif season and large farmers more affected by it. The opinion of farmers regarding the hike in agricultural labour cost 40 per cent severe hike due to MGNREGA.

Keywords: MGNREGA, Agriculture labour Availability, Agricultural labour cost, MGNREGA Wage

ACKNOWLEDGEMENTS

One who merges into the knowledge of the Lord as absolute and related?

Serves the True Guru and obtains the supreme status....

[Shri Guru Granth Sahib]

First of all I would like to thank to God for giving me determination and courage to complete this work. After God I would like to thank my supervisor, Mr. Guatam K Sinha, assistant professor in Lovely Professional University, Phagwara for his support, care and suggestions.

I'm grateful to Mr. Vishal Sarin, Anoop Beri and Surinder Kumar Singla guiding me. I sincerely thankful to all the faculty members of department Commerce and Economics Lovely Professional University to complete my research work. I would express my gratitude to my all classmates for their help and moral support.

I'm deeply thankful to my parents, Mr. Jarnail Singh and Manjit Kaur who are my ray of hope, my ideals and my pillars of strength through my life. I'm greatly thankful to my brother and Sister Mr. Baljit Singh and Kirandeep Kaur and my sister- in- Law Mrs. Sumandeep Kaur who was always supportive to me and helped a lot to me in odd as well as even times.

Harpreet Kaur

CONTENTS:

CHAPTER	PARTICULARS	Page No.
1	INTRODUCTION: 1.1 Introduction 1.2 Background of MGNREGA 1.3 Timeline of MGNREGA 1.4 Objectives of MGNREGA 1.5 Features of MGNREGA 1.6 Implementation structure of MGNREGA 1.7 Performance of MGNREGA at National Level 1.8 Wage rates under MGNREGA 1.9 Profile of Punjab 1.10 Performance of MGNREGA at State Level: PUNJAB 1.11 Profile of Hoshiarpur District 1.12 Performance of MGNREGA at District Level: HOSHIARPUR 1.13 Research Gap 1.14 Objectives of the Study 1.15 Assumptions of the Study 1.16 Hypothesis to be Tested 1.17 Research Methodology 1.18 Scope of the Study 1.19 Limitations of the Study 1.20 Chapter Scheme	1 – 24
2	REVIEW OF LITERATURE	25– 36
3	SOCIO- ECONOMIC STATUS OF MGNREGA BENEFICIARIES: 3.1 Age distribution of the Respondents 3.2 Caste- wise distribution 3.3 Religion 3.4 Education 3.5 Family Size 3.6 Occupation 3.7 House Type 3.8 Movable Assets 3.9 Livestock Assets 3.10 Annual Income	37- 50
4	IMPACT OF MGNREGA ON AVAILABILITY OF AGRICULTURAL LABOUR: 4.1 Impact of MGNREGA on Availability of Agriculture labour in Hoshiarpur district in Kharif season 4.2 Impact of MGNREGA on Availability of Agriculture labour in Hoshiarpur district in Rabi season	51-71

CHAPTER	PARTICULARS	PAGE NO.
5	IMPACT OF MGNREGA ON AGRICULTURAL LABOUR COST: 5.1 Salient features of wage rates under MGNREGA 5.2 Wage rates under MGNREGA in Punjab 5.3 Comparison of agricultural wage rates with MGNREGA wage rates 5.3.1 Wage rates in 2012-13 5.3.2 Wage rates in 2013-14 5.3.3 Wage rates in 2014-15 5.4 Opinion of farmers regarding impact of MGNREGA on Agricultural wage rates	72- 85
6	SUMMARY AND CONCLUSIONS	86- 93
CASE STUDY		94
BIBLIOGRAPHY		95- 97
QUESTIONNAIRES		98- 102
ANNEXURE		103- 04

LIST OF TABLES

TABLE NO.	TITLE OF THE TABLE	PAGE NO.
1.1	Timeline of MGNREGA	6
1.2	Performance of MGNREGA at national level	11
1.3	Phase- wise implementation of MGNREGA in Punjab	14
1.4	Performance of MGNREGA in Punjab	15
1.5	Details of total area and production of Punjab under wheat and paddy	17
1.6	Performance of MGNREGA in Hoshiarpur	18
1.7	Information of the blocks of Hoshiarpur district	20
1.8	Selection of sample Respondents	21
3.1	Age distribution of the MGNREGA beneficiaries in Hoshiarpur district	38
3.2	Caste wise distribution of the MGNREGA beneficiaries	39
3.3	Religion details of MGNREGA beneficiaries	40
3.4	Education details of beneficiaries	42
3.5	Family size of MGNREGA beneficiaries	43
3.6	Occupation of MGNREGA beneficiaries	44
3.7	House type of MGNREGA beneficiaries	45
3.8	Details of movable assets of beneficiaries	46
3.9	No. of livestock assets of beneficiaries	47
3.10	Income of MGNREGA beneficiaries	48
3.11	Economic condition improved due to MGNREGA	49
4.1	Opinion of farmers regarding the impact of MGNREGA on availability of agriculture labour during 2012-13 (kharif season or paddy)	53
4.1 (a)	Results of ANOVA test of opinions of farmers	55
4.1.1	Opinion of farmers regarding impact on MGNREGA on availability of agriculture labour during 2013-14 (kharif season or paddy)	56
4.1.1 (a)	Results of ANOVA test of opinions of farmers	58
4.1.2	Opinion of farmers regarding impact on MGNREGA on availability of agriculture labour during 2014-15 (kharif season or paddy)	59
4.1.2 (a)	Results of ANOVA test of opinions of farmers	61
4.2	Opinion of farmers regarding impact on MGNREGA on availability of agriculture labour during 2012-13 (Rabi season or wheat)	62
4.2 (a)	Results of ANOVA test of opinions of farmers	64
4.2.1	Opinion of farmers regarding impact on MGNREGA on availability of agriculture labour during 2013-14 (Rabi season or wheat)	65
4.2.1 (a)	Results of ANOVA test of opinions of farmers	67

4.2.2	Opinion of farmers regarding impact on MGNREGA on availability of agriculture labour during 2014-15 (Rabi season or wheat)	68
4.2.2 (a)	Results of ANOVA test of opinions of farmers	70
5.1	Details of wage rates under MGNREGA in Punjab	74
5.3.1.1	Wage rates in Hoshiarpur during 2012-13 (Kharif or paddy season)	75
5.3.1.2	Wage rates in Hoshiarpur during 2012-13 (Rabi or wheat season)	76
5.3.2	Wage rates in Hoshiarpur during 2013-14 (Kharif or paddy season)	77
5.3.2.2	Wage rates in Hoshiarpur during 2013-14 (Rabi or wheat season)	77
5.3.3.1	Wage rates in Hoshiarpur during 2014-15 (Kharif or paddy season)	79
5.3.3.2	Wage rates in Hoshiarpur during 2013-14 (Rabi or wheat season)	79
5.4.1	Opinion of farmers regarding the impact of MGNREGA on agriculture labour cost	81
5.4.1.1	Details of ANOVA test of Opinions of farmers	84

LIST OF FIGURES:

CHART NO.	NAME OF FIGURES	PAGE NO.
3.1	Age distribution of MGNREGA beneficiaries (Pie charts)	38
3.2	Caste distribution of MGNREGA beneficiaries	40
3.3	Religion of MGNREGA beneficiaries	41
3.4	Education details of MGNREGA beneficiaries	42
3.5	Family size of MGNREGA beneficiaries	43
3.6	Occupation details of MGNREGA beneficiaries	44
3.7	House type details of MGNREGA beneficiaries	46
3.8	Income details of MGNREGA beneficiaries	48
4.1	Shortage of labour in kharif season 2012-13 (Bar charts)	54
4.1.1	Shortage of labour in kharif season 2013-14	57
4.1.2	Shortage of labour in kharif season 2014-15	60
4.2	Shortage of labour in rabi season 2012-13	63
4.2.1	Shortage of labour in rabi season 2013-14	66
4.2.2	Shortage of labour in rabi season 2014-15	69
5.4.1 (a)	Opinion of farmers on rise in labour cost	83
1.1	Map of Punjab	14
1.2	Map of Hoshiarpur district	16

CHAPTER – 1

INTRODUCTION

1.1 Introduction

India is a country which is known as a country of villages and rural areas. The rural population in India comprises the core of the Indian society. The most of the 70 per cent of the population lives in the rural areas in India. The rural population in India provides the real picture of the country. The population of India that lives in rural areas mostly live on agriculture and other agricultural- allied works like animal husbandry, horticulture, fishery, sericulture etc. Since the ancient period, the agriculture and agricultural- allied activities have been primary occupations of the rural people in India but this scenario changing in the current scenario. Many villages in India as well as in Punjab have been engaging themselves in various non-agricultural occupations in the last decade. The contribution of agriculture sector in Gross Domestic Product was 50 per cent at the time of independence that has gone down to nearly 14 per cent in the present state. Similarly the share of workforce or labour engaged in agriculture, which was about to 70 per cent in the year 1951 has gone down nearly 50 per cent. The wider gap between the incomes of agricultural and non- agricultural sectors that leads to presence of poverty in India. There is a gap between the number of new rural workers and number of new job opportunities created in agriculture that leads to increase in non-agricultural activities. In India, to reduce poverty and unemployment in rural areas and the rural and urban disparities the Government of India has taken several steps. The ministry of rural development introduces the number of programmes to reduce poverty by increasing employment opportunities in rural areas.

Recent developments in rural wages, especially from the year 2007 (MGNREGA fully implemented) has received public attention more. It has, by now been a well-established fact that in the recent years, wages in rural areas have increased at a rate higher than the inflation thereby contributing to increase in real wages (RBI, 2012). This period is also characterised by the introduction of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which provides 100 days of wage employment for one member of a family. It has been argued that MGNREGA has been one of the factors that have contributed to increase in wages (CACP, 2012).

The scheme is in the last eight years of its existence has brought in a noticeable change in the rural areas with regard to the employment opportunities, provide livelihood security to the people who lives in rural areas. Several studies on employment in rural areas conducted

in India have concluded that the share of non-farm sector in rural employment has significantly grown time by time. Many studies that related to MGNREGA revealed that after implementation of MGNREGS migration has been reduced from rural areas and showing a greater positive socio economic impact on rural women and analysed the labour wages have increased significantly from Rs.60 to Rs110 per day since the implementation of MGNREG scheme (Maheshwari M. and Gangwar L.S. 2011) and small and marginal farmers. Annual income of the beneficiaries of MGNREGS has increased between 9 to 16 per cent (Harisha B.G., Nagaraj.N., Chandrakantha M.G. and P.S.Srikantha Murthy 2011). At the same time some research studies were indicating that MGNREGA has been showing a greater negative impact on supply of labour to the agricultural sector and causing the increased labour cost and the agriculture wages. Some scholars finding that in the short run wage rates might have gone up because of MGNREGS but in the in the long run the assets created under MGNREGS would have positive impact on agriculture as most of the assets created under this scheme are related to natural resources like: water, land, assets and forest and concluded that the structural changes in Indian economy in recent past have made male-migration a lucrative phenomenon while schemes like MGNREGS are found to be attractive for females in rural areas. This has caused a shortage of farm labour, increase in bargaining power and an upward push in agricultural wages (Akhil Alha and Bijoyata Yonzon 2011)

Even though India has been the second largest in terms of man power in the world, all the sectors of the economy have been affected by the scarcity of the labour, the impact of this is more on agricultural sector (Prabhakar et al. 2011). The agricultural sector in India has been characterized by high supply of labour but the demand of labour is lower and also low wages, skewed distribution of land, and limited means of earning livelihood. The agriculture sector has undergone a vast change in the recent past, mainly due to the increased rural-to-urban migration and partly due to the inception of MGNREGA and other public works. The structural changes in the economy of India in the recent past have made male-migration a while schemes like MGNREGS are found to be attractive for females in rural locations (Akhil Alha and Bijoyata Yonzon 2011) and agricultural sector has facing the shortage of labour and concluded that the total cost of cultivation in fully implemented MGNREGA villages has been found higher by 22.91 per cent and 16.37 per cent in red gram and Rabi jowar. The labour productivity of male and female has been noticed lower in fully-implemented MGNREGA villages for all operations in both the crops (Anjani

Kumar et al. and Channaveer et al. 2011) and wage rates are significantly high even if labour is available (Baba et al. 2011).

Data from Agricultural Ministry, Government of India, have revealed that in the 35 months period, from January 2008 to December 2010, agricultural wages have increased to 42 per cent in Rajasthan and 106 per cent in Andhra Pradesh, except in Gujarat where agricultural wages grew by 24 % only. The rise in agricultural wages can be attributed mainly to MGNREGS, public works, out-migration of rural labour to towns and cities (Swaminathan and Ayiar 2011). Cultivators widely complain of both labour shortages and of the high cost of labour. Because of shortage of agricultural labour farmers are changing their cropping pattern and moving towards less labour intensive crops from more labour intensive crops, even though they are less remunerative and non-profitable and opined that Agricultural labour is a vital input in the agricultural production system in India. The phenomenon of underemployment is manifested in daily lives as a large proportion of labour demand is met by wage labour, due to the skewed land distribution and seasonality of demand in agriculture (Baba et al. 2011).

One of these study in Betul and Mandla districts of Madhya Pradesh to assess the impact of MGNREGA on labour markets, particularly with regard to changes in land use, cropping patterns of agriculture. In both the districts, research shows that fallow land has been brought under cultivation; there has been a change in cropping pattern from dry land crops to irrigated crops and from traditional to cash crops. There is also a reported hike in the cost of labour. Migration continued unabated in the study areas. However, there was no distress migration by the sample farmers Rao and Reddy (2011).

While increase in wages could be beneficial for the rural labourers from a social welfare point of view but there is also increase in agricultural labour cost that is harmful.

In the words of Sharad Powar, Ministry of Agriculture, GoI (2011),

“MGNREGA works have started impacting agriculture sector itself as it has resulted in drawing out agriculture labourers from agricultural operations. Since critical agricultural operations are required to be carried out at appropriate times and cannot be postponed, this has led to increasing agricultural wage rates, impacting cost of cultivation and affecting farming viability adversely. Moreover, assets created under NREGA works may or may not have productive use”.

Acc. to Jairam Ramesh, Ministry Of Rural development, GoI (2011),

“The average person-days of work generated under the flagship programme never exceeded 54 days per household. This indicates the critical but small and supplementary nature of his employment for our self-selecting poorest people”

The paper of RBI “Recent Trends in Rural Wages: An Analysis of Inflationary Implications” brings out the following major inferences:

- (a) Increases in real wages have been a recent phenomenon;
- (b) During 2000-2007 period, real wages remained constant or declined in rural areas and money wages were largely responding to inflation;
- (c) Since 2007, wage changes are not explained by changes in prices, but wages impact prices as increase in real wages has been feeding into cost of production;
- (d) MGNREGA wages were higher than market wages for most labour supply states indicating that the pressure on market wages in those states could be significant;
- (e) The coverage of MGNREGA has remained relatively low to exert pressure from demand arising out of cash transfers and
- (f) Reduced work force participation rates in recent period both on account of increased participation in education and withdrawal of female work force as well as shift of labour away from agriculture could have contributed to labour market tightening and increase in wages (G V Nadhanael).

1.2 Background of MGNREGA

To reduce poverty and unemployment, the Government of India introduces the number of programmes that are Integrated Rural Development Programme (IRDP), Employment Assurance Scheme (EAS), Prime Minister’s Rozgar Yojana (PMRY), Jawahar Gram Samridhi Yojana (JGSY), Swarnajayanti Gram Swarozgar Yojana to provide employment, food security with rural infrastructure, Pradhan Mantri Gramodaya Yojana (PMGY), National rural Employment Guarantee act (NREGA) etc. All these programmes were initiated to providing wage employment to those people who lives in rural areas. Among all these programmes NREGA is one of the latest programmes to increase wage base employment has been implemented in 2006. The difference between these schemes and MGNREGA is that mahatma Gandhi national rural employment guarantee act provides the “legal right for employment” or “Right to Work” to rural population and provides unemployment allowance if work is not provided. There are various schemes are launched under the Ministry of Rural Development that are:

- **Training Rural youth for Self- Employment:** This scheme was launched in 1979 for the training of the rural youth who are unemployed and not getting the work. This scheme provides the self- employment to the rural youth.
- **Integrated Rural Development Programme:** This scheme is implemented in the year 1980 for the all- over development of the rural poor by providing the self- employment of the program of asset endowment.
- **National Rural Employment Program:** This program is integrated in 1980. The main of this program to provide the employment opportunities to the people who live in rural areas.
- **Rural Landless Employment Guarantee Program:** In 1983, this program is implemented by the Indian government for providing employment to landless farmers and rural people who lives in poorer conditions.
- **Jawahar Rozgar Yojana:** This scheme or Yojana that implemented in 1989 for providing the employment to rural people who are unemployed.
- **Employment Assurance Scheme:** This scheme is started in 1993 for the aim of the providing employment of at least 100 days in a year in a village.
- **Swarna Jayanti Gram Swarozgar Yozana:** In 1999, the Ministry of Rural Employment Development launched the yojana for eliminating rural poverty and unemployment and promoting self -employment in rural areas such as proper Training, development of infrastructure, planning of activities, financial aid, Credit from banks, organizing self- help groups, and subsidies.
- **Sampoorna Grameen Rozgar Yojana:** This yojana is implemented in 2001 for providing wage employment and food security in rural areas and also create durable economic and social assets.
- **Pradhan Mantri Gram Sadak Yojana:** This was launched on 25th December 2000 as a fully funded Centrally Sponsored programme to provide all weather road connectivity in rural areas of the country. The programme envisages connecting all habitations with a population of 500 persons and above in the plain areas and 250 persons and above in hill States, the tribal and the desert areas.

- **Food for work Programme:** In 2001, the one of the program of providing employment in rural areas to give food through wage employment in the drought affected areas in eight states. Wages are paid by the state government partly in cash and partly in food grains.
- **National Rural Employment Guarantee scheme:** The NREGA is one of the schemes that enacted in 2006 for providing the hundred day's employment to the rural people. The NREGA is one of the schemes that provide employment to the rural people for the aim of reducing unemployment.

Thus all these schemes that plays an important role for reducing unemployment and poverty in India. But MGNREGA is one of these schemes that provide livelihood security to the rural people by giving hundred days employment and MGNREGA play an important role for creating the assets.

1.3 Timeline of MGNREGA

Table 1.1: The Timeline of MGNREGA

August 2005	February 2006	April 2007	April 2008	October 2008	October 2009
NREGA legalized	NREGA came into force in 200 districts	130 more districts included in NREGA	Universalization of the scheme (applicable all over INDIA)	Wages transaction through banks and post offices	Renamed NREGA to MGNREGA (Mahatma Gandhi National Rural Employment Guarantee act.)

Source: www.nrega.nic.in

National Rural Employment Guarantee Act is implemented by UPA government to reduce poverty by giving employment to rural people. The Mahatma Gandhi national rural employment guarantee act was passed in September 2005 and it was implemented in most backward districts of the country since February 2006. NREGA is renamed as Mahatma Gandhi National Rural Employment Guarantee Act Programme (MGNREGA) on 2 October 2009. The Act gives guarantee for at least 100 days of employment in a financial year to a rural household of the job card holders MGNREGA workers. In this act those who apply at the Panchayat for a job card must be given the job card within 15 days. Job card of the MGNREGA worker is a license of the wage worker's family with a record of days of work and wages received during the year. The MGNREGA in 2005 covered 200 districts is the Phase FIRST district and in 2006-2007 this was extended to cover 130

districts known as the Phase SECOND. In Punjab state for the first phase Mahatma Gandhi National Rural Employment Guarantee Programme was implemented in the Hoshiarpur district of Punjab. In Phase third, the Programme was extended to the remaining 285 rural districts of India by 2008. Out of the nine types of works that are prescribed by the MGNREGA, seven relate to water conservation and management works.

1.4 Objectives of MGNREGA

The main objectives of MGNREGA programme are:

- To Ensure social protection for the people living in rural India through providing employment opportunities,
- To Ensure livelihood security for the poor through creation of durable assets, improved water security, soil conservation,
- To Strengthen drought-proofing and flood management in rural India,
- The empowerment of the marginalized communities, especially women, Scheduled Castes and Scheduled Tribes,
- To strengthen the Panchayat Raj Institutions,
- To reduce migration from rural areas.

Thus MGNREGA is now one of the powerful tools that are used for inclusive growth in rural India by providing the livelihood security to the people of India.

1.5 Feature of MGNREGA

The main features of the Mahatma Gandhi National Rural Employment Guarantee act are:

- Right based- frame work:

All adult members of a rural household willing to do unskilled manual work have the right to demand employment. The GP after due verification will issue a job card. After verification, the GP will issue a job card (contain details of the member) to the household with photograph free of cost within 15 days of application.

- Time bound guarantee of employment:

Employment will be provided by the GP within 15 days of work application, else unemployment allowance will be paid. A household may avail to 100 days of guaranteed employment in a financial year, depending on its need.

- Permissible works:

Water conservation; drought proofing (including plantation & afforestation); flood protection; land development; minor irrigation.

- Labour intensive works:

A ratio of 51:49 will be maintained between wage and material. Contractors/machinery is not permitted. Payment of wages: Wages will be paid at the wage earners through their bank/post office accounts.

➤ Decentralization:

Gram sabha (local community) will recommend works to be taken up. Gram panchayats will execute at least 50% of work. PRI will have a principal role in planning, monitoring and implementation.

➤ Work site management and facilities:

Work should be provided within 5 km radius of the village. In case the number of children below the age of 6 years accompanying the women working at any site is 5 or more, provisions shall be made to assign one women worker to look after such children. The person assigned for this shall be paid the statutory minimum wage. Thus creche, drinking water, first-aid and shade are to be provided on the work sites.

➤ Women empowerment:

At least one-third of the workers should be women. Equal wages will be provided to both men & women.

➤ Funding:

100% wage cost is borne by Central Govt. 75 per cent of the cost of material and wages for skilled and semi-skilled workers. Administrative expenses as may be determined by the Central Government. These will include, inter alia, the salary and allowances of Programme Officers and their support staff and work site facilities 25% Material cost is borne by the State Govt. Unemployment allowance is borne by State Govt.

1.6 Implementation structure of MGNREGA

MGNREGA has a five-tier structure of implementation starting from GP at the bottom to the central government at the top. According to the Ministry of Rural Development, The role of the village panchayat or GP constitutes an essential part in promoting local participation and empowerment. The first step of implementation is by the Gram Sabah (village council), which is the established legal body for community participation at village panchayat level. The Act permits the Gram Sabah to facilitate at least 50 per cent of the works to be carried out, to manage and monitor these works and to arrange Social Audits twice a year for transparency and evaluation purposes. Additionally, the Gram Sabah conducts village meetings to give information about the MGNREGA and

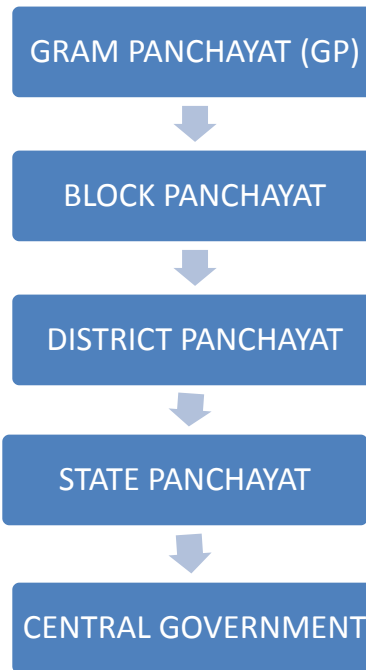
to discuss future works with the villagers. Furthermore, based on local resources and needs, the panchayat prepares village-level plans to be assessed and implemented by the Act. Registration of households and issuing of Job Cards are all in the hands of the Gram Panchayat (GOI- MORD, 2008 and CSE, 2008).

At the block-level panchayat, it is the Intermediate Panchayat who has the responsibility of planning, supervising and monitoring the MGNREGA implementation. Any works not planned by the village panchayat are taken care of at the block level. One of the main tasks is to ensure that every person who applies for work through the MGNREGA is offered work within 15 days of application. Ensuring that Social Audits are held is also a responsibility at the block level (GOI-MORD, 2008 and CSE, 2008).

At the district level, two planning documents are made with the aim of identifying local needs and development potentials of the villages; one district perspective plan for every fifth year and one district annual plan. The purpose of the first plan is to enhance local development potentials through generation of assets by the works implemented in a long-term view. By the latter, the plan describes the various works that have to be implemented by the village-level panchayat by the month of December every year. In addition, the district panchayat has responsibility of issuing funds, and to verify Muster Rolls (workers attendance at each work) (GOI-MORD, 2008 and CSE, 2008).

At the state level, a State Employment Guarantee Council (SEGC) is formed with the overall purpose of advising the State Government in the implementation of the MGNREGA. The SEGC has also the responsibility of determining, which works to be implemented by the programme, to set up a State Employment Guarantee Fund, to hire staff working only with the MGNREGA and to monitor and ensure accountability and transparency through establishing a network of agencies (GOI-MORD, 2008 and CSE,2008).

At the central level, the responsibility of the MGNREGA lies with the Ministry of Rural Development (MORD). With the Minister of Rural Development as the chair person, a Central Employment Guarantee Council (CEGC) is established to advise, monitor and evaluate all issues relating to the act. The CEGC prepares annual reports about the implementation of the MGNREGA to the parliament (GOI-MORD, 2008 and CSE, 2008). The GP is the nodal agency at the bottom level that has the authority to select, design and implement 50% of the works. Selection of works, monitoring and supervision are done by the Gram Sabha (village council). GP has the responsibility to register households, issue job cards, receive applications for employment, provide employment and monitor the



NREGA works. The rest 50% may be undertaken either by the block Panchayat or the district Panchayat or both.

Block Panchayat monitors and coordinates the plans and works at the block level. Computer updating of MGNREGA works, muster roll entries, etc. is done at the block level under the guidance of the MGNREGA programme officer. District Panchayat, in addition to implementing non-mandatory works, coordinates MGNREGA activities at the district level. Next in hierarchy is the state government which acts as a facilitator in the flow of MGNREGA funds and helping in preparation of manpower. It has the responsibility to set up the State Employment Guarantee Council. At the top of the hierarchy comes the central government. The Ministry of Rural Development, New Delhi is the nodal agency for MGNREGA implementation. It has the responsibility to set up Central Employment Guarantee Council for receiving advice on MGNREGA implementation.

1.7 Performance of MGNREGA at National level

A longstanding struggle of social activists demanding right to life resulted in the first round of success through the enactment of National Rural Employment Guarantee Act (NREGA). The Act was passed on 5th September 2005 and came into force in February 2006. The Act was notified in 200 poorest and backward Districts of twenty seven states of India in the first phase with effect from February 2nd 2006 and then extended to an additional 130 Districts in the financial year 2007-2008 (113 Districts were notified with effect from April 1st 2007, and 17 Districts in Uttar Pradesh were notified with effect from May 15th 2007).

The remaining Districts have been notified under MGNREGA with effect from April 1, 2008. The performance of MGNREGA in INDIA is very well in 2006-07, there was only 3.78 crore job card holders that are increasing to 12.50 in 2011-12 and in 2014-15 the number of job card holders in India is 13 crore. The following table 1.2 shows the performance of MGNREGA in India:

Table 1.2: Performance of MGNREGA at National level (INDIA)

Particulars	(FY06-07) 200 District	(FY07-08) 330 District	(FY08-09) 615 District	(FY09-10) 619 District	(FY10-11) 626 District	(FY11-12) 626 District	(FY12-13) 632 District	(FY13-14) All Districts	(FY14-15) All Districts
Total job card issued(in crore)	3.78	6.48	10.01	11.25	11.98	12.50	13.06	13.15	13.00
Employment provided to household(in crore)	2.10	3.39	4.51	5.26	5.49	5.04	4.99	4.79	3.60
Persondays (in crore)									
Total	90.5	143.59	216.32	283.59	257.15	216.34	230.48	220.22	121.25
SC's	22.95 (25%)	39.36 (27%)	635.4 (29%)	86.45 (30%)	78.76 (31%)	47.70 (22%)	51.21 (22%)	49.79 (23%)	27.50 (23%)
ST's	32.98 (36%)	42.07 (29%)	55.02 (25%)	58.74 (21%)	53.62 (21%)	39.59 (18%)	41.00 (16%)	38.23 (17%)	20.17 (17%)
Women	36.40 (40%)	61.15 (43%)	103.6 (48%)	136.4 (48%)	122.8 (48%)	103.8 (48%)	118.2 (51%)	116.2 (53%)	67.31 (56%)
Others	34.56 (38%)	62.16 (43%)	97.95 (45%)	138.4 (49%)	124.8 (48%)	129.1 (60%)	138.3 (60%)	132.3 (60%)	73.56 (61%)
Persondays per HH (days)	43	42	48	54	47	43	46	46	34

Source: www.nrega.nic.in

The total number of persondays generated under MGNREGA in 2006-07 was 90.5 crore that are increase to 121.25 in 2014-15. The total percentage of SC population working

under MGNREGA was 25% that is increase to 31% in 2010-11 and now the 23% SC population working under MGNREGA in India. The women participation is also increased year wise year in 2006-07, there was 40 per cent women working under MGNREGA that are increase to 56 per cent in 2014-15. The share of others is also increase from 38 per cent in 2006-07 to 61 per cent in 2014-15. The total number of persondays generated under MGNREGA in 2006-07 was 90.5 crore that are increase to 121.25 in 2014-15. The total percentage of SC population working under MGNREGA was 25% that is increase to 31% in 2010-11 and now the 23% SC population working under MGNREGA in India. The women participation is also increased year wise year in 2006-07, there was 40 per cent women working under MGNREGA that are increase to 56 per cent in 2014-15.

Thus, the MGNREGA covers the entire country with the exception of Districts that have a hundred per cent urban population. The performance of MGNREGA in INDIA is very well in 2006-07, there was only 3.78 crore job card holders that are increasing to 12.50 in 2011-12 and in 2014-15 the number of job card holders in India is 13 crore. The total number of persondays generated under MGNREGA in 2006-07 was 90.5 crore that are increase to 121.25 in 2014-15. The women participation is also increased year wise year in 2006-07, there was 40 per cent women working under MGNREGA that are increase to 56 per cent in 2014-15. This data shows how MGNREGA contributes to the development of India by providing livelihood security to its poor who lives in rural areas.

1.8 Wage rates under MGNREGA

Every person working under the Scheme shall be entitled to wages at the minimum wage rate fixed by the State Government (or the competent authority concerned) for agricultural labourers under the Minimum Wages Act, 1948, unless the wages have been notified by the Central Government under the Section 6(1) of the Act. As stated in the Act (Schedule I, Section 6), labourers shall not be paid less than the above-mentioned wage rate (hereafter 'the minimum wage') under any circumstances. Equal wages shall be paid to both men and women workers, and the provisions of the Equal Remuneration Act, 1976 shall be complied with. Wages should be paid at least once in a fortnight. Daily wages may be paid on a piece-rate basis.

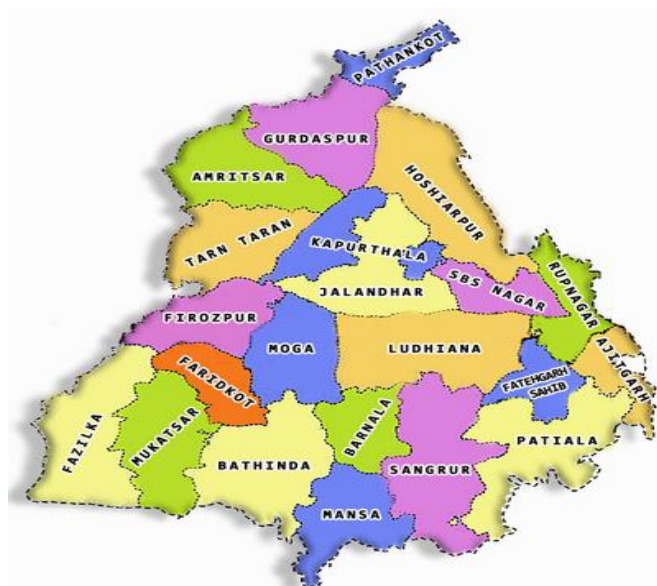
Where wages are paid on a piece-rate basis the work norms must be such that any person working at a normal pace for seven hours earns no less than the minimum wage, as per the Rural Schedule of Rates. Measurements must be recorded in a transparent manner whereby individuals may verify their measurements as and when they are recorded. The payment of

wages is based on the outturn. However, wage rates are varied from state to State. It can be seen from Table 1.3 that the highest daily wage rate is fixed in Haryana (Rs.191) followed by Goa (Rs. 188) and Punjab (Rs. 166) states, while the lowest daily wage rates are witnessed in Bihar and Jharkhand (Rs.122) followed by Arunachal Pradesh, Nagaland, Sikkim and Tripura (Rs.124) and Uttar Pradesh (Rs.125) in 2012-13. In the case of Union Territories, daily wage rate is the highest in Chandigarh and Nicobar (Rs. 189) followed by Andaman (Rs.178) and Dadra and Nagar Haveli (Rs. 157) and lowest in Puducherry (Rs. 132) in 2012-13. In South Indian states daily wage rates are the highest in Kerala (Rs.164) and the lowest in Karnataka (Rs.131) in 2012-13. Recently the rise in MGNREGA wage rates in Haryana the highest wage rate is Rs.236 and in Punjab is Rs.200 in 2014-15. In 2006- 07, highest MGNREGA wage rates in Kerala (Rs.125), Haryana (Rs.99.21) and Punjab (Rs.93-105) states, while the lowest daily wage rates are in Gujarat, Bihar and followed by Maharashtra. In 2009-10, the highest MGNREGA wage rates are in Haryana (Rs.141.02), Kerala (Rs.125) and Punjab (Rs.100-105) states in India. The lowest MGNREGA wage rates in states like: Arunachal Pradesh (Rs.80), Manipur (Rs.81.4) and Odisha (Rs.90) respectively. During the current time period (2014-15) the highest MGNREGA wage rates in the states are: Haryana (Rs.236), Andaman (Rs.222) and Nicobar (Rs.235), Chandigarh (Rs.227).

1.9 PROFILE OF PUNJAB

Punjab is state which is prospers rather than other states of India. It has 22 develop as well under - develop districts. Punjab has 145 developing blocks and 13028 GP's and 66 per cent population lives in rural areas while rest of the 34 per cent are urban residents (Census 2011). Punjab has the highest Dalit population in India which is 31.9 per cent including both SC's and ST's population. In Punjab, total population is 277.04 lakh (male population is 146.35 lakh and female population is 130.69 lakh). The main workers in Punjab are 78.36 lakh persons (male are 64.26 and female are 14.10 lakh persons), marginal workers are 12.92 per lakh persons (male 5.34 and female are 7.58 lakh persons), non- workers are 152.32 lakh persons (male are 60.25 and female are 92.07 lakh persons), cultivators are 20.65 lakh persons (male are 17.63 and female are 3.02 lakh persons) and agricultural labour is 14.90 lakh persons (male are 11.04 and female are 3.86 lakh persons). In Punjab average rainfall is 472.1 Millimetre in 2010.

1.1 Map of Punjab



Phase- wise implementation of MGNREGA in Punjab:

Punjab is recognized as one of the successful implementers of the scheme is being implemented since February 2006 and now in all the 22 rural Districts. The table 1.4 explain the phases as:

Table 1.3: Phase-wise Implementation of MGNREGA in Punjab

Sr no.	Phase	No. of districts	Detail of districts
1	First	1	Hoshiarpur
2	Second	3	SBS Nagar, Jalandhar, Amritsar
3	Third	18	Moga, Mansa, Gurdaspur, Muktsar, Ferozpur, Sangrur, Bathinda, Ropar, Kapurthala, Patiala, Faridkot, Ludhiana, SAS Nagar, Taran Taran, Barnala, Pathankot, Fatehgarh Sahib, Fazilka

Source: www.nrega.nic.in

MGNREGA plays very well role to improve the living standard of the rural people. In Punjab MGNREGA implemented phase wise as: In the first phase only one (1) District (Hoshiarpur) was covered, in the second phase there are three districts are included that are SBS Nagar (old name Nawanshehar), Jalandhar, Amritsar and later it was extended to other Districts in the two and third phases.

1.10 Performance of MGNREGA at State level: PUNJAB

In Punjab no. of household who have demanded employment was 31788 lakhs in 2006-07 that is increased to 454855 lakhs in 2013-14. The total number of person days generated in Punjab was 15.57 in 2006- 07 to 44.63 in 2014-15. The percentage of SC population working under MGNREGA was 69.36 per cent in 2006-07 and increase to 76.94 per cent in 2014-15. The participation of women is also increased from 37.76 per cent to 58.03 per cent in 2014-15. The participation of others also increased from 4.77 in 2006-07 to 10.29 in 2014-15. This data shows that the MGNREGA is very successfully implemented in Punjab and it is very beneficial for the poor who lives in slum as well as underdeveloped areas. In the table 1.5 the performance of MGNREGA in Punjab described as:

Table 1.4: Performance of MGNREGA in Punjab

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
No. of household who have demanded employment in (Lakhs)	31788	49690	149902	272691	278567	245674	242965	454855	301299
No. of households provided employment	31648	49690	149902	271941	278134	245176	234838	411875	228579
Persondays :Total	15.57	19.15	40.27	77.15	75.39	64.36	63.59	134.54	44.63
SC's	10.8 (69.36%)	14.61 (76.3%))	29.63 (74.22%)	60.90 (78.92%)	59.03 (78.39%)	49.94 (77.44%)	50.02 (78.66%)	103.54 (76.94%)	34.34 (76.94%)
Women	5.88 (37.76%)	3.12 (16.29%)	9.82 (24.62%)	20.26 (26.28%)	25.53 (33.83%)	27.85 (43.24%)	29.68 (46.67%)	70.96 (52.74%)	25.9 (58.03%)
Others	4.77	4.54	10.38	16.27	16.34	14.52	13.55	30.97	10.29

Source: www.nrega.nic.in

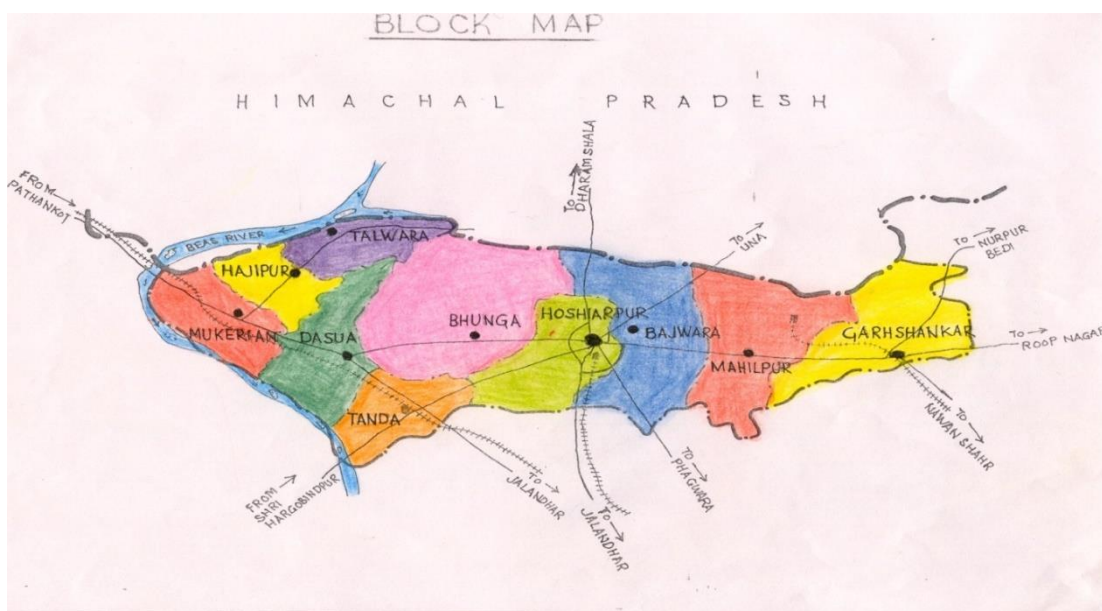
1.11 Profile of Hoshiarpur District

Hoshiarpur district present in north east of Punjab lie between the latitude of 31° 07' 58" and 32° 05' 13". It covers an area of 339285 sq. km. It is bounded by Himachal Pradesh in east and north eastern side, Gurdaspur district in north, Kapurthala and Jalandhar district in west and Nawanshahar district in south. The district Hoshiarpur has four tehsils namely

Mukerian, Dasuya, Hoshiarpur and Garhshankar and include 1449 village and 10 Blocks. The total GP's in Hoshiarpur district are 1373, total population is 15,86,625 lakhs (male are 8,09,057 lakhs and females are 7,77,568 lakhs), the total SC population is 5,57,504 (Male SC's are 2,84,622 and female SC's are 2,73,182 lakhs) and Hoshiarpur district is higher in literacy rate, in it there are 84.6 per cent (male are 88.8 per cent and female are 80.3 per cent) population is educated (Census 2011). The total population of the district is 78.9 per cent lives in rural areas and only 21.1 per cent lives in urban areas (Census 2011). Average rain fall in the Hoshiarpur district is 1125mm or 75 per cent rainfall is experienced in the period of July to September and 15 per cent rainfall is experienced in the winter months of January and February (2014). Total geographical area in Hoshiarpur is 339 hectares. The area under forests is 109 hectares, area under cultivation is 203 hectares, and irrigation area is 154 hectares and gross cropped area is 348 hectares in Hoshiarpur district with 171 per cent crop intensity. In Hoshiarpur, 90 per cent of irrigated area and source of irrigation is tube wells and wells.

District Hoshiarpur, with half of its area as sub-mountainous, is a very backward district of Punjab and 80 per cent of its population is residing in rural areas. Main economic activity of the workforce in the district is agriculture and that too with low productivity of land and labour. There is immediate need to bring changes in the occupation distribution of district from agriculture to other non-farm activities.

1.2 Map of Hoshiarpur District



The main crops in Hoshiarpur that are wheat and paddy that plays a major role for the agricultural production. In Hoshiarpur district of Punjab, there is total area of wheat in the

Punjab that under Hoshiarpur is 4.21 per cent and the total production of wheat in the Hoshiarpur is 2.46 per cent. Similarly, percentage area of paddy in Hoshiarpur is 2.46 per cent of the Punjab and the percentage production of paddy in Hoshiarpur is 2.24 of the production of the paddy in Punjab.

In Hoshiarpur district of Punjab, there is total area of wheat in the Punjab that under Hoshiarpur is 4.21 per cent and the total production of wheat in the Hoshiarpur is 2.46 per cent. Similarly, percentage area of paddy in Hoshiarpur is 2.46 per cent of the Punjab and the percentage production of paddy in Hoshiarpur is 2.24 of the production of the paddy in Punjab. That show the hoshiarpur district also contributed for the agricultura production of Punjab and engaged high population of rural areas in agricultural activities. That show in the table 1.6 as:

Table 1.5: Details of total areas and production under wheat and paddy in Hoshiarpur

Crops	Hoshiarpur			
	Area (in 000ha.)	%age area of Punjab	Production (Metric Tons)	%age production of Punjab
Wheat	148	4.21	671	3.81
Paddy	70	2.46	252	2.24

Source: Statistical abstract of Punjab, 2014

1.12 Performance of MGNREGA at District level: HOSHIARPUR

Hoshiarpur is one of the district of Punjab where MGNREGA implemented very firstly because this district one of the backward district of Punjab. MGNREGA plays an important role for providing the livelihood security to the people of Hoshiarpur. In Hoshiarpur number of household who demanded employment in 2006-07 was 31788 lakhs that was increased to 44581 lakhs in 2009-10 and number of household who provided employment in 2006-07 are 31648 lakhs and 44581 in 2009-10 respectively. In 2014-15 the number of household who demanded employment is 21427 lakhs and provided employment to the households are 17806 lakhs. The SC population work in MGNREGA in Hoshiarpur was 69.63 per cent in 2006-07, in 2009-10 SC population in Hoshiarpur are 62.36 per cent but in 2014-15 the SC people work in MGNREGA 62.46 per cent. Women participation in MGNREGA also increasing year by year like in 2006-07 there are 38 per cent women are working under MGNREGA that are increase to 55.7 per cent in 2014-15.

Thus this data revealed that the MGNREGA provide the livelihood security to the poor people or rural people of the Hoshiarpur district of Punjab.

MGNREGA firstly implemented in Hoshiarpur district so there is very successful implantation of MGNREGA in Hoshiarpur district of Punjab. The following table 1.7 shows the performance of MGNREGA in Hoshiarpur as:

Table 1.6: Performance of MGNREGA in Hoshiarpur

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
No. of household demanded employment (lakhs)	31788	26297	35512	44581	37237	23011	13633	28394	21427
No. of household provided employment (lakhs)	31648	26297	35512	44581	37237	22985	13482	25374	17806
SC's	10.8 (69.36 %)	6.45 (64.44 %)	7.17 (59.45 %)	8.02 (62.36 %)	6.61 (58.03 %)	3.67 (61.68 %)	1.78 (58.17 %)	3.45 (62.73 %)	1.93 (62.46 %)
Women	5.88 (38%)	2.23 (22.3%)	3.14 (26.1%)	3.24 (25.2%)	4 (35.2%)	2.56 (43.1%)	1.35 (44.2%)	2.97 (54%)	1.72 (55.7%)

Source: www.nrega.nic.in

In Hoshiarpur number of household who demanded employment in 2006-07 was 31788 lakhs that was increased to 44581 lakhs in 2009-10. In 2014-15 the number of household who demanded employment is 21427 lakhs. The SC population work in MGNREGA in Hoshiarpur was 69.63 per cent but in 2014-15 the SC people work in MGNREGA 62.46 per cent.

It can be observed from the above that research results are coming out on the impact of MGNREGA. Some research studies revealed the positive results regarding the implementation of MGNREGA such as decline in the migration from rural areas, improving the socio economic status of the beneficiaries, creation of assets which are useful to the farming etc. On the contrary, some research studies have indicated that agricultural sector has been facing the acute shortage of labour for carrying out the agricultural operations. Moreover, the wage rates have increased drastically even if labour is available. By keeping these divergent research results of impact of MGNREGA and

importance of agricultural sector, the present study has been taken up to search the impact of MGNREGA on agriculture Hoshiarpur district of Punjab.

1.13 RESEARCH GAP

Agricultural sector in India has been characterized with high supply of labour than demand, low wages, unskilled labour, skewed distribution of land, and limited options of earning livelihood on one hand and the agricultural production is seasonal in another hand. Indian agricultural sector has undergone a vast change in recent past, mainly due to the increased rural-to-urban migration and some public policies that are introduced by the Governments. Further, the share of the non-farm sector in rural employment has significantly grown over time. All these factors are forcing agricultural labour to go on migrating to different parts of the country for earning a better livelihood. By considering all these factors, GoI introduced MGNREGA in 2005 to provide 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. Its primary objective is to augment wage employment and strengthen natural resource management.

There are various studies conducted on the implementation of MGNREGA and asset-creation through MGNREGA but there is no study conducted on the impact of MGNREGA on agriculture in Punjab. So I choose this topic for study. I will study how MGNREGA impacts the availability of rural labour and role of MGNREGA in wage determination in Punjab. I will analyse the minimum agricultural wage rates with comparison of MGNREGA wage rates and how MGNREGA affects the wage rates in Hoshiarpur.

1.14 OBJECTIVES OF THE STUDY

The objectives of the study are:

1. To identify the socio- economic status of MGNREGA beneficiaries in Hoshiarpur.
2. To study the opinions of farmers on shortage of agricultural labour due to MGNREGA in Hoshiarpur.
3. To study the opinions of farmers on increase in agricultural labour cost due to MGNREGA in Hoshiarpur.

1.15 ASSUMPTIONS OF THE STUDY

The study is based on these assumptions:

1. Socio- Economic status of MGNREGA workers improved.
2. MGNREGA causes an adverse effect on the availability of labour to the agricultural operations

3. MGNREGA causes to increase in agricultural labour cost.

1.16 HYPOTHESIS TO BE TESTED

1. There is association or not between the MGNREGA and availability of labour to agriculture operations
2. There is association or not between the MGNREGA and cost of agricultural labour.

1.17 RESEARCH METHODOLOGY

The study “Impact of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on Agriculture: a case study of Hoshiarpur District” conduct in Hoshiarpur one of the district of Punjab where MGNREGA implemented very firstly. The total area under wheat in Punjab is 3510 hectares and the production of wheat is 16472 tonnes. In paddy, the total areas in Punjab are 2831 hectares and production is 16255.5 tonnes (statistical abstract of Punjab, 2014). In Hoshiarpur percentage of district area of total state area is 6.74 from which percentage district area net sown area to state area is 4.84 and the net irrigated area of Hoshiarpur of the Punjab is 4.50.

**Table 1.7 General information of administrative blocks of Hoshiarpur district,
31march 2014**

Sr. no.	Name of blocks	No. of GP's	No. of HH job card holders	BPL household	Ranking of blocks
1	Tanda	118	6819	143	1
2	Hoshiarpur- 1	186	9436	2046	2
3	Hoshiarpur- 2	118	6089	738	3
4	Bhunga	179	9926	702	4
5	Talwara	97	7440	543	5
6	Mukeria	138	6694	772	6
7	Dusuya	148	8992	574	7
8	Garshankar	142	7899	1913	8
9	Mahilpur	150	8008	148	9
10	Hajipur	96	7106	197	10

Source: Additional Deputy Commissioner, Hoshiarpur (Punjab)

Though the Hoshiarpur district has highest literacy rate in the state yet it is economically backward. Its backwardness is mainly due to topography of the district. The Shivalik hills, from North- East and South- East alignment, run throughout the length of the district. The Hoshiarpur district has 10 administrative blocks. In Hoshiarpur district there are 10 blocks from which I select 4- blocks which are highly performed blocks of the Hoshiarpur district. I select the Hoshiarpur-1 and Bhunga and Hoshiarpur-2 and Tanda to check the impact of MGNREGA on the agriculture of the Hoshiarpur district. Total two crops like wheat and paddy are selected for the study which are labour intensive crops and play a significant role in agricultural sector and economy of Punjab. The villages or the GP's from these blocks are selected conveniently.

Sample size

Blocks and villages are selected on the basis of the best performing in the Hoshiarpur. A sample of 30 respondents from each GP is selected, which consist of 15 beneficiaries of MGNREGA and 15 farmers. As two GP's are selected from each four blocks from the district, total sample size in each block are 60.

Table 1.8: Selection of Sample Respondents

District	Blocks	GP's or villages	Beneficiaries (sample size)	Farmers (sample size)	Total No. of sample	
Hoshiarpur	Hoshiarpur- 1	Talwandi Raian	15	15	30	
		Dhamian kalan	15	15	30	
	Total number of sample from this block is = 60 (30 MGNREGA beneficiaries and 30 farmers)					
	Bhunga	Bassi Wazid	15	15	30	
		Johal	15	15	30	
	Total number of sample from this block is = 60 (30 MGNREGA beneficiaries and 30 farmers)					
	Hoshiarpur- 2	Bassi Daulat khan	15	15	30	
		Dada	15	15	30	
	Total number of sample from this block is = 60 (30 MGNREGA beneficiaries and 30 farmers)					
	Tanda	Harsi Pind	15	15	30	
		Jaja	15	15	30	
	Total number of sample from this block is = 60 (30 MGNREGA beneficiaries and 30 farmers)					
	4	8	120	120	240	

Thus the total sample size of the study is 240, consisting of 120 beneficiaries of MGNREGA and 120 farmers. The selection of MGNREGA beneficiaries is purposively

and selection of farmers are stratified sampling as small farmers (less than 2 acre) medium farmers (2 to 5 acre) and large farmers (above 5 acre). Thus the sample of 120 farmers consists of 40 small farmers, 40 medium farmers and 40 large farmers.

From the four blocks of Hoshiarpur district, I conveniently selected eight GP's from these blocks. From these GP's 30- 30 respondents (15 MGNREGA beneficiaries and 15 farmers) are chosen for study. Hoshiarpur district has highest literacy rate in the state yet it is economically backward. Its backwardness is mainly due to topography of the district. The Shivalik hills, from North- East and South- East alignment, run throughout the length of the district.

Thus from the four blocks of Hoshiarpur district, I conveniently selected eight GP's from these blocks. From these GP's 30- 30 respondents (15 MGNREGA beneficiaries and 15 farmers) are chosen for study. The study requires both primary and secondary data. Separate questionnaires are designed for collecting primary data from the beneficiaries and the farmers, while the secondary data is collected from the website of MGNREGA www.nrega.nic.in , report to people MGNREGA reports, NSSO reports, Labour Bureau reports, and yearly agriculture reports. For Statistical analysis, the data is collected from the primary sources are analysis by using the ratio analysis, percentage and ANOVA and t-test techniques. SPSS used for analysis of the both qualitative and quantitative data.

Analysis of Variance (ANOVA): Analysis of variance is an important statistical technique used to test the hypothesis that the means of two or more populations are equal. In case of more than two means, one can also use t-test for comparing means but the chances of type I error increases. To avoid this situation, in case of more than two population means, the appropriate test for testing equality of two or more means is analysis of variance. R. A. Fisher, the father of statistics, developed a technique called 'experimental design' to establish cause and effect relationship between variables. In fact, ANOVA is an important part of a large 'experimental design' setup. Essentially in ANOVA, we have a dependent variable which is quantitative in nature and one or more independent variables which are categorical in nature. The independent variables which are categorical variables are also called **factors**. Combination of factors or categories is called **treatment**. When there is a single independent variable or a single factor, it is called **one-way ANOVA**. If there are two or more factors it is termed as **n-way ANOVA**. ANOVA is based on the following assumptions:

- Samples are drawn from normally distributed populations.

- Samples are randomly drawn from populations and independent of each other.
- Populations from which samples are drawn have equal variances.

One-Way ANOVA

In one-way ANOVA, we have one dependent variable and one categorical independent variable. The idea is to find how much variation in dependent variable is explained by categorical independent variable and how much variation is not accounted by this independent variable. In fact, we will try to decompose total variation in dependent variable (Y) into variation explained by categorical independent variable (X) and variation not explained by X, that is, error. In analysis of variance, the aim is to test the null hypothesis that the means of two or more population are equal. In other words, our null and the alternate hypotheses are:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \dots = \mu_k$$

H_1 : Not all means are equal

Thus ANOVA can be computed with three sums of squares: SSC (sum of squares between columns), SSE (sum of squares within samples) and SST (total sum of squares). F is the ratio of two variances. In case of ANOVA, F value is obtained by dividing the treatment variance (MSC) by the error variance (MSE).

$$F = \text{MSC} / \text{MSE}$$

Where: MSC is the mean square columns and MSE the mean square error.

The above hypothesis is tested by the F statistic with (k-1) and (n-k) degrees of freedom in the numerator and denominator respectively.

1.18 Scope of the study

The scope of the study is that there is further scope for research in this area. One may look into the scope for the convergence of MGNREGA with the agriculture to overcome the problem of labour scarcity. One can make a study of MGNREGA in other districts of Punjab as each district is having its own peculiar agriculture systems and socio economic features. A cost benefit analysis of expenditure incurred by the Government on asset creation under MGNREGA and benefits derived by the participants as well as farming community may also be under taken. It may also be of interest to find out the behavioural implications of MGNREGA on the participants as well as farmers. Thus there is wide scope of the study for the further research.

1.19 Limitation of the study

The present study is limited to Hoshiarpur District of Punjab. Hoshiarpur one of the backward district of Punjab and there is very different social as well as economic conditions vary place by place. Moreover, during collection of primary data from the respondents, the bias of the respondents might have crept into the answers. Further, respondents were replying to the queries by recollecting their past memories. Hence, there is a chance of deviation from the actual scenario. The information used for analysis collected from sample respondents, its validity depends on the honesty of the respondents.

1.20 Chapter Scheme

The chapter scheme includes the following six chapters as:

Chapter-1: introduction

Chapter-2: Review of Literature

Chapter-3 Analyse the socio- economic status of MGNREGA beneficiaries

Chapter-4 Impact of MGNREGA on availability of agriculture labour

Chapter-5 Impact of MGNREGA on agriculture labour cost

Chapter-6 Summary and Conclusions

In the **First chapter** explains the history of the employment schemes in India, introduction about the MGNREGA, status of the MGNREGS at national, state and District level, funding procedure of the MGNREGA, wage rates under MGNREGA in different states, outreach and implementation of the scheme in Punjab and basic demographic features of the select Hoshiarpur District, need and scope of the study, sampling procedure, data collection and statistical analysis. The **Second chapter** is dedicated for the collection of different reviews of research related to the present research work or different studies that are related to the present work. The **Third chapter** is devoted to assess the socio economic characteristics of participant households of MGNREGA in the Hoshiarpur district. The **Fourth chapter** discussed about the impact of the MGNREGS on availability of agricultural labour and the **Fifth chapter** discussed about the impact of the scheme on agricultural wage rates in Hoshiarpur district. The **Sixth chapter** summarizes the study from the emerged findings, presents the broad conclusions and offers a few policy implications based on the findings.

CHAPTER-2

REVIEW OF LITERATURE

Review of literature is essential to take stock of few things to design the framework for the study. Review of literature is arranged with a view to look into the findings of few researches which were conducted earlier and which are also related to the analysis of the previous research findings that helps the researcher to know how the hypothesis are constructed, types of data and tools used for research etc.

A number of literature based on empirical studies are available on the role of MGNREGA in achieving livelihood security and its impact on rural labour market and agriculture. These studies depict that MGNREGA programme has shown mixed results so far in whole rural India.

Bardhan Kalpana (1977) in paper “Rural Employment, wages and Labour Markets in India” explained that the labour participation rates in rural India declined and the decline was high in the case of women than men. The decline in women labour participation was also unequally distributed between regions, less in the states of Kerala, west Bengal, Punjab and U.P. and more in the western states and eastern states of Orissa, Bihar and Assam. On the basis of NSS data for 1970’s Bardhan traces the nature and impact of the rural migration on the rural labour market. It is also analysed that seasonal migration of labour into and out of the village is an important mechanism of adjustment of labour supply to seasonal change in labour demand for agricultural operations. Such rural-to-rural migration for agricultural work is the single major type of migration in the rural India.

Parmar B.D. (1987) “Rural Labour Market: An Empirical Study of Farm Wages in Saurashtra Region” studied the Asian countries including India has a relative abundance of labour resources in comparison to land and capital. Saurashtra region a part of Gujarat is also having surplus labour. In labour surplus economy, the supply of labour should be perfectly elastic. For analysis the wage of daily and resident workers, primary data have been used. The method of stratified sampling has been adopted for collecting primary data. In this study it is found that 85.07 per cent of male members of a family work as daily workers in sample households of developed villages and such percentage are 82.99 in underdeveloped villages. As regards female daily workers, the percentage turns out to be 84.58 and 73.97 in developed and underdeveloped villages respectively.

Sidhu H.S. (1988) “Wage determination in the rural labour market :the case of Punjab and Haryana” this paper identified the factors which play an important role in the process of wage determination in term of demand and supply of rural labour in the most developed regions of the country like Punjab and Haryana. The new technology of agriculture is not the increase in the demand of labour but also increase the bargaining power of wage labour. The agricultural wages are positively related with demand factors like irrigation, cropping intensity, use of HYV’s and negatively related with supply factors such as relative size of agriculture labour.

Nair Sukumaran (1997) “Rural Labour Market in Kerala: small holder agriculture and labour market dynamics” he studied the rural labour market in Kerala and he states that there is relatively labour shortage in rural Kerala by the small holder tree crop character of agricultural sector. In this paper firstly understand the dynamics of rural labour market behaviour, the factors governing the labour demand conditions are analysed with empirical data, the stickiness of labour supply in the context of increasing demand and implications of the labour shortage for labour market flexibility and agricultural development in Kerala.

Deshpande (1998) “Impact of Liberalization on Labour Market in India: What do Facts from NSSO’s 50th Round Show?” This paper analysed the highlight the favourable and unfavourable impact liberalisation of 1991 has had, in the short run, on the labour market in India. The demand for labour increased after liberalisation but the increase was not shared evenly in rural and urban India between men and women, and regular and casual workers. The structure of employment moved away from the primary sector for rural men, but rural women lost in employment, real wages and the share of primary sector in their employment increased. Gender-based inequality in earnings of casual workers was reduced but that in the earnings of regular workers increased. Liberalisation has affected casual labourers, particularly the women casual workers, mostly than regular workers.

Mathur (2007) argued in favour of MGNREGA because according to him MGNREGA positively affect the lives of the rural poor. He showed that migration was less in several villages in Andhra Pradesh, Chhattisgarh, Orissa and Rajasthan states of India and minimum wage were raised in many states, the participation of women increased in the districts of Rajasthan and Uttar Pradesh.

Dreze (2007) in paper “Employment Guarantee and the Right to Work” studied the corruption in rural employment programs in Orissa and how this has continued in a

NREGS as well. Nonetheless, he believes that there is tremendous potential of NREGA in the survey areas. Where work was available, it was generally found that workers earned close to the statutory minimum wage of Rs.70 per day, and that wages were paid within 15 days or so. This is an unprecedented opportunity for the rural poor, and there was evident appreciation of it among casual labourers and other disadvantaged sections of the population. There is the hope among workers that NREGA would enable them to avoid long-distance seasonal migration, with all its hardships. Further, there is plenty of scope for productive NREGA works in this area, whether it is in the field of water conservation, rural connectivity, regeneration of forest land, or improvement of private agricultural land. The challenges involved in “making NREGA work” should always be seen in the light of these long-term possibilities and their significance for the rural poor.

Datt (2008) revealed that there is very few people received the benefit of MGNREGA, like out of 20.1 million household employed in the MGNREGA, only 2.2 million (i.e. 10.5%) received a full 100 days employment and wages. The average employment per household was 43 days in 2006-07 and 35 days in 2007-08 respectively. He reported that main constraints under MGNREGA were lack of professional management, lack of proper planning, bureaucratic resistance to MGNREGA, insufficient rates of payment, lack of facilities on worksite and lack of transparency and social audit.

Akhand Akhtar Hassain (2008) in his paper “Rural Labour Market Developments, Agricultural Productivity, and Real Wages in Bangladesh, 1950-2006” analysed recent developments in rural labour markets in Bangladesh and also examined the trends and movements of agricultural productivity and real wages with annual data for the period 1950-2006. The paper develops a simple model of agricultural real wages that depend on agricultural productivity. In order to examine the long-run relationship between agricultural productivity and real wages, the paper applied the Autoregressive Distributed Lag Bounds testing approach. Empirical results suggest that there exists a long-run relationship between agricultural productivity and real wages.

Reddy and Roy et.al (2009) “Soil and Water Conservation Works through National Rural Employment Guarantee Scheme (NREGS) in Andhra Pradesh- An Analysis of Livelihood Impact” Indicated that MGNREGA has reduced migration by providing work closer to home and decent working conditions. They studied in Anantpur, Andhra Pradesh observed that the scheme brought down the migration levels from about 27 per cent to 7

per cent in the sample villages due to availability of work. Thus MGNREGA is very helpful for reduce the distress migration.

Singh Sukhpal (2009) “Survival of Agricultural Labour in Punjab: A Burning Question” A study of farmer and agricultural labour suicides by Punjab Agricultural University for the government of Punjab was released in April 2009. Through a census conducted in the two districts of Bhatinda and Sangrur, the study reveals that during the period of 2000-08, 2,890 suicides were committed by the farmers and agricultural labourers, out of which 1,133(39.2%) were of agricultural labourers. Agricultural labour is one of the most important means of livelihood in the rural economy in terms of numbers, and this has been increasing over time. The structural transformation process in Punjab has reduced income generation in the rural economy, although the population continues to be dependent upon agriculture as the most important source of livelihood.

AFPRO (2009) carried out a study in Chainpur Block, District Gumla, Jharkhand on “Infrastructure Development and Beyond: Exploring the Scope for Sustainable Livelihood Support under MGNREGA” Recognizing the need to learn from work carried out in MGNREGA and its effectiveness for sustainable livelihood support at the community level, An assessment was done of 37 works in 28 villages and 10 Gram Panchayats (GP) in Chainpur block. Works covered included—ponds, wells, roads, check dams, earthen bunds, land levelling sites and guard walls. Works were selected on a random basis from different years of MGNREGA implementation since 2006. Areas for improvement at village-level were related to effective participation of villagers/beneficiaries in the decision making process, selection of need-based programmes, and increasing the ownership of infrastructure created under the programme. The need to give priority to selection of smaller structures for soil and water conservation has also been highlighted in the recommendations. Giving better tools to workers, orientation of functionaries, co-ordination among line departments, etc. are some of the other measures suggested.

Usha Rani Ahuja et.al (2011) in paper “Impact of MGNREGA on Rural Employment and Migration: A Study in Agriculturally-backward and Agriculturally-advanced Districts of Haryana” They studied the impact of MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GAURANTEE ACT on two districts of Haryana like Karnal as an agricultural advanced district and Mewat as an agricultural backward district. They examined the employment status, income, landholding size and other assets in two districts by taking sample of 120 farm families and taking 60 from these two

districts. To assess the impact of MGNREGA, they studied the income and employment security, migration, socio and economic status by taking the 30 MGNREGA workers and 30 non-MGNREGA workers from each district and they used the employment, wages and migration variables. A logit model was used to assess the impact of MGNREGA on rural households. They concluded that MGNREGA has not been able to check the migration from the developed region because of higher wage rates at destinations.

Anjani kumar et.al (2011) in their paper “Rural Employment Diversification in India: Trends, Determinants and Implications on poverty” expressed that the rural sector in India is undergoing a transformation and the contribution of rural non-farm sector to the rural income and employment has been growing. The study also revealed an acute labour shortage in the Cuddalore district for the agricultural works, affecting consequently the productivity levels of almost all the crops grown in the district. If this trend continues, the cropping pattern of the district may even get a shift towards tree crops like cashew and coconut, which are comparatively less labour intensive. The reasons identified for the labour scarcity include higher wages in other locally available jobs, seasonal nature of agricultural job and presumption of an agricultural job as a low-esteem one.

Basu A.K. (2011), “Impact of Rural Employment Guarantee Schemes on Seasonal Labour Markets: Optimum Compensation and Workers” He studied the impact of employment guarantee schemes like national rural employment guarantee act (NREGA) in the context of an agriculture sector by lean season involuntary unemployment as a effect of tied labour contracts. He examined the labour and output market and attained the objectives of increase in agriculture production and maximum welfare of labour.

Mukherjee, D and U B Sinha (2011) analysed the impact of NREGA scheme on (i) rural labour market, (ii) income of the poor households and (iii) overall agricultural production. It is seen that the income from NREGA alone can be a substantial part of the target income of the poor. In such a situation, the poor may exhibit a backward bending supply curve of labour which may lead to an aggregate reduction in agricultural output. This adverse production effect can take place even when the NREGA activities lead to a moderate improvement in agricultural productivity.

Akhil Alha and Bijoyata Yonzon (2011) opined in “Recent Developments in Farm Labour Availability in India and Reasons behind its Short Supply” that the agricultural sector in India has been characterized with high supply of labour than demand, low wages, skewed distribution of land, and limited options of earning livelihood. This sector has

undergone a vast change in recent past, mainly due to the increased rural-to-urban migration and partly due to the inception of MGNREGS and other public works. The structural changes in Indian economy in recent past have made male-migration a lucrative phenomenon while schemes like MGNREGS are found to be attractive for females in rural locations. This has caused a shortage of farm labour and consequently, an upward push in agricultural wages. The study has suggested that there is a need to implement MGNREGA and other public works schemes with full potential to improve the economic conditions of vast pool of agricultural workers who have been living in distressed conditions for many decades. They further opined that the agricultural sector in India has undergone a perceptible change in recent years and an apparent shortage of labour is observed in rural farms, a phenomenon which was highly unlikely in the Indian context till recently. Till not very long ago, Indian agriculture was marked by abundant supply of farm labour and a sizeable portion of work force was absorbed in it even when it was not actually required. This labour remained under-utilized due to the residuary nature of agricultural occupations. The decline in rural to urban migration between the period 2004-05 and 2007-08 may be due to the introduction of safety nets like MNREGS, a constant run of good monsoons and better access to credit.

Selva Maheshwari and Gangwar (2011) have conducted a study on “Impact of Rural Development Scheme on Availability of Agricultural Labour — A Study of Dairy Farmers in Thanjavur -District of Tamil Nadu” and found that the labour wages have increased significantly from Rs.60 to Rs.110 per day since the implementation of MGNREG scheme. It has been observed that animals of some landless/ small dairy farmers are being maintained by the children or aged family members, as majority of adult family members prefer the MGNREGS jobs to earn wages. These adult members have complained about not getting 100-day wage employment as per provisions of scheme. The wage payments are also delayed after completion of work and they face problems in getting the job cards. The study has concluded that the minimum wages under MGNREGS should be increased cautiously keeping in view its impact on agricultural/ livestock activities. Further opined Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is a vital milestone and mechanism, the manifestations of which have led to the reviewing of crucial issues regarding the impact of development interventions in the rural ecosystems.

Baljinder Kaur et.al (2011) conducted a study in Punjab on “Causes and Impact of Labour Migration” and expressed that the influx of migrant labour particularly in agriculture sector started with the green revolution and picked up subsequently. Further, they opined that due to monoculture in the cropping pattern, the state has become largely dependent on migrant labourers for various agricultural operations. The influx of seasonal as well as permanent labour from outside has led to various socio-economic problems in Punjab. Their results have revealed that better income and employment opportunities at the destination place were the major factors responsible for migration. About 64 per cent of the respondents earned less than 20000 per annum at their native places and 60 per cent of them had less than 200 days of employment in a year, whereas 23 per cent of the labourers were unemployed at their native place. However, after migration 63 per cent of the migrants could earn from Rs.20000 to Rs.50000 per annum and 34 per cent earned more than Rs.50000 per annum in Punjab, leading to a major share (60% of total income) as remittances sent back to their native places. On the other hand, the flip side of the influx of migrants in the study area increased the drug menace by 37 per cent, social tension by 45 per cent and crime by 43 per cent.

Mehtabul, Azam (2012) in his paper “The Impact of Indian Job Guarantee Scheme on Labour Market Outcomes: Evidence from a Natural Experience.” He studied the impact of MNGREGA on labour market outcomes using data from NSSO for the year 2004-05 and 2007-08, he performed a difference-in-difference analysis the effect of MNGREGA on wages, public works participation and labour force participation. He concluded that there is a positive effect on labour force participation and wages of women compared with non MGNREGA districts.

Harisha et.al (2011) in their paper “Impacts and Implications of MGNREGA on Labour Supply and Income Generation for Agriculture in Central Dry Zone of Karnataka” conducted a study on Impacts and Implications of MGNREGS on Labour Supply and Income Generation for Agriculture in Central Dry Zone of Karnataka and expressed that the number of days worked in a year with the implementation of MGNREGA programme has significantly increased to 201 days, reflecting 16 per cent increase. Regression analysis has revealed that gender, education and family size of the workers are the significant factors influencing the worker’s employment.

Srikantha Murthy and Indumati (2011) in their paper “Economic Analysis of MGNREGA in the Drought-prone States of Karnataka, Rajasthan and Irrigation-dominated State of Andhra Pradesh” conducted a study on Economic Analysis of MGNREGA in the Drought-prone States of Karnataka, Rajasthan and Irrigation-dominated State of Andhra Pradesh and found that only around 50 per cent of the households who had registered under MGNREGA, actually demanded employment. Such a modest proportion availing MGNREGA employment is due to favourable labour market outside MGNREGA and outside agriculture. Of the total number of households demanding employment, 92-97 per cent were provided employment in the drought-prone states of Karnataka and Rajasthan, while for irrigation-dominated state of Andhra Pradesh, it was reported that 107 per cent. Thus, in Andhra Pradesh, employment under MGNREGA is being offered even to those households who did not demand for it. They found that above 60 per cent beneficiaries of MGNREGS has the age below 40 years, and 32 -35 % are in between 40 to 60 years and 4 to 6 per cent beneficiaries have the age group of above 60 years.

Prabhakar et.al (2011) in their paper “Labour Scarcity – Its Immensity and Impact on Agriculture” expressed that even though India has the second largest man power in the world, all sectors of the economy have been affected by the scarcity of labour, and the impact being felt more in the agricultural sector. The 2001 Census of India defined agricultural labour as any person who worked on another person’s land only as labourer, without exercising any supervision in cultivation, for wage in cash or share such as share of produce. The portion of agricultural workers to the total workers has been declining over the years, while the corresponding ratio in the secondary and tertiary sectors is on the rise. These impacts have been predominantly noticed in agriculture in recent years: reduction in crop yield, reduction in cropping intensity and changes in traditional cropping pattern. Though agricultural research has evolved-in many crop specific, labour-saving implements and technologies, the problem has not been addressed fully. Another matter of concern is that in the sociological perspective, the vocation of casual agricultural labour is considered to be the last resort and hence preferred only by people who have no other means of livelihood.

Baba et.al (2011) conducted a study on “Scarcity of Agricultural Labour in Cold-Arid Ladakh: Extent, Implications, Backward Bending and Coping Mechanism” opined that Agricultural labour is a vital input in the agricultural production system in India. The phenomenon of underemployment is manifested in daily lives as a large proportion of

labour demand is met by wage labour, due to the skewed land distribution and seasonality of demand in agriculture. However, agricultural labourers are not generally well placed to take advantage of them and mobility out of agricultural labour remains low.

Vanitha and Murthy (2011) conducted study on “An Economic Analysis of MGNREG Programme in Mysore District of Karnataka” and observed that among the total participants and non-participants of MGNREGS, 70 per cent in each case were agricultural labourers. In the total income earned by participants and non- participants, a major proportion was from agricultural labour work (60.55% and 52.59%, respectively), followed by crop cultivation (24.95% and 47.41%, respectively) and MGNREGS (14.50% in case of participants). Average annual person-days of employment generated from MGNREGS works was 57. About 68 per cent of landless participants derived 28 per cent of their household income from MGNREGS compared to only 6 per cent in case of participants with land. The study has found that, there has been reduction in the supply of labour to agriculture to the extent of 40.67 person-days per year on an average after the implementation of MGNREGS. Hence, MGNREGS works need to be executed only during off- season.

Channaveer et.al (2011) conducted a study on “Impact of MGNREGA on Input-use Pattern, Labour Productivity and Returns of Selected Crops in Gulbarga District, Karnataka”. The study has tried to capture the effect of MGNREGA by selecting two sets of villages in the Gulbarga district of Karnataka, one which have utilized 75 per cent of allocated funds and the other which have utilized less the 25 per cent of allocated funds under MGNREGA. The total cost of cultivation in fully implemented MGNREGA villages has been found higher by 22.91 per cent and 16.37 per cent in red gram and Rabi jowar. The labour productivity of male and female has been noticed lower in fully-implemented MGNREGA villages for all operations in both the crops. The implementation of MGNREGA had increased the wage rates in the fully-implemented MGNREGA villages.

Prattoy Sarkar et.al (2011) conducted a study on “Impact of MGNREGA on Reducing Rural Poverty and Improving Socio-economic Status of Rural Poor: A Study in Burdwan District of West Bengal” and has examined the socio-economic impact of MGNREGA on the rural poor who are mainly comprised of small and marginal farmers and agricultural labourers. They have been found that significant changes have taken place in the socio-economic variables like annual per capita income, monthly per capita food expenditure, annual per child expenditure on education, per capita savings, condition of the

dwelling houses, access to healthcare facility and possession of other assets or luxury items for those households which are regularly working in the scheme.

Berg et.al (2012) “Can Rural Public Works Affect Agricultural Wages? Evidence from India.” tested the impact of the Indian government’s major public works programme, National Rural Employment Guarantee (NREG), on agricultural wages. The rollout of NREG in three phases is used to identify difference-in-difference estimates of the programme effect. Using monthly wage data from the period 2000–11 for a panel of 249 districts across 19 Indian states, they find that NREG boosts the real daily agricultural wage rates by 5.3 per cent. The wage effect appears to be gender neutral and biased towards unskilled labour. This positively affect across different implementation stages and months. They have argued that since most of the world’s poor live in rural areas and the poorest of the poor is agricultural wage labourer that lives in very critical situations.

Zimmermann, L (2012) in his paper “Labour Market Impacts of a large- scale public works program: Evidence from the Indian Employment Guarantee Scheme” analysed impact of Indian national rural employment Guarantee Scheme on the rural labour market by using the regression discontinuity design. He found that private sector wages increased for women with comparison of men during the main agricultural seasons. He also analysed that there is very little evidence for negative private employment effects.

Dutta, et.al (2012) in their paper “Does India’s Employment Guarantee Scheme Guarantee Employment?” used the India’s National Sample Survey of 2009/10 to test the wage rates under MGNREGA. They also analysed how national rural employment act reduce migration from rural areas and people come back to their house and get livelihood security.

Reddy, A (2013) in his paper “Dynamics of Rural Labour Market: Evidence from Longitudinal panel data in India” he tried to analysis the structural transformation of the economy by using the longitudinal panel data from 1975 to 2010. That showed that in 1980’s most population employed in agriculture with very few days in paid work. But now this time there is increase in opportunities of self-employment and non- self- employment in rural areas. He also showed that the real wage rates increases before the implementation of MGNREGA and migration and increased agricultural productivity.

Zimmermann (2013) examined the impact of MGNREGA on private casual wage employment, public works employment and self-employment using unit record data for 2007/8, and adopting a regression discontinuity approach. Her findings suggest that

MGNREGA has had an insignificant effect on public works employment. She also finds evidence that suggests that people moved out of private casual wage employment into self-employment due to the MGNREGA.

Imbert and Papp (2013) “Labour Market Effects of Social Programs: Evidence from India’s Employment Guarantee” He studied the indirect impacts of MGNREGA and find that public sector hiring crowds out private sector works and increase private sector wages resulting in welfare gains to the poor that are large in absolute terms and large relative to the gains received by program participants. He reported a 4.5 per cent increase in casual wages in the dry season and insignificant change in the casual wage in the rainy season.

Imbert and Papp (2014) in his paper “short-term migration and rural workfare programs: evidence from india” examined the impact of MGNREGA on employment in public and private works. While they also used the DID (Difference- in- Difference) strategy to estimate causal impacts and also disaggregate the analysis by season. They find a 1.04 percentage points increase in the fraction of days spent in public works during the Dry season (defined as being from January to June), and a decline of 1.23 percentage points in private work in the same season. They interpret this finding as evidence to suggest that private sector employment is being substituted by public works employment in the Dry season. In the Rainy season (defined as being from July to December), they do not find any significant difference in employment in either the private or the public sector. While Imbert and Papp disaggregate the labour market into private and public sectors, they do not further disaggregate the private sector into agriculture and non-agriculture, nor do they examine casual labour separately. Also, in terms of methodology, although they have several time-varying (household and district-specific) controls, they do not account for differential time trends that may exist across agro-ecological zones.

Deepak Varshney et.al (2014) in paper “The impact of MGNREGA on cropping patterns, wages and labour use” They used the district level data from 2000-01 to 2009-10 to examine the impact on irrigated area and cropping patterns and agricultural wages. By using unit record data from the NSSO from the period 2004-05, 2007-08 and 2011-12 to estimate the impact on employment (casual, self and regular) and wages (agriculture and non- agriculture sector). They compared the outcomes from partial implementation (2004-05 and 2007-08) with full implementation (2007-08 and 2011-12). By using difference-in-difference model they arrive on the conclusion that there is no impact of MGNREGA on

irrigated area and the mixed impact on cropping patterns. There is also increase in agriculture wages.

DN Reddy et.al (2014) “Impact of Mahatma Gandhi National Employment Guarantee Act (MGNREGA) on Rural Labour Market” He studied the impact of MGNREGA on the fulfilment of the basic entitlements like days of employment, wages and incomes and the coverage of SC and ST population and women and poverty alleviation. This study based on both micro as well as macro level data. The micro level data based on the reports of focus group discussions in villages of Andhra Pradesh. MGNREGA responsible to increase in agricultural wages, shortage of labour in agriculture, peak season adjustment of work or adoption of MGNREGA calendar and migration between the period 2006-07 and 2011-12. The shortage of labour in agriculture sector one of the constraints to increase the agriculture production and increase in agriculture cost. He also suggested that development of labour saving technologies and use of machines in agriculture sector and strengthening the rural urban connectivity, social protection of migrate labour are used to strengthen the rural labour market.

Sum up

Thus we can say that all these studies are related to the positive as well as negative impact of the mahatma Gandhi national rural employment guarantee act on the wages, employment, agriculture, migration, economic and social status of the people. Azam and impert and papp, and Berg et al (2012) stress on the increase in the agricultural wages from 4% to 8% and the decrease in supply of labour for the agricultural works.

Agricultural sector in India has been characterized with high supply of labour than demand, low wages, unskilled labour, skewed distribution of land, and limited options of earning livelihood on one hand and the agricultural production is seasonal in another hand. Indian agricultural sector has undergone a vast change in recent past, mainly due to the increased rural-to-urban migration and some public policies that are introduce by the Governments. Further, the share of the non-farm sector in rural employment has significantly grown over time. All these factors are forcing agricultural labour to go on migrating to different parts of the country for earning a better livelihood. By considering all these factors, GoI introduced MGNREGA in 2005 to provide 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. Its primary objective is to augment wage employment and strengthen natural resource management.

CHAPTER- 3

SOCIO- ECONOMIC STATUS OF MGNREGA BENEFICIARIES

Introduction

MGNREGA is one of the programmes that play a major role for the rural development in India. It is the world's biggest employment guarantee programme and aims at enhancing livelihood security of households in rural areas of the country by providing 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. Its primary objective is to augment wage employment and strengthen natural resource management. Job cards are issued to all the workers seeking employment under MGNREGA scheme and unemployment allowance is paid, if work is not assigned within 15 days. Under the MGNREGA there is use of machines which replace human labour is minimized, wage rates for both men and women are the same and one-third of the beneficiaries should be women. It also provides equal opportunities to Schedule Caste, Schedule Tribes and other weaker sections of the society. Considering all these aspects, it is decided to carry out an impact assessment of MGNREGA in Hoshiarpur district of Punjab.

In this chapter, an attempt has been made to find out the socio- economic impact of the MGNREGA on its beneficiaries. The aspects related to socio-economic and demographic components like age distribution, caste and religion details, education, family size, occupation, movable assets, livestock, annual income and social benefits of the participants of the MGNREGA. The sample profile of respondents reflects the true picture of various economic and demographic aspects of areas covered under survey. The sample profile of respondents thus provides a vital clue to indicators used for measuring the impact as well as implementation of MGNREGA in the select areas under the present study. A questionnaire is used for collecting data from the participants of MGNREGA.

2.1 Age Distribution of the Respondents

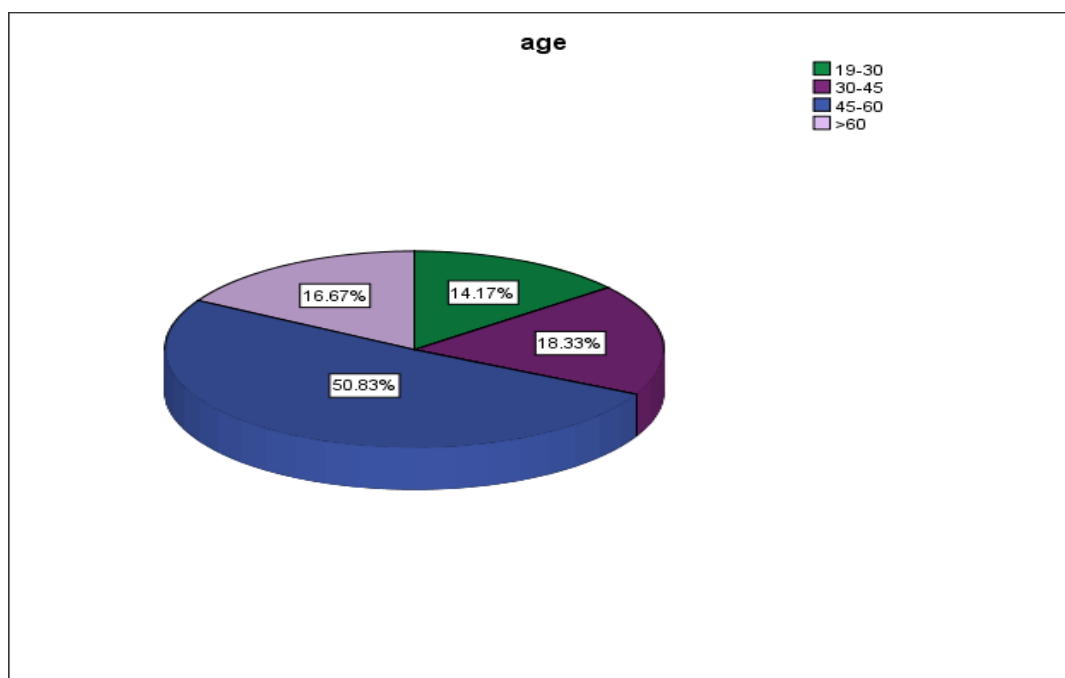
Household respondents of beneficiaries are interviewed in four blocks of Hoshiarpur district. Age is one of the important aspects of the socio economic features of the respondents. The sample size is 120.

Table: 3.1 Age distribution of the beneficiaries of MGNREGA in Hoshiarpur district

Sr. no.	Age Group (in yrs)	Beneficiaries (N= 120)	Percentage (%)
1	19-30	17	14.2
2	30-45	22	18.3
3	45-60	61	50.8
4	>60	20	16.7
	Total	120	100.0

In the table 3.1 the data shows that there is majority of the people that working under MGNREGA are belonged to the age group 45-60 that are 61 beneficiaries. The 17 out of 120 beneficiaries are belonged to the age group 19-30. In age group 30-45, there are 22 out of 120 beneficiaries are working under MGNREGA. There are 20 people of MGNREGA are under MGNREGA that belong to the age group greater than 60. Thus this data revealed that only above 50yrs old people are mostly working under MGNREGA and get their livelihood security by getting the sufficient timely wage rates. The following pie chart3.1 also depicts the age distribution of the respondents.

Chart 3.1: Age distribution of the MGNREGA beneficiaries (Respondents)



The above pie chart depicts the picture of the different age group persons. In this pie chart there are 50.8 per cent MGNREGA beneficiaries are belong to the age group 45-60. This is the greater portion of the MGNREGA beneficiaries that working under MGNREGA. The

people that belong to the age group 19-30 that are 14.2 per cent, 30-45 are 18.3 per cent people are working under MGNREGA. The old age people are also working under MGNREGA that are the 16.7 per cent.

2.2 Caste- wise distribution of the MGNREGA beneficiaries

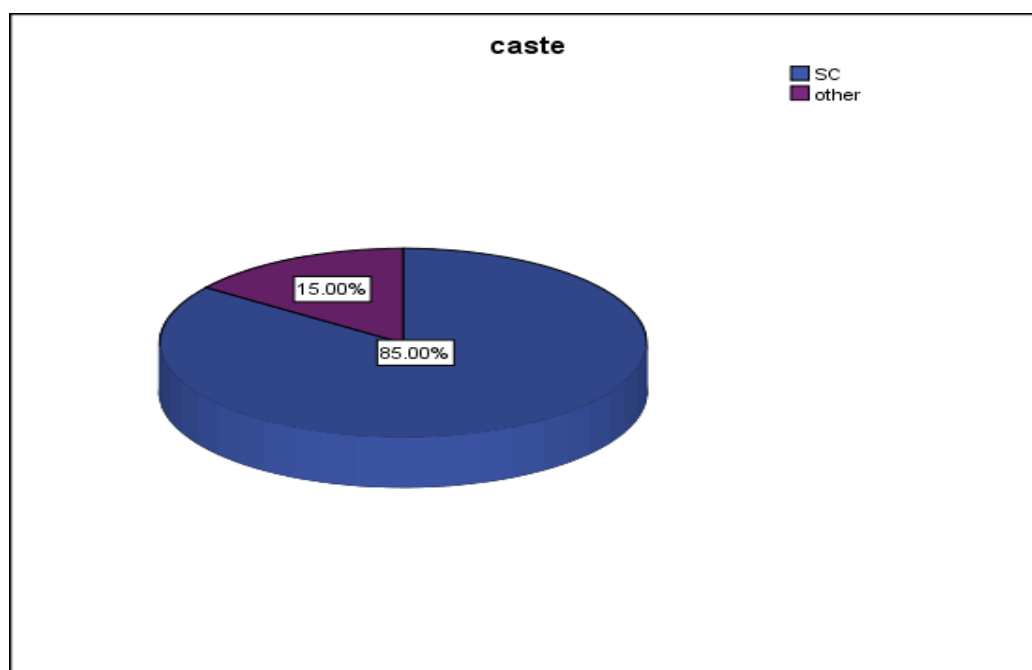
Caste is the one of the major social factors in the Indian society. Moreover, the major objective of the introduction of MGNREGA is to enhance the livelihood of vulnerable sections of the rural people across the country. The scheme has an inherent objective of social inclusion of the marginal and the most disadvantaged sections of the Indian Society (Draft Report on NREGA in West Bengal, 2009). Keeping these factors in mind, caste particulars of beneficiaries are collected and analysed to study the social composition. Details regarding caste particulars are divided into three categories namely Schedule Castes (SC), Schedule Tribes (ST) and others.

Table 3.2: Caste- wise Distribution of MGNREGA beneficiaries

Sr. no.	Caste Distribution	Beneficiaries (N= 120)	Percentage (%)
1	General	0	0
2	SC	102	85.0
3	ST	0	0
4	Others	18	15.0
	Total	120	100.0

In the caste distribution the respondents that are mostly belong to the SC caste that are of the 85 per cent of the total respondents of the MGNREGA beneficiaries (Sample size). The people that belong to the others category are only 15 per cent of the sample size. There are no people in the sample size that belong to the general and ST castes. The data revealed that there were mainly schedule caste people that working under MGNREGA in Hoshiarpur district. They secure their livelihood by getting hundred days employment in their villages. The following pie chart 3.2 also depicts the true picture of the SC workers that have the more portions in MGNREGA rather than other categories. The pie chart shows the caste distribution in selected sample of Hoshiarpur district as:

Chart 3.2: Caste distribution of the MGNREGA beneficiaries (Respondents)



2.3 Religion:

Religion is another important social factor after caste. Details regarding religious affiliation are also collected from the beneficiaries in the four select blocks of Hoshiarpur District under the study and are divided into four categories: Sikh, Hindu, Muslim, and other religions.

Table 3.3: Religion details of MGNREGA Beneficiaries

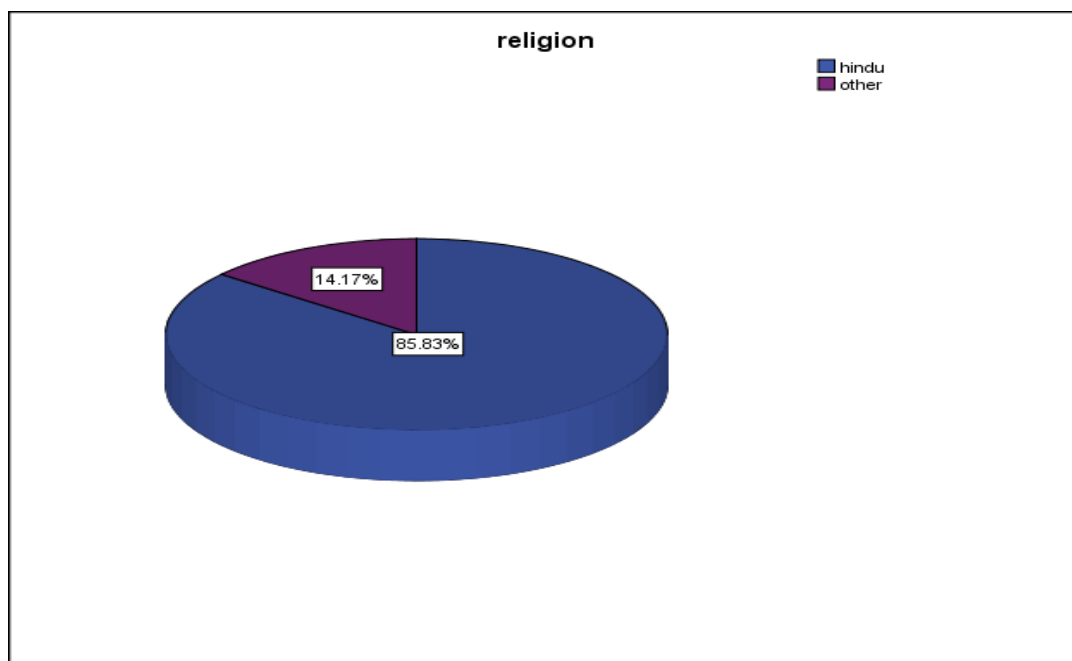
Sr. no.	Category	Beneficiaries(N= 120)	Percentage (%)
1	Sikh	0	0.0
2	Hindu	103	85.8
3	Muslim	0	0.0
4	Others	17	14.2
	Total	120	100.0

In the religion details, the maximum MGNREGA beneficiaries from sample are belonged to the Hindu religion that are of the total sample of the 85.8 per cent. In the sample there are no people that are belong to the others category. There are 14.2 per cent people that are belong to the other categories of the religion. That shows that the total of the sample size people working under MGNREGA are belong to the Hindu religion. In Hoshiarpur district mainly four categories of the people live namely Sikh, Hindu, Muslim And other

categories also include the other religions. The main portion of the Hindu religion people working under MGNREGA while conducting survey in that areas.

The following pie- chart explains the religion details of the sample of the MGNREGA beneficiaries.

Chart 3.3: Religion of the MGNREGA Beneficiaries (Respondents)



2.4 Education:

Formal education attained by an individual plays an important role in a holistic development of an individual, family and finally the society. Hence, education details of family head were also collected and assessed. Respondents are classified into 5 categories like illiterate (who doesn't have any formal education), primary school education (who have education level in between 1 – 5 standards), secondary school education (who have education level in between 6 – 10 standards), higher secondary (who have formal education of 11 – 12 standards) and graduation and above (who have degree and above level of education). The education details of the MGNREGA beneficiaries are shows that there are maximum people that are working under MGNREGA from sample have only the Primary education till to the 5th standard that are 38.3 per cent of the total sample. There are 23.3 per cent people are illiterate that have no any education qualification. In sample respondents, there are 25 per cent people haave the secondary level education (10th

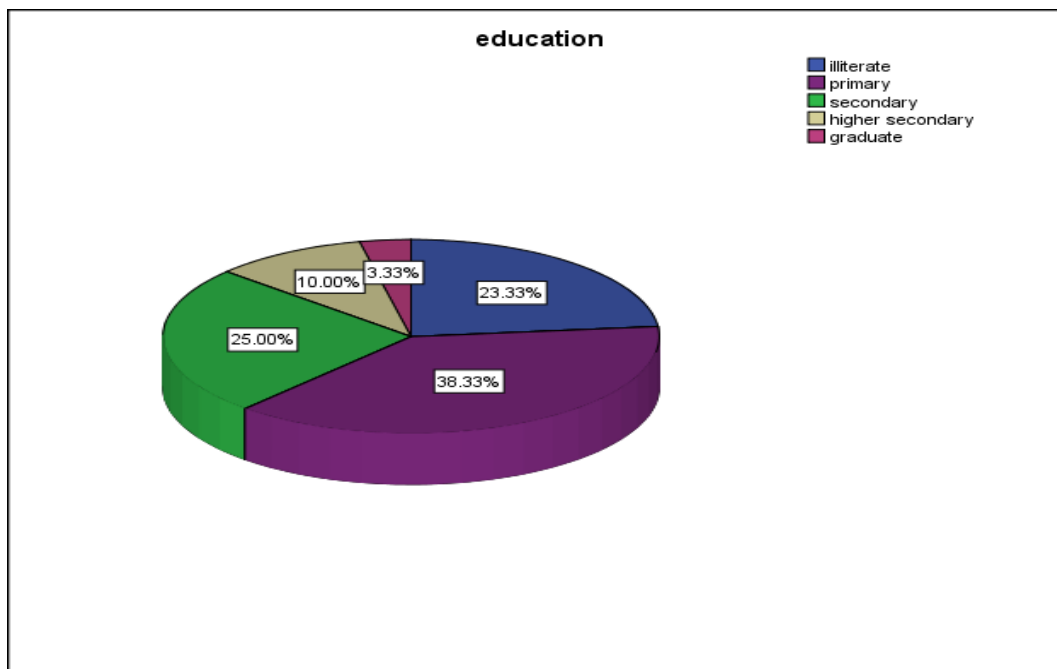
standard) and the 10 per cent people have the education to the higher secondary (12th standard) also.

Table 3.4: Education details of Beneficiaries

Sr. no.	Level of education	Beneficiaries(N= 120)	Percentage (%)
1	Illiterate	28	23.3
2	Primary	46	38.3
3	Secondary	30	25.0
4	Higher secondary	12	10.0
5	Graduate	4	3.3
	Total	120	100.0

There are unemployment in the rural areas so there are 3.3 per cent people that have done their graduation that are also working under MGNREGA for securing their livelihood. The following pie chart also depicts the education details of the sample of the MGNREGA beneficiaries.

Chart 3.4 Education details of the MGNREGA beneficiaries (Respondents)



2.5 Family Size:

Family size indicates the number of people live in a family. Family size is another important factor as MGNREGA shows employment for 100 days per a family in a financial year. Family size also a factor in determining the number of individuals can

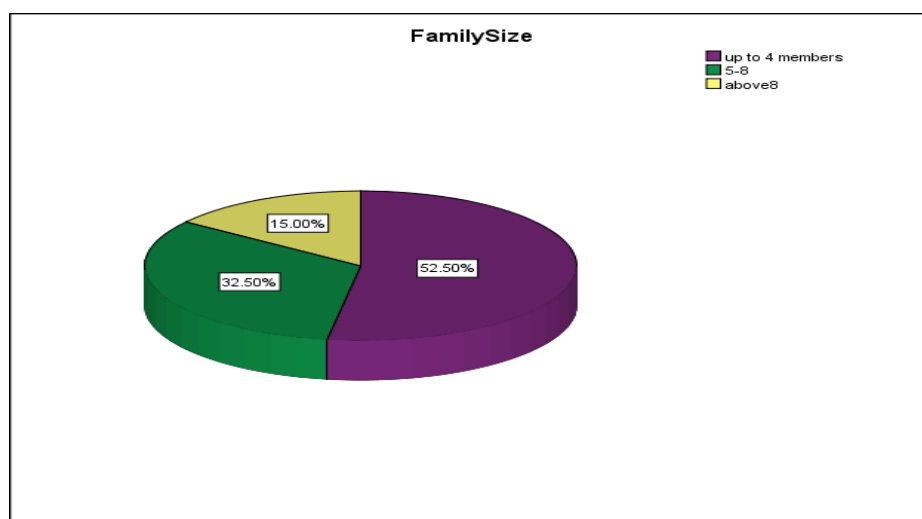
afford to participate either in MGNREGA or in non-MGNREGA works. Hence, family size is considered as one of the key factors of the socio economic features of the respondents. Details regarding family size of beneficiaries are captured in the present section. Based on the number of members living in a family, family size is categorised into three groups like: Small size family (up to 4 members), Medium size family (5 to 8 members) and large size family (above 8 members).

Table 3.5: Family Size of beneficiaries of MGNREGA

Sr. no.	Family size (Members)	Beneficiaries	Percentage (%)
1	Small Size (Up to 4 members)	63	52.5
2	Medium Size (5 to 8 members)	39	32.5
3	Large size (Above 8 members)	18	15.0
	Total	120	100.0

In the family size, there are maximum people that are working under MGNREGA are belongs to the small family size that means 52.5 per cent people of the sample are have the family members up to four members of family. The people that are belonging to the medium size are 32.5 per cent that means the people have the five to eight members of the family they have. In the sample respondents there are 15 per cent people that have the large families that means they have more than eight family members. The following pie chart depicts the picture of the family size of the sample of the MGNREGA beneficiaries.

Chart 3.5: Family size of the MGNREGA beneficiaries (Respondents)



2.6 Occupation:

Occupation indicates an activity / work / job performed by an individual for earning his/her livelihood. Occupation details are confined to the head of the family. Occupation is

also an important factor in determining the intensity (number of days) of participation either in MGNREGA or non-MGNREGA works. Hence, occupational particulars are also collected from beneficiaries of the MGNREGA.

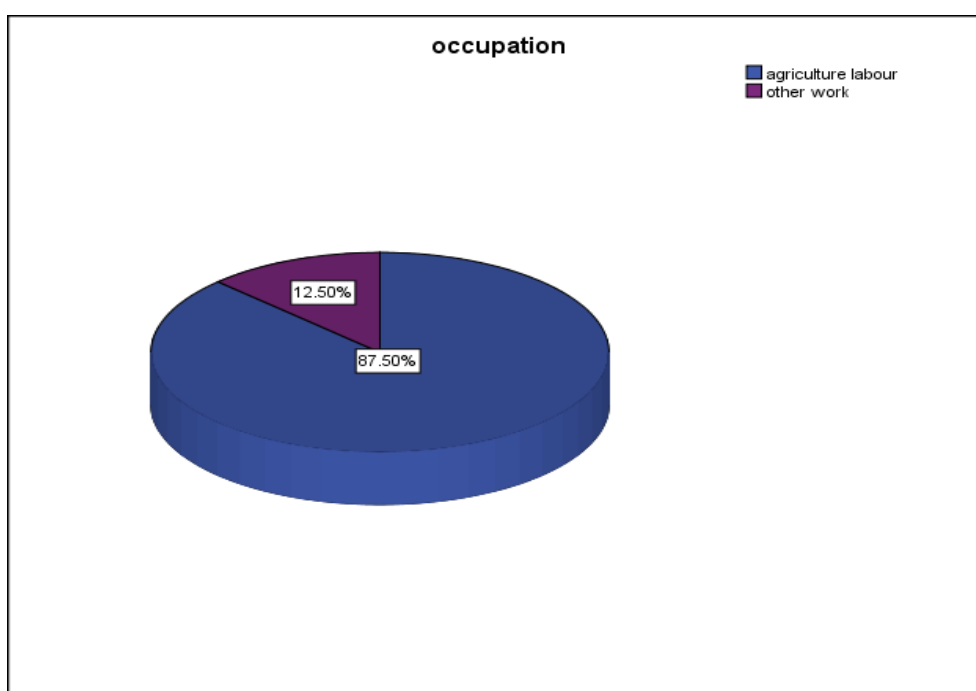
Table 3.6: Occupation of the MGNREGA beneficiaries

Sr. no.	Occupation	Beneficiaries	Percentage (%)
1	Agriculture	0	0.0
2	Agriculture Labour	105	87.5
3	Other works	15	12.5
		120	100.0

The occupation details shows, the most of the people working under MGNREGA are have the occupation as an agricultural labour that means in sample there are 87.5 per cent people that have the occupation as a agricultural labour. In the sample, there are people that are also works in other works in the village that are 12.5 per cent of the total sample. Some of them are working in the houses of the people for part time. But most of the people are working in the agricultutal sector for their livelihood and they doing agricultural operations like: ploughing, land preparation, sowing, weeding etc. works. But there are also women that are prefer to working under MGNREGA because that work provides in their villages and easy than the agricultural operations.

The following pei chart explains the occupations of the MGNREGA beneficiaries as:

Chart 3.6: Occupation details of MGNREGA beneficiaries (Respondents)



2.7 House Type:

Based on the type of the house, economic condition of the respondent may be assessed. Hence, a detail regarding type of house in which the respondent family is residing was also gathered to measure the relationship (if any) between participation in MGNREGA and type of house.

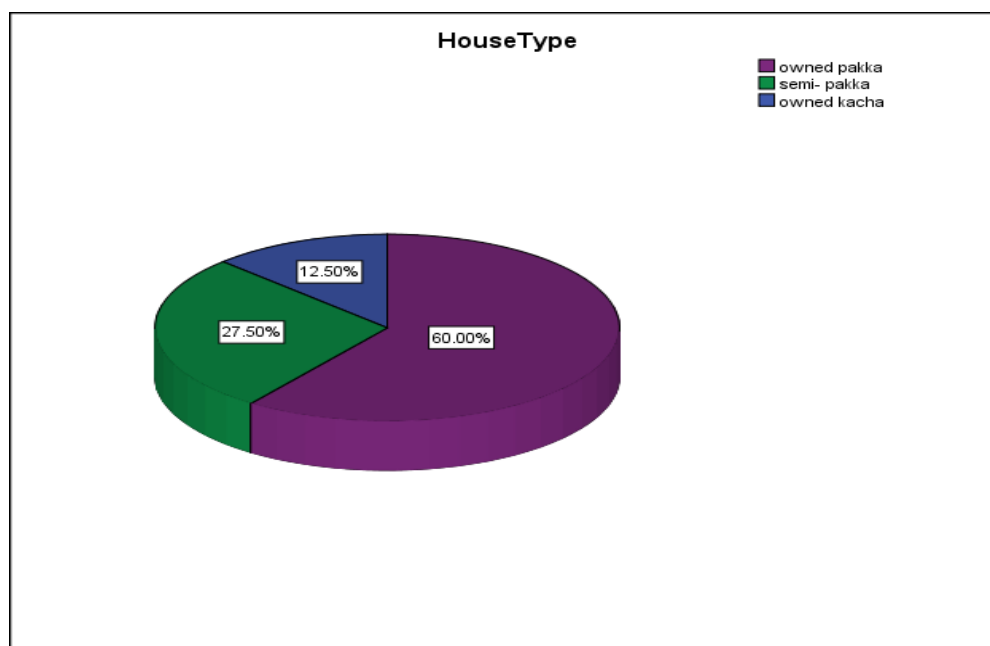
Table 3.7: House type of beneficiaries of MGNREGA

Sr. no.	House type	Beneficiaries (N=120)	Percentage (%)
1	Owned Pakka	72	60.0
2	Semi- Pakka	33	27.5
3	Rented- Pakka	0	0
4	Owned- kacha	15	12.5
	Total	120	100.0

In the details of the house type of the MGNREGA beneficiaries, there are sample of the 120 respondents of the MGNREGA beneficiaries that are working under MGNREGA from which total of the sample size 60 per cent people lives in the pakka house that are their own houses. But from the sample there are 27.5 per cent people are lives in the semi-pakka houses that mean they have pakka houses but with some areas of the house are the kacha. In sample, there are no people lives in the rented houses they live their own houses and permanent residents of the villages.

But there are also people that lives under below poverty line have the kacha houses that means the sample of the 12.5 per cent people are living in the kacha houses that they make from the soil and bamboos etc. Thus the house type of the people shows their economic conditions of them. The data revealed that there are most of the people are living in the pakka houses and they think their economic status rise because of the MGNREGA. The following pie chart shows the house type of the beneficiaries of MGNREGA.

Chart 3.7: House Type details of MGNREGA beneficiaries (Respondent)



3.8 Movable Assets:

Details regarding major movable household asset are collected from of MGNREGA. Details of movable assets like TV, Fridge, Mobile phone, Scooter, Fan and any other movable assets are presented in this section. The following table 3.8 shows the number of movable assets of the beneficiaries.

Table 3.8 Details of the Movable assets of beneficiaries:

Sr. no.	Type of the movable assets	Beneficiaries (N=120)	Percentage (%)
1	TV	110	91.67
2	Mobile	114	95.0
3	Fridge	78	65.0
4	Scooter	49	40.84
5	Fan	102	85.0

The movable assets are those assets which are in the houses like TV, mobile, fridge, scooter, fan, furniture etc. But in the present study for analyse the movable assets of the sample of MGNREGA beneficiaries are chosen the main movable assets that they have at the present state. Most of the beneficiaries have brought their movable assets after joining

MGNREGA. The samples of the data 91.67 per cent people have TV, 95 per cent have mobile, 65 per cent have fridge and 40.84 have scooter. The data revealed that most of the people have TV and Mobile. In the sample, there are 85 per cent people have fan in their houses. Thus the data shows the economic status of MGNREGA beneficiaries is increased after joining MGNREGA.

3.9 Livestock assets:

Livestock is an inseparable component from rural and agrarian system in India. Moreover, livestock and rural/agricultural systems are inter linked and inter dependent. Hence, details regarding live-stock also collected from the respondents, which consist of cows, buffalos, goats, poultry birds and others. The following table 3.9 shows the number of the livestock assets the MGNREGA beneficiaries have.

Table 3.9 Number of Livestock assets of Beneficiaries:

Sr. no.	Livestock assets	Beneficiaries (N=120)	Percentage (%)
1	Cows	85	70.84
2	Buffaloes	99	82.5
3	Goat	26	21.67
4	Poultry birds	106	88.34
5	Others	13	10.84

The data shows the livestock assets of the MGNREGA beneficiaries, the sample of people have the 88.34 per cent poultry birds; they have 70.84 per cent cows in their houses. The data shows that the people have 82.5 per cent buffaloes and 21.67 per cent goat they have. The people also have other animals that show their economic status by the number of livestock they have. Thus this data shows that the people are brought many of livestock animals after joining MGNREGA.

3.10 Annual Income:

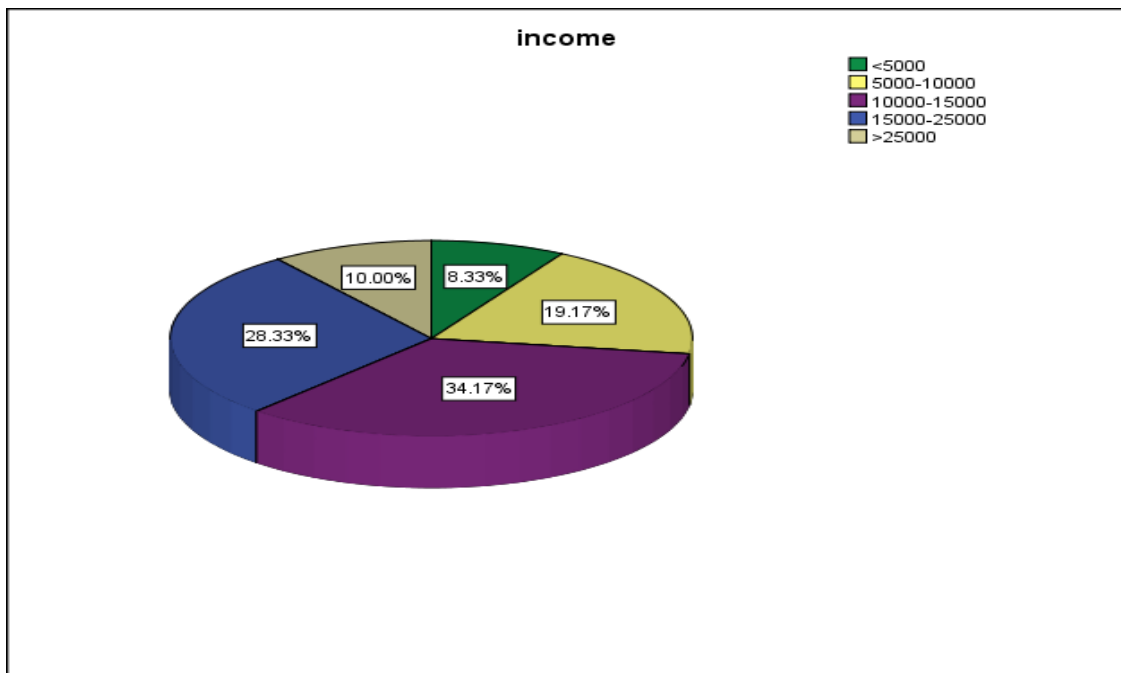
The average annual income coming from different income sources are collected and analysed for the participant of the MGNREGA. Different income sources are: farm income, agricultural labour, livestock, MGNREGA and other sources. The following table 3.10 shows the aggregate annual income of the MGNREGA beneficiaries.

Table 3.10 Income of respondents of MGNREGA beneficiaries:

Sr. no.	Income (Rs.)	Beneficiaries (N=120)	Percentage (%)
1	<5000	10	8.3
2	5000-10000	23	19.2
3	10000-15000	41	34.2
4	15000-25000	34	28.3
5	>25000	12	10.0

The data shows that there is 34.2 per cent of the sample of the MGNREGA beneficiaries that have the income between 10000 to 15000Rs. Per annum. There is 28.3 per cent people said that they have annual income between 15000 to 25000Rs. And some of them have means 10 per cent have the more than 25000Rs. Per annum.

Chart 3.8: Income details of the MGNREGA beneficiaries (Respondents)



Thus the data shows that there is only 8.3 per cent people have the income less than 5000Rs. The data revealed that there is sharp increase in the income of the beneficiaries after joining MGNREGA. Most of the people said that they have more than 10000Rs. annual income and their economic status rises.

3.11 Economic condition improved due to MGNREGA:

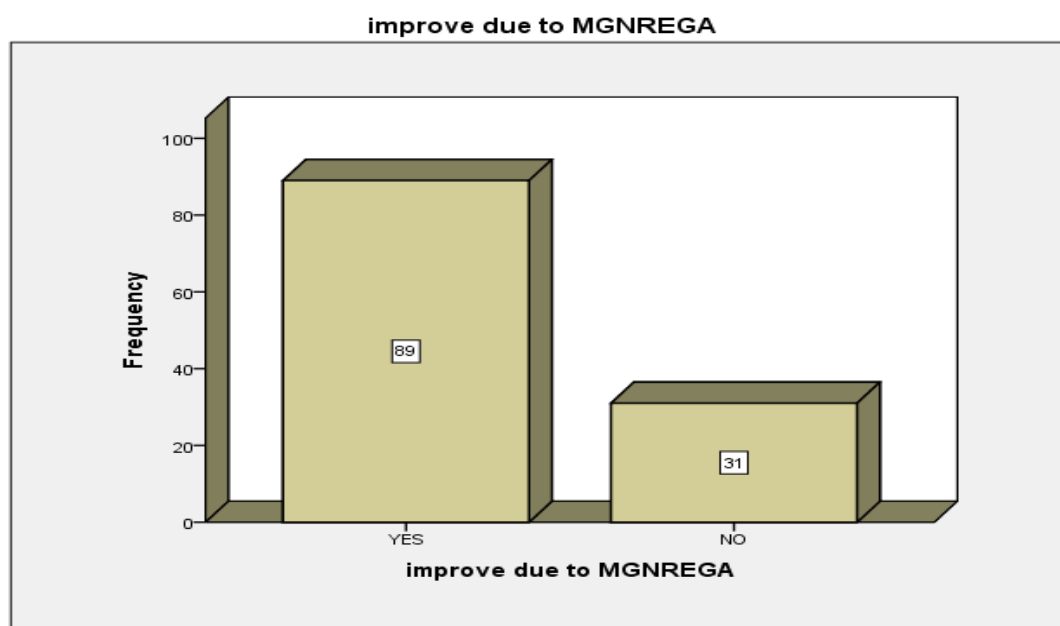
The following **Table 3.11** shows the economic condition improved due to MGNREGA:

Sr. no.	Economic condition improved	Beneficiaries (N=120)	Percentage (%)
1	Extremely	4	3.3
2	Highly	84	70.0
3	Moderately	32	26.7
4	Slightly	0	0.0
5	Not improved	0	0.0
	Total	120	100.0

That shows the most of the MGNREGA beneficiaries of the sample that said that their economic condition is highly improved (70 per cent) after joining MGNREGA and only 26.7 per cent beneficiaries said that their economic condition improved moderately.

The following bar graphs 3.9 also showing the opinions of MGNREGA beneficiaries regarding the Economic condition improved due to MGNREGA. The total of sample 89 per cent beneficiaries said that their economic condition improved due to MGNREGA and only 31 per cent said there is no change their life after joining MGNREGA.

Chart 3.9: Opinions of MGNREGA Beneficiaries on Economic conditions Improved due to MGNREGA



SUM UP

In this section, an attempt has been made to analyse the beneficiaries of the MGNREGA and also to find out the socio- economic impact of the MGNREGA on its participants. The components like age distribution, caste and religion details, education, family size, and occupation, movable assets, livestock, income of the beneficiaries of the MGNREGA were studied. Majority of the beneficiaries belong to SC caste in Hoshiarpur district (85 per cent) and 15 per cent belongs to the other caste. In Hoshiarpur District, majority of beneficiaries belong to Hindu religion. Literacy percentage of beneficiaries in Hoshiarpur districts under study. Moreover, illiterate proportion of the beneficiaries was 23.3 per cent Hoshiarpur district. Most of the people have primary level education (38.3 per cent) and only 10 per cent people have higher secondary education. Proportion of small size families (up to 4 members) was higher in beneficiary in Hoshiarpur districts. In Hoshiarpur district proportion of large size families of (15 per cent). The major occupation of the beneficiaries of the MGNREGA in Hoshiarpur district appeared to be agriculture labour (87.5 per cent) and only 12.5 per cent involves in the other works. More number of beneficiaries is residing in own pakka houses in Hoshiarpur district (60 per cent) and 27.5 per cent lives in semi- pakka houses and the sample of beneficiaries of 12.5 per cent lives in own kacha houses. Proportion of the beneficiaries who have movable assets is improved after joining MGNREGA in Hoshiarpur. Proportion of participants who have livestock was also improved in case of beneficiaries. Beneficiaries of Hoshiarpur districts have more buffalos and cows and poultry birds. The 34.2 per cent beneficiaries said that their income rise due to MGNREGA and their annual income is more than Rs.10000 per annum. The data also revealed that the 70 per cent of the sample of the beneficiaries said their economic condition highly improved due to MGNREGA. Thus we can say that MGNREGA plays an important role for the socio economic status of the people that lives in the rural areas and their socio economic status rise due to MGNREGA.

CHAPTER- 4

IMPACT OF MGNREGA ON AVAILABILITY OF AGRICULTURE LABOUR

MGNREGA is the largest employment generation programme ever started in the India with a huge investment by Government. The main focus of the scheme is to provide 100 days of wage employment to every rural household who wishes to work and asks for unskilled manual work. It aims at creating sustainable rural livelihood through regeneration of the natural resource base as: augmenting productivity and supporting creation of durable assets and strengthening rural governance through decentralization and processes of transparency and accountability. Gram Panchayats of the villages are involved in the planning and implementation of the scheme and creation of durable assets for sustainable development of the rural areas.

This chapter examines the impact of MGNREGA on availability of agricultural labour in four blocks select of the Hoshiarpur district. As labour is an important component in the Indian agriculture system, an attempt has been made to analyse the impact of MGNREGA on availability of labour to the agricultural operations. Perceptions or opinions of the farmers on the availability of agricultural labour are collected for three years as: 2012-13, 2013-14 and 2014-15. In Hoshiarpur district, primary data are collected for both the seasons of Kharif and Rabi as crops have been cultivated like wheat and paddy in two seasons there.

The farmers select on the basis of small (those who have a landholding size up to 2 acres) farmers, medium (those who have landholding size of above 2 acres and up to 5 acres) farmers and large (those who have landholding size of above 5 acres) farmers. Data are collected regarding impact of MGNREGA on availability of agricultural labour from all the three categories of farmers as: small, medium and large farmers and an equal sample are taken from these three groups. To capture the opinions of farmers, 5- point Likert's scale is used. It consists of five different opinions like: "Extreme shortage", "High shortage", "Moderate shortage", "Slight shortage" and "No shortage". If a farmer given the opinion of "Severe shortage" it implies that MGNREGA has been causing severe shortage of agricultural labour. If farmer given the opinion of "No shortage", it implies that MGNREGA has not been causing any shortage of agricultural labour. Thus, primary data are collected from the different categories of farmers for three consecutive years as: during 2012-13, 2013-14 and 2014-15.

4.1 Impact of MGNREGA on Availability of Agriculture labour in Hoshiarpur district in Kharif season:

Hoshiarpur District is located in the Doaba region of Punjab state. In Hoshiarpur District, wheat and paddy crops are cultivated in the majority of the area under cultivation. Primary data are collected from the eight select Gram Panchayats (GPs) namely, Talwandi raian, Dhamian kalan, Bassi Wazid, Johal, Bassi Daulat khan, Dada, Harsi Pind and Jaja. Total 15 farmers each are studied from eight GPs. Thus, the total sample collected in Hoshiarpur District is 120. Further, this 120 sample size stratified into small farmers, medium farmers and large farmers, each stratum consists of 40 farmers. Data are collected for three consecutive years as: 2012-13, 2013-14 and 2014-15 and it presented year wise.

During 2012-13

Opinion of farmers regarding impact of MGNREGA on availability of agricultural labour are collected for different agricultural operations for 2012-13 Kharif season. Data are collected from three different landholding categories and analysed and presented category wise.

The opinion of farmers for 2012-13, majority (27.5 per cent) of the small farmers opined that there was “Moderate shortage” of MGNREGA on availability of agricultural labour. It implies that MGNREGA has moderately shortage of agricultural labour according to opinions of the small farmers. However, some small farmers expressed their opinion that there is “Extreme shortage” and “High shortage” of agricultural labour due to MGNREGA and their proportion is 17.5 per cent and 25 per cent respectively. Further, it can also be observed that farmer expressed their opinion that there is either “no shortage” of agricultural labour due to MGNREGA also (10 per cent).

In case of medium farmers category too, majority of the farmers opined that there was “high shortage” of agricultural labour due to MGNREGA. Furthermore, it can be observed some medium farmers opined that there was “Extreme shortage”, “Moderate shortage” and “Slight shortage” of agricultural labour due to MGNREGA and their proportions were 20 per cent, 25 per cent and 20 per cent to the total number of farmers respectively, while only 5 per cent of farmer of medium size category has opined that there is “no shortage” of agricultural labour.

Table 4.1 Opinion of farmers regarding the impact of MGNREGA on availability of agriculture labour during 2012-13 (Kharif season or paddy)

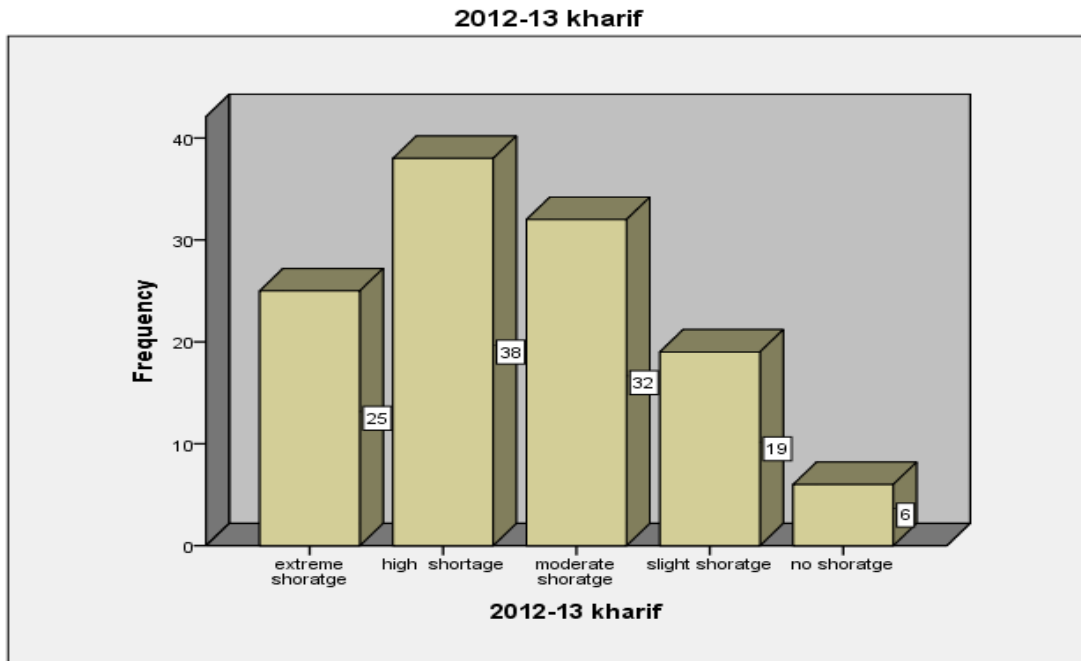
Categories of farmers	Opinion of farmers					Total
	Extreme shortage	High shortage	Moderate shortage	Slight shortage	No shortage	
Small farmers	7 (17.5)	10 (25.0)	11 (27.5)	8 (20.0)	4 (10.0)	40 (100.0)
Medium farmers	8 (20.0)	12 (30.0)	10 (25.0)	8 (20.0)	2 (5.0)	40 (100.0)
Large farmers	10 (25.0)	16 (40.0)	11 (27.5)	3 (7.5)	0 (0.0)	40 (100.0)
Total	25 (20.84)	38 (31.67)	32 (26.67)	19 (15.84)	6 (5.0)	120 (100.0)

Source: Primary data collected from different categories of farmers (the value in parenthesis are the percentage to the row total)

In case of large category of farmers 40 per cent of total farmers opined that there was “High shortage” of agricultural labour, while a few large farmers expressed their opinion that there is “Slight shortage” of agricultural labour due to MGNREGA and they account for 7.5 per cent of the total large farmers. The large farmers opined that there was 25 per cent “Extreme Shortage” and 27.5 per cent “Moderate Shortage” of agricultural labour. Even in large farmers category also no farmer expressed their opinion that there is a “no shortage” of agricultural labour.

Contrary to the public perception, 31.67 per cent of total farmers opined that there was “High shortage” of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture operations. However, a small proportion of 15.84 per cent, 5 per cent and of total farmers expressed their opinion that there is “Slight shortage”, “No shortage” of agricultural labour due to MGNREGA respectively. At the overall level, few farmers opined that there is a “No shortage” of agricultural labour. The following bar chart 4.1 that show the total of the farmer 25 farmers opined that there is extreme shortage of labour for paddy or kharif operations in 2012-13 and 38 farmers revealed that there was high shortage of labour.

Chart 4.1: Shortage of labour in Kharif season 2012-13



ANOVA test of opinions of farmers of Hoshiarpur district

The One-way ANOVA (Analysis of Variance) test is conducted to compare means for significant difference. It can be observed from Table 4.1 that the three groups of farmers like: small farmers, medium farmers and large farmers expressed their opinion on the increase or change in availability of agricultural labour after the introduction of MGNREGA in rural areas. To find out the difference between the opinions of the three category farmers, ANOVA test conducted. The most important of assumptions is that the k groups are independent and drawn from normal population.

Null Hypothesis and alternative hypotheses are:

H_0 : There is no difference between the opinions of different categories of farmers on availability of agricultural labour in Hoshiarpur District during 2012-13 Kharif season (paddy).

H_1 : There is a difference between the opinions of different categories of farmers on availability of agricultural labour in Hoshiarpur District during 2012-13 Kharif season (paddy).

Table 4.1 (a) Results of ANOVA test of opinions of farmers

ANOVA

2012-13 Kharif

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.150	2	4.075	3.271	.041
Within Groups	145.775	117	1.246		
Total	153.925	119			

Table 4.1(a) shows whether the overall F ratio for the ANOVA is significant or not. The calculated F ratio (3.271) is significant ($p = .041$) at the .05 alpha level i.e. the calculated F (3.271) is more at (n-k) degrees of freedom.

$F(5) = 3.271, p < .05$.

Based on F test, the null hypothesis that all three groups means are equal is rejected since $p < \alpha$. It can be concluded that there a significant difference between the opinion of small, medium and large farmer categories on availability of agricultural labour in Hoshiarpur district during 2012-13 Kharif (paddy) season. Thus that show the small, medium and large farmer opined differently regarding the shortage of labour in Kharif season in 2012-13. MGNREGA mainly affected the large farmers because they don't handle all agricultural operations by him like small farmers. They highly depend on the agricultural labour that show MGNREGA caused labour shortage for agricultural operations.

During 2013-14

Details regarding impact of MGNREGA on availability of agricultural labour were collected for 2013-14 Kharif season in Hoshiarpur district. The opinion of farmers for 2013-14, majority (32.5 per cent) of the small farmers opined that there was "Moderate shortage" of MGNREGA on availability of agricultural labour. It implies that MGNREGA has moderately shortage of agricultural labour according to opinions of the small farmers. However, some small farmers expressed their opinion that there is "Extreme shortage" and "High shortage" of agricultural labour due to MGNREGA and their proportion is 22.5 per cent and 25 per cent respectively. Further, it can also be observed that farmer expressed their opinion that there is either "no shortage" and "Slight shortage" of agricultural labour due to MGNREGA also (10 per cent) and results are presented in Table 4.1.1

Table 4.1.1: Opinion of farmers regarding impact on MGNREGA on supply of agriculture labour during 2013-14 (Kharif season or paddy)

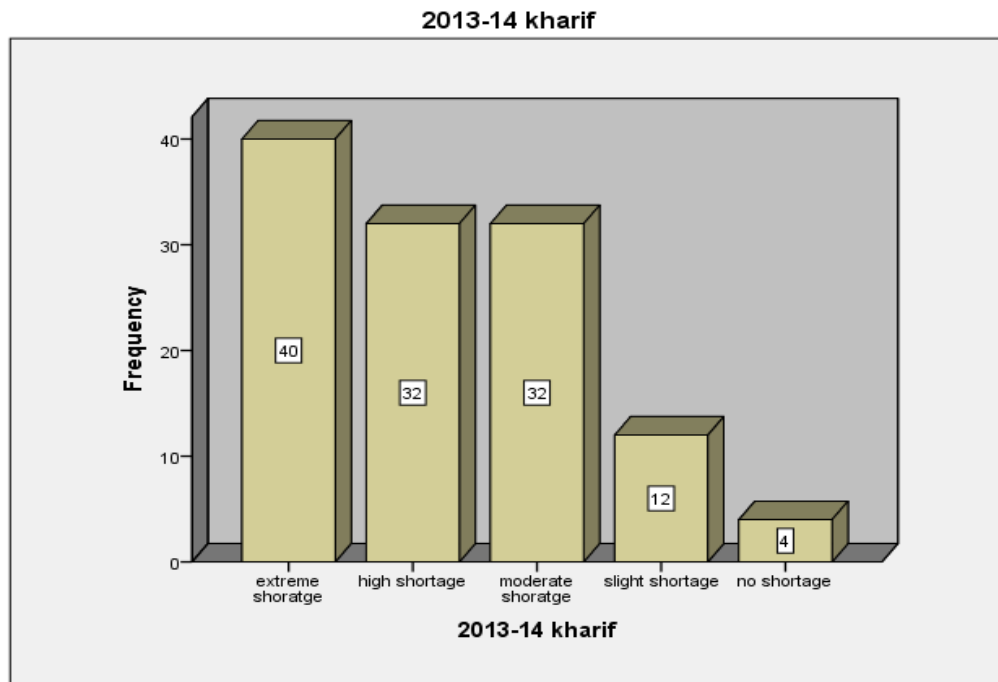
Categories of farmers	Opinion of farmers					Total
	Extreme shortage	High shortage	Moderate shortage	Slight shortage	No shortage	
Small farmers	9 (22.5)	10 (25.0)	13 (32.5)	4 (10.0)	4 (10.0)	40 (100.0)
Medium farmers	14 (35.0)	12 (30.0)	12 (30.0)	2 (5.0)	0 (0.0)	40 (100.0)
Large farmers	17 (42.5)	10 (25.0)	7 (17.5)	6 (15.0)	0 (0.0)	40 (100.0)
Total	40 (33.34)	32 (26.67)	32 (26.67)	12 (10.0)	4 (10.0)	120 (100.0)

Source: Primary data collected from different categories of farmers (the value in parenthesis are the percentage to the row total)

In case of medium farmers category too, majority of the farmers opined that there was “Extreme shortage” of agricultural labour due to MGNREGA. Furthermore, it can be observed some medium farmers opined that there is “High shortage”, “Moderate shortage” and “Slight shortage” of agricultural labour due to MGNREGA and their proportions were 30 per cent, 30 per cent and 5 per cent to the total number of farmers respectively, while there is no small farmers has opined that there is “no shortage” of agricultural labour.

In case of large category of farmers 42.5 per cent of total farmers opined that there was “Extreme shortage” of agricultural labour, while a few large farmers expressed their opinion that there is “Slight shortage” of agricultural labour due to MGNREGA and they account for 15 per cent of the total large farmers. The large farmers opined that there was 25 per cent “High Shortage” and 17.5 per cent “Moderate Shortage” of agricultural labour. Even in large farmers category also no farmer expressed their opinion that there is a “no shortage” of agricultural labour.

Chart 4.1.1: Shortage of labour in kharif season 2013-14



Contrary to the public perception, 33.34 per cent of total farmers opined that there is “Extreme shortage” of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture. However, a small proportion of 10 per cent of total farmers expressed their opinion that there is “Slight shortage”, “No shortage” of agricultural labour due to MGNREGA respectively. There was 26.67 per cent of the total farmers opined that there was moderate shortage of agricultural labour for agricultural operations.

ANOVA test of opinions of farmers of Hoshiarpur District

The One-way ANOVA (Analysis of Variance) test is conducted to compare means for significant difference. It can be observed from Table 4.2 (a) that the three groups of farmers like: small farmers, medium farmers and large farmers expressed their opinion on the increase or change in availability of agricultural labour after the introduction of MGNREGA in rural areas. To find out the difference between the opinions of the three category farmers, ANOVA test conducted. The most important of assumptions is that the k groups are independent and drawn from normal population.

Null Hypothesis and alternative hypotheses:

H_0 : There is no difference between the opinions of different categories of farmers on availability of agricultural labour during 2013-14 Kharif season (paddy).

H₁: There is a difference between the opinions of different categories of farmers on availability of agricultural labour during 2013-14 Kharif season (paddy).

Table 4.1.1 (a) Results of ANOVA test of opinion of farmers:

ANOVA

2013-14 Kharif

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.067	2	4.033	3.337	.039
Within Groups	141.400	117	1.209		
Total	149.467	119			

Table 4.2(a) shows whether the overall *F* ratio for the ANOVA is significant or not. The calculated *F* ratio (3.337) is significant ($p = .039$) at the .05 alpha level i.e. the calculated *F* (3.337) is more at (n-k) degrees of freedom.

$$F(5) = 3.337, p < .05.$$

Based on *F* test, the null hypothesis that all three groups means are equal is rejected since $p < \alpha$. It can be concluded that there a significant difference between the opinion of small, medium and large farmer categories on availability of agricultural labour in Hoshiarpur district during 2013-14 Kharif (paddy) season. Thus that show the small, medium and large farmer opined differently regarding the shortage of labour in Kharif season in 2013-14. MGNREGA mainly affected the large farmers because they don't handle all agricultural operations by him like small farmers. They highly depend on the agricultural labour that show MGNREGA caused labour shortage for agricultural operations.

During 2014-15

Opinion of farmers regarding impact of MGNREGA on availability of agricultural labour are collected category wise for 2014-15 Kharif season (paddy).

The opinion of farmers for 2014-15, majority (30 per cent) of the small farmers opined that there is "High shortage" of MGNREGA on availability of agricultural labour. It implies that MGNREGA has highly shortage of agricultural labour according to opinions of the small farmers. However, some small farmers expressed their opinion that there is "Extreme shortage" and "Moderate shortage" of agricultural labour due to MGNREGA and their proportion is 27.5 per cent. Further, it can also be observed that farmer expressed their opinion that there is either "no shortage" and "Slight shortage" of agricultural labour due to

MGNREGA also (5 per cent) and (10 per cent) respectively. The following table 4.12 shows the availability of agricultural labour as:

Table 4.1.2 Opinion of farmers regarding impact on MGNREGA on supply of agriculture labour during 2014-15 (kharif season or paddy)

Categories of farmers	Opinion of farmers					Total
	Extreme shortage	High shortage	Moderate shortage	Slight shortage	No shortage	
Small farmers	11 (27.5)	12 (30.0)	11 (27.5)	4 (10.0)	2 (5.0)	40 (100.0)
Medium farmers	14 (35.0)	16 (40.0)	9 (22.5)	1 (2.5)	0 (0.0)	40 (100.0)
Large farmers	17 (42.5)	14 (25.0)	9 (22.5)	0 (0.0)	0 (0.0)	40 (100.0)
Total	42 (35.0)	42 (35.0)	29 (24.17)	5 (4.17)	2 (5.0)	120 (100.0)

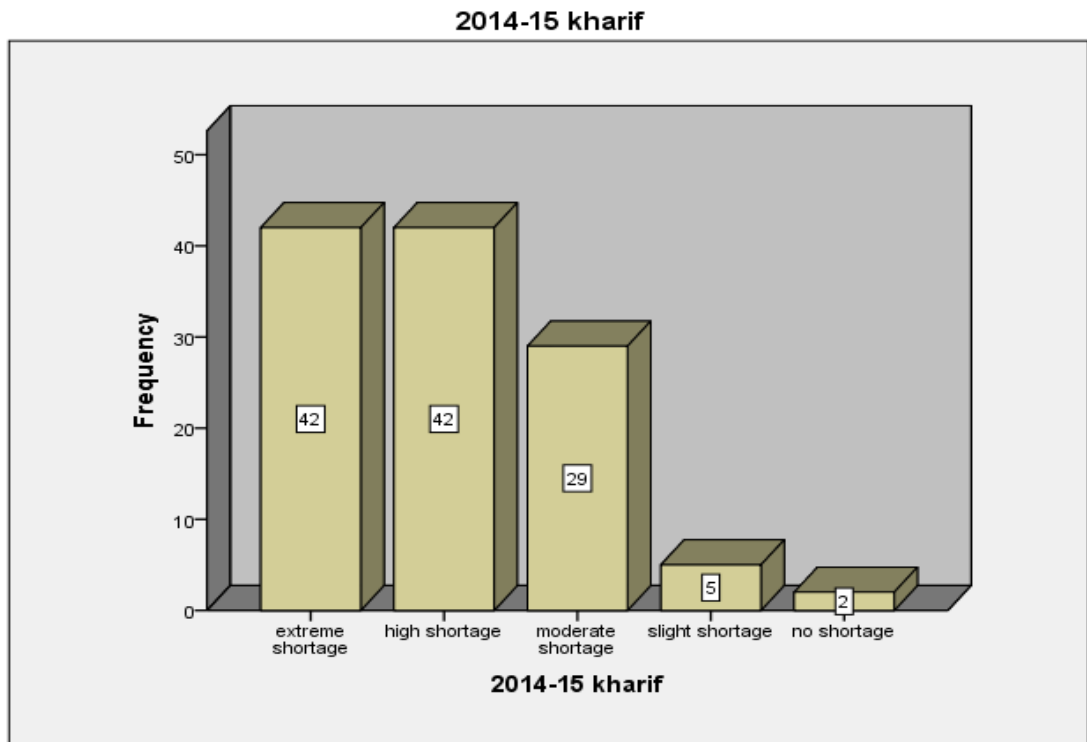
Source: Primary data collected from different categories of farmers (the value in parenthesis are the percentage to the row total)

In case of medium farmers category too, majority of the farmers opined that there is “High shortage” of agricultural labour due to MGNREGA. Furthermore, it can be observed some medium farmers opined that there is “extreme shortage”, “Moderate shortage” and “Slight shortage” of agricultural labour due to MGNREGA and their proportions were 35 per cent, 22.5 per cent and 2.5 per cent to the total number of farmers respectively, while there is no small farmers has opined that there is “no shortage” of agricultural labour.

In case of large category of farmers 42.5 per cent of total farmers opined that there is “Extreme shortage” of agricultural labour. The large farmers opined that there was 25 per cent “High Shortage” and 22.5 per cent “Moderate Shortage” of agricultural labour. Even in large farmers category also no farmer expressed their opinion that there is a “no shortage” and “Slight Shortage” of agricultural labour.

The following bar chart 4.1.2 shows the labour shortage in kharif season 2014-15, the total of the sample 42 farmer opined that there was extreme as well as high shortage of labour during the agricultural activities. There was only 2 farmers opined that there was no shortage of labour during Kharif season 2014-15 because they are small farmers, they use their family labour for their small agricultural activities.

Chart 4.1.2: Shortage of labour in Kharif season 2014-15



Contrary to the public perception, 35 per cent of total farmers opined that there is “Extreme shortage” and “High shortage” of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture. However, a small proportion of 4.17 per cent and 5 per cent of total farmers expressed their opinion that there is “Slight shortage”, “No shortage” of agricultural labour due to MGNREGA respectively. There was 24.17 per cent of the total farmers opined that there was “Moderate shortage” of agricultural labour for agricultural operations.

ANOVA test of opinions of farmers of Hoshiarpur district:

The One-way ANOVA (Analysis of Variance) test is conducted to compare means for significant difference. It can be observed from Table 4.3 (a) that the three groups of farmers like: small farmers, medium farmers and large farmers expressed their opinion on the increase or change in availability of agricultural labour after the introduction of MGNREGA in rural areas. To study the difference between the opinions of the three category farmers, ANOVA test conducted by formulating the following hypothesis. The most important of assumptions is that the k groups are independent and drawn from normal population.

Null Hypothesis and alternative hypotheses:

H₀: There is no difference between the opinions of different categories of farmers on availability of agricultural labour during 2014-15 Kharif season (paddy).

H₁: There is a difference between the opinions of different categories of farmers on availability of agricultural labour during 2014-15 Kharif season (paddy).

Table 4.1.2 (a) Results of ANOVA test of opinions of farmers:

ANOVA

2014-15 Kharif

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.650	2	3.325	3.804	.025
Within Groups	102.275	117	.874		
Total	108.925	119			

Table 4.3(a) shows whether the overall *F* ratio for the ANOVA is significant or not. The calculated *F* ratio (3.804) is significant ($p = .025$) at the .05 alpha level i.e. the calculated *F* (3.804) is more at (n-k) degrees of freedom.

$$F(5) = 3.804, p < .05.$$

Based on *F* test, the null hypothesis that all three groups means are equal is rejected since $p < \alpha$. It can be concluded that there a significant difference between the opinion of small, medium and large farmer categories on availability of agricultural labour in Hoshiarpur district during 2014-15 Kharif (paddy) season. Thus that show the small, medium and large farmer opined differently regarding the shortage of labour in Kharif season in 2014-15. MGNREGA mainly affected the large farmers because they don't handle all agricultural operations by him like small farmers. They highly depend on the agricultural labour that show MGNREGA caused labour shortage for agricultural operations.

4.2 Impact of MGNREGA on Availability of Agriculture labour in Hoshiarpur district in Rabi season (Wheat):

In Hoshiarpur District, wheat and paddy crops are cultivated in the majority of the area under cultivation. Primary data are collected from the eight select Gram Panchayats (GPs) namely, Talwandi raian, Dhamian kalan, Bassi Wazid, Johal, Bassi Daulat khan, Dada, Harsi Pind and Jaja. Total 15 farmers each are studied from eight GPs. Thus, the total sample collected in Hoshiarpur District is 120. Further, this 120 sample size stratified into small farmers, medium farmers and large farmers, each stratum consists of 40 farmers.

Data are collected for three consecutive years as: 2012-13, 2013-14 and 2014-15 and it presented year wise. Opinions of farmers are collected regarding impact of MGNREGA on availability of agricultural labour during *Rabi* season also as there is a considerable area under cultivation during this season.

During 2012-13:

Opinion of farmers regarding impact of MGNREGA on availability of agricultural labour are collected for 2012-13 *Rabi* season (Wheat) The opinion of farmers for 2012-13, majority (27.5 per cent) of the small farmers opined that there was “Moderate shortage” of MGNREGA on availability of agricultural labour. It implies that MGNREGA has moderately shortage of agricultural labour according to opinions of the small farmers. However, some small farmers expressed their opinion that there is “Extreme shortage” and “High shortage” of agricultural labour due to MGNREGA and their proportion is 12.5 per cent and 15 per cent respectively. The details are presented in Table 4.2

Table 4.2 Opinion of farmers regarding the impact of MGNREGA on availability of agriculture labour during 2012-13 (Rabi season or wheat)

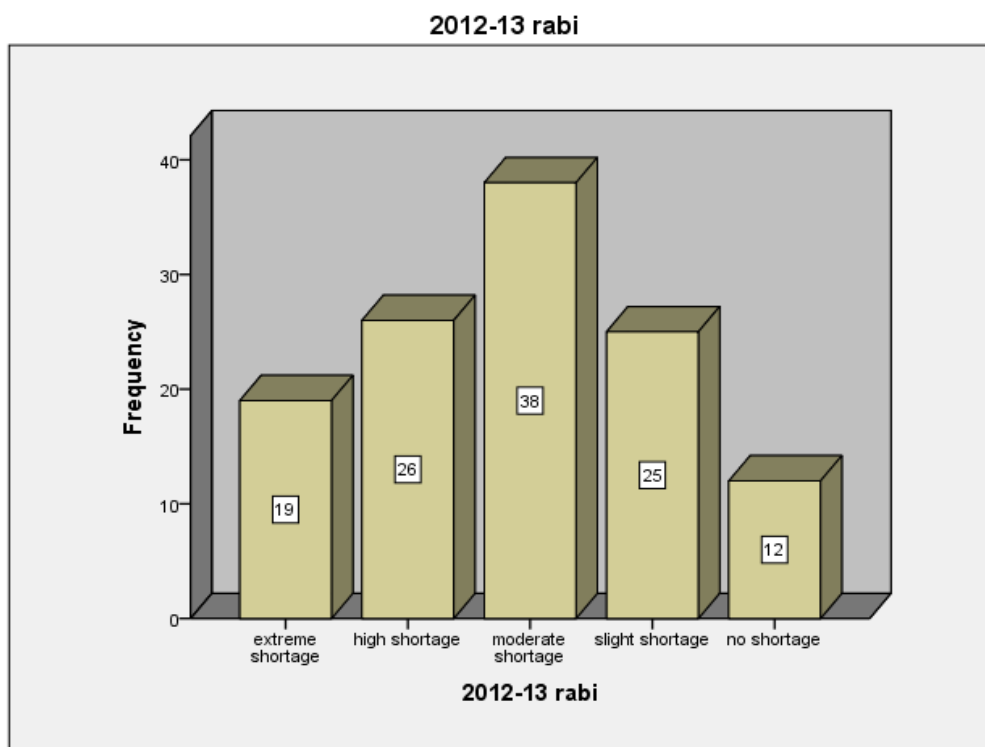
Categories of farmers	Opinion of farmers					Total
	Extreme shortage	High shortage	Moderate shortage	Slight shortage	No shortage	
Small farmers	5 (12.5)	6 (15.0)	11 (27.5)	10 (25.0)	8 (20.0)	40 (100.0)
Medium farmers	6 (15.0)	8 (20.0)	12 (30.0)	10 (25.0)	4 (10.0)	40 (100.0)
Large farmers	8 (20.0)	12 (30.0)	15 (37.5)	5 (12.5)	0 (0.0)	40 (100.0)
Total	19 (15.84)	26 (21.67)	38 (31.67)	25 (20.84)	12 (10.0)	120 (100.0)

Source: Primary data collected from different categories of farmers (the value in parenthesis are the percentage to the row total)

Further, it can also be observed that farmer expressed their opinion that there is either “no shortage” and “Slight shortage” of agricultural labour due to MGNREGA also (20 per cent) and (25 per cent) respectively. In case of medium farmers category too, majority of the farmers opined that there was “Moderately shortage” of agricultural labour due to

MGNREGA. Furthermore, it can be observed some medium farmers opined that there is “Extreme shortage”, “High shortage” and “Slight shortage” of agricultural labour due to MGNREGA and their proportions were 15 per cent, 20 per cent and 25 per cent to the total number of farmers respectively, while there was small farmers has opined that there was 10 per cent “no shortage” of agricultural labour.

Chart 4.2: Shortage of labour in Rabi season



In case of large category of farmers 37.5 per cent of total farmers opined that there is “Moderately shortage” of agricultural labour. The large farmers opined that there was 30 per cent “High Shortage” and 20 per cent “Extreme Shortage” of agricultural labour. Even in large farmers category no farmer expressed their opinion that there is a “no shortage” of agricultural labour.

Contrary to the public perception, 31.67 per cent of total farmers opined that there is “Moderately shortage” and 21.67 per cent “High shortage” of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture. However, a proportion of 20.84 per cent and 10 per cent of total farmers expressed their opinion that there is “Slight shortage”, “No shortage” of agricultural labour due to MGNREGA respectively. There was 15.84 per cent of the total farmers opined that there was “Extreme shortage” of agricultural labour for agricultural operations.

ANOVA test of opinions of farmers of Hoshiarpur District

The One-way ANOVA (Analysis of Variance) test is conducted to compare means for significant difference. It can be observed from Table 4.2 (a) that the three groups of farmers like: small farmers, medium farmers and large farmers expressed their opinion on the increase or change in availability of agricultural labour after the introduction of MGNREGA in rural areas. To find out the difference between the opinions of the three category farmers, ANOVA test conducted by formulating the following hypothesis. The most important of assumptions is that the k groups are independent and drawn from normal population.

Null Hypothesis and alternative hypotheses:

H_0 : There is no difference between the opinions of different categories of farmers on availability of agricultural labour during 2012-13 *Rabi* season (wheat).

H_1 : There is a difference between the opinions of different categories of farmers on availability of agricultural labour during 2012-13 *Rabi* season (wheat).

Table 4.2 (a) Results of ANOVA test of opinions of farmers:

ANOVA					
2012-13 Rabi					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	13.950	2	6.975	5.127	.007
Within Groups	159.175	117	1.360		
Total	173.125	119			

Table 4.2 (a) shows whether the overall F ratio for the ANOVA is significant or not. The calculated F ratio (5.127) is significant ($p = .007$) at the .05 alpha level i.e. the calculated F (5.127) is more at $(n-k)$ degrees of freedom.

$$F(5) = 5.127, p < .05.$$

Based on F test, the null hypothesis that all three groups means are equal is rejected since $p < \alpha$. It can be concluded that there a significant difference between the opinion of small, medium and large farmer categories on availability of agricultural labour in Hoshiarpur district during 2012-13 *Rabi* (wheat) season. Thus that show the small, medium and large farmer opined differently regarding the shortage of labour in *Rabi* season in 2012-13. MGNREGA mainly affected the large farmers because they don't handle all agricultural operations by him like small farmers. They highly depend on the agricultural labour that show MGNREGA caused labour shortage for agricultural operations.

During 2013-14:

Opinion of farmers regarding impact of MGNREGA on availability of agricultural labour are collected for 2013-14 *Rabi* season (Wheat) and Data are collected from three different landholding categories and analysed and presented category wise and details are presented in Table 4.2.1

Table 4.2.1 Opinion of farmers regarding the impact of MGNREGA on availability of agriculture labour during 2013-14 (Rabi season or wheat)

Categories of farmers	Opinion of farmers					Total
	Extreme shortage	High shortage	Moderate shortage	Slight shortage	No shortage	
Small farmers	7 (17.5)	10 (25.0)	5 (12.5)	14 (35.0)	4 (10.0)	40 (100.0)
Medium farmers	7 (17.5)	10 (25.0)	5 (12.5)	16 (40.0)	2 (5.0)	40 (100.0)
Large farmers	12 (30.0)	16 (40.0)	5 (12.5)	7 (17.5)	0 (0.0)	40 (100.0)
Total	26 (21.67)	36 (30.0)	15 (12.5)	37 (30.84)	6 (5.0)	120 (100.0)

Source: Primary data collected from different categories of farmers (the value in parenthesis are the percentage to the row total)

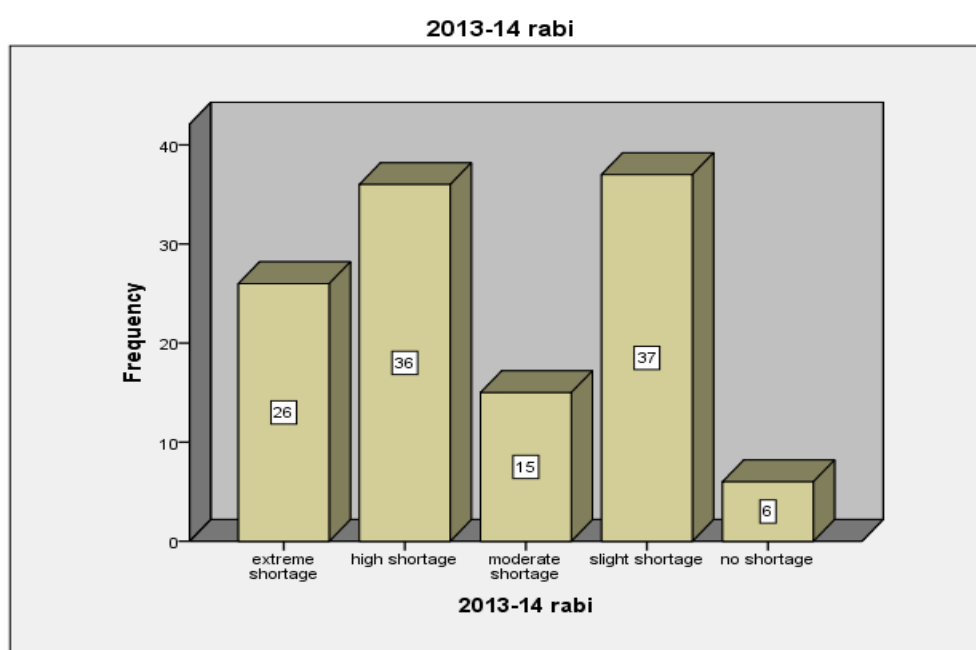
The opinion of farmers for 2013-14, majority (35 per cent) of the small farmers opined that there was “Slight shortage” of MGNREGA on availability of agricultural labour. It implies that MGNREGA has slightly shortage of agricultural labour according to opinions of the small farmers. However, some small farmers expressed their opinion that there is “Extreme shortage” and “High shortage” of agricultural labour due to MGNREGA and their proportion is 17.5 per cent and 25 per cent respectively. Further, it can also be observed that farmer expressed their opinion that there is either “no shortage” of agricultural labour due to MGNREGA also (10 per cent).

In case of medium farmers category too, majority of the farmers opined that there was “Slightly shortage” of agricultural labour due to MGNREGA. Furthermore, it can be observed some medium farmers opined that there is “Extreme shortage”, “High shortage” and “Moderately shortage” of agricultural labour due to MGNREGA and their proportions

were 17.5 per cent, 25 per cent and 1.25 per cent to the total number of farmers respectively, while there was small farmers has opined that there was 5 per cent “no shortage” of agricultural labour.

In case of large category of farmers 40 per cent of total farmers opined that there is “Highly shortage” of agricultural labour. The large farmers opined that there was 30 per cent “Extremely Shortage” and 12.5 per cent “Moderately Shortage” of agricultural labour. Even in large farmers category no farmer expressed their opinion that there is a “no shortage” of agricultural labour.

Chart 4.2.1: Shortage of labour in Rabi season



Contrary to the public perception, 30.84 per cent of total farmers opined that there is “Slightly shortage” and 30 per cent “High shortage” of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture. However, a proportion of 5 per cent and 12.5 per cent of total farmers expressed their opinion that there is “Slight shortage”, “Moderate shortage” of agricultural labour due to MGNREGA respectively. There was 21.67 per cent of the total farmers opined that there was “Extreme shortage” of agricultural labour for agricultural operations.

The following bar chart 4.2.1 shows the labour shortage in Rabi season during 2013-14, that show the 26 farmers opined the extreme shortage of labour and 36 farmers opined that high shortage of labour for agricultural operations. Only 6 farmers opined that there was no shortage of labour.

ANOVA test of opinions of farmers of Hoshiarpur District

The One-way ANOVA (Analysis of Variance) test is conducted to compare means for significant difference. It can be observed from Table 4.2.1 (a) that the three groups of farmers like: small farmers, medium farmers and large farmers expressed their opinion on the increase or change in availability of agricultural labour after the introduction of MGNREGA in rural areas. To find out the difference between the opinions of the three category farmers, ANOVA test conducted by formulating the following hypothesis. The most important of assumptions is that the k groups are independent and drawn from normal population.

Null Hypothesis and alternative hypotheses:

H_0 : There is no difference between the opinions of different categories of farmers on availability of agricultural labour during 2013-14 *Rabi* season (wheat).

H_1 : There is a difference between the opinions of different categories of farmers on availability of agricultural labour during 2013-14 *Rabi* season (wheat).

Table 4.2.1 (a) Results of ANOVA test of opinions of farmers:

ANOVA

2013-14 Rabi

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	15.050	2	7.525	5.081	.008
Within Groups	173.275	117	1.481		
Total	188.325	119			

Table 4.2.1 (a) shows whether the overall F ratio for the ANOVA is significant or not. The calculated F ratio (5.081) is significant ($p = .008$) at the .05 alpha level i.e. the calculated F (5.081) is more at $(n-k)$ degrees of freedom.

$$F(5) = 5.081, p < .05.$$

Based on F test, the null hypothesis that all three groups means are equal is rejected since $p < \alpha$. It can be concluded that there a significant difference between the opinion of small, medium and large farmer categories on availability of agricultural labour in Hoshiarpur district during 2013-14 *Rabi* (wheat) season. Thus that show the small, medium and large farmer opined differently regarding the shortage of labour in *Rabi* season in 2013-14. MGNREGA mainly affected the large farmers because they don't handle all

agricultural operations by him like small farmers. They highly depend on the agricultural labour that show MGNREGA caused labour shortage for agricultural operations.

During 2014-15:

Opinion of farmers regarding impact of MGNREGA on availability of agricultural labour are collected for 2014-15 *Rabi* season (Wheat) and details are presented in Table 4.2.2

Table 4.2.2 Opinion of farmers regarding the impact of MGNREGA on availability of agriculture labour during 2014-15 (Rabi season or wheat)

Categories of farmers	Opinion of farmers					Total
	Extreme shortage	High shortage	Moderate shortage	Slight shortage	No shortage	
Small farmers	9 (22.5)	12 (30.0)	3 (7.5)	12 (30.0)	4 (10.0)	40 (100.0)
Medium farmers	11 (27.5)	14 (35.0)	3 (7.5)	12 (30.0)	0 (0.0)	40 (100.0)
Large farmers	14 (35.0)	14 (35.0)	9 (22.5)	2 (5.0)	0 (0.0)	40 (100.0)
Total	34 (28.34)	40 (33.34)	15 (12.5)	27 (22.5)	4 (3.34)	120 (100.0)

Source: Primary data collected from different categories of farmers (the value in parenthesis are the percentage to the row total)

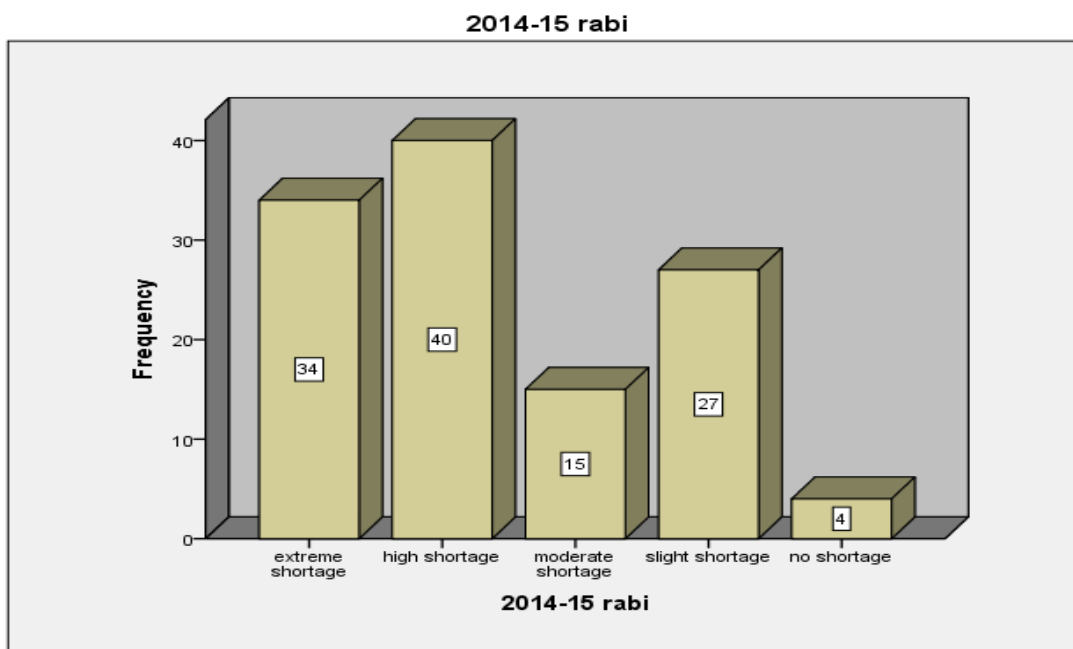
The opinion of farmers for 2014-15, majority (30 per cent) of the small farmers opined that there was “High shortage” of MGNREGA on availability of agricultural labour. It implies that MGNREGA has highly shortage of agricultural labour according to opinions of the small farmers. However, some small farmers expressed their opinion that there is “Extreme shortage” and “Moderate shortage” of agricultural labour due to MGNREGA and their proportion is 22.5 per cent and 7.5 per cent respectively. Further, it can also be observed that farmer expressed their opinion that there is either “no shortage” of agricultural labour due to MGNREGA also (10 per cent).

In case of medium farmers category too, majority of the farmers opined that there was “Slightly shortage” of agricultural labour due to MGNREGA. Furthermore, it can be observed some medium farmers opined that there is “Extreme shortage”, “High shortage”

and “Moderately shortage” of agricultural labour due to MGNREGA and their proportions were 27.5 per cent, 35 per cent and 7.5 per cent to the total number of farmers respectively, while there was no medium farmers has opined that there was “no shortage” of agricultural labour.

In case of large category of farmers 35 per cent of total farmers opined that there is “Extremely shortage” of agricultural labour. The large farmers opined that there was 22.5 per cent “Moderately Shortage” and 5 per cent “Slightly Shortage” of agricultural labour. Even in large farmers category no farmer expressed their opinion that there is a “no shortage” of agricultural labour.

Chart 4.2.2 Shortage of labour in Rabi season



Contrary to the public perception, 33.34 per cent of total farmers opined that there is “Highly shortage” and 28.34 per cent “Extremely shortage” of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture. However, a proportion of 22.5 per cent and 12.5 per cent of total farmers expressed their opinion that there is “Slight shortage”, “Moderate shortage” of agricultural labour due to MGNREGA respectively. There was 3.34 per cent of the total farmers opined that there was “No shortage” of agricultural labour for agricultural operations.

ANOVA test of opinions of farmers of Hoshiarpur District

The One-way ANOVA (Analysis of Variance) test is conducted to compare means for significant difference. It can be observed from Table 4.2.2 (a) that the three groups of farmers like: small farmers, medium farmers and large farmers expressed their opinion on

the increase or change in availability of agricultural labour after the introduction of MGNREGA in rural areas. To find out the difference between the opinions of the three category farmers, ANOVA test conducted by formulating the following hypothesis. The most important of assumptions is that the k groups are independent and drawn from normal population.

Null Hypothesis and alternative hypotheses:

H_0 : There is no difference between the opinions of different categories of farmers on availability of agricultural labour during 2014-15 *Rabi* season (wheat).

H_1 : There is a difference between the opinions of different categories of farmers on availability of agricultural labour during 2014-15 *Rabi* season (wheat).

Table 4.2.2 (a) Results of ANOVA test of opinions of farmers:

ANOVA

2014-15 Rabi

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	10.517	2	5.258	3.750	.026
Within Groups	164.075	117	1.402		
Total	174.592	119			

Table 4.2.2 (a) shows whether the overall F ratio for the ANOVA is significant or not. The calculated F ratio (3.750) is significant ($p = .026$) at the .05 alpha level i.e. the calculated F (3.750) is more at $(n-k)$ degrees of freedom.

$$F(5) = 3.750, p < .05.$$

Based on F test, the null hypothesis that all three groups means are equal is rejected since $p < \alpha$. It can be concluded that there a significant difference between the opinion of small, medium and large farmer categories on availability of agricultural labour in Hoshiarpur district during 2014-15 *Rabi* (wheat) season. Thus that show the small, medium and large farmer opined differently regarding the shortage of labour in *Rabi* season in 2014-15. MGNREGA mainly affected the large farmers because they don't handle all agricultural operations by him like small farmers. They highly depend on the agricultural labour that show MGNREGA caused labour shortage for agricultural operations.

SUM UP

Data are collected from the three categories of farmers' like: small, medium and large farmers regarding the impact of MGNREGA on availability of agricultural labour in Hoshiarpur district. Opinion of farmers is captured using 5 point Likert scale. In Hoshiarpur district, a proportion of the small, medium and large farmers opined that MGNREGA has caused a shortage of agricultural labour during 2012-13 and 2013-14. But, only few medium opined that there is "No shortage" of agricultural labour in Hoshiarpur district during 2013-14. Very few farmers also opined that there is "Slight shortage" and "Severe shortage" of agricultural labour and their proportion varied for different categories of farmers during these years. It can be concluded from the above observations that during the last three successive years, proportion of respondents of "Slight shortage" has been decreasing which indicates that the MGNREGA has an impact on availability of agricultural labour for agricultural operations. "Moderate shortage", "High shortage" and "Extreme shortage" were very high during kharif season compared to Rabi season in Hoshiarpur district during the respective years. Results indicate that large farmers were facing "Extreme shortage" and "High shortage" of agricultural labour compared to medium and small and marginal farmers. ANOVA test statistics show that there is a significant difference in the opinion of small and marginal, medium and large farmers on impact of MGNREGA on availability of agricultural labour in Hoshiarpur district during 2012-13, 2013-14 and 2014-15 Kharif season.

In 2014-15, the public perception, 35 per cent of total farmers opined that there is "Extreme shortage" and "High shortage" of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture. However, a small proportion of 4.17 per cent and 5 per cent of total farmers expressed their opinion that there is "Slight shortage", "No shortage" of agricultural labour due to MGNREGA respectively. There was 24.17 per cent of the total farmers opined that there was "Moderate shortage" of agricultural labour for agricultural operations. In the Rabi season, 2014-15 the public perception, 33.34 per cent of total farmers opined that there is "Highly shortage" and 28.34 per cent "Extremely shortage" of agricultural labour, which indicates that MGNREGA is affecting the availability of labour to the agriculture. However, a proportion of 22.5 per cent and 12.5 per cent of total farmers expressed their opinion that there is "Slight shortage", "Moderate shortage" of agricultural labour due to MGNREGA respectively. There was 3.34 per cent of the total farmers opined that there was "No shortage" of agricultural labour for agricultural operations.

CHAPTER- 5

IMPACT OF MGNREGA ON AGRICULTURAL LABOUR COST

MGNREGA plays very important role for the development of the areas and aims at creating sustainable rural livelihood through regeneration of the natural resource base like: augmenting productivity and supporting creation of durable assets and strengthening rural governance through decentralization and processes of transparency and accountability. Gram Panchayats of the villages are involved in the planning and implementation of the scheme and creation of durable assets for sustainable development of the rural areas.

The people of local village are participating in the MGNREGA to augment their annual family income. The major chunk of the participants in MGNREGA consists of local land less agricultural labour and small farmers. Again, these are the people also work as agricultural labour force for the local agricultural operations. Thus, there is an inter link between MGNREGA and local agricultural operations as the most of the work force in both the operations is the same. The present study is undertaken in the Hoshiarpur district of the Punjab. Further, two GPs were selected from each block where MGNREGA was being run successfully compared to other areas in that particular district. In the present study, primary data as well as secondary are analysed. Primary data regarding wage rates that prevailed during the last three years like: 2012 -13, 2013-14 and 2014-15 were collected from the local people (farmers as well as agricultural labourers). Wage rates for different agricultural operations were collected separately. As wheat and Paddy crops are prominent and being cultivated on a larger scale in Hoshiarpur and wage rates. Further, local farmers were also asked to give their opinion regarding huge fluctuation (increase) in the agricultural wage rates. Wage rates for men and women were collected separately as the equal wage pay policy is not existed for agricultural labour. Generally, male labourers have been paid more wage rates as compared to women agricultural labourers. Further, some specific agricultural operations are being attempted by specific gender only. For example, in most of the cases in all the regions, ploughing operations are confined to male labourers and weeding operations are confined to women labourers. Finally, secondary data were also collected regarding official wage rates announced by the Government of India for the MGNREGA workers for the last years.

5.1 Salient features of wage rates under MGNREGA:

The following objectives are notable under MGNREGA as far as wages are concerned:

- The job card should be issued within 15 days of application (Having job card is mandatory for participating in MGNREGA works)
- Employment will be provided within 15 days of application, if concerned officials are unable to provide any employment for the seekers, then unemployment allowance as per the Act, has to be paid.
- Wages are to be paid according to the Minimum Wages Act 1948 for agricultural labour in the state.
- At least one-third of the beneficiaries shall be women who have registered and requested work under the scheme.
- Social audit has to be done by the Gram Sabha including daily wage payments.
- All accounts and records relating to the scheme should be available for public scrutiny.

From the above salient features regarding wage payments under MGNREGA it can be noticed that unlike normal agricultural wages, one should get equal wage rates irrespective of gender. Paying equal wage rates is mandatory according to the Minimum Wages Act-1948. Further, it can be observed that unemployment allowance provision is also incorporated in the MGNREGA, if one cannot get an employment within 15 days after applying. Another distinctive and peculiar feature of MGNREGA is minimum one third of the beneficiaries shall be women of the total registered and requested for the work under the scheme.

5.2 Wage rates under MGNREGA in Punjab:

Details regarding wage rates for MGNREGA workers were collected from the secondary sources for the last eight years i.e., 2006-07 to 2014-15. The details of wage rates of MGNREGA are presented in Table 5.1 for the period 2006-07 to 2014-15. The daily wage rates fixed by government for the state of Punjab shows a steady increase during the above said 7 years period. During the year 2006-07, the daily wage rate fixed by the government was Rs.93-105. For the next year during 2007-08 the daily wage is same to Rs.93-105 and it was static during 2009-10 at Rs.100-105. Wage rate increased to Rs.153 and it prevailed during 2010-11 and 2011-12. Wage rate increased to Rs.166 from 2012-13. In 2013-14 and 2014-15, the wage rates increased to Rs.184 and Rs.200 respectively. It can be concluded that during the past seven years the wage rate increased except for the year 2007-08.

Table 5.1: Details of wage rates under MGNREGA in Punjab

Period	MGNREGA daily wage rate in Punjab
2006-07	Rs.93- 105
2007-08	Rs.93- 105
2009-10	Rs.100- 105
2010-11	Rs.153
2012-13	Rs.166
2013-14	Rs.184
2014-15	Rs.200

Source: Report to people and www.nrega.nic.in

5.3 Comparison of agricultural wage rates with MGNREGA wage rates:

In this section it is proposed to compare wage rates of agricultural operations with the wage rates of MGNREGA. As mentioned above, wage rates of MGNREGA are similar in the State and equal payment to both men and women labourers, as envisaged in the Act. While agricultural wage rates are dynamic in nature and depend on different factors like region, crop, type of operation, season, cropping intensity, supply of and demand for labour and gender. Keeping all these factors in mind, agricultural wage rates in the select district were compared with the wage rates of MGNREGA.

Wage rates in HOSHIARPUR district:

Wage rates are studied in Hoshiarpur district with reference to paddy crop as this crop has been extensively and largely cultivated crop in Hoshiarpur District including in the select GPs of the present study and hence, the wage rates regarding different operations in paddy crop were collected. Paddy crop is a major food crop in general in India and in particular in South India. Paddy crop requires different field operations right from nursery, sowing, and field preparation, transplantation, weeding, harvesting and threshing. In paddy crop also labour component is a vital part. Though mechanisation has been taking place with a considerable pace, still dependence on agricultural labour remained as crucial especially for the operations like transplantation and weeding in paddy crop. In most of the areas for harvesting and threshing farmers are depending on machines where both harvesting and threshing operations done simultaneously. But, in water logged fields this mechanised paddy harvesting is not possible. In such cases farmers invariably have to depend on agricultural labour only. Thus, agricultural labour has been playing a significant role in

paddy crop cultivation. Wage rates regarding agricultural labour were collected for three consecutive (2012-13, 2013-14 and 2014-15) years in for the eight GPs like: Talwandi Raian, Dhamian Kalan, Bassi Wazid, Johal, Bassi Daulat Khan, Dada, Harsi Pind and Jaja are selected from the four blocks of Hoshiarpur District. Hence, wage rates were collected separately for wheat (Rabi season) also for paddy (Kharif season) cultivation in Hoshiarpur district.

5.3.1. Wage rates in 2012-13

Agricultural wage rates were collected with regards to paddy crop during 2012-13. Generally land preparation works in paddy crop are carried out by men only. In Kharif season, agricultural wage rates for land preparation was Rs.280 per day and Rs.270 per day during *Rabi* season in the same year, while wage rates in MGNREGS was Rs.166 per day during 2012-13.

It can be concluded from Table 5.3.1.1 and Table 5.3.1.2 that agricultural wage rates were higher in kharif season as compared to Rabi season. Thus, it can be concluded that wage rates for different agricultural operations were higher than the wage rates of MGNREGA except wage rates for weeding operations and sowing and transplanting operations in case of women in Hoshiarpur district during 2012-13.

Transplantation and harvesting and threshing works are done by both male and female labourers. Agricultural wage rates for transplantation were Rs.265 for men and Rs.180 for women in Kharif season and Rs.235 for men and Rs.155 for women in *Rabi* season and these rates were 99 per cent in case of men and 14 per cent in case of women in kharif season and 69 per cent in case of men in Rabi season more than the wage rates of MGNREGA respectively. But in case of women in Rabi season, there was 11 per cent lesser wage rates than MGNREGA for transplanting or sowing wheat in 2012-13. It can further be observed from Table 5.3.1.1 and Table 5.3.1.2. that agricultural wage rates for harvesting and threshing operations was Rs.285 per day for men and Rs.200 for women in Kharif season and Rs.280 for men and Rs.195 for women in Rabi season and these wage rates were 119 per cent in case of men and 34 per cent in case of women and 114 per cent in case of men and 29 per cent in case of women more than that of wage rates of MGNREGA respectively.

Table 5.3.1.1 Wage rates in Hoshiarpur during 2012-13 (Kharif or paddy season)

Sr. no.	Wage rates for agriculture operations (Rs. Per day)			Wage rates in MGNREGA (Rs. Per day)		Percentage change	
	Types of operations	Men	Women	Men	Women	Men	Women
1	Land preparation	280	-	166	166	144.0	-
2	Sowing/Transplanting	265	180	166	166	99.0	14.0
3	Weeding	225	150	166	166	59.0	-16.0
4	Fertilizer/Pesticide Spray	240	-	166	166	74.0	-
5	Harvesting/Threshing	285	200	166	166	119.0	34.0

Table 5.3.1.2 Wage rates in Hoshiarpur during 2012-13 (Rabi or Wheat season)

Sr. no.	Wage rates for agriculture operations (Rs. Per day)			Wage rates in MGNREGA (Rs. Per day)		Percentage change	
	Types of operations	Men	Women	Men	Women	Men	Women
1	Land preparation	270	-	166	166	104.0	-
2	Sowing/Transplanting	235	155	166	166	69.0	-11.0
3	Weeding	200	125	166	166	34.0	-41.0
4	Fertilizer/Pesticide Spray	250	-	166	166	84.0	-
5	Harvesting/Threshing	280	195	166	166	114.0	29.0

While weeding operations are performed mostly by women labourers and agricultural wage rate for weeding operations was Rs.225 for men and Rs.150 for women per day in Kharif season and Rs.200 for men and Rs.125 for women in *Rabi* season. But, unlike other operations, wage rates for weeding operations in case of men higher 59 per cent in kharif season and 34 per cent in rabi season but in case of women 16 per cent lesser in Kharif and

11 per cent lesser in *Rabi* seasons respectively than the wage rates of MGNREGA in Hoshiarpur district during 2012-13.

5.3.2 Wage rates in 2013-14

During 2013-14, agricultural wage rates for land preparation was Rs.300 per day in Kharif season for men and Rs.285 per day during Rabi season during the same year. Whereas, wage rates in MGNREGA was Rs.184 per day during 2013-14. Compared to MGNREGA wage rates, wage rates of land preparation works in *Kharif* and *Rabi* seasons were 116 per cent and 101 per cent more respectively. In Hoshiarpur, mostly land preparation operation for paddy and wheat is only done by men.

Table 5.3.2.1: Wage rates in Hoshiarpur during 2013-14 (kharif season or paddy)

Sr. no.	Wage rates for agriculture operations (Rs. Per day)			Wage rates in MGNREGA (Rs. Per day)		Percentage change	
	Types of operations	Men	Women	Men	Women	Men	Women
1	Land preparation	300	-	184	184	116.0	-
2	Sowing/Transplanting	285	200	184	184	101.0	16.0
3	Weeding	250	160	184	184	66.0	-24.0
4	Fertilizer/Pesticide Spray	270	-	184	184	86.0	-
5	Harvesting/Threshing	310	225	184	184	126.0	41.0

Table 5.3.2.2: Wage rates in Hoshiarpur during 2013-14 (Rabi season or Wheat)

Sr. no.	Wage rates for agriculture operations (Rs. Per day)			Wage rates in MGNREGA (Rs. Per day)		Percentage change	
	Types of operations	Men	Women	Men	Women	Men	Women
1	Land preparation	285	-	184	184	101.0	-
2	Sowing/Transplanting	250	180	184	184	66.0	-4.0
3	Weeding	200	150	184	184	66.0	-34.0
4	Fertilizer/Pesticide Spray	250	-	184	184	66.0	-
5	Harvesting/Threshing	290	215	184	184	106.0	31.0

Transplantation and harvesting and threshing works are done by both male and female labourers. Agricultural wage rates for transplantation were Rs.285 for men and Rs.200 for women in Kharif season and Rs.250 for men and Rs.180 for women in Rabi season and these rates were 101 per cent in case of men and 16 per cent in case of women in kharif

season and 66 per cent in case of men in Rabi season more than the wage rates of MGNREGA respectively. But in case of women in Rabi season, there was 4 per cent lesser wage rates than MGNREGA for transplanting or sowing wheat in 2013-14. It can further be observed from Table 5.3.2.1 and Table 5.3.2.2. that agricultural wage rates for harvesting and threshing operations was Rs.310 per day for men and Rs.225 for women in Kharif season and Rs.290 for men and Rs.215 for women in Rabi season and these wage rates were 126 per cent in case of men and 41 per cent in case of women in kharif season and 106 per cent in case of men and 31 per cent in case of women more than that of wage rates of MGNREGA respectively. While weeding operations are performed mostly by women labourers and agricultural wage rate for weeding operations was Rs.250 for men and Rs.160 for women per day in Kharif season and Rs.200 for men and Rs.150 for women in *Rabi* season. But, unlike other operations, wage rates for weeding operations in case of men higher 66 per cent in kharif season and in rabi season but in case of women 24 per cent lesser in Kharif and 34 per cent lesser in *Rabi* seasons respectively than the wage rates of MGNREGA in Hoshiarpur district during 2013-14.

It can be concluded from Table 5.3.2.1 and Table 5.3.2.2 that agricultural wage rates were higher in kharif season as compared to Rabi season. Thus, it can be concluded that wage rates for different agricultural operations were higher than the wage rates of MGNREGA except wage rates for weeding operations and sowing and transplanting operations in case of women in Hoshiarpur district during 2013-14.

5.3.3 Wage rates in 2014-15

During 2014-15, agricultural wage rates for land preparation was Rs.325 per day in Kharif season and Rs.300 per day for men during *Rabi* season during the same year. Whereas, wage rates in MGNREGA was Rs.200 per day during 2014-15. Compared to MGNREGA wage rates, wage rates of land preparation works in Kharif and Rabi seasons were 125 per cent and 100 per cent more respectively. In Hoshiarpur, mostly land preparation operation for paddy and wheat is only done by men.

Transplantation and harvesting and threshing works are done by both male and female labourers. Agricultural wage rates for transplantation were Rs.300 for men and Rs.225 for women in Kharif season and Rs.280 for men and Rs.200 for women in Rabi season and these rates were 100 per cent in case of men and 25 per cent in case of women in kharif season and 80 per cent in case of men in Rabi season more than the wage rates of MGNREGA respectively. But in case of women in Rabi season, there was no change in

wage rates than MGNREGA for transplanting or sowing wheat in 2014-15. It can further be observed from Table 5.3.3.1 and Table 5.3.3.2. that agricultural wage rates for harvesting and threshing operations was Rs.350 per day for men and Rs.265 for women in Kharif season and Rs.325 for men and Rs.250 for women in Rabi season and these wage rates were 150 per cent in case of men and 65 per cent in case of women in kharif season and 125 per cent in case of men and 50 per cent in case of women more than that of wage rates of MGNREGA respectively. While weeding operations are performed mostly by women labourers and agricultural wage rate for weeding operations was Rs.325 for men and Rs.200 for women per day in Kharif season and Rs.250 for men and Rs.180 for women in Rabi season. But, unlike other operations, wage rates for weeding operations in case of men higher 66 per cent in kharif season.

Table 5.3.3.1: Wage rates in Hoshiarpur during 2014-15 (Kharif season or paddy)

Sr. no.	Wage rates for agriculture operations (Rs. Per day)	Wage rates in MGNREGA (Rs. Per day)		Percentage change			
	Types of operations	Men	Women	Men	Women	Men	Women
1	Land preparation	325	-	200	200	125.0	-
2	Sowing/Transplanting	300	225	200	200	100.0	25.0
3	Weeding	325	200	200	200	66.0	0.0
4	Fertilizer/Pesticide Spray	300	-	200	200	100.0	-
5	Harvesting/Threshing	350	265	200	200	150.0	65.0

Table 5.3.3.2: Wage rates in Hoshiarpur during 2014-15 (Rabi season or Wheat)

Sr. no.	Wage rates for agriculture operations (Rs. Per day)	Wage rates in MGNREGA (Rs. Per day)		Percentage change			
	Types of operations	Men	Women	Men	Women	Men	Women
1	Land preparation	300	-	200	200	100.0	-
2	Sowing/Transplanting	280	200	200	200	80.0	0.0
3	Weeding	250	180	200	200	50.0	-20.0
4	Fertilizer/Pesticide Spray	300	-	200	200	100.0	-
5	Harvesting/Threshing	325	250	200	200	125.0	50.0

But in case of women, there was no change in wage rates in Kharif because women get similar wage rates in both agriculture and MGNREGA but there was 20 per cent lesser in Rabi seasons respectively than the wage rates of MGNREGA in Hoshiarpur district during 2014-15.

It can be concluded from Table 5.3.3.1 and Table 5.3.3.2 that agricultural wage rates were higher in kharif season as compared to Rabi season. Thus, it can be concluded that wage rates for different agricultural operations were higher than the wage rates of MGNREGA except wage rates for weeding operations and sowing and transplanting operations in case of women in Hoshiarpur district during 2014-15.

5.4 Opinion of farmers regarding impact of MGNREGA on Agricultural wage rates:

The agricultural wage rates depend on different factors. There is a school of thought that MGNREGA has been leading to drastic increase in agricultural wage rates in different regions. Keeping this in view an attempt has been made to study the impact of MGNREGA on agricultural wage rates. In this regard opinions of farmers were collected regarding MGNREGA and its impact on agricultural wage rates. In general, Indian farmers are unique in nature. Indian farmer's community consist of land lords, big farmers, middle farmers and also small farmers. The opinions of farmers also vary with their land holding size. Hence, opinions were collected from different type of farmers like: Small (farmers who have up to 2 acres), Medium farmers (farmers who have 2 to 5 acres) and large farmers (farmers who have more than 5 acres). Total 120 farmers were studied from each district to study the impact of MGNREGA on agricultural wage rates. Small farmers, Medium farmers and larger farmers constitute 40 each of the total 120 farmers. Opinions were collected from these three types of farmers on a 5 point Likert's scale to capture the opinions of farmers regarding impact of MGNREGA on agricultural wage rates. Scale consists of extreme, high, moderate, slight and no impact of MGNREGA on increase of agricultural wage rates.

Opinion of farmers in Hoshiarpur District

Opinions of farmers are collected regarding impact of MGNREGA on agricultural labour cost. Farmers are asked to give their opinion on whether MGNREGA has been causing the increase in agricultural wage rates. Opinions are collected from farmers of the select GPs in Hoshiarpur district. Opinions of total 120 farmers consisting of small, medium and large farmers were collected regarding impact of MGNREGA on agricultural wage rates in Hoshiarpur district. Opinions were collected from these three types of farmers on a 5 point

Likert's scale to capture the opinions of farmers regarding impact of MGNREGA on agricultural wage rates. Scale consists of extreme, high, moderate, slight and no impact of MGNREGA on increase of agricultural wage rates.

Table 5.4.1 Opinion of farmers regarding the impact of MGNREGA on agriculture labour cost:

Categories of farmers	Opinion of farmers					Total
	Extreme hike	Severe hike	Moderate hike	Slight hike	No hike	
Small farmers	5 (12.5)	10 (25.0)	14 (35.0)	9 (22.5)	2 (5.0)	40 (100.0)
Medium farmers	10 (25.0)	18 (45.0)	10 (25.0)	2 (5.0)	0 (0.0)	40 (100.0)
Large farmers	16 (40.0)	20 (50.0)	4 (10.0)	0 (0.0)	0 (0.0)	40 (100.0)
Total	31 (25.84)	48 (40.0)	28 (23.34)	11 (9.17)	2 (1.67)	120 (100.0)

Source: Primary data and values in the parenthesis are percentage to the row total

To study the fact about the popular belief among farmers that farm wage rates have been escalating due to the influence of MGNREGA, this study is taken up in Hoshiarpur district. Table 5.4.1 describes the opinion of farmers on increase of farm wage rates and influence of MGNREGS. The three categories of farmers i.e., small and marginal, medium and large farmers are asked to rate the severity of impact of MGNREGS on agricultural wage hike.

Among the small farmers (who have farm holding size up to 2 acres) category, 5 per cent of farmers opined that there is no impact of MGNREGA on agricultural wage as: MGNREGA is not causing any increase in agricultural wage rates. However, 25 per cent and 35 per cent of small farmers revealed that there is "Severe hike" and "Moderate" impact of MGNREGA on increase of agricultural wage rate in Hoshiarpur district respectively. Further, it can be observed from Table 5.4.1 that the small farmer expressed the opinion that 35 per cent of "Moderate hike" and 12.5 per cent "Extreme hike" impact of MGNREGA on agricultural wage rates in Hoshiarpur district.

In case of medium category of farmers (who have land holding size of above 2 to 5 acres), 25 per cent of the farmers perceived that there is "Extreme hike" of agricultural wage due to MGNREGA. Further, it can be observed from Table 5.4.1 that 22.5 per cent, 25 per cent

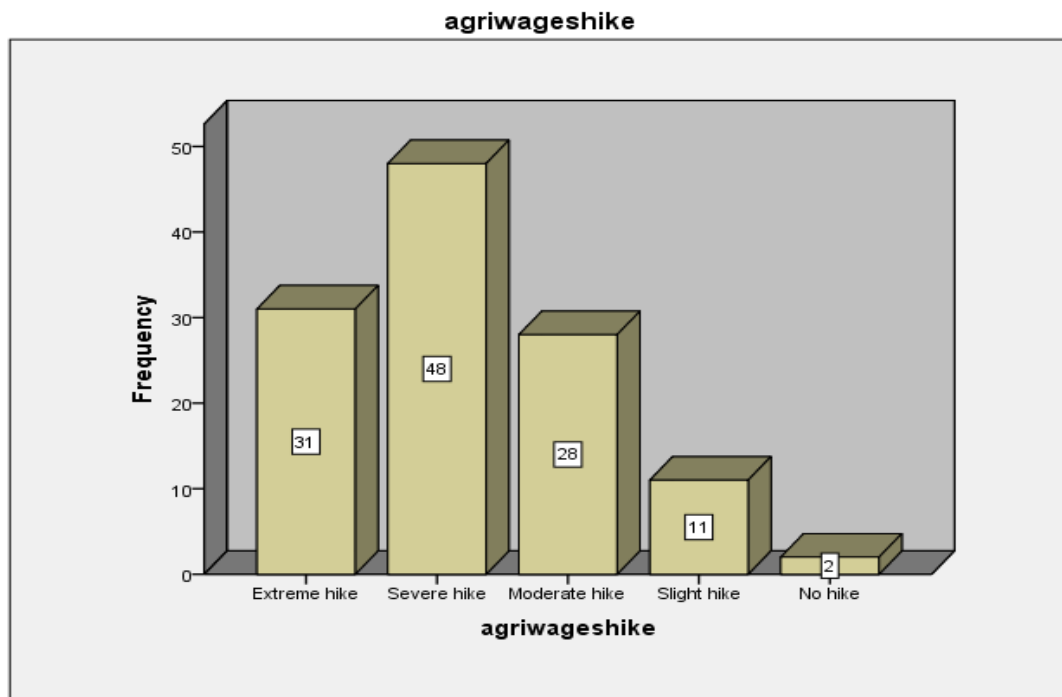
and 45 of medium farmers opined that there is “Slight hike”, “Moderate hike” and “Severe hike” in agricultural wage rates due to MGNREGA respectively in Hoshiarpur district. Further, it can be observed that no medium farmer expressed the opinion that there is “No hike” agricultural wage rates due to MGNREGA.

Among the large farmers (who have land size of more than 5 acres), 90 per cent of farmers replied that there is an impact of MGNREGA due to which agricultural wage rates have increased. However, 40 per cent of farmers opined that there is an “Extreme hike” in agricultural wage rates due to MGNREGA and it is causing increase in the wage rates. Further, it can be observed from Table 5.4.1 that 50 per cent and 10 per cent of large farmers perceived that there is “Severe impact”, “Moderate impact” of MGNREGA on increase of agricultural wage rates respectively in Hoshiarpur district. No single farmers in large farmers’ category opined that there is “No hike” in agricultural wage rates due to MGNREGA.

At the overall level in the select GPs in Hoshiarpur district, majority of the farmers (40 per cent) opined that there is “Severe hike” in agricultural wage rates due to MGNREGA. However, 25.84 per cent, 23.34 per cent and 9.17 per cent of farmers have opined that there is “Extreme hike”, “Moderate hike” and “Slight hike” in agricultural wage rates due to MGNREGA. It can further be observed that only 1.67 per cent of farmers revealed that there is “No hike” in agricultural wage rates due to MGNREGA.

It can be concluded from the above discussions that majority of the small and medium farmers have opined that there is moderate impact of MGNREGA on increase of agricultural wage rates. However, very few large farmers (5 per cent) replied that there is “No hike” in agricultural wage rates due to MGNREGA and majority of large farmers’ perceived “Severe hike” in agricultural wage rates due to MGNREGA in Hoshiarpur district. The following chart 5.4.1 (a) show the opinions of the farmers regarding the rise in agricultural wages due to MGNREGA, the 31 farmers opined that MGNREGA extremely affect the agricultural wage and 48 farmers from the sample opined that there is highly increase in agricultural wages due to MGNREGA. Only 2 farmers opined that MGNREGA is not the cause to Hike in agricultural wage rates.

Chart no. 5.4.1 (a) Opinions of farmers on agricultural wage rates hike due to MGNREGA



ANOVA test of opinions of farmers of Hoshiarpur District

The One-way ANOVA (Analysis of Variance) test was conducted to compare means for significant difference. It can be observed from Table 5.4.1.1 that the three groups of farmers like: small farmers, medium farmers and large farmers expressed their opinion on the increase or change in the wage rates demanded by the agricultural labour after the introduction of MGNREGA. Some of the small farmers opined that there is no increase in wage rate and some of medium farmers opined that there is moderate hike in the agricultural wages due to MGNREGA. However, some of the large farmers reported that there is severe wage hike in agriculture due to the effect of MGNREGA in rural areas in Hoshiarpur district. The data contains one independent variable i.e. wage rate, hence the analysis is one-way ANOVA. In order to find out if any of the opinion between groups and within groups is significant, the data is subjected to ANOVA test by formulating the following hypothesis. The most important assumption is that the k groups are independent and drawn from normal population.

Null Hypothesis and alternative hypotheses:

H_0 : There is no significant difference between the opinions of different categories of farmers on impact of MGNREGA on agricultural labour cost in Hoshiarpur District.

H₁: There is a significant difference between the opinions of different categories of farmers on impact of MGNREGA on agricultural labour cost in Hoshiarpur District.

Table 5.4.1.1 Details of ANOVA test of Opinions of farmers

ANOVA

Agricultural wages hike due to MGNREGA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	26.017	2	13.008	16.953	.000
Within Groups	89.775	117	.767		
Total	115.792	119			

Based on the results provided in Table 5.4.1.1 it can be observed that the *F* ratio (16.953) is highly significant ($p=0.000$) as it is more than critical value at 0.05 alpha level at (n-k) degrees of freedom.

$$F(2) = 16.953, p < .05.$$

Based on *F* test, the null hypothesis is rejected that all three groups' means are equal, since $p < \alpha$. Hence, there is a significant difference in opinions of large, medium and small farmers reporting the impact of MGNREGA on agricultural wage rates is significant in Hoshiarpur district.

Sum up

MGNREGA is one of the largest employment programme ever started in a country with a huge public investment. The major objective of this programme is to augment the annual family incomes of the participants and sustaining rural livelihood through regeneration of durable assets. Most of the beneficiaries in MGNREGA are land less agricultural labour and small farmers. Thus, MGNREGA has a direct link with the agriculture system. Moreover, MGNREGA has completed 8 years in Hoshiarpur district. So, here, an attempt has been made to study the impact of MGNREGA on agricultural labour cost.

Paying equal wage rates is mandatory according to the Minimum Wage Act- 1948. Further, unemployment allowance provision is also incorporated in the MGNREGA, if one can't get an employment within 15 days after applying. Another, distinctive and peculiar features of MGNEGA is minimum one third of the beneficiaries shall be women. In Hoshiarpur district, agricultural wage rates have been higher compared to MGNREGA wage rates during 2012-13, 2013-14 and 2014-15. Further, it can be observed that the percentage difference between agricultural wage rates and wage rates of MGNREGA was

substantially higher in case of men compared to women. Moreover, rate of increase in wage rates of MGNREGA was higher than that of rate of increase in wage rates of agricultural operation for both men and women.

In Hoshiarpur district, majority of the small farmers have opined that there was “moderate impact” of MGNREGA on increase of agricultural wage rates. While large farmers opined that there was “Severe impact” of MGNREGA on agricultural wage rates. Majority of large farmers perceived “severe” impact of MGNREGA on increase of agricultural wage rates.

ANOVA test details show that there is a significant difference in the opinions of farmers of small, medium and large categories reporting the impact of MGNREGA on agricultural labour cost in Hoshiarpur.

CHAPTER- 6

SUMMARY AND CONCLUSIONS

The MGNREGA is one of the employment programs that provide a new life line of the rural people who earn their livelihood as wage earners. It also gears up the social relationship among the rural people which is a pre requisite condition to build a strong society or a nation. It also reduces the gender difference for some works which are in practice in rural areas. It is also observed that female workers, both urban and rural, receive lesser wages than their male counterparts for doing the same jobs. The act of the MGNREGA has removed the gender difference in wages. The right to participate in works for women was made a sort of compulsion as per the act of MGNREGA there must be at least 33 per cent participation for women. This chapter is explains the chapter wise summary and conclusions of the study. Further, suggestions or policy implications are also explained in this chapter.

Chapter -1: INTRODUCTION:

This chapter provides the meaning and background of MGNREGA, objectives of the study, methodology, sampling of the study, analysis of the data, hypotheses to be tested, chapter scheme, and limitations of the study and scope of the study for future research. It is also intended to summarize the review of literature or the reviews of the researchers that are related to this study.

OBJECTIVES OF THE STUDY

The main purpose of the present study is “Impact of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on Agriculture: a case study of Hoshiarpur district” is to examine the impact of scheme on the beneficiaries in socio-economic status, influence of the MGNREGA on availability of agricultural labour as well as agricultural wage rates.

The main objectives are:

- To examine the socio- economic status of MGNREGA beneficiaries in Hoshiarpur.
- To study the opinions of farmers on shortage of agricultural labour due to MGNREGA in Hoshiarpur.
- To study the opinions of farmers on increase in agricultural labour cost due to MGNREGA in Hoshiarpur.

The study also analyses the effect of demographic and social variables such as the respondents' age, gender, education status, land holding size, caste and religion affiliations, income sources, major occupation, other socio-cultural parameters, agricultural cropping pattern, wage rates etc.

Chapter-2: REVIEW OF LITERATURE:

Different research studies expressed the opinion that MGNREGA has augmented the annual income of the rural families and minimised the migration at a significant level. Further, some of the researchers have opined that MGNREGA found to be more attractive for females and senior people as the scheme is providing employment to those who demand work and also useful to improve the natural resources like land and water. At the same time, there is another school of thought that MGNREGA has been causing the shortage of agricultural labour as well as increase in the wage rates. And the intensity of this problem is ranging from moderate to severe based upon the local agro-climatic conditions, socio-economic features and effectiveness in the implementation of the MGNREGA. Agricultural wages have risen between 42 per cent (in Rajasthan) and 106 per cent (Andhra Pradesh). They further opined that the rise in agricultural wages can be attributed mainly to MGNREGA works and out-migration of rural labour to towns and cities. The researchers who have been supporting the scheme are claiming that the major reasons for increase in the farm wage are higher wages in other locally available jobs, seasonal nature of agricultural job and presumption of an agricultural job as a low-esteem one.

Chapter-3: SOCIO- ECONOMIC STATUS OF MGNREGA BENEFICIARIES:

In this chapter, an attempt has been made to study the socio-economic and demographic components like age distribution, caste and religion details, education, family size, occupation, movable assets, livestock, and income of the beneficiaries of the MGNREGA.

In this chapter, an attempt has been made to analyse the beneficiaries of the MGNREGA and also to find out the socio- economic impact of the MGNREGA on its participants. The components like age distribution, caste and religion details, education, family size, and occupation, movable assets, livestock, income of the beneficiaries of the MGNREGA were studied. Majority of the beneficiaries belong to SC caste in Hoshiarpur district (85 per cent) and 15 per cent belongs to the other caste. In Hoshiarpur District, majority of beneficiaries belong to Hindu religion. Literacy percentage of beneficiaries in Hoshiarpur districts under study. Moreover, illiterate proportion of the beneficiaries was 23.3 per cent

Hoshiarpur district. Most of the people have primary level education (38.3 per cent) and only 10 per cent people have higher secondary education. Proportion of small size families (up to 4 members) was higher in beneficiary in Hoshiarpur districts. In Hoshiarpur district proportion of large size families of (15 per cent). The major occupation of the beneficiaries of the MGNREGA in Hoshiarpur district appeared to be agriculture labour (87.5 per cent) and only 12.5 per cent involves in the other works. More number of beneficiaries is residing in own pakka houses in Hoshiarpur district (60 per cent) and 27.5 per cent lives in semi- pakka houses and the sample of beneficiaries of 12.5 per cent lives in own kacha houses. Proportion of the beneficiaries who have movable assets is improved after joining MGNREGA in Hoshiarpur. Proportion of participants who have livestock was also improved in case of beneficiaries. Beneficiaries of Hoshiarpur districts have more buffalos and cows and poultry birds. The 34.2 per cent beneficiaries said that their income rise due to MGNREGA and their annual income is more than Rs.10000 per annum. Thus we can say that MGNREGA plays an important role for the socio economic status of the people that lives in the rural areas.

Chapter- 4: IMPACT OF MGNREGA ON AVAILABILITY OF AGRICULTURE LABOUR:

As labour is an important component in the Indian agriculture system, an attempt has been made to analyse the impact of MGNREGA on availability of labour to the agricultural operations. Perceptions of the farmers on the availability of agricultural labour are collected for three consecutive years as: 2012-13, 2013-14 and 2014-15. In Hoshiarpur district, primary data are collected for both the seasons i.e., Kharif and Rabi as crops have been cultivating in two seasons. Further, perceptions of farmers are captured category wise as: small farmers, medium farmers and large farmers.

Data are collected from the three categories of farmers' like: small, medium and large farmers regarding the impact of MGNREGA on availability of agricultural labour in Hoshiarpur district. Opinion of farmers is captured using 5 point Likert scale. In Hoshiarpur district, a proportion of the small, medium and large farmers opined that MGNREGA has caused a shortage of agricultural labour during 2012-13 and 2013-14. But, only few medium opined that there is "No shortage" of agricultural labour in Hoshiarpur district during 2013-14. Very few farmers also opined that there is "Slight shortage" and "Severe shortage" of agricultural labour and their proportion varied for different categories of farmers during these years. Results indicate that large farmers were facing "Extreme

shortage” and “High shortage” of agricultural labour compared to medium and small and marginal farmers. ANOVA test statistics show that there is a significant difference in the opinion of small and marginal, medium and large farmers on impact of MGNREGA on availability of agricultural labour in Hoshiarpur district during 2012-13, 2013-14 and 2014-15 Kharif season.

Chapter- 5: IMPACT OF MGNREGA ON AGRICULTURE LABOUR COST:

Most of the beneficiaries of MGNREGA also work as agricultural labour in the agricultural operations. Thus, there is a inter link and inter dependence between the MGNREGS and agricultural wage rates. Hence, in this chapter an effort has been made to find out the impact of MGNREGA on agricultural wage rates, if any. Wage payments under MGNREGA should be equal irrespective of gender. Paying equal wage rates is mandatory according to the Minimum Wages Act-1948. Further, it can be observed that unemployment allowance provision is also incorporated in the MGNREGA, if one can't get an employment within 15 days after applying. The daily wage rate of MGNREGA is fixed by the Government and it is Rs.153 in 2010-11; Rs.166 in 2012-13; Rs.184 in 2013-14 in Punjab. Wage rate increased to Rs.184 during 2013- 14 and to Rs.200 since 2014-15. Paying equal wage rates is mandatory according to the Minimum Wage Act- 1948. Further, unemployment allowance provision is also incorporated in the MGNREGA, if one can't get an employment within 15 days after applying. Another, distinctive and peculiar features of MGNREGA is minimum one third of the beneficiaries shall be women.

In Hoshiarpur district, agricultural wage rates have been higher compared to MGNREGA wage rates during 2012-13, 2013-14 and 2014-15. Further, it can be observed that the percentage difference between agricultural wage rates and wage rates of MGNREGA was substantially higher in case of men compared to women. Moreover, rate of increase in wage rates of MGNREGA was higher than that of rate of increase in wage rates of agricultural operation for both men and women.

Further, opinions of farmers were also collected regarding impact of MGNREGA on agricultural wage rates. The opinions of farmers also vary with their land holding size. Hence, opinions were collected from different type of farmers like: Small farmers (farmers who have up to 2 acres), Medium farmers (farmers who have above 2 acres and up to 5 acres) and large farmers (farmers who have more than 5 acres)

In Hoshiarpur district, majority of the small farmers have opined that there was “moderate impact” of MGNREGA on increase of agricultural wage rates. While large farmers opined

that there was “Severe impact” of MGNREGA on agricultural wage rates. Majority of large farmers perceived “severe” impact of MGNREGA on increase of agricultural wage rates. ANOVA test details show that there is a significant difference in the opinions of farmers of small, medium and large categories reporting the impact of MGNREGA on agricultural labour cost in Hoshiarpur.

CONCLUSIONS:

The beneficiaries of MGNREGA led to the following conclusions pertaining to their socio economic background:

- People are participating in the MGNREGA from all the age groups. In fact, the participation of middle age people in MGNREGA works is much higher as compared to the other age groups. There is also 17 per cent approximately worker are belong to the old age (more than 60 years old).
- The participation of weaker section particularly belonging to SC category is much higher in MGNREGA works.
- Female labour prefers to work in their local areas or in their own villages so they work in MGNREGA.
- There are instances of participation of even Graduates in MGNREGA in Hoshiarpur district indicating that the scheme has been coming handy to not only agricultural labour during un-season but also to educated unemployed. The most of the beneficiaries of MGNREGA have only primary level education (5th standard) that is 39 per cent of the sample.
- Most of the beneficiaries of MGNREGA happen to be agricultural labour and thus the scheme has achieved the desired purpose of providing employment to the agricultural labour during un-season or in the lean season when agricultural worker don't have work.
- The beneficiaries of MGNREGA are living in own pakka houses and 13 per cent of the sample lives in the kacha houses.
- However, majority of the beneficiaries of the MGNREGA own TVs and mobiles, fridge, scooter, fan etc. after joining MGNREGA which have become almost necessities.
- MGNREGA has been contributing in rise of income in Hoshiarpur district. Most of the 35 per cent of the beneficiaries said that there income is between 10000-15000Rs.

- The farmers have been increasing feeling the shortage of labour for agricultural operations due to MGNREGA in the Hoshiarpur district.
- The farmers in Hoshiarpur district felt the shortage is more in Kharif season of paddy as compared to Rabi season of wheat.
- Large farmers face more shortage of labour rather than small and medium farmers.
- There is positive impact is that it increases bargaining power among the labourers and empowering the women in terms of wage rates because female gets equal wage rates to men.
- Seasonality of MGNREGA work also very much effected the availability of agricultural labour for its main sowing, weeding, harvesting operations of Rabi and Kharif.
- As far as wage rates are concerned the agricultural wage rates are much higher than the wage rates given under MGNREGA for both male and female related agricultural operations in the Hoshiarpur districts. This may be due to the decreasing supply of labourer to agricultural operations and increased participation of women in MGNREGA works.
- The farmers of all the categories (small, medium and large) have been increasing feeling the increase of agricultural wage rates due to MGNREGA.
- The farmers of large category felt the increase more compared to small and medium category.
- Most of the assets created under MGNREGA pertaining to land development and road connectivity.
- The peak period labour shortages in agriculture are observed in several regions and are resulting in a number of changes - in the working hours, working day and MGNREGA work calendar.
- The on-going process of agricultural mechanization is hastened especially in certain operations like ploughing and harvesting of paddy.
- A clear response to peak season agriculture labour shortage is the negotiated MGNREGA calendar that avoids implementing works during agricultural peak season and provides developmental works during the lean season. Such a time schedule though not universal is welcomed by farmers as well as workers wherever adopted.
- There is clear evidence that the rise in wages is one of the factors contributing, along with other rising input costs, to the increasing costs of cultivation. While SC,

ST and other small marginal farmers who are also participants in the MGNREGA were not affected much, or in many cases gained considerably, the better off farmers could face the rising costs partly through mechanization.

- The worst affected are the small-marginal farmers who are neither participants in the MGNREGA work nor beneficiaries of works on their private lands.
- One of the salutary effects of MGNREGA on poor rural households is the drastic reduction in distress migration.

SUGGESTIONS:

The bigger challenge for the Government and policy makers with regard to MGNREGA is to make a win-win situation for the beneficiaries of MGNREGA, link to environment protection and ensuring the sustainable development and growth in the agriculture and rural sector. To face this challenge, policy makers may think of converging MGNREGA with the agricultural operations.

- Government can think of allowing the participant farmers (mainly farmers) of MGNREGA to work in their own fields to enhance the agriculture production as well as productivity.
- At present Government is providing 100 manual days for a household in a financial year on demand. Number of days should be decided based on local cropping pattern and cropping systems so that agricultural operations in that specific District / area will not be affected because of lack of supply of agricultural labour.
- The officials of MGNREGA need to work hand in glove with the agriculture and horticulture departments to prepare a comprehensive work plan.
- Government can make the guidelines based on location specific, region specific, District specific and area specific within the District.
- Care should be taken to avoid coincidence of MGNREGA works and peak season of agricultural operations as majority of the beneficiaries of MGNREGA are agriculture labour.
- Government shall set up a separate department to look after the scheme as huge money is being pumped in the scheme in every year, instead of depending only on contract employees to run the scheme.
- Officials of MGNREGA shall take utmost care while issuing job cards as number of job cards in most cases are exceeding the number of households in the location.

- A participative approach should be developed in making decisions regarding creation of assets by involving local bodies, representatives of farmers and agricultural labour to create useful and sustainable assets, which can protect the environment, improve ground water, reduce soils loss and transforming fallow land and thereby developing the agricultural production and productivity. Technical help also should be taken while creation of assets.
- Capacity building programmes for employees of MGNREGA with main emphasis on imparting agricultural and environmental knowledge to enhance the utility of assets that are created under MGNREGA to the agriculture development.
- Awareness campaign for participants shall be undertaken of MGNREGA regarding the main objectives and intents of the scheme. Moreover, highly educated and prosperous youth beneficiaries of MGNREGA can be selected and given training in agribusiness and entrepreneurship perspective

Thus MGNREGA one of the cause of shortage of labour for agricultural operations and also causing rise in agricultural labour cost. The farmers of Hoshiarpur opined that there was MGNREGA implemented from the year 2006 and it play important role for rise the economic status of the poor people or agricultural labour. People raise bargaining power while working in agricultural activities. Thus MGNREGA causing agricultural labour cost and hike agricultural labour cost.

CASE STUDY:

Highlights the opinion of a large farmer with regard to having paid high wage rates to labours and agricultural labour cost is increased after introduction of MGNREGA.

District: Hoshiarpur

Block: Hoshiarpur- 1

Gram Panchayat: Talwandi Raian

Name of the Respondent: Gurmail singh

Age: 60

Monthly Income: Rs.5000

Caste: General

Land holding size: 6 acres

Wage rates paid to labourer on farm: Rs.300 per day for normal agricultural operations.

Wage rates for labourer before MGNREGA in village:

Men= Rs.150 and Women= Rs.80

Wage rates after MGNREGA:

Men= Rs.250 and women= Rs.200

Current wage rate under MGNREGA: Rs.200 per day

Main crops grown: paddy, wheat and sugarcane.

Irrigation: tube well (submersible)

Input costs (Annual per acre):

Seeds and fertilizers: Rs.10000

Irrigation: no

Labour: Rs.4000



Gurmail singh aged 60 years lives in Talwandi raian village of Hoshiarpur-1 block in Hoshiarpur district of Punjab. He owns 6 acres of land and the main crops grown include paddy, wheat and sugarcane. According to him, the village agriculture is not benefitting from MGNREGA because in there is not any single asset created that helpful agriculture. But the other hand most of the labourer prefer to work under MGNREGA and demand more wages while working in farms. **He states that productivity of crops would only increase if MGNREGA is discontinued during agricultural season as the wages being offered to the labourers are lucrative for lesser work hours.**

He suggested that MGNREGA works must be relevant to the community such as irrigation projects as the village faces water shortage for agricultural operations. In addition, he suggested that the implementation and allocation of the scheme must be collaborated with the Gram Panchayat and requires efficient staff to ensure the funds allocated are being utilized correctly.

BIBIOGRAPHY

- Action for Food Production (AFPRO) (2009). Infrastructure Development and Beyond: Exploring the Scope for Sustainable Livelihood Support under NREGA. Report submitted to the Ministry of Rural Development/UNDP. New Delhi: AFPRO
- Akhil Alha and Bijoyata, Yonzon (2011). Recent Developments in Farm Labour Availability in India and Reasons behind its Short Supply. *Agricultural Economics Research Review*, 24, 381-390
- Anjani Kumar, Sant Kumara, Dhiraj K., Singh and Shivjee (2011). Rural Employment Diversification in India: Trends, Determinants and Implications on Poverty. *Agricultural Economics Research Review*, 24, 361-372.
- Azam, Mehtabul (2012). The impact of indian job guarantee scheme on labour market outcome: Evidence from a natural experience. *world bank and IZA* , 6548.
- Baba,SH., Wani, M.H, Shaheen,F.A, Bilal A. Zargar and Kubrevi, S.S. (2011). Scarcity of Agricultural Labor in Cold-Arid Ladakh: Extent, Implications, Backward Bending and Coping Mechanism. *Agricultural Economics Research Review*, 24, 391-400.
- Baljinder Kaur, Singh, J.M., Garg,B.R., Jasdev Singh and Satwinder Singh (2011). Causes and Impact of Labour Migration: A Case Study of Punjab Agriculture. *Agricultural Economics Research Review*, 24, 459-466.
- Bardhan, Kalpana (1977). Rural employment wages and labour markets in india. *Economic and Political Weekly* , 12, 26.
- Basu, A. K. (2011). Impact of rural employment guarantee schemes on seasonal labour markets: optimum compensation and workers welfare. *institute for study of labour(IZA)*, 5701.
- Berg, E. B. (2012). Can rural public works affect agricultural wages? Evidence from India. *Oxford, UK: centerfor the Study of African Economics* .
- Census, (2011): www.censusindia.gov.in
- Channaveera, Lokeshaa,H., Hugara,L.B., Deshmanyab,L.B., and Goudappa,S.B. (2011). Impact of MGNREGA on Input-use Pattern, Labour Productivity and Returns of Selected Crops in Gulbarga District, Karnataka. *Agricultural Economics Research Review*, 24, 517-523.

Deepak, Varshney, D. G. (2014). The Impact of MGNREGA on cropping Patterns, wages and labour use.

Deshpande S. & L. (1988). Impact of Liberalisation on labour market in India: What do Facts from NSSO's 50th round show? *Economic and Political weekly* , 33, 22.

D N Reddy, A. N. (2014). Impact of Mahatma Gandhi National Employment Guarantee Act (MGNREGA) on Rural labour Markets. *International Crops Research Institute for the Semi- Arid Tropics (ICRISAT)* , 58. 40.

Dreze, J. (2007). Employment Guarantee and the Right to Work. in *The Battle for Employment Guarantee*, ed. R. Khera, New Delhi: Oxford University Press, 2011, 3–21. *Economics & Management*, 2, 1, 136-140.

Dutta, P. M. (2012). Does India's Employment Guarantee Scheme Guarantee Employment?". *world bank policy research working paper*. 6003.

GOI (Government of India) (2011). Census of India 2011 – District Census Hand Book.

Government of India (2014). The National Rural Employment Guarantee Act 2005 (NREGA), Operational Guidelines, Ministry of Rural Development, New Delhi, 194

Harisha, B.G., Nagaraj.N., Chandrakantha, M.G and P.S.Srikantha Murthy (2011). Impacts and Implications of MGNREGA on Labour Supply and Income Generation for Agriculture in Central Dry Zone of Karnataka. *Agricultural Economics Research Review*, 24, 2011, 485-494.

Kareemulla, K., Reddy, S. K., Rama Rao, C. A., Kumar, S. And Vekateshwarlu, B. (2009). Soil and water conservation work through National Rural Employment Guarantee Scheme (NREGA) in Andhra Pradesh-An analysis on livelihood impact. *Agriculture Economics Research Review*, 22(4): 443-450.

Mathur L. (2007). Employment Guarantee: Progress So Far. *Economic and Political Weekly*, 42(52), 17-20.

Mukherjee, D. and Sinha, U.B. (2011). Understanding NREGA: A Simple theory and some facts. *CDE, Delhi school of economics* , 196.

MORD (Ministry of Rural Development). (2012). MGNREGA Sameeksha : An Anthology of Research Studies on the Mahatma Gandhi National Rural Employment Guarantee Act,2005, 2006-2012. Government of India, New Delhi.

Nair, Sukumaran (1997). Rural Labour Market in Kerala: small holder agriculture and labour market dynamics . *Economic and political weekly* , 32, 35.

- Papp, Impert (2013). Labour Market Effects of Social Programs: Evidence from India's Employment Guarantee. *CASE working paper* .
- Papp, Impert (2014). short-term migration and rural workfare programs: evidence from India. *CASE working paper* .
- Parmar, B. D. (1987). Rural Labour Market: An Empirical Study of Farm Wages in Saurashtra Region. *Indian Journal of Industrial Relations* , 23, 2.
- Prabakar, C., Sita Devi, K and Selvam.S. (2011). Labor Scarcity – Its Immensity and Impact on Agriculture, *Agricultural Economics Research Review*, 2, 373-380.
- Prattoy Sarkar, Jagdish Kumar and Supriya (2011). Impact of MGNREGA on Reducing Rural Poverty and Improving Socio-economic Status of Rural Poor: A Study in Burdwan District of West Bengal, *Agricultural Economics Research Review*, 24, 437-448.
- Reddy, A. (2013). Dynamics of Rural Markets: Evidence from Longitudinal panel data in India. *ICRISAT* .
- Selva Maheshwari, M. and Gangwar, L.S. (2011). Impact of Rural Development Scheme on Availability of Agricultural Labour - A Study of Dairy Farmers in Thanjavur District of Tamil Nadu. *Agriculture Economics Research Review*, 24, 201, 409-414
- Sidhu, H. S. (1988). Wage determination in the rural labour market: the case of Punjab and Haryana. *Economic and Political Weekly*, 23, 52/53.
- Singh, Sukhpal (2009). Survival of Agricultural Labour in Punjab: A Burning Question. *Economic and Political Weekly* , 44, 29.
- Srikantha Murthy, P.S and Indumati (2011). Economic Analysis of MGNREGA in the Drought- prone States of Karnataka, Rajasthan and Irrigation- dominated State of Andhra Pradesh, *Agricultural Economics Research Review*, 24, 531-536.
- Usha Rani Ahuja, Dushyatnt Tyagi, Sonia Chauhan and Khyali Ram Chaudhary (2011). Impact of MGNREGA on Rural Employment and Migration: A Study in Agriculturally-backward and Agriculturally- advanced Districts of Haryana. *Agricultural Economics Research Review*, 24, 495-502.
- Vanitha, S.M and Srikantha Murthy,P.S. (2011). An Economic Analysis of MGNREG Programme in Mysore District of Karnataka. *Agricultural Economics Research Review*, 24, 415-422.
- Zimmermann, L. (2012). Labour market impacts of a large- scale public works program: Evidence from the Indian Employment Guarantee Scheme . *IZA* , 6858.

**IMPACT OF MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT
GUARANTEE ACT (MGNREGA) ON AGRICULTURE: A CASE STUDY OF
HOSHIARPUR DISTRICT**

A) MGNREGA Beneficiary Questionnaire

This questionnaire is used to study the impact of MGNREGA on agriculture. The aim of this questionnaire is to get the information regarding the socio- economic status of MGNREGA beneficiaries in Hoshiarpur district.

Date of Data Collection: _____

District _____ Block _____ Village _____

A. Respondent Profile

1. Name of the respondent: _____
2. Job card Number: _____
3. Name of the head of the household: _____
4. Gender: _____
 (1) Male (2) Female
5. Age (in years): _____
 (1) 19- 30yrs (2) 30- 45yrs
 (3) 45 to 60yrs (4) >60yrs
6. Caste: _____
 (1) General (2) SC
 (3) ST (4) Others
7. Education: _____
 (0) Illiterate (1) Primary
 (2) Secondary (3) Higher Secondary
 (4) Graduate
8. Religion: _____
 (1) Sikh (2) Hindu
 (3) Muslim (4) other (specify)
9. Occupation: _____
 (1) Agriculture (2) Agriculture labour
 (3) Other works
10. Listed under BPL _____
 (1) Yes (2) No

B. Household Details

11. Family Size: _____ (in numbers)
 (1) Up to 4 members (2) 5 to 8 members
 (3) Above 8 members
12. Please provide household details:

Age	No. Of Males		No. Of Females	
	Working	Not working	Working	Not working
1) 0 to 14yrs				
2) 14yrs to 18yrs				
3) 18yrs to 30yrs				
4) Above 30yrs				

**IMPACT OF MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT
GUARANTEE ACT (MGNREGA) ON AGRICULTURE: A CASE STUDY OF
HOSHIARPUR DISTRICT**

B) Farmer's questionnaire

This questionnaire is used to study the impact of MGNREGA on agriculture. The aim of this questionnaire is to get the information regarding the impact of MGNREGA on availability of agriculture labour on the Rabi (wheat) and Kharif (paddy) and to compare agriculture labour cost with MGNREGA wage rates in Hoshiarpur.

Date of data collection _____

District _____ Block _____ Village _____

A. Respondent Profile:

1. Name of head of household: _____
2. Name of the respondent: _____
3. Gender: __
 - (1) Male
 - (2) Female
4. Age (years): __
 - (1) <20yrs
 - (2) 20 to 40yrs
 - (3) 40 to 60yrs
 - (4) >60yrs
5. Caste: __
 - (1) General
 - (2) SC
 - (3) ST
 - (4) Others
6. Education: __
 - (0) Illiterate
 - (1) Primary
 - (2) Secondary
 - (3) Higher secondary
 - (4) Graduate
 - (5) Post- Graduate
7. Source of income: __
 - (1) Agriculture
 - (2) Business/ Trade
 - (3) Livestock Farming
 - (4) other (specify)
8. Religion: _____
 - (1) Sikh
 - (2) Hindu
 - (3) Muslim
 - (4) Other
9. Average annual income (Rs.): _____
 - (1) <25000Rs.
 - (2) 25000 to 50000Rs.
 - (3) 50000 to 100000Rs.
 - (4) >100000Rs.
10. Please provide land details (in acre):

Farmer	Land (acre) 8Kannals= 1 Khet= 1 Acre	Specify
(1) Small farmers	Less than 2 acre	
(2) Medium farmers	2 acre to up to 5 acre	
(3) Large farmers	Above 5 acre	

B. Cost of labour for agriculture operations:

11. Please provide cost of labour details:

Year	Agriculture Operations	Cost of labour for Rabi (wheat) per acre	Daily labour cost per person for Rabi (wheat) crop		Cost of labour for Kharif (paddy) crop per acre	Daily labour cost per person for Kharif (paddy) crop	
			Male	Female		Male	Female
2012-13	Land Preparation						
	Sowing/Transplanting						
	Weeding						
	Fertilizer/ Pesticide Spray						
	Harvesting/ Threshing						
2013-14	Land Preparation						
	Sowing/ Transplanting						
	Weeding						
	Fertilizer/ Pesticide Spray						
	Harvesting/ Threshing						
2014-15	Land preparation						
	Sowing/ Transplanting						
	Weeding						
	Fertilizer/ Pesticide Spray						
	Harvesting/ Threshing						

12. Before MGNREGA implementation, was availability of labourers is easy?

- (1) Yes (2) No

13. Did the MGNREGA lead to shortage of labour in the village?

Year	Season	Extent of shortage				
		Extreme 1	High 2	Moderate 3	Slight 4	Nil 5
2012-13	Rabi (Wheat)					
	Kharif (Paddy)					
2013-14	Rabi (Wheat)					
	Kharif (Paddy)					
2014-15	Rabi (Wheat)					
	Kharif (Paddy)					

14. Was there an increase in farm wage rates due to MGNREGA in the village?

- Extreme hike Severe hike Moderate hike Slight hike No hike
1 2 3 4 5

15. Which work of MGNREGA was more useful? __

- (1) Water conservation/ harvesting (2) Flood control and protection
(3) Land development (4) Rural connectivity

ANNEXURE

Glance of the MGNREGA in Hoshiarpur district

Total no. of blocks		10	
Total no. of Gram panchayats		1372	
Total no. of job cards issued		78415	
Financial year of 2013-14			
No. of HH who demanded employment		28394	
No. of HH provides employment		25374	
Total approved no in- progress works		8758	
Total works taken up		1672	
Total works completed	Percentage (%)	164	9.81
Total expenditure	Wages (Rs. In lakhs)	696.61	
	Material and skilled wages (Rs. In lakhs)	231.87	
	Percentage expenditure on wages	75.03	
	Total (Rs. In lakhs)	978.32	
	Admin Exp. %	5.09	
Person days in lakhs for SCs	Percentage (%)	3.45	62.73%
Person days in lakhs for STs	Percentage (%)	0.00	0.00
Person days in lakhs for women	Percentage (%)	2.97	54%
Person days in lakhs for others		2.05	
Average wage rate per day per person (Rs.)		Rs. 200	
Average no. of days employment provided per household		21.68	
Total no HH completed 100 days of wage employment		203	

Source: www.nrega.nic.in (31st March, 2014)

WAGE RATES OF MGNREGA IN INDIA

S. No.	Name of state/union territory	Wage rate in Rs. Per day MGNREGA 2006-07	Wage rates Rs. per day MGNREGA 2007-08	Wage rates in Rs.Per day MGNREGA 2009-10	Wage rates in Rs.Perday MGNREGA 10-11 and11-12	Wage rates in Rs.Per day MGNREGA 2012-13	Wage rate in Rs.Per day MGNREGA 2013-14	Wage rate in Rs. Per day MGNREGA 2014-15
1	Assam	66	76.35	100	130	136	152	167
2	Andhra Pradesh	80	80	100	121	137	149	169
3	Arunachal Pradesh	55-57	65.35	80	118	124	135	155
4	Bihar	68	77	100	120	122	138	158
5	Gujarat	50	50	100	124	134	147	167
6	Haryana	99.21	135	141.02	179	191	214	236
7	Himachal Pradesh	75	75	100	120-150	126	Rs.171	Rs. 193
8	Jammu and Kashmir	70	70	100	121	151	145	157
9	Karnataka	69	74	100	120	131	174	191
10	Kerala	125	125	125	150	164	180	212
11	Madhya Pradesh	63	85	100	122	132	146	157
12	Maharashtra	47	66-72	100	127	145	162	168
13	Manipur	72.4	81.4	81.4	126	144	153	175
14	Meghalaya	70	70	100	117	128	145	153
15	Mizoram	91	91	110	129	136	148	170
16	Nagaland	66	100	100	118	124	135	155
17	Odisha	55	70	90	125	126	143	164
18	Punjab	93-105	93-105	100-105	153	166	184	200
19	Rajasthan	73	73	100	119	133	149	163
20	Sikkim	86	85	100	118	124	135	155
21	Tamil Nadu	80	80	100	119	132	148	167
22	Tripura	60	60	100	118	124	135	155
23	Uttar Pradesh	58	58	100	120	125	142	156
24	West Bengal	69.4	69.4	100	130	136	151	169
25	Chhattisgarh	62.63	62.63	100	122	132	146	157
26	Jharkhand	76.68	76.68	99	120	122	138	158
27	Goa	0	0	0	0	188	178	195

SOURCE: MGNREGA REPORTS AND MGNREGA SAMEEKSHA, 2012