

MGNREGA AND ITS IMPACT ON PUNJAB

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FOR THE AWARD OF THE DEGREE OF**

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**Dr Ash Narayan Sah
Supervisor
Assistant Professor,
School of Behavioral Sciences &
Business Studies
Thapar University, Patiala**

**Dr (Ms) Ravi Kiran
Professor and Head & Supervisor
School of Behavioral Sciences &
Business Studies
Thapar University, Patiala**

**BY
SATVEER KAUR
ROLL NO: 881201002**



**SCHOOL OF MANAGEMENT AND SOCIAL
SCIENCES
THAPAR UNIVERSITY, PATIALA 147001 (INDIA)
JULY (2013)**

DEDICATED

TO

God,

My Father S. Gurjit Singh

Mann,

And my whole family

CERTIFICATE

I hereby certify that the work, which is being presented in this thesis entitled '**MGNREGA AND ITS IMPACT ON PUNJAB**' in partial fulfillment of the requirements for award of the Degree of Masters of Philosophy in Economics, submitted in School of Behavioral Sciences & Business Studies, Thapar University Patiala, is an authentic record of my own work, carried out under the supervision of Dr(Ms) Ravi Kiran, Professor & Head and Dr A.N. Sah, Assistant Professor, School of Behavioral Sciences & Business Studies & Business Studies, Thapar University Patiala.

The matter presented in this thesis has not been submitted for the award of any other degree of this or any other degree of this or any other University.

Satveer Kaur
(Satveer Kaur)

(Registration No. 881201002)

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Ash Narayan Sah
Dr Ash Narayan Sah
Supervisor
Assistant Professor,
School of Behavioral Sciences & Business Studies
Thapar University, Patiala

Ravi Kiran
Dr (Ms) Ravi Kiran
Supervisor
Professor and Head,
School of Behavioral Sciences &
Business Studies
Thapar University, Patiala

Countersigned by:

Ravi Kiran
Dr (Ms) Ravi Kiran
Professor and Head,
School of Behavioral Sciences & Business Studies
Thapar University, Patiala

S.K. Mohopatra
Dr S. K. Mohopatra
Dean of Academic Affairs
Thapar University, Patiala

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Satveer Kaur
SATVEER KAUR

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- Satveer Kaur

Table of Contents

<i>List of Tables</i>	<i>i</i>
<i>List of Figures</i>	<i>ii</i>
<i>Abbreviations</i>	<i>iii</i>
<i>Abstract</i>	<i>iv</i>
Chapter I: Introduction	1-15
1.1 Background	1
1.2 Overview of MGNREGA	4
1.3 Meaning and Definition of MGNREGA	8
1.4 History	8
1.5 Rural Wage Employment Programmes in India	9
1.6 Significance of MGNREGA	11
1.7 Structure of MGNREGA	
<i>1.7.1 Gram Panchayat</i>	11
<i>1.7.2 Block Panchayat</i>	11
<i>1.7.3 District Panchayat</i>	12
<i>1.7.4 State Government</i>	12
<i>1.7.5 Central Government</i>	12
1.9 Salient Features of MGNREGA	13
1.10 Objectives of the Study	15
1.11 Chapterization	15
Chapter II: Review of Literature	16 -26
Chapter III: Research Design, Data and Methodology	27 -31
3.1 Introduction	27
3.2 Research Design	27
3.3 Data and its sources	28
3.4 Research methods	28
3.4.1 Student'st Distribution	28
3.4.2 Hypothesis Test of Equal Mean wages	29
3.4.3 Analysis of Variance (ANOVA)	30

Chapter- IV Data Analysis and Result Discussions	32-52
4.1 Introduction	32
4.2 Evaluation of MGNREGA since its Inception	32
4.3 Impact on Socio-Economic Aspects of Six Districts of Punjab	40
4.4 Rural Agricultural Wage and MGNREGA Wage Analysis	46
Chapter- V Summary and Conclusion	53-59
5.1 Introduction	53
5.2 Employment Generation and the Socio-Economic Profile	55
5.3 Work Profile and Wage Structure	59
References	62

List of Tables

Table No.	Title of the Table	Page No.
1.1	Rural Wage Employment Programs In India	2
1.2	Time Line of MGNREGA	10
4.1	National Performance of MGNREGA during 2007-08 To 2011-12	33
4.2	Rural Wage Employment Programs In India	39
4.3	Work Performance of MGNREGA from 2006-07 to 2010-11	39
4.4	Issuing of Job cards, Employment Demanded and Provided	40
4.5	Table (continued)4.4 Issuing Job Cards	41
4.6	Extent of Employment Generated (Cumulative Person Days)	44
4.7	Average Daily (Rs/Day) Agri and Non-Agri wages during 2006-07 to 2009-10	46
4.8	Results of t-Test	46
4.9	Comparison of Average Daily (Rs/Day) Men Agri and Women Agri wages during 2006-07 to 2009-10	47
4.10	Results of Two Sample t-test	48
4.11	Comparison of MGNERGA Wage with Minimum Agri Wages during 2011-12	48
4.12	Results of Two Sample t-test	49
4.13	Cumulative No. of HH Issued Job Cards during 2008-09 to 2011-12	50
4.14	Results of ANOVA	50
4.15	No. of HH Working under MGNERGA during 2008-09 to 2011-12	51
4.16	Results of ANOVA	51
4.17	Cumulative Person days generated during 2008-09 to 2010-11	51
4.18	Results of ANOVA	52

List of Figures

Figure No.	Title of the Figure	Page No.
4.1	No. of Districts Covered under MGNREGA	34
4.2	Total Job Cards Issued under MGNREGA	35
4.3	Employment Provided to HH in MGNREGA	35
4.4	Person Days Employment Generated under MGNREGA	36
4.5	Share of SC, ST and Women of Person-Days in 2007-08	36
4.6	Share of SC, ST and Women of Person-Days in 2008-09	37
4.7	Share of SC, ST and Women of Person-Days in 2009-10	37
4.8	Share of SC, ST and Women of Person-Days in 2010-11	38
4.9	Share of SC, ST and Women of Person-Days in 2011-12	38

List of Abbreviations

ANOVA	Analysis of Variance
EAS	Employment Assurance Scheme
EGS	Employment Guarantee Scheme
JGSY	Jawahar Grameen Sampoorna Yojana
JRY	Jawahar Rojgar Yojana
MGNREGA	Mahatma Gandhi National Rural Employment Guaranteed Programme
NFFWP	National Food for Work Programme
NREGA	National Rural Employment Guaranteed Programme
NREP	National Rural Employment Program
NREP	National Rural Employment Programme
OPHI	Oxford Poverty and Human Development Initiative
RLEGP	Rural Landless Employment Guarantee Program (RLEGP)
RLEGP	Rural Landless Employment Guarantee Programme
SC	Scheduled Castes
SFDA	Small Farmers Development Agency
SGRY	Sampoorna Grameen Rozgar Yojana
ST	Scheduled Tribes
TADP	Tribal Area Development Program

Abstract

Poverty is one of the main issues in India, attracting the attention of sociologists, economists and political class equally. Government of India has been running many poverty-alleviation programmes and some success also achieved in this endeavour over the years. However, even today Governments struggle with mass level of poverty and related problems. In this context, the Indian Government has implemented the National Rural Employment Guarantee Act (NREGA) in recent past to complement the income of the poor by providing them employment for certain number of the poor by providing them employment for certain number of labour days in the year. It provides an alternative source of livelihood which will have an impact on reducing migration, restricting child labour, alleviating poverty, and making villages self-sustaining through productive assets creation such as road construction, cleaning up of water tanks, soil and water conservation work, etc. For which it has been considered as the largest anti-poverty programme in the world. But the success of this Act depends upon its proper implementation. We have analysed the impact of NREGA scheme in some districts in (Majha, Malwa, Doaba) Punjab. Government of India has been consistency implementing this scheme to eradicate poverty and employment since 2005. The Mahatma Gandhi National Rural Employment Guarantee Act is an Indian job guarantee scheme. MNREGA has been in operations in most of the States in India since its inception. Some reports have already examined the effectiveness of MNREGA about its ability to empower rural masses. In this context, an attempt has been made in this study to analyse the impact of NREGA on rural labour market, income of the poor households and overall agriculture production using secondary data for six districts of Punjab. The study found that MGNREGA has positively impacted rural people in Punjab but this impact seems to be less significant. However, the results of the study may not be generalized to other districts of Punjab as the evidence is scant in nature. In this regard, extensive empirical works needs to be the demand of future work in this area.

CHAPTER – I

INTRODUCTION

1.1 Background

Poverty in India is widespread, with the nation estimated to have one-third of the world's poor residing in India. In 2010, the World Bank reported that 32.7% of the total Indian people fall below the international poverty line of US\$ 1.25 per day (Purchasing Power Parity) while 68.7% live on less than US\$ 2 per day. According to United Nations Development Programme (2010), an estimated 29.8% of Indians live below the country's national poverty line. A 2010 report by the Oxford Poverty and Human Development Initiative (OPHI) states that 8 Indian states have more poor people than 26 poorest African nations combined which totals to more than 410 million poor in the poorest African countries.

According to Poverty Development Goals Report (2011), as many as 320 million people in India and China are expected to come out of extreme poverty in the next four years, while India's poverty rate is projected to drop to 22% in 2015. The report also indicates that in Southern Asia, however, only India, where the poverty rate is projected to fall from 51% in 1990 to about 22% in 2015, is on track to cut poverty in half by the 2015 target date may due to the help of programmes such as MNREGA. The latest UNICEF data shows that one in three malnourished children worldwide are found In India, whilst 42% of the nation's children under five years of age are underweight. It also shows that a total of 58% of children under five surveyed were stunted. The 2011 Global Hunger Index Report (2011) places India amongst the three countries where the GHI between 1996 and 2011 went up from 22.9 to 23.7, while 78 out of the 81 developing countries studied, including Pakistan, Nepal, Bangladesh, Vietnam, Kenya, Nigeria, Myanmar, Uganda, Zimbabwe and Malawi, succeeded in improving hunger conditions. According to a 2010 World Bank report, India is on track to meet its poverty reduction goals. However by 2015, an estimated 53 million people will still live in extreme poverty and 23.6% of the population will still live under US\$1.25 per day. This number is expected to reduce to 20.3% or 268 million people by 2020. However, at the same time, the effects of the worldwide recession in 2009 have plunged 100 million more Indians into poverty than there were in 2004, increasing the effective poverty rate from 27.5% to 37.2%.

Since the 1950s, the Indian government and NGOs have initiated several programmes to alleviate poverty, including subsidizing food and other necessities, increased access to loans, improving agricultural techniques and price supports, and promoting education and family planning. These measures have helped eliminate famines, reduced poverty levels by more than half, and reduced illiteracy and malnutrition.

The following is a listing of programs enacted since 1971:

Table 1.1: Rural Wage Employment Programs in India

	Program	Launching year	Objectives
1	Small Farmers Development Agency	1971	Controlling soil conservation and promoting agricultural productivity
2	Tribal Area Development Program	1972	Improving Economy of the tribal
3	Minimum Needs Program	1972	Providing construction assistance and controlling drop-out rate of children in school and improving health
4	Drought Prone Area	1973	Promoting dryland agriculture
5	Twenty-Point Program	1975, 1982, 1986	Eradicating poverty under various schemes
6	Food for Work Program	1977	Improving the consumption level of the poor
7	Training Rural Youth for Self Employment	1979	Upgrading the technical skills of rural youth for taking up self-employment ventures
8	Integrated Rural Development Program	1979	Providing assistance for acquisition of productive assets for self-employment
9	National Rural Employment Program (NREP)	1980	Providing wage employment for assets creation
10	Rural Landless Employment Guarantee Program (RLEGP)	1983	Providing wage employment to landless agricultural laborers for creating a social forestry and for construction activities
11	Jawahar Rojgar Yojana	1989	NREP and RLEGP merged into JRY

	(JRY)		for generating additional employment on productive works. It is to be implemented in all villages in the country
12	Urban Basic Services Scheme, Urban Basic Services for the poor (revised)	1986	Aiming at child survival development. Assistance to handicapped and street children
13	Nehru Rojgar Yojana	1986	Encouraging unemployed youth to take up self-employment ventures and providing/upgrading shelter to pavements/slum dwellers
14	National Poverty Line Benefit Schemes	1995	Paying Rs.300 to a pregnant woman, a pension of Rs. 75 per month to an old aged and a sum of Rs. 5,000 in the event of a death of the bread earner and Rs. 10,000 in the case of an accident
15	Prime Minister's Integrated Urban Poverty Eradication Program (PMIUPEP) in 345 Class II cities	1995	Uplifting the urban poor by mobilizing the women power and encouraging for self-employment and training
16	JGSY	1999	Development of rural infrastructure
17	SGRY	2001	Employment, food security with rural infrastructure
18.	NFFWP	Nov 2004	Employment, food security with rural infrastructure implemented in 150 most backward districts.
20	NREGA	Aug 2005	NREGA enacted by legislation
21	MGNREGA	2 nd OCT, 2009	NREGA renamed as MGNERGA

Basically all of these programs are of four basic types.

1. Programs that promote economic growth and overall development,
2. Programs that promote human development with emphasis on health, education and minimum needs,
3. Programs that directly target poverty eradication through creation of employment, training and creating asset endowments of the poor

4. Lastly, the targeted Public Distribution System (PDS) mentioned earlier, which provides protection from inflationary pressures by providing food at affordable prices.

1.2 Overview of MNREGA

One of the flagship poverty alleviation programmes of Government of India is MNREGA. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is an Indian job guarantee scheme, enacted by legislation on 25 August 2005. The scheme provides a legal guarantee for at least one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage of ₹120 (US\$2.20) per day in 2009 prices. If they fail to do so the government has to pay the salary at their homes. The Central government outlay for scheme is ₹4000 billion (US\$74 billion) in FY 2010–11.

This act was introduced with an aim of improving the purchasing power of the rural people, primarily semi or un-skilled work to people living in rural India, whether or not they are below the poverty line. Around one-third of the stipulated work force is women. The law was initially called the National Rural Employment Guarantee Act (NREGA) but was renamed on 2 October 2009.

In 2011, the program was widely criticised as no more effective than other poverty reduction programs in India. Despite its best intentions, MGNREGA is beset with controversy about corrupt officials, deficit financing as the source of funds, poor quality of infrastructure built under this program, and unintended destructive effect on poverty.

The Mahatma Gandhi National Rural Employment Guarantee Act aims at enhancing the livelihood security of people in rural areas by guaranteeing hundred days of wage-employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work.

The Mahatma Gandhi National Rural Employment Guarantee Act, with its legal framework and rights based approach, aims at enhancing livelihood security by providing up to one hundred days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work. The Act is currently being implemented in 619 rural districts of the country. Mahatma Gandhi NREGA is the first ever

law internationally that guarantees wage employment at an unprecedented scale. The primary objective of the Act is augmenting wage employment. The auxiliary objective is strengthening natural resource management through works that address causes of chronic poverty like drought, deforestation and soil erosion and thus encourage sustainable development. Mahatma Gandhi NREGA has been a vehicle for inclusive growth and the marginalized sections of society have high percentage of participation under the Act. The participation rate of Scheduled Castes (SC) and Scheduled Tribes (ST) in FY 2009-10 is 52 %.

The states with high SC participation are Uttar Pradesh (53%), Tamil Nadu (56%), Bihar (46%), Haryana (56%), Punjab (78%). The states with high ST participation are Madhya Pradesh (43%), Jharkhand (44%), Sikkim (44%), Chhattisgarh (38%) and all North East States. Women participation is higher than the mandated 33%. In the current year the women participation is 50 %. The Act has augmented household income, such that the average wage rate has increased from Rs. 65 in FY 2006-07 to Rs. 4050 in FY 2008-09. Post-MGNREGA, there has been a revision of minimum wages across the country.

In order to increase transparency and bring the rural poor under the organized banking sector and credit system, agencies for wage payment are being separated from implementing agencies through accounts-based wage payment. Initial experiments in the use of smart cards and biometric signatures for wage payment to MGNREGA workers in remote villages are being supported. An Ombudsman for effective grievance redressal is being instituted for each district. Ombudsman will be an agency independent of the central or state government. The Ombudsman will receive complaints from NREGA workers and others on any matter consider such complaints and facilitate their disposal in accordance with law. The Ombudsman will be appointed by the State Government on the recommendation of the selection committee. Summary report of cases disposed by Ombudsman will be reported to the State Council and will also form part of the Annual Report to be placed in the Legislative Assembly. To build on the current programme implementation and to leverage Mahatma Gandhi NREGA for sustainable development the Ministry has started pilot projects in Rajasthan. These initiatives include training and skill building for NREGA workers, basic literacy, computer and financial literacy, facilitating wage payment through business correspondent mode. In view of the inter-sectorality of NREGA, the need to create durable assets and improve livelihood security and the common target groups of certain development

programmes with NREGA, taken up convergence pilots in 115 districts and 23 states across India.

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poverty like drought, deforestation and soil erosion and thus encourage sustainable development. Mahatma Gandhi NREGA has been a vehicle for inclusive growth and the marginalized sections of society have high percentage of participation under the Act. The participation rate of Scheduled Castes (SC) and Scheduled Tribes (ST) in FY 2009-10 is 52 %. The states with high SC participation are Uttar Pradesh (53%), Tamil Nadu (56%), Bihar (46%), Haryana (56%), Punjab (78%). The states with high ST participation are Madhya Pradesh (43%), Jharkhand (44%), Sikkim (44%), Chhattisgarh (38%) and all North East States. Women participation is higher than the mandated 33%. In the current year the women participation is 50 %. The Act has augmented household income, such that the average wage rate has increased from Rs. 65 in FY 2006-07 to Rs. 4050 in FY 2008-09. Post-MGNREGA, there has been a revision of minimum wages across the country.

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The policy of employment guarantee scheme is well known since 1817 poor employment act and 1834 poor Law Amendment Act in Great Britain(Blaug 1962,1964) new deal

programme. Under the MGNREGA, the Center Government meets cost towards the payment of wage $\frac{3}{4}$ of material cost and some percentage of administration cost, state government meet the cost of unemployment allowance $\frac{1}{4}$ of material cost and administrative cost of state council. 100 days of employment per household must be provided to able and willing workers every financial year.

1.3 Meaning and Definition of MGNREGA

The National Rural Employment Act is one such policy of Employment Guarantee Scheme (EGS) which is introduced in recent past passed by the Lok Sabha on August 23, 2004 and signed by president of India on September 5, 2005. MNREGA which was launched in 2006 aims at enhancing the livelihood security of people in rural areas by guaranteeing hundred days of wage – employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work.

The ongoing programmes of SGRY and National food for work programme have been subsumed under NREGA in these districts, MNREGA will cover all districts of the country within five years. The MNREGA, a demand-driven scheme has its focus on works relating to water conservation, drought proofing including afforestation (tree plantation) land development, flood control/protection (including drainage in waterlogged areas) and rural connectivity in terms of all weather roads.

1.4 HISTORY

India has three decades of experience in implementing employment generation programmes. The concept of creating employment in public works is not new: the Maharashtra model of rural employment has existed since the 1970s. The most critical difference now is that people's entitlement, by law, to employment, is mandated through MNREGA for the entire country. Not much has changed in the form and substance of the public work programmes in the past 30-odd years, however. In many ways the MNREGA is a replication of earlier schemes in letter and spirit, of course, with a legal guarantee. So past failures do haunt the MNREGA.

The first set of programmes, the National Rural Employment Programme and the Rural Landless Employment Programme, began in the 1970s as clones of the Maharashtra EGS. In 1989, the Rajiv Gandhi government integrated the two schemes into one, revamped the

schemes and decided delivery would occur through the panchayati raj institutions (village-level elected institutions). Thus born the Jawahar Rozgar Yojana (JRY); but it was radically different. The bureaucratic machinery was bypassed; funds would be deposited in the accounts of each village institution responsible for planning development activities used to create employment creation, and overseeing implementation. The scheme began but it was never given a chance to succeed. In retrospect, JRY was perhaps an idea before its time.

In 1990, when prime minister V P Singh ambushed the Rajiv Gandhi government over the Bofors gun scandal, the election call was a promise to 'guarantee' Maharashtra-type employment for all. Instead the subsequent, Narasimha Rao-led, government diluted what existed. By 1993, JRY received little political leadership or attention. It was agreed (from largely anecdotal and some official reports) that the scheme, controlled by people's representatives, was leading to increased corruption and even greater inefficiency in delivery. Therefore, it needed to be re-vamped.

In 1993, the Employment Assurance Scheme (EAS) was launched. Now, half the allocated funds for rural employment would be channelised through the bureaucracy, not the panchayati raj institutions. The big brother was back in business, to the tune of roughly Rs 2,000 crore each year.

1.5 Rural Wage Employment Programmes in India

MNREGA has come after almost 56 years of experience of other rural employment programmes, which include both Centrally Sponsored Schemes and those launched by State Govt. These comprise the National Rural Employment Programme (NREP) 1980-89; Rural Landless Employment Guarantee Programme (RLEGP) 1983-89; Jawahar Rojgar Yojana (JRY) 1989-1990; Employment Assurance Scheme (EAS) 1993-99; Jawahar Gram Samridhi Yojana (JGSY) 1999-2002; Sampoorna Grameen Rojgar Yojana 2 (SGRY) from 2001; National Food For Work Programme (NFFWP) from 2004 were national rural employment schemes. Among these, the SGRY and NFFWP have been merged with NREGA in 2005.

The following table 1.2 shows the time line of MGNREGA whereby the scheme got its modifications during the years of its running. As table 1.1 depicts, when the Act got first

introduced in 200 most backward districts of the country in Feb 2006, it was proposed to extend to the remaining districts only after 5 years, after seeing the popularity of the Act.

Table 1.2: Timeline of MGNREGA

Time	Event
August 2005	NREGA enacted by legislation
Feb 2006	Came into force in 200 districts
April 2007	130 more districts included
April 2008	Universalization of the scheme
Oct 2008	Wage transactions through banks/post offices
16 Feb 2009	MoU with postal deptt.
2 nd Oct, 2009	Renamed as MGNREGA

But in the next year itself the Act was extended further to 130 more districts & within a year after the Act got universalized by bringing the entire country under its horizon with the exception of districts that have a hundred percent urban population & got soon named after Mahatma Gandhi (in Oct 2nd 2009) to make the Act more reachable to the masses and thus it became Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

1.6 Significance of MGNREGA

MGNREGA aims to achieve the objective as enunciated in the Article: 41 of the Indian Constitution- “giving citizens the right to work”. The Act is significant due to the following reasons:

- While the earlier wage employment programmes did not provide any guarantee of job, this Act provided guaranteed job. This guarantee for wage employment is now uniformed all over the country like never before.
- It is a development initiative, chipping in with essential public investment for creation of durable assets, without which the growth process can't be possible in the most backward regions of rural India.
- Almost all the previous programmes were allocation based rather than demand based. NREGA, which was launched in 2006, is considered to be unique from this stand point.
- The key element of MGNREGA is the provision of employment by the state to those people who are unable to find alternative employment, which provides a form of social safety net to the rural unemployment people.

- In other wage employment programmes, anyone can be engaged as labour while in MGNREGA only job card holders that apply for employment can be engaged as laborers.
- There is no time frame in other wage employment programmes but in MGNREGA, employment will be given within 15 days of demand, payment also within 15 days of work.
- In other wage employment programme the duration of employment is dependent on duration of work by implementing agency while in MGNREGA, a job card holder applies for maximum 100 days.
- The other key attributes of this Act are labour-intensive work, decentralized participatory planning, women's empowerment, work-site facilities and above all transparency and accountability through the provision of social audits and right to information. The use of information technology in this programme is considered to bring about greater transparency through intensive monitoring and faster execution. The payment of wages through bank and post office accounts is other innovative step that is likely to reduce fudging of muster rolls on the part of the implementing agencies since the actual payments are beyond their reach.

Thus MGNREGA is not only a welfare initiative but also a development effort that can take the Indian economy to a new prosperity.

1.7 Structure of MGNREGA

MGNREGA has a five-tier structure of implementation starting from GP at the bottom to the central government at the top.

1.7.1 Gram Panchayat (GP)

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.

1.7.2 Block Panchayat

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.

1.7.3 District panchayat:

District Panchayat, in addition to implementing non-mandatory works, coordinates MGNREGA activities at the district level. Besides, it has the responsibility to prepare both the district annual plan and the five-year perspective plan. These two plan documents are the bases which guide the implementation of MGNREGA at the village level. These documents are prepared at the district level in consultation with the GP and block Panchayats.

1.7.4 State Government

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. The latter has the role to advise the government from time to time on MGNREGA implementation in the state. Besides, the council is also entrusted with the responsibility of monitoring and evaluation of the MGNREGA in the state.

1.7.5 Central Government

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. It may also undertake independent evaluation and monitoring of the scheme. It has the responsibility to prepare the budget and disburse funds.

1.8 GOALS OF MGNREGA

Long-term objectives of the Act include:

- Enhancement of livelihood security in rural areas by guaranteeing 100 days of wage employment in a financial year to every registered household.
- Creating productive assets
- Protecting the environment
- Reducing migration
- Empowering rural women and the poor through the provision of a right-based law.
- Fostering social equity.
- To create strong social safety net for the vulnerable groups by providing employment source, when other alternative are inadequate.

Thus MGNREGA has 3 distinct goals:

- Protective
- Preventive
- Promotive

It protects the rural poor from vulnerabilities by providing them demand based employment. It prevents risk associated with agricultural investment and forced migration of rural poor. It brings prosperity in rural economy via increased consumption demand. Thus MGNREGA can be considered as a growth engine.

1.9 Salient features of MGNREGA

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 60:40 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.

- Payment of wages to be made in every week and in any case not later than a fortnight.

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 creating drinking water, first-aid and shade are to be provided on the work sites.
- Timely measurement to be ensured.

Women empowerment

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

Transparency and Accountability

- Proactive disclosure of information.
- Social Audit by the Gram Sabha is compulsory.
- Regular monitoring at all levels.
- grievance redressal mechanism is to be set up.

Funding

- 100% wage cost is borne by Central Govt.
- 25% Material cost is born by the State Govt.
- Unemployment allowance is borne by State Govt.

1.10 Objectives of the Study

The main objectives of the study are to analyse the overall impact of MGNREGA on rural economy. Specifically, the study will try:

1. To analyze performance of MGNREGA from 2006-07 to 2011-12.

2. To analyze the trend in wages in rural areas and compare with MGNREGA wages.
3. To study the district wise differences.

1.11 Chapterization

The structure of the study has been organised into five chapters. The history of NREGA in Punjab and India discussed in first chapter. Besides this structure of NREGA in Punjab and MGNREGA activities in different districts. Objectives of the study are also discussed under this chapter.

Chapter II presents a detailed review of literature related to impact analysis of MGNREGA in Punjab and its different districts are discussed. In third chapter, data, methodology of the study is discussed. This chapter explains in detail about the relevance of the adopted methodology. In addition, the coverage and location of the study have been illustrated in this chapter. Various statistical techniques used Chi-Square and ANOVA techniques adopted are explained in this chapter.

Chapter four provides data analysis and discussion of results. Firstly, we tried to evaluate the performance of MGNERGA on various parameters. Secondly, we also analyzed performance of MGNERGA in six districts of Punjab and its impact on socio-economic aspects of Punjab rural economy. Thirdly, we tried to analyze wage prevailing in general with MGNERGA wage in India and across states. Results of t-test, Chi-square and ANOVA are also discussed in this chapter. Finally, chapter five gives summary and conclusion of the study. Policy implications, limitations of study and scope of further research are also given in this chapter

Chapter – II

Review of Literature

In August 2005, National Rural Employment Guarantee Act, was legislated to provide guaranteed employment to rural people in India. Several studies have been conducted by the Ministry of Rural Development, Government of India's as part of its own initiative. Impact assessment, appraisals and research were conducted by various institutes, researchers in this regard.

This chapter provides a brief overview of research done in this area. A review of study helps in giving a proper direction to the research.

The study by Ghuman and Dua (2008) highlights that National Rural Employment Guarantee Act (NREGA) 2005 is a unique policy intervention by the state for providing "livelihood security" to the resource poor people in rural India. Under the Act, the governments are legally bound to provide 100 days guaranteed manual employment on local Public works to every rural unskilled adult (job card holder) who is willing to work at the prevailing minimum statutory wage rate. In the absence of employment they would be paid unemployment allowance. The study is also an attempt to examine the socio-economic background of the job sector households and of those who got employment under the Act.

The entire primary data and information has been collected through a questionnaire from 10 villages and 10 development blocks were randomly selected. Out of each village, 10 beneficiaries were randomly selected from each of the sampled village. The study thus pertains to 100 households. It is important to note that there is a widespread impression that Punjab is a very prosperous state. However, all is not well with Punjab. The sheen of green revolution is no more there. Rather the adverse affects of the green revolution had started surfacing since the last two decades. As such the rural Punjab in general and agrarian economy in particular, is passing through a serious crisis.

The performance of NREGA in district Hoshiarpur has not been very encouraging during the first two years its implementation. Most of the employment was generated in 2006-07. The achievement of the Act in terms of annual average days of employment household has been nearly 1/4th of the minimum 100 days employment. Out of 126 workers who were called for work, only 17 could complete the 100 days norms of employment in two years period. Amongst the 100 sampled households 93 were below poverty line and 75 were scheduled caste. Clearly, the resource poor households in the rural area are the most targeted group

under NREGA. Nevertheless, the program can be a great agent for socio economic upliftment and providing livelihood security to the poorest of the rural India, if implemented earnestly. The employment and earnings under NREGA should be treated as additional avenues for such households. The existing rural employment should not be transferred under NREGA. The executing machinery and the beneficiaries under NREGA need to be sensitized about the fundamental objectives of NREGA. The state government must appoint whole time program officers who must be dedicated committed and honest persons.

While commenting on the failure of NREGA in Maharashtra, Datar (2007) pointed out that the scheme could not get momentum because government machinery is paralyzed. Such schemes can only work if there is organized social and political pressure from the rural poor on the executing machinery. The people need to be educated in the new ethos and built their capacity to manage funds assets with an opportunity to create livelihood for themselves. In fact for NREGA to be able to realize its potential, the rate of civil society organizations is critical. But this calls for a new self-critical politics balance and restraint (Shah, 2007).

Dreze (2007) looks at 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 (and sometimes more than) 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.

Mathur (2007) thinks that a system of regular and continuous flow of authoritative information is essential, as opposed to the sporadic reports and studies dependent on the initiative of individuals and groups. There is room for the government to take up concurrent

evaluations, more effective 10 monitoring, time-series studies, and focused reports on critical aspects like minimum wages, muster rolls. The states should also shoulder responsibility through rural development department, labor, and agriculture, forests, planning, the CSSO and its network. To improve implementation, the government needs to troubleshoot, modify policy directives, and issue operational guidelines for the district, block and village levels. The government must take the lead, be proactive, mobilize institutions and groups, and use the media effectively. NREGS involves several lakh government officials, panchayat functionaries, elected representatives, NGOs and community groups. They play a critical role but have had little preparation for the challenge. Government has the primary responsibility, and fortunately, also the capacity to do so, with its training in budget, infrastructure and network of support institutions. Most importantly, the isolation in which the NREGA now operates must end – as a mere scheme of one ministry, and no more. This in fact is a program of national importance which has been marginalized. While the ministry of rural development is the nodal ministry at the centre, every relevant department and agency requires being involved.

Ambasta, Shankar and Shah (2008) gave a number of important recommendations. These included deployment of full-time professionals dedicated to NREGA at all levels, especially at the block level. Intensive effort at building up a massive cadre of fully trained grass-root workers required at the gram panchayat level through a nationwide movement for capacity building, engaging government and non-government training institutions.

There is also a need for provision of adequate resources and setting up systems for continuous monitoring and evaluation at every stage of the program to ensure quality. Information technology has to be utilized optimally to infuse more transparency, accountability and speed at all stages, from sanction of works, release of funds, wage payments to social audit. The author also recommends revision of the Schedule of Rates so that they are in line with a program that bans machines and contractors, are gender sensitive, more accurately reflect variations in climate and geology, value 11 separately the different activities that comprise works and move in tandem with changes in statutory minimum wages.

Mehrotra (2008), a civil servant who has worked in implementation of the scheme, believes that 4 per cent of program costs now allocated to administrative costs and professional support is still quite low and does not recognize the fact that a program of the scale of the NREG requires serious professional support. If the 2 per cent per annum agricultural growth rate is to be reversed, the rain-fed areas that constitute 60 per cent of the agricultural cropped area in the country have to raise their land productivity; they have to move from one crop per year to preferably two if not three crops per year. The evidence from watershed development programs in the past has demonstrated that such programs can repay the investment on them many times quickly.

Therefore, if the NREG continues existing manner, the program runs the risk of going the way of most previous wage employment programs. On the other hand, if its design weaknesses, as well as the flaws in the design of its implementation are addressed, it can raise the stagnating rural wages, push up productivity, stem the tide of rural urban migration and have second- and third-round effects that go well beyond the policymakers' original design.

Khera (2008) thinks that the successful implementation of the NREGA in the Pati block in Orissa state goes beyond the ability of its residents to claim their rights. This is brought out by the high levels of engagement with the program in terms of planning, implementation and monitoring. Apart from its immediate aim of being a form of social security for the rural poor, by providing them local employment, it was expected that the NREGA would contribute to activating gram Sabhas, empowering women and developing rural areas. In this sense, the organization studied by the author in Madhya Pradesh has fully imbibed the spirit of NREGA, where it is looked upon as an opportunity to promote the overall development of the village as well as to alter the balance of power in the village society. Aside from showing that it is possible to make the NREGA work, the Sangathan's experience also provides important insights into the transformation that is possible if the act is effectively implemented.

Mathur (2009) states that in social audit undertaken in Andhra Pradesh it was found that in certain villages, some people stated that they had not been paid for the work done. When comparisons were made of the payments as per the pass-book with the payment as per the job card, it was discovered that the job card did not contain the inner pages that record the work done by each person; the job card itself was incomplete. This came as a surprise as it had not happened in any region so far but then this area had resisted the initiative. The MPDO was

asked to ensure that complete job cards were issued, investigate the lapse, fix responsibilities and send a report. Earlier, several officials, Field and Technical Assistants and Mates admitted to irregularities and about Rs. 50,000 were returned. From separate discussions with the sarpanches, it was evident that they were keen to ensure that there was no irregularity in their villages. In one of the regions, Thimmapur mandal had been selected as a pilot project for the payment of wages through Smart Cards, which work like ATM cards and are given to each person registered under the NREGP. The bank concerned at the mandal headquarters appoints an agent to make payment for each village under the scheme. The Kollampalli village agent was a young lady who was also the President of a successful SHG. She operated a simple instrument connected on line with the bank, and after biometric identification each worker was paid the wage earned that had been deposited in the savings account. The families preferred this procedure to that of payments through the Post Office.

Hence, in our literature review and some other articles discussed in this report, we find that a number of problems and issues have been discussed by authors assessing the scheme. There have also been success stories and interesting new practices that can be used as benchmarks and adopted across the country. On the whole, the authors are very positive about the potential of the scheme and see it as a means to revolutionize the way rural India lives and works.

Datt (2008) revealed that out of 20.1 million household employed in the MGNREGA, only 2.2 million (i.e. 10.5%) received the full 100 days employment and wages. The average employment per house hold was 43 days in 2006-07 and 35 days in 2007-08 respectively.

Shekhawat (2002) in his study, 'Impact of Employment Generation Programmes(EGPs) in Jaipur district of Rajasthan', reported that disbursement of assistance to beneficiaries was delayed and assistance given under EGPs was insufficient, these were the major problems faced by the respondents in taking advantages of EGPs.

Datt (2008) reported that main constraints under MGNREGA were lack of professional staff, lack of proper project planning ,bureaucratic resistance to MGNREGA, inappropriate rates of payment ,lack of worksite facilities and lack of transparency andsocial audit.

Mazdoor Kisan Samiti and Nari Shak ti Sangathan (2006) studied status of implementations of NREGP scheme in Jharkhand district. A sample of 36 respondents(men and women) from 8

Panchayats were taken. The finding of the study revealed that in village Jilimatanr, out of nine respondents only one reported that Gram Sabha was organized in which four women and 12 male participated.

Sood (2006) studied NREGP challenges in implementation and reported that in Jashpur block, Chattisgarh, lack of staff is having a negative impact on the working of the NREGA. Also sub-engineer were being burdened with the task of maintaining job cards implying that their primary tasks suffered. Such additional appointments are a rare opportunity to provide employment to the youth in villages and should not be allowed to be squandered due to administrative hurdles.

Central Guarantee Council (2007) reviewed the implementation of MGNREGA in Burdibeda village Jharkhand district of and revealed that. Job cards were handed over to the workers only two days prior the visit of the social audit team in the same village. Two community development works have been sanctioned on the some land owned by the Pradhan of the Village. Construction of well and a farm pond are both being carried out on the Pradhan's land.

Khan, Ullah and Salluja (2007) have discussed the direct and the indirect effects of NREGP on employment generation and poverty reduction in a local area. For this, a detailed survey was done in a poor agricultural village with 400 households, nearly 2500 people. The survey recorded income and expenditure levels by type of household including large, small and marginal farmers, agricultural labour etc. The survey also recorded production activities undertaken by the inhabitants. This village study reveals that most people do not access the scheme, as they haven't heard of the programme. They would like a more proactive role of the panchayat in deciding the infrastructure to be constructed. Almost everyone wants more work from the 10 scheme and better facilities at the work place. There is enough evidence of fudging and mismanagement of records.

Indian Institute of Technology, Madras, Chennai (2009) study generally reveals the impact of MNREGA in the state of Tamilnadu by taking 5 districts into account. In each districts 4 GPs were chosen. This study shows many positive aspects of the programme. These are mainly:

- Villagers consider NREGA is promising to be a boon for improving rural livelihood.

- Provision of job within the village is very much encouraging to villagers.
- NREGA also ensured gender equality in rural Tamilnadu.
- The programme employed a very good proportion of scheduled caste and backward caste people.
- Involvement of SHG members improves people's NREGS awareness and this is very important for future NREGS planning.
- Financial inclusion strategies like bank account opening and rural ATM for NREGS beneficiaries at four villagers of cuddalore block has resulted in multiplier effects of savings, financial safety etc.
- Registrations are open throughout the year.
- Most of the respondents perceived that payment were received within a week.

Dey and Bedi (2010) studied the functioning of the NREGS between February 2006 and July 2009 in Birubham district, West Bengal. Their study reveals that in order to serve as an effective “employer of last resort”, the programme should provide more job days during lean season and wages should be paid in a timely manner. This study shows that, in Birubham, there is universal awareness about the NREGS, job card have been made available to all those who have applied and NREGS related information is well maintained and relatively accessible. But there are long delays in wage payments during the first year of the programme, since then, the payment lag has declined and it is now in the range of 20 days.

Nayak, Behera, and Mishra (2008) conducted their study in 2 districts of Orissa mainly Mayurbhanj and Balasore. NREGA programme was first introduced in 200 most backward districts of the country. During the first phase itself, Mayurbhanj was selected along with other 18 backward districts of the state including KBK districts. The next phase, five more districts of Orissa were included under the scheme including Balasore. Mayurbhanj completed 3 years of NREGA implementation while Balasore has completed two. Both the districts are reported to have achieved certain goals and failed in others. This study shows that the state as a whole as well as the two sample districts are well in certain physical and financial parameters like provision of employment to those who demand jobs and maintenance of wage and non-wage ratio. However their performance in certain other important parameters like utilization of funds and creation of demand for jobs is not very encouraging. While the target is to guarantee 100 days of employment to each household, not

many households have achieved this target. According to this report well thought out effort is necessary to address these problems of NREGA in the state.

AFPRO (2009) recognising the need to learn from work carried out in MGNREGA and its effectiveness for sustainable livelihood support at the community level, AFPRO carried out a study in Chainpur Block, District Gumla, Jharkhand. 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 leveling 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 Schemes, and increasing the ownership of infrastructure created under the Scheme. 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, coordination among line departments, etc. are some of the other measures suggested.

ASCI(2009) conducted a study to understand MGNREGA's processes, procedures and impact. The study was oriented towards identifying good practices that could be upscaled for strengthening the programme. Research was undertaken in six blocks of three districts—Anantpur, Adilabad and Guntur of Andhra Pradesh. The positive findings of the study included, increase in groundwater in Anantpur as a result of the assets created, improved agricultural yields across all three districts and reduction in migration. The study also showed the problems the programme faced including delays in wage payment and poor quality of assets.

According to Azam (2011) public works programmes, aimed at building a strong social safety net through redistribution of wealth and generation of meaningful employment, are becoming increasingly popular in developing countries. The NREGA, enacted in August 2005, is one such programme. This paper assesses causal impacts (Intent-to-Treat) of NREGA on public works participation, labour force participation, and real wages of casual workers by exploiting its phased implementation across Indian districts. Using nationally representative data from the National Sample Surveys (NSS) and Difference-in-Difference framework, the author finds that there is a strong gender dimension to the impacts of

NREGA: it has a positive impact on the labour force participation and this impact is mainly driven by a much sharper impact on female labour force participation. Similarly, NREGA has a significant positive impact on the wages of female casual workers/real wages of female casual workers increased 8 per cent more in NREGA districts compared with the increase experienced in non-NREGA districts. However, the impact of NREGA on wages of casual male workers has only been marginal (about 1 per cent). Using data from the pre-NREGA period, the authors also performed falsification exercises to demonstrate that the main conclusions are not confounded by pre-existing differential trends between NREGA and non-NREGA districts.

Rao and Reddy (2011) undertaken 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 and economics 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.

Babu and Rao(2010) studied Tripura, Rajasthan, Chhattisgarh, Mizoram, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal to highlight issues related to MGNREGA and Scheduled Castes (SCs) and Scheduled Tribes (STs) in each of the States. The studies also elaborate issues of MGNREGA implementation; for example, awareness levels among beneficiaries, etc. Other impacts of the Scheme with regard to agriculture wage and migration have also been noted.

Basu (2011) studied impact of MGNERGA on seasonal employment. This study models the impact of such employment guarantee schemes in the context of an agrarian economy characterised by lean season involuntary unemployment as a consequence of tied labour contracts. Specifically, it examines labour and output market responses to a productive rural Employment Guarantee Scheme (EGS) and determines the optimal compensation to public work employees consistent with the objectives of (i) productive efficiency in agriculture and (ii) welfare maximisation of the labourers. The author's framework provides a theoretical one for the evaluation of a number of (sometimes) conflicting observations and empirical results on the impact of an EGS on agricultural wages, employment and output, and underscores the

importance of the relative productivity of workers in the EGS programme vis-à-vis their counterparts engaged in agricultural production in determining the success of these programmes.

Berg (2012) tested the impact of the Indian government's major public works programme, the 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, we find that, on average, NREG boosts the real daily agricultural wage rates by 5.3 per cent. It takes six to 11 months for an NREG intensity shock to feed into higher wages. The wage effect appears to be gender neutral and biased towards unskilled labour. It is positive across different implementation stages and months. It remains significant even after controlling for rainfall, district and time fixed effects, and phase-wise linear, quadratic, and cubic time trends. They have argued that since most of the world's poor live in rural areas, and the poorest of the poor are agricultural wage labourers, rural public works constitute a potentially important anti-poverty policy tool.

CERD (2010) conducted a study to understand MGNREGA's processes, procedures and impact. The research was initiated to assess not only the benefits and challenges of MGNREGA in Andhra Pradesh and Madhya Pradesh, but also to study existing management practices for further replication, among other States and districts in similar circumstances. The districts of study were Chittoor and Vizianagaram in Andhra Pradesh and Shahdol and Seoni in Madhya Pradesh. The study did an analysis of both secondary data from MIS and field level data gathered through surveys, focus group discussions, case studies, etc. The research makes general recommendations on processes and procedures to ensure greater efficiency in the two States. A targeted approach in terms of empowering the vulnerable groups may need to be followed both towards creating awareness and for extending outreach in participation. Replicable practices include: Andhra Pradesh's systems of mobile musters and muster roll maintenance; weekly cycle of opening and closure of musters; Fixed Daily Activity Schedule in generating pay-orders/system of weekly cycle; and the system of wage cum withdrawal slips. Public private partnership may need to be explored and encouraged especially for enhancing awareness levels of wage seekers and the masses.

CRRID(2009) conducted an assessment of MGNREGA in three districts, viz. Sirsa in Haryana, Sirmaur in Himachal Pradesh and Hoshiarpur in Punjab. The study aimed at identifying efficient management practices, procedures, processes, and recommending interventions and strategies for dissemination and upscaling. More than 62 per cent of the selected Panchayats in Sirsa district and nearly three-fourth Panchayats in Sirmaur district reported that agricultural productivity has increased due to MGNREGA activities. But more than 87 per cent panchayats of Hoshiarpur district reported that NREGA did not have any impact on agriculture and irrigation. Data gathered during the survey also indicated that there was no change in in-migration of the workers in Sirmaur and Hoshiarpur districts whereas 37 per cent Panchayats in Sirsa district reported that in-migration had decreased due to NREGA work at their native place. But on the other side there was a decrease in outmigration from the villagers. All the panchayats in Sirmaur, three-fourth in Hoshiarpur and 50 per cent in Sirsa reported that out-migration from their village had decreased.

Dasgupta and Sudarshan (2011) Using data from the 2004–05 NSSO survey and NREGA data from official sites studied to find that: (i) women's participation in the NREGA has been increasing; (ii) statewise women's participation in the programme is positively correlated with women's participation in rural areas, though women's participation in NREGA is often higher than in other forms of recorded work so far; and (iii) women's participation is negatively correlated with the existing gender wage gap in unskilled agricultural labour. The latter implies that where women's actual wages as a share of men's is lower in the private sector, women are flocking to work in this government administered programme. This will inevitably raise women's bargaining power, and is potentially a critical factor in reducing gender disparities in the labour market. The question of course is to what extent the implementation of the programme will adhere to the Guidelines and to what extent other considerations would influence the actual roll out of the programme in different state governments. The paper also finds that the achievements or outcomes of the NREGA as far as women are concerned are—as with any other government programme—mediated by the intervening institutions including both the gendered nature of the labour market and the efficacy or otherwise of the local government.

Chapter – III

Research Design, Data and Methodology

3.1 Introduction

Poverty is a major problem India has been facing even after 60 years of Independence. Since Independence India has been working continuously to eradicate this menace but results so far indicate that a lot of work has still to be done to fight poverty, malnutrition, rural migration, rural unemployment, women empowerment in the new Millennium. In this context, MNREGA is another initiative of the government to improve livelihood of people in rural areas. In this chapter, we will outline the research design, data and its sources and mathematical and statistical tools used for analysis.

3.2 Research Design

To study the impact of MNREGA on people especially in rural areas of Punjab, six districts were selected. In this study, an attempt is made for studying the beneficiary level impact and responses. These six districts are selected from different regions of Punjab. These regions of Punjab are Majha, Malwa and Doaba. From every region, two districts were selected for the purpose of study.

From each districts two blocks were selected in consultation with districts officials concerned and from each block, three gram panchayats were selected for the following informations:

1. Household details
2. Mechanism of job card registration
3. Issue of job card
4. Registration and application for job(work)
5. Impact on wages, income and quality of life.
6. Impact on outward migration.

With a view to meet the objective of the study, we have adopted the different methods in our entire exercises. The methodology adopted in the study broadly comprises of

- ❖ Secondary data collection
- ❖ Identification of districts and then block
- ❖ Identification of villages where NREGA have been working.

3.3 Data and its Sources

The data is basically collected from the official website of MGNREGA. We collected secondary data on variables such as job cards issued to households, employment demanded, employment provided, number of households working under MGNREGA from 2008-09 to 2011-12. We also collected data on person days generated under MGNREGA for six districts of Punjab viz. Hoshiyarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda. In addition, we collected agricultural and non-agricultural wages from Labour of Bureau of India from 2006-07 to 2009-10.

3.4 Research Methods

To study the first objective of the study, we will use descriptive statistics for describing the corporate performance sector wise over the last ten years. Under descriptive statistics, we will use bar chart, line graph and pie chart for summarizing data graphically. We will also summarize numerically identified variables using arithmetic mean, range, standard deviation and other descriptive statistics.

As a first step to study relationship between different variables, the study will make use of t-test to test the hypothesis that the agricultural wage of men and women are the same.

3.4.1 Student's t Distribution

William S. Gossett pioneered the Small Sample Theory with his work in the beginning of 20th century. Gossett was an employee of an Irish company named Guinness Brewery in Dublin which restricted employees to publish works under their own name. So Gossett under the pen name 'Student' published his works in 1908 and that is why the t-distribution is commonly called Student's t distribution.

The t-distribution is employed when size of the sample is 30 or less and the population variance is unknown. For any random sample size of n drawn from a normal or approximately normal population with mean (μ) and variance (σ^2) then the t-distribution is defined as:

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

where n= no. of observations in the sample

μ = mean of the population
 \bar{X} = Mean of the sample
 S = Estimated standard deviation of the population

Characteristics of t-distributions

- The t-distribution is also a bell-shaped symmetric distribution with zero mean and unit variance.
- The t-distribution is somewhat flatter than the normal distribution which implies that the area at the tails is larger.
- The t-distribution approaches to normality when size of the sample increases.
- The t-distribution is defined by degrees of freedom.

3.4.2 Hypothesis Test of Equal Mean Wages

When samples are drawn randomly from different population they are termed as independent samples because the units or people sampled under each group are in no way linked to units of other group. When comparing means for two independent samples, the hypotheses may take the following form:

$$H_0 : \mu_1 - \mu_2 = 0$$

$$H_1 : \mu_1 - \mu_2 \neq 0$$

When variance of both the populations are same, a pooled variance is estimated using both the samples variances as follows:

$$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

The standard error of the above statistic is given as follows:

$$s_{\bar{x}_1 - \bar{x}_2} = \sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}$$

Finally, to test hypothesis about two population means, the appropriate test is given as follows:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

where

$\bar{x}_1 - \bar{x}_2$ = Difference in two samples mean

$\mu_1 - \mu_2 =$ Difference in two population mean

$S^2 =$ pooled Variance

$n_1 =$ Sample size 1

$n_2 =$ sample size 2

The Procedure of Hypothesis Testing

a) In this case our null and alternate hypothesis are:

$$H_0 : \mu_1 - \mu_2 = 0$$

$$H_1 : \mu_1 - \mu_2 \neq 0$$

b) Choose a level of significance.

c) Choose an appropriate test. In this case t -test is the appropriate test.

d) Compute the value of the t test as follows

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

e) Take the decision. The decision rule is if the calculated t-statistic is greater than critical t-statistic then rejects the null hypothesis.

3.4.3 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. Earlier we discussed how to test the equality of two means by t-test. 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. 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**.

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. SS_Y is the total variation in Y. SS_X is the variation in Y that is due to the variations in the means of groups of X. SS_{Error} is the variation in Y that is linked with variation within each category of X.

The total variation in dependent(Y), denoted by SS_Y , is decomposed into:

$$SS_Y = SS_X + SS_{Error}$$

where

$$SS_Y = \sum_{i=1}^N (Y_i - \bar{Y})^2$$

$$SS_X = \sum_{j=1}^c n(\bar{Y}_j - \bar{Y})^2$$

$$SS_{Error} = \sum_j^c \sum_i^n (Y_{ij} - \bar{Y}_j)^2$$

Y_i = individual observation

\bar{Y}_j = average for category j

\bar{Y} = Grand mean

Y_{ij} = ith observation in jth category

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:

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

H_1 : at least one mean is different

The above hypothesis is tested by the F statistic with (c-1) and (N-c) degrees of freedom in the numerator and denominator respectively. The F statistic is given by the following formula:

$$F = \frac{\frac{SS_X}{(c-1)}}{\frac{SS_{Error}}{(N-c)}}$$

The rule is when the calculated value of F is greater than critical F value reject the null hypothesis.

Chapter – IV

Data Analysis and Results Discussions

4.1 Introduction

In this chapter, results of data analysis will be reported and discussed. The first objective of the study was to evaluate the performance of MNREGA since its inception. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was launched in February 2006. It is perhaps the largest and most ambitious social security and public works programme in the world. Since its inception in 2006, around Rs. 1,10,000 crore has spent directly as wage payment to rural households and 1200 crore person –days of employment has been generated. On average, 5 crore households have been provided employment every year since 2008. Though the achievements of MGNREGA have been impressive, there have been issues with regard to its implementation that need to be recognized and meaningfully. In this chapter, an attempt will be made to first evaluate MNREGA on various parameters, which is, the first objective of this study.

4.2 Evaluation of MGNREGA since its Inception

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 was notified on 7th September, 2005. The mandate of the Act is to provide 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work such as:

- Rural connectivity
- Water conservation and water harvesting
- Renovation of traditional water bodies
- Flood control
- Drought Proofing
- Irrigation Canals
- Irrigation facilities to SC/ST/IAY/LR
- Land Development
- Bharat Nirman Rajeev Gandhi Sewa Kendra
- Coastal Areas
- Rural Drinking Water
- Fisheries

- Rural Sanitation
- others

In current financial year 2011-12, (upto December, 2011) 3.77 Crore households were provided employment and 120.88 Crore person-days of employment were generated. The enhanced wage earnings have led to a strengthening of the livelihood resource base of the rural poor in India; 72 percent of funds utilized were in the form of wages paid to the workers. Self targeting in nature, the programme has high work participation for marginalized groups like SC/STs (40%) and Women (49%) in 2011-12 (upto December, 2011). Total works undertaken were 62.72 lakh in the same period, of which 53 percent relates to Water Conservation, 12 percent for the provision of Irrigation facility to lands owned by SC/ST/BPL/S&M Farmers and IAY beneficiaries, 22 percent for Rural Connectivity, 9 percent for Land Development, 4 percent for Any other activity approved by MoRD and 0.37 percent for Bharat Nirman Rajiv Gandhi Seva Kendra. Women participation in current financial year upto December, 2011 was 49% and the participation of SC & ST in current financial year upto December, 2011 is 40%. Since its inception, the Act has generated 1112.03 Crore person days. In the current financial year upto December, 2011 MGNREGA has provided employment to 3.77 Crore households generating 120.88 crore persondays. Almost 70% of the expenditure is on wages. Over the last six years (Upto December, 2011) Rs. 100452 crore has been spent on the wages of Mahatma Gandhi NREGA labour. The average wage earned has risen from Rs. 65 per person day in 2006 to Rs. 100 by 2011. The share of SC/ST families in the work provided under MGNREGA over the previous five years has ranged between 51-61%. Women workforce participation under the Scheme has surpassed the statutory minimum requirement of 33%. Over the previous five years it has ranged between 40-48%.

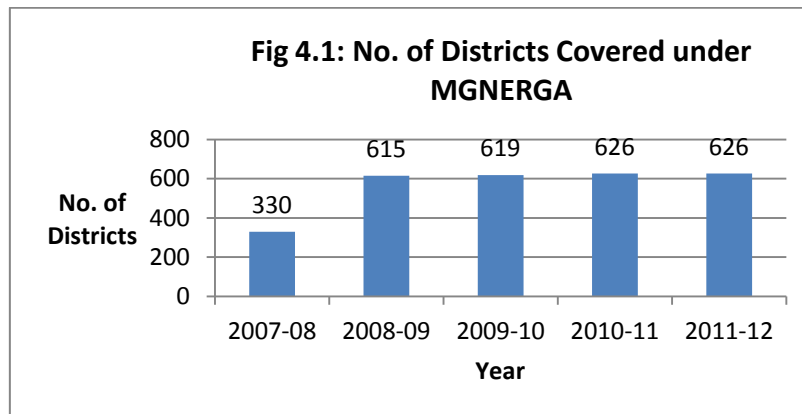
The overall performance of MGNREGA during the year from 2007-08 to 2011-12 is presented in table-1.

Table 4.1: National Performance of MGNREGA during 2007-08 to 2011-12

Indicators	2007-08	2008-09	2009-10	2010-11	2011-12
No. of Districts	330	615	619	626	626
Total Job cards issued (crores)	6.48	10.01	11.25	11.98	12.07
Employment to household (crores)	3.39	4.51	5.26	5.49	3.77
Person-days (crores)	143.59	216.32	283.59	257.15	120.88
SC-days (crores)	39.36	63.36	86.45	78.76	27.4
ST-days (crores)	42.07	55.02	58.74	53.62	20.69
Women-days (crores)	61.15	97.94	136.4	122.74	59.82
Others (crores)	1.01	0	2	2.04	13

The table reveals that the performance of MGNREGA has been significant in quantitative terms in the study period. The Number of households has increased significantly from 3.39 Crores in 2007-08 to 5.49 Crores in 2010-11 and upto December'2012 MGNREGA has provided employment to 3.77 Crore households generating 120.88 crore person-days. Total Job Cards issued were doubled during the study period i.e. 6.48 Crores in 2007-08 and 12.07 Crores in 2011-12. The number of Districts have also increased from 330 to 626 during the period from 2007-08 to 2011-12. In 2009-10, number of person-days created was 283.59 Crores which declined to 257.15 Crore person-days in 2010-11. In total person-days, Scheduled Castes' share has increased significantly from 27 per cent in 2007-08 to 31 per cent in 2010-11. The share of Scheduled Tribes in total person-days created has declined from 29 percent in 2007-08 to 25 per cent in 2008-09 and during 2009-10 and 2010-11 it was 21 percent each. Women-days increased significantly from 61.15 Crores in 2007-08 to 122.74 Crores in 2010-11.

The following figure shows number of districts covered under MGNERGA during 2007-08 and 2011-12. The total number of districts covered by MGNERGA was 330 in the year 2007-08 which increased to 615 in the next year.



Thus, there was a jump of almost 100 per cent in the number of districts covered by MGNERGA. However, the number of districts covered under MGNERGA was 619, 626 and 626 respectively in 2009-10, 2010-11 and 2011-12. Thus, the growth in MGNERGA was almost stagnant after 2008-09.

Figure 4.2 shows the total job cards issued under MGNERGA during 2007-08 and 2011-12. The trend is positive during this period. However, the rate of issuing job cards under MGNERGA has certainly declined. The total number of job cards issued in 2007-08 was 6.48

crores which increased to 10.01 crores in 2008-09. However, the total number of job cards issued in 2009-10 was only 11.25 crores.

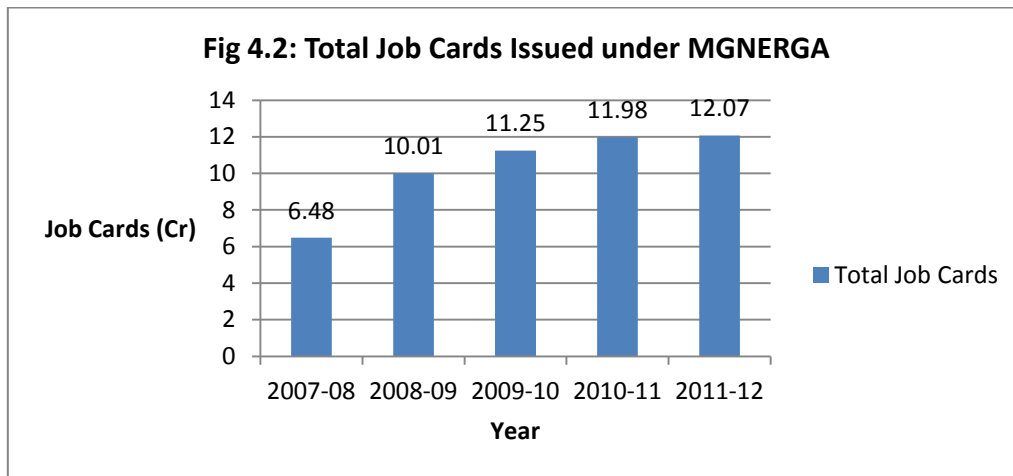
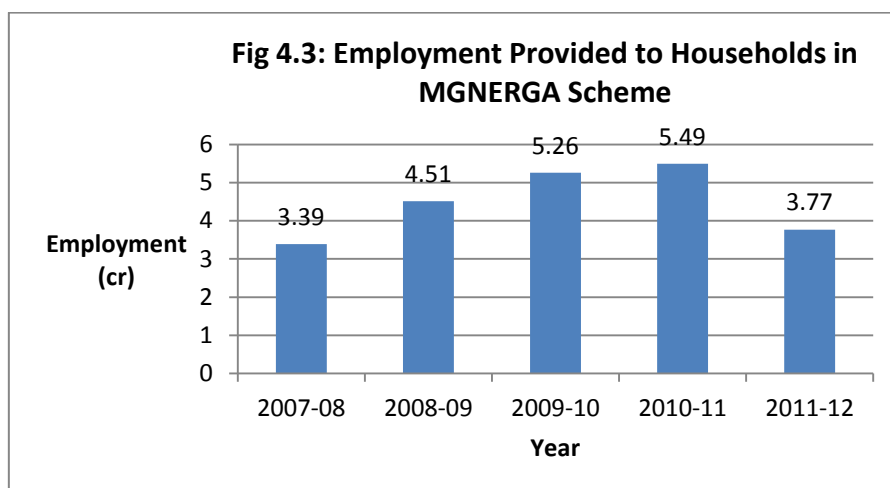


Figure 4.3 shows employment provided to household in MGNERGA Scheme. In 2007-08, employment to 3.39 crore households were provided which increased to 4.51 crore in 2008-09. However, in 2011-12, only 3.77 crore households were employed under MGNERGA. This clearly shows that MGNERGA programme is losing its steam.



Not only employment provided to the household has declined but also person-days under MGNERGA has declined in recent years. Figure 4.3 shows person-days employment under MGNERGA. After 2009-10, we can notice the sharp fall in person-days employment under MGNERGA depicted in the following figure.

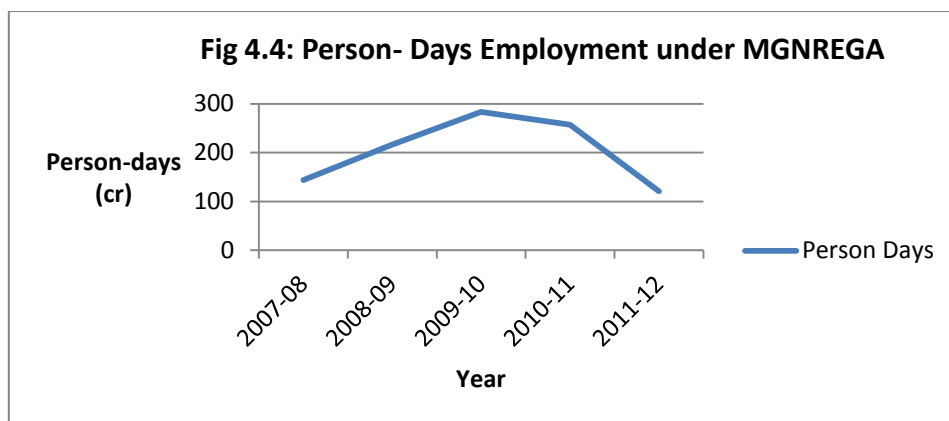
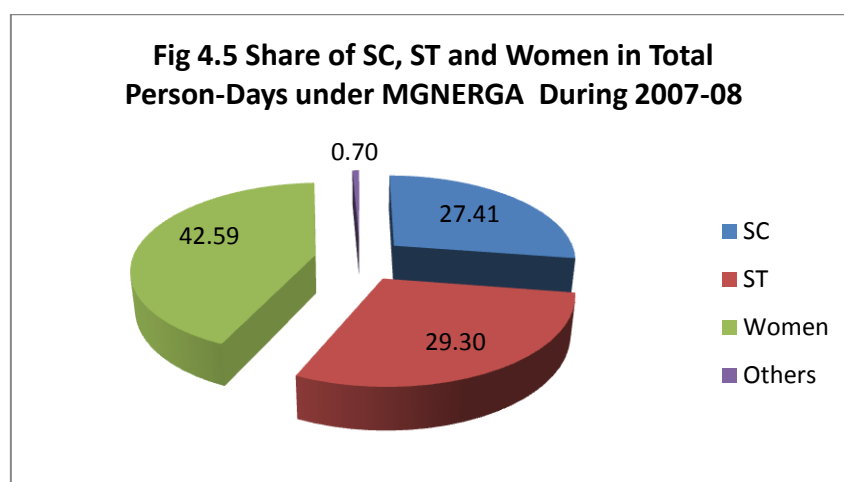
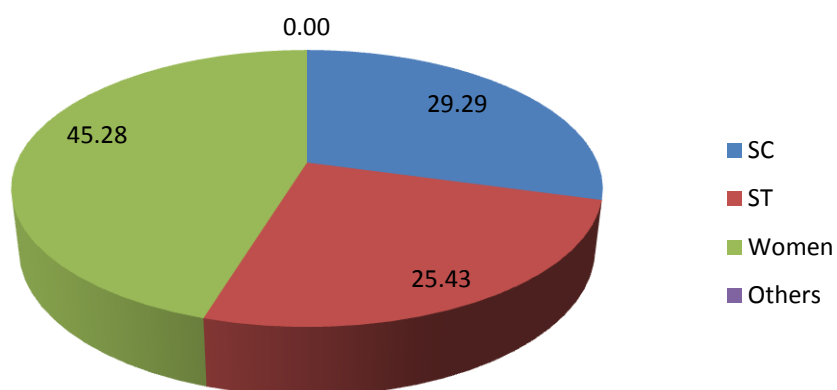


Table 4.1 also shows the share of SCs, STs, women and others in total person-days generated under MGNREGA Scheme. The share of SC, ST, women in the year 2007-08 is given below the pie chart:



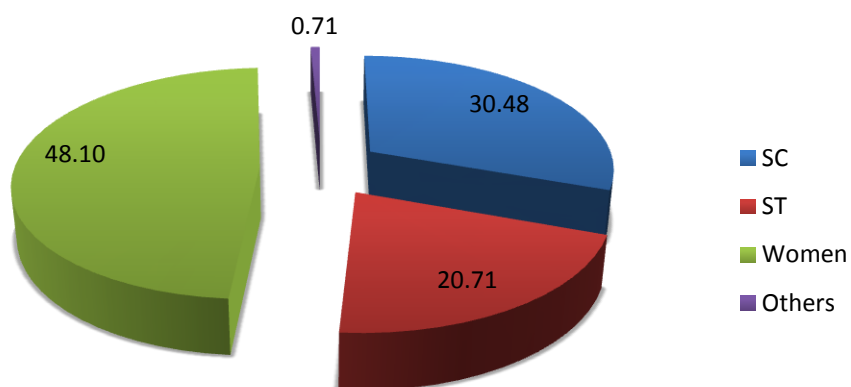
The figure above shows that the share of women in total person-days generated under MGNREGA during 2007-08 was 42.59%. The share of SC, ST and others were 27.41%, 29.3% and 0.7% respectively. Thus, the largest beneficiary of the MGNREGA wage employment scheme was basically rural women. It also helped to empower the marginalized sections of society in rural India.

Fig 4.6 Share of SC, ST and Women in Total Person-Days under MGNERGA During 2008-09



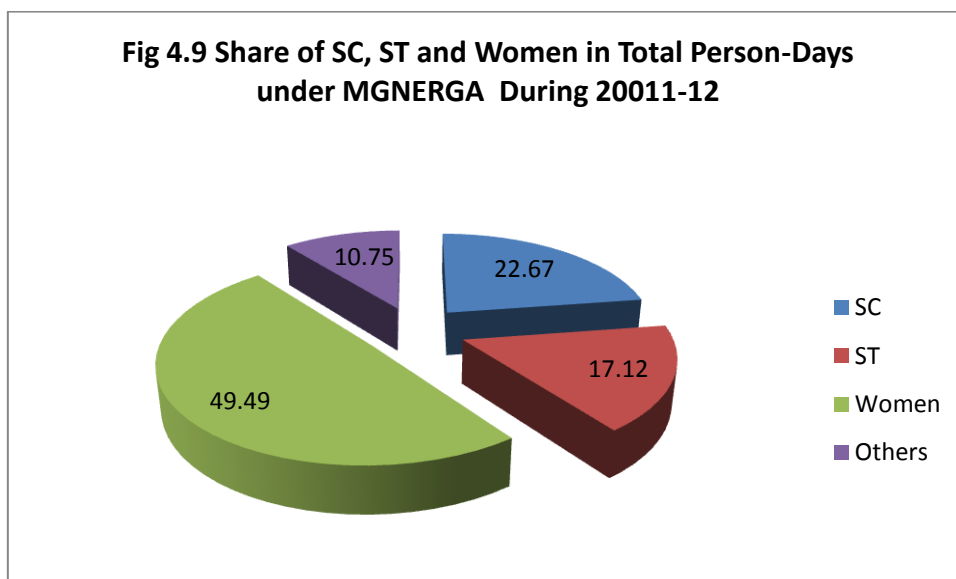
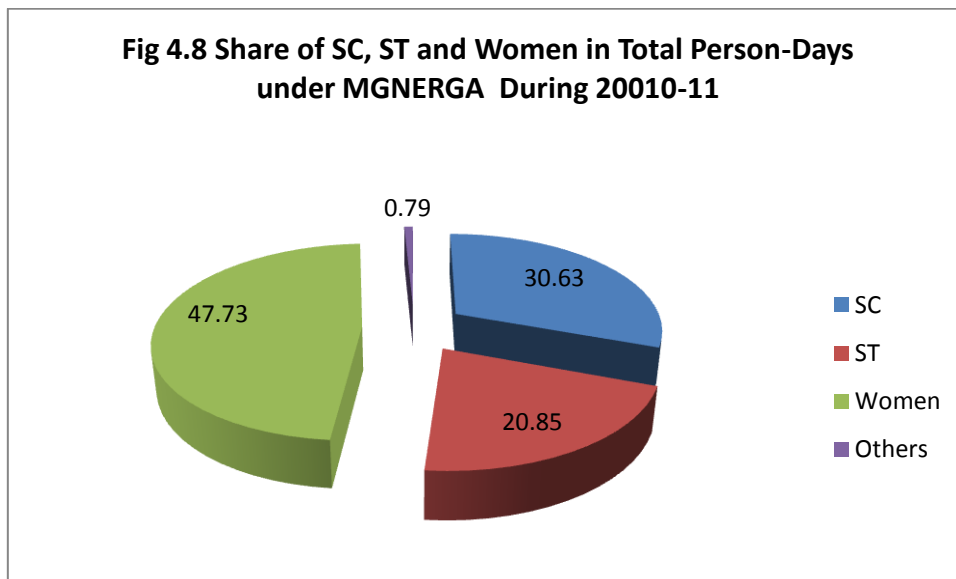
The figure above shows that the share of women in total person-days generated under MGNERGA during 2008-09 was 45.28%. The share of SC, ST and others were 29.29%, 25.43% and 0% respectively. Thus, the largest beneficiary of the MGNERGA wage employment scheme was rural women and its share in total person-days also increased from 42% to 45%. While the share of SC in total person days increased, the share of ST declined.

Fig 4.7 Share of SC, ST and Women in Total Person-Days under MGNERGA During 2009-10



The figure above shows that the share of women in total person-days generated under MGNERGA during 2009-10 was 48.1%. The share of SC, ST and others were 30.48%, 20.71% and 0.71% respectively. Thus, the share of women has been rising since the inception of MGNREGA in total person-days also increased from 45% to 48%. While the share of SC

in total person days increased, the share of ST declined substantially in 2009-10. It remained only at 20.71%.



In the year 2011-12, the share of women in total person-days generated under MGNERGA was 49.49%. The share of SC, ST and others were 22.67%, 17.12% and 10.75% respectively. Thus, the share of women has been rising since the inception of MGNERGA in total person-days. The share SC and ST have declined might be because the total person-days have declined significantly after 2009-10. One important thing we notice that share of ST in total person days has been continuously declining while the shares of women and SC have been on rise. One reason may be the in subsequent years, districts covered under MGNERGA may not have ST population.

Table 4.2 shows financial performance of MGNERGA during 2006-07 and 2011-12. The Govt. of India made provisions for MGNERGA scheme in its budget in various years since its inception. In 2006-07, the Govt. of India made a provision of Rs. 11300 crores. However, only 78% of money spent on MGNERGA Scheme in that year. It is also to note here that only 66% of that allocated money in the budget spent as unskilled wages.

Table 4.2: Financial Performance of MGNERGA during 2006-07 to 2011-12

Financial Details	2006-07	2007-08	2008-9	2009-10	2010-11	2011-12
Budget Outlay (Rs.Cr)	11300	12000	30000	39100	40100	40000
Expenditure (Rs.Cr)	8824	15857	27250	37905	39377	37303
% of Exp of Budget Outlay	78%	132.14%	90.83%	96.94%	98.19%	93.25%
Exp on Unskilled Wages (Rs.Cr)	5842	10739	18200	25579	25686	24660
% of Total Exp on unskilled wages	66%	68%	67%	67%	65%	66%

In 2007-08, the Government of India made a budget provision of Rs. 12000 crores for MGNERGA and the expenditure made on the scheme was 132.14% indicating 32% more expenditure than allocated amount in the budget. The percentage of expenditure of total amount sanctioned in budget in 2008-09, 2009-10, 2010-11 and 2011-12 were respectively 90.83%, 96.94%, 98.19% and 93.25%. Thus, implying that MGNERGA Scheme is able to spend almost entire money allocated to this scheme. The percentage of amount spent on unskilled wages of total expenditure indicates that roughly 65 to 68 percent money is spent on wages while the rest amount of money is spent on administrative machinery or some other leakages may be there in the system.

Table 4.3 shows total works undertaken in MGNERGA Scheme and amount of works completed under this particular programme. From the table, it is clear that success rate of MGNREGA projects is below 50%. In 2006-07, total works taken under MGNERGA were 8.4 lakhs. Out of this, only 3.9 lakhs of projects were completed during that year.

Table 4.3: Work Performance of MGNERGA during 2006-07 to 2010-11

Works (in Lakhs)	2006-07	2007-08	2008-9	2009-10	2010-11	2011-12
Works taken up	8.4	17.9	27.8	46.2	51	73.6
Works Completed	3.9	8.2	12.1	22.6	25.9	14.4
% of work completed	46.42%	45.81%	43.52%	48.91%	50.78%	19.56%

Similarly, in 2007-08, 17.9 lakhs of works undertaken in the MGNREGA but only 8.2 lakhs of works were completed. The best performance of MGNREGA was registered in 2010-11 where 51 lakhs works were taken up and 25 lakhs works were completed. Thus, the success rate that year was 50.78%. However, the next year in 2011-12, total works under this scheme was taken up were 73.6 lakhs but only 14.4 lakhs of works were completed giving a success rate of only 19.56 per cent.

4.3 Impact of MGNREGA on Socio-Economic Aspects of Six Districts of Punjab

The second objective of the study was to examine the impact of MGNREGA on socio-economic aspects of various districts of Punjab. In this we will discuss the functioning of National Rural Employment Guarantee Act (NREGA) during three phases of its implementation in six districts of Punjab namely, Hoshiyarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda. The objective is to examine the change in pace and nature of work being undertaken during this period. The achievements in terms of the employment generation across different caste and gender groups, quantity of work done along with its quality and usefulness of the work has also been attempted. In order to fully understand the extent, nature and pattern of employment generation through NREGA, a critical analysis of the issuance of the job cards, demand for employment by job card holders, share of lower castes and gender in employment and the proportion of households completing 100 days of employment in NREGA activities is important. The examination of such progress over past four years will further add value to the analysis. Table 4 shows issuing of job cards, employment demanded and provided.

Table 4.4: Issuing of Job cards, Employment demanded and provided

Particulars	Cumulative No. of HH Issued Job Cards				Cumulative No. of HH		
HOSHIYARPUR							
	SCs	STs	Others	Total	Employment Demanded	Employment Provided	No. of HH Working Under MGNREGA
2008-09	36833 (57.94)	33 (0.05)	26710 (42.01)	63516	34	33 (0.97)*	15
2009-10	40523 (57.97)	31 (0.04)	29349 (41.98)	69903	36707	36597 (0.99)	12900
2010-11	40806 (58.01)	31 (0.04)	29597 (42.08)	70343	31465	31422(0.99)	5739
2011-12	41439 (57.89)	32 (0.04)	31105 (43.45)	71576	22996	22972 (0.99)	2944
AMRITSAR							
2008-09	45661 (87.5)	5 (0.01)	6518 (12.49)	52184	523	504 (0.96)	120
2009-10	54299 (86.33)	7 (0.01)	8590 (13.66)	62896	28174	28099 (0.99)	10903
2010-11	55030 (86.05)	7 (0.01)	8912 (13.94)	63949	30444	30282 (0.99)	7526
2011-12	56165 (86.01)	8 (0.01)	9124 (13.97)	65297	14706	14603 (0.99)	1879
Jalandhar							

2008-09	27232 (96.66)	-	2158 (7.34)	29390	639	592 (0.92)	113
2009-10	30463 (92.57)	-	2442 (7.42)	32905	10604	10593 (0.99)	4225
2010-11	31132 (92.54)	-	2509 (7.46)	33641	11388	11383 (0.99)	2966
2011-12	31665 (92.32)	-	2634 (7.67)	34299	7219	7209 (0.99)	874
Taran Taran							
2008-09	35632 (79.77)	0	9038	44670	1309	1307 (0.99)	651
2009-10	42932 (78.9)	18 (0.03)	11461 (20.23)	54411	3440	3440 (100)	1708
2010-11	44235 (79.2)	18 (0.03)	11596 (21.06)	55849	16724	16688 (0.99)	3958
2011-12	45496 (79.35)	20 (0.03)	11819 (20.61)	57335	11519	11514 (0.99)	1182

* Ratio of employment provided by employment demanded

Table 4.5 (Continued): Table 4.4: Issuing of Job cards, Employment demanded and provided

Particulars	Cumulative No. of HH Issued Job Cards				Cumulative No. of HH		
	SCs	STs	Others	Total	Employment Demanded	Employment Provided	No. of HH Working Under MGNREGA
Patiala							
2008-09	19936 (71.18)		8070 (28.82)	28006	2386	1829 (0.76)*	1362
2009-10	24466 (68.8)	4 (0.01)	11091 (31.19)	35561	11820	11814 (0.99)	3146
2010-11	25126 (68.58)		11510 (31.42)	36636	10732	10732(100)	584
2011-12	26567 (68.21)	0	12377 (31.78)	38944	10875	10869 (0.99)	1284
Bhatinda							
2008-09	28618 (90.56)	27 (0.09)	2955 (9.35)	31600	4939	4788 (0.96)	1676
2009-10	35513 (88.48)	27 (0.07)	4597 (11.45)	40137	21094	20819 (0.98)	8260
2010-11	36017 (88.36)	27 (0.07)	4718 (11.57)	40762	18863	18817 (0.99)	4924
2011-12	38304 (88.32)	2 (0.004)	5061 (11.67)	43367	18691	18627 (0.99)	6282

* Ratio of employment provided by employment demanded

From Table 4, it is clear that in Hoshiyarpur, a cumulative number of more than 75 thousands job cards were issued by 2011-12. The number of job cards issued was 63516 in 2008-09 which then increased to about 69903 thousands by 2009-10 (an increase of more than 10 per cent). There was a small increase of 0.62 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Hoshiyarpur by 1.75 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 57 per cent and that of other households around 42 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Amritsar, a cumulative number of more than 65297 thousands job cards were issued by 2011-12. The number of job cards issued was 52184 in 2008-09 which then increased to about 62896 thousands by 2009-10 (an increase of more than 20 per cent). There was a small increase of 1.67 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Amritsar by 2.1 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 85 per cent in Amritsar and that of other households around 12 to 13 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Jalandhar, a cumulative number of more than 34299 thousands job cards were issued by 2011-12. The number of job cards issued was 29390 in 2008-09 which then increased to about 32905 thousands by 2009-10 (an increase of more than 11 per cent). There was a small increase of 2.23 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Jalandhar by 1.95 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 92 per cent in Jalandhar and that of other households around 7 to 8 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Taran Taran, a cumulative number of more than 57335 thousands job cards were issued by 2011-12. The number of job cards issued was 44670 in 2008-09 which then increased to about 54411 thousands by 2009-10 (an increase of more than 21 per cent). There was a small increase of 2.64 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Taran Taran by 2.66 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 75 per cent in Taran Taran and that of other households around 25 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Patiala, a cumulative number of more than 38944 thousands job cards were issued by 2011-12. The number of job cards issued was 28006 in 2008-09 which then increased to about 35561 thousands by 2009-10 (an increase of more than 26.97 per cent). There was a small increase of 3.2 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Patiala by 6.2 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 68 per cent in Patiala and that of other households around 28 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Bhatinda, a cumulative number of more than 43367 thousands job cards were issued by 2011-12. The number of job cards issued was 31600 in 2008-09 which then increased to about 40137 thousands by 2009-10 (an increase of more than 27 per cent). There was a small increase of 1.55 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Bhatinda by 6.3 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 88 per cent in Bhatinda and that of other households around 12 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

All the districts of Punjab where NREGA was implemented in the third phase registered comparatively higher growth in the number of job cards during the period of 2008-09 to 2010-11. While the proportion of scheduled castes in the total number of job cards issued was as high as about 92 per cent in Jalandhar, such proportion was between 80-90 per cent in more than 10 districts and was the lowest at 41 per cent in Gurdaspur, 54 per cent in Ropar and 58 per cent in Hoshiarpur. Such proportion does not seem to have any relationship with the phase of implementation of NREGA, but appears to be related more to the proportion of SC population in the respective districts.

Further, of all the households issued job cards in Punjab, about 2.88 lakh households demanded employment in 2010-11. These households accounted for 34.82 per cent of the total number of households to whom the job cards were issued. There were large variations in

such proportion across different districts in Punjab and it varied between 20 to 50 per cent without any obvious relationship with the phase of implementation of NREGA. Almost all the households demanding employment during a given year (97 to 100 per cent) were provided employment, which seems to be quite encouraging. However, there is need to significantly increase the proportion of households demanding employment from the current levels of about 35 per cent. Based on the previous trend, such proportion is expected to increase with time but the pace of increase needs to be made much faster. Lesser awareness about the proper provisions of NREGA among the rural households, lack of sufficient provisions for employment on demand, etc., may be some reasons for such situation.

Table 4.6 shows extent of employment generated in six districts of Punjab.

Table 6: Extent of Employment Generated (Cumulative Person Days)

HOSHIYARPUR					
Year	SC	ST	Other	Women	Total
2009-2010	557239 (56.39)	454 (0.04)	430356 (43.55)	366695 (37.11)	988049
2010-2011	571953 (56.97)	481 (0.04)	431351 (42.97)	398687 (39.71)	1003785 (1.59)
2011-2012	366942 (61.66)	357 (0.05)	227711 (38.27)	256554 (43.11)	595010 (-40.72)
AMRITSAR					
2009-2010	673537 (86.61)	168 (0.02)	103926 (13.36)	74617 (9.59)	777631
2010-2011	769755 (86.34)	231 (0.02)	120041 (13.48)	113843 (12.79)	890027 (14.45)
2011-2012	314804 (86.34)	79 (0.02)	49685 (13.62)	49398 (13.54)	364568 (-59.03)
JALANDHAR					
2009-2010	365942 (92.99)	0	27548 (7.01)	0	393490
2010-2011	337932 (93.66)	0	22858 (6.33)	0	360790 (-8.31)
2011-2012	191117 (91.51)	0	17720 (8.48)	0	208837 (-42.11)
TARAN TARAN					
2009-2010	69604 (88.27)	0	9241 (11.72)	13517 (17.14)	78845
2010-2011	263117 (83.46)	156 (0.04)	51954 (16.48)	48366 (15.34)	315227 (299.8)
2011-2012	207640 (85.04)	25 (0.01)	36478 (14.94)	51921 (21.26)	244143 (-22.55)
PATIALA					
2009-2010	236759 (72.16)	0	91318 (27.83)	149768 (45.65)	328077
2010-2011	201556 (70.3)	0	85150 (29.69)	141094 (49.21)	286706 (-12.61)
2011-2012	226350 (70.76)	0	93501 (29.23)	172115 (53.81)	319851 (11.56)
BHATINDA					
2009-2010	538769 (91.0)	512 (0.08)	52729 (8.9)	257164 (43.43)	592010
2010-2011	391846 (89.36)	85 (0.01)	46551 (10.61)	223916 (51.06)	438482 (-25.93)
2011-2012	403046 (88.55)	24 (0.0)	52070 (11.44)	254031 (55.81)	455140 (3.79)

In Hoshiyarpur, 9.88 lakh person days of employment were generated through MGNREGA activities in 2009-10 (Table 6). The extent of employment generation was more by a meagre 1.59 percent in the year 2010-11. However, employment generated through MGNREGA in Hoshiyarpur significantly declined by 40 per cent in 2011-12. Table 6 also shows how the employment generated through MGNREGA got distributed in rural areas among various sections of society. In Hoshiyarpur, 56 per cent employment went to scheduled castes (SCs), 0.04 per cent to scheduled tribes (STs), 37.11 per cent went to women and the rest went to others during 2009-10. By 2011-12, share of scheduled castes (SCs) has increased to 61.66 per cent in employment generated through MGNREGA. The share of women also has risen to 43.11 per cent by 2011-12. However, the share of others had declined marginally by 2011-12.

In Amritsar, 7.77 lakh person days of employment were generated through MGNREGA activities in 2009-10 (Table 6). The extent of employment generation increased by only 14.45 percent in the next year, 2010-11. However, employment generated through MGNREGA in Hoshiyarpur significantly declined by 59 per cent in 2011-12. Table 6 also shows how the employment generated through MGNREGA got distributed in rural areas among various sections of society. In Amritsar, 86 per cent employment went to scheduled castes (SCs), 0.02 per cent to scheduled tribes (STs), 9.59 per cent went to women and the rest went to others during 2009-10. By 2011-12, share of scheduled castes (SCs) has remained constant at 86 per cent in employment generated through MGNREGA. The share of women, however, has risen from 9.59 to 13.54 per cent by 2011-12 in Amritsar.

In Jalandhar, 3.93 lakh person days of employment were generated through MGNREGA activities in 2009-10 (Table 6). The extent of employment generation decreased by 8.31 percent in the next year 2010-11 in Jalandhar. This fall in employment generated through MGNREGA in Jalandhar was significant and declined by 42 per cent in 2011-12. In Jalandhar, over the sample years more than 90 per cent employment went to scheduled castes (SCs). In Taran Taran, more than 88 per cent employment generated through MGNREGA went to scheduled castes (SCs) over the sample period. In Patiala, 70 per cent employment went to SCs, roughly 29 per cent employment went to others and roughly 20 per cent went to women over the sample period. However, in Bhatinda, around 90 per cent employment

generated through MGNREGA went to SCs over the sample period during 2009-10 to 2011-12.

4.4 Rural Agricultural Wage and MGNREGA Wage Analysis

The third objective of the study is to analyze the wages prevailing in rural village. The table 4 shows Average Daily (Rs/Day) Agricultural and Non-Agricultural wages during 2006-07 to 2009-10.

Table 4.7: Average Daily (Rs/Day) Agricultural and Non-Agricultural wages during 2006-07 to 2009-10

Agricultural	Non-agri	Growth in Agri Wages	Growth in Non-Agri wages
70.37	89.71		
76.30	96.70	8.43	7.80
86.15	107.89	12.91	11.57
101.29	123.97	17.57	14.90
Average Annual Growth Rate		12.97	11.42

From table 4.7, it is clear that there is positive trend in average daily wage of both agricultural wages and non-agricultural wages of carpenter, mason, etc during the sample period. The average annual growth rate of agricultural and non-agricultural wages were 12.97 and 11.42 respectively over the sample period. Thus, wages in rural areas is increasing on average at 12 per cent per annum.

Next, we try to test the hypothesis that the wages in agricultural and wages in non-agricultural activities are the same using two sample t-test. The results of two-sample t-test is shown in table 5.

Table 4.8: Results of t-Test

t-Test: Two-Sample Assuming Unequal Variances		
	<i>Agricultural</i>	<i>Non-agri</i>
Mean	83.5275	104.5664286
Variance	182.5801583	223.4220796
Observations	4	4
Hypothesized Mean Difference	0	
Df	6	
t Stat	-2.088283231	
P(T<=t) one-tail	0.040896126	
t Critical one-tail	1.943180274	
P(T<=t) two-tail	0.081792252	
t Critical two-tail	2.446911846	

The results indicate that the null of no difference in two wages cannot be rejected at 5 per cent significance level. Thus, it implies that both types of wages are essentially equal in rural areas.

In agricultural related works such as ploughing, sowing, etc, we compared the wages of men with women from 2006-07 to 2009-10. Average agricultural wage of men and women were Rs.83.52 per day and Rs. 61.34 per day over the sample period. Thus, the gap between agricultural wages of men and women seem to be high and gender discrimination in this respect is clearly visible.

Table 4.9: Comparison of Average Daily (Rs/Day) Men Agricultural and Women Agricultural wages during 2006-07 to 2009-10

Average Agri Men Wage	Average Agri women Wage	Growth in Men Agri Wages	Growth in Women Agri wages
70.37	50.02		
76.3	55.84	8.426886	11.63535
86.15	63.32	12.90957	13.39542
101.29	76.19	17.574	20.32533
Average Annual Growth Rate		12.97015	15.1187

When we compared the growth rate in agricultural wages of men and women, we found that wages of men is growing at a rate of roughly 13% per annum. However, average annual growth rate in women wages is around 15.11 per cent. Thus, growth rate in agricultural wages of men and women are more or less the same. There is not much difference in this case. In fact, growth rate in wages of women is higher than growth rate in wages of men over the sample period. 12 to 15 percent growth rate in agricultural wages of men and women might be induced by MGNERGA wages.

We also conducted hypothesis test on these two sets of wages. The null hypothesis is that there is no difference in agricultural wages of men and agricultural wages of women. Results of hypothesis testing using two sample t-test is given in Table 6. Results show that the null of equal agricultural wages of men and wages of women is rejected at 5 per cent significance level. From the Table 6, it is clear that the computed t-statistic is 2.51 and critical t-statistic for two-tail test is 2.44. Thus, the calculated t-statistic is greater than critical t-statistic, we will reject the null of equal wages.

Table 4.10: Results of Two Sample t-test

t-Test: Two-Sample Assuming Equal Variances		
	<i>AverageAgri Men Wage</i>	<i>AverageAgri women Wage</i>
Mean	83.5275	61.3425
Variance	182.5801583	127.6117583
Observations	4	4
Pooled Variance	155.0959583	
Hypothesized Mean Difference	0	
Df	6	
t Stat	2.519266958	
P(T<=t) one-tail	0.022665981	
t Critical one-tail	1.943180274	
P(T<=t) two-tail	0.045331962	
t Critical two-tail	2.446911846	

Table 4.11: Comparison of MGNERGA Wage with Minimum Agri Wages during 2011-12

States	MGNERGA Wage	Minimum Agri Wage (Mini. Wage Act)
A.P.	137	168
Arunachal Pradesh	124	144.5
Assam	136	100.42
Bihar	122	120
Chatishgarh	132	114
Gujarat	134	100
Harayana	191	173.19
Himanchal Pradesh	141	135
J&K	131	110
Jharkhand	122	127
Karnatka	155	145.58
Kerla	164	200
M.P.	132	124
Maharastra	145	100
Manipur	144	122.1
Meghalay	128	100
Mizoram	136	170
Odisha	126	90
Punjab	166	153.8
Rajstan	133	135
Sikkim	124	100
Tamil Nadu	132	100
Tripura	124	100
U.P.	125	100
Uttarakhand	125	121.65
West Bengal	136	167
Average MGNERGA	137.1153846	127.74
Standard Deviation	16.15506589	28.97154692

Next, we compared the MGNREGA wages with minimum agricultural wages of 2011-12 for various states in India. All India average MGNREGA wage is Rs. 137.11 per day and all India average minimum agricultural wages is Rs. 127.74 per day during 2011-12. Thus, there is a gap of Rs. 10 between MGNREGA wages and minimum agricultural wages as indicated by Labour Bureau data.

The variation in MGNERGA wages and minimum agricultural wages as indicated by standard deviation of wages shows that there is less variation in MGNERGA wages across the States in India. However, there is great extent of variation in minimum agricultural wages across the States in India. We computed standard deviation of both types of wages and found that the variation in minimum agricultural wages is almost double than MGNERGA wages.

We also conducted hypothesis test on these two sets of wages. The null hypothesis is that there is no difference in minimum agricultural wages and MGNREGA wages in India. Results of hypothesis testing using two sample t-test is given in Table 6.

Table 4.12: Results of Two Sample t-test

t-Test: Two-Sample Assuming Unequal Variances		
	<i>MGNREGA Wage</i>	<i>Minimum Agri Wage</i>
Mean	137.1153846	127.74
Variance	260.9861538	872.924552
Observations	26	26
Hypothesized Mean Difference	0	
Df	39	
t Stat	1.419666516	
P(T<=t) one-tail	0.081824577	
t Critical one-tail	1.684875122	
P(T<=t) two-tail	0.163649154	
t Critical two-tail	2.022690901	

Results show that the null of equal minimum agricultural wages and MGNREGA wages during 2011-12 cannot be rejected at 5 per cent significance level. From the Table 8, it is clear that the computed t-statistic is 1.41 and critical t-statistic for two-tail test is 2.02. Thus, the calculated t-statistic is less than critical t-statistic, we cannot reject the null of equal wages.

Next, we studied the differences in six districts of Punjab in respect of job cards issued, employment generated, etc. Table 9 shows cumulative number of households (HH) issued job

cards during 2008-09 to 2011-12. We tried to find out is there any statistically significant difference in job cards distribution across the districts.

Table 4.13: Cumulative No. of HH Issued Job Cards during 2008-09 to 2011-12

Cumulative No. of HH Issued Job Cards during 2008-09 to 2011-12					
Hoshiyarpur	Amritsar	Jalandhar	Taran Taran	Patiala	Bhatinda
63576	52184	29390	44670	28006	31600
69903	62896	32905	54411	35561	40137
70343	63949	33641	55849	36636	40762
71576	65297	34299	57335	38944	43367

To find this we conducted a hypothesis test that the equal number of job cards is issued to all districts in Punjab. For this we used Analysis of Variance test (ANOVA).

Table 4.14: Results of ANOVA

Anova: Single Factor						
SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
Hoshiyarpur	4	275398	68849.5	12861336		
Amritsar	4	244326	61081.5	36150304		
Jalandhar	4	130235	32558.75	4786867		
Taran Taran	4	212265	53066.25	32757097		
Patiala	4	139147	34786.75	22426829		
Bhatinda	4	155866	38966.5	26074538		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	4.5E+09	5	900667833	40.0128	3.90883E-09	2.772853153
Within Groups	4.05E+08	18	22509495.2			
Total	4.91E+09	23				

Table 10 shows the results of ANOVA. From the results, we can infer that the null of equal number of job cards are issued in across the six districts of Punjab is rejected at 5 per cent significance level. This implies that there is statistically significant difference in distribution of job cards across the six districts of Punjab viz. Hoshiyarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda.

A similar test is conducted on number of HH working under MGNREGA during 2008-09 to 2011-12 for six districts of Punjab namely Hoshiyarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda.

Table 4.15: No. of HH Working Under MGNERGA during 2008-09 to 2011-12

No. of HH Working Under MGNERGA during 2008-09 to 2011-12					
Hoshiyarpur	Amritsar	Jalandhar	Taran Taran	Patiala	Bhatinda
15	120	113	651	1362	1676
12900	10903	4225	1708	3146	8260
5739	7526	2966	3958	584	4924
2944	1879	874	1182	1284	6282

Table 4.15 shows the results of ANOVA for number of HH working under MGNREGA during 2008-09 to 2011-12 for six districts of Punjab. From the results, we can infer that the null of equal number of households working under MGNERGA across six districts of Punjab cannot be rejected at 5 per cent significance level. This implies that there is no statistically significant difference in number of HH working under MGNREGA across the six districts of Punjab viz. Hoshiyarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda.

Table 4.16: Results of ANOVA

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Hoshiyarpur	4	21598	5399.5	30465027		
Amritsar	4	20428	5107	24911777		
Jalandhar	4	8178	2044.5	3568168		
Taran Taran	4	7499	1874.75	2115068		
Patiala	4	6376	1594	1192909		
Bhatinda	4	21142	5285.5	7666612		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	71023135	5	14204627	1.21894	0.340416	2.772853
Within Groups	2.1E+08	18	11653260.1			
Total	2.81E+08	23				

We also conducted ANOVA test on Cumulative Person days generated during 2008-09 to 2010-11.

Table 4.17: Cumulative Person days generated during 2008-09 to 2010-11

Cumulative Person days generated during 2008-09 to 2010-11					
Hoshiyarpur	Amritsar	Jalandhar	Taran Taran	Patiala	Bhatinda
1167	14819	12812	33891	42691	100349
988049	777631	393490	78845	328077	592010
1003785	890027	360076	314757	286706	429937

Table 4.18 shows the results of ANOVA for number of HH working under MGNREGA during 2008-09 to 2011-12 for six districts of Punjab.

Table 4.18: Results of ANOVA

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Hoshiyarpur	3	1993001	664333.667	3.29904E+11		
Amritsar	3	1682477	560825.667	2.26751E+11		
Jalandhar	3	766378	255459.333	44437420129		
Taran Taran	3	427493	142497.667	22760173969		
Patiala	3	657474	219158	23783341477		
Bhatinda	3	1122296	374098.667	62771074332		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	6.32E+11	5	1.2641E+11	1.067682896	0.4248	3.105875
Within Groups	1.42E+12	12	1.184E+11			
Total	2.05E+12	17				

From the results of Table 14, we can infer that the null of equal person days of employment are generated under MGNREGA across six districts of Punjab cannot be rejected at 5 per cent significance level. This implies that there is no statistically significant difference in equal person days of employment under MGNREGA across the six districts of Punjab viz. Hoshiyarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda.

Chapter – V

Conclusion and Policy Implications

5.1 Introduction

Poverty is a major problem India has been facing even after 60 years of Independence. Since Independence India has been working continuously to eradicate this menace but results so far indicate that a lot of work has still to be done to fight poverty, malnutrition, rural migration, rural unemployment, women empowerment in the new Millennium. In this context, MNREGA is another initiative of the government to improve livelihood of people in rural areas. Despite its robust economic growth, India faces the problem of widespread unemployment especially in the rural areas. Rural employment during 1993-94 and 1999-2000 grew at just 0.6 per cent per annum, much below the rate of rural population growth during this period. The decline largely owed to the fall in agricultural growth of labour intensive food crops, extensive mechanization, increased pressure on land causing a decline in land to man ratio and curtailment of rural development expenditure over time. The incidence of unemployment is higher among rural female than their male counter parts. Recent rise in the world food prices has further fuelled the distress in Indian economy by decreasing disposable incomes of the poor and thus affecting their consumption patterns. This has further aggravated the situation of poverty, hunger and malnutrition among the rural poor, especially the landless and marginal landholders, who are the net buyers of food, making them the most vulnerable targets. The decline in employment opportunities and fall in real incomes owing to rising prices highlight the distress amongst the lowest strata of Indian economy in general and rural economy in particular. Such distress appeared to worsen further with ever-increasing backlog of unemployment. The poor are supposed to be the worst hit in such a scenario of rising prices and falling employment and need assistance to cope up with the situation. These households lack productive assets, access to financial assistance, labour being their sole asset to earn a living. Therefore, it is essential to provide gainful wage employment opportunities to the rural work force. Keeping this in view, The National Rural Employment Guarantee Act (NREGA) was passed in 2005 to provide a minimum guaranteed wage employment of 100 days in a financial year to every willing rural household. The act was implemented in a phased manner in India with the programme being implemented in 200 most backward districts of India in 2006, followed by 130 more districts in 2007-08 and covered the whole country in 2008-09. In 2010-11, the program provided 1.45 billion man days of employment to 41 million rural households in 141 India. While the females accounted for 50.3 per cent of such employment, the share of SC and ST households was approximately

50 per cent. Such an attempt is not new in the history of wage employment in India. Some of the earlier programmes taken in this direction include Rural Works Programme (RWP,1960's), Crash Scheme for Rural Employment (CSRE) in 1971, Food for Work Programme (FFWP) in 1977, National Rural Employment Programme (NREP) in 1980,Rural Landless Employment Guarantee Programme (RLEGP) initiated in 1983, Jawahar Rozgar Yojana (JRY) in 1989, Employment Assurance Scheme (EAS) in 1993, EAS and JGSY were merged into a new programme Sampoorna Grameen Rozgar Yojana (SGRY)in 2001 and National Food for Work Programme (NFFWP) in 2004. However, all the wage employment programmes in India from the past four decades have not proven highly successful. This is largely due to their inability to provide sufficient employment as per the demand, at the minimum wages, within the periphery of the villages. In addition, these programmes could not ensure minimum level of social security to the villages; ensure equity of the benefits and community ownership as well as maintenance of the assets created from such works. Despite huge spending on all such programmes, the achievement on poverty reduction has not been faster enough as expected. These limitations of the wage employment programmes necessitated to look for some other sort of employment model with the potential to increase incomes of the poor, improve rural income distribution and reduce household poverty. The National Rural Employment Guarantee Act was started in India in 2006 with perhaps the same objective. At the national level MGNREGA was implemented in three stages. In Punjab, only Hoshiarpur district was selected for MGNREGA in the first stage (out of total 200 districts of India). Later, three districts (Nawanshahar, Jalandhar and Amritsar) and 16 districts (Moga, Mansa, Gudaspur, Muktsar, Ferozepur, Fatehgarh Sahib, Sangrur, Bathinda, Ropar, Kapurthala, Patiala, Faridkot, Ludhiana, Mohali, Taran Taran and Barnala) were selected in the second and third stage of MGNREGA, respectively. It comes out clearly that apart from the objective of providing guaranteed employment to the rural poor for a specific number of days, MGNREGA has many other dimensions, which can directly or indirectly influence the rural livelihoods, income, employment and income distribution. It has many other socio-economic aspects such as woman empowerment, child care, economic growth, etc. which need to be studied in detail for assessing the overall significance of this initiative. While the implementation of MGNREGA can be assessed by a selected list of physical indicators in a region, it is important that an important insight is obtained with regard to a comprehensive achievement on various socio-economic indicators. With this backdrop the present study was carried out in Punjab with the following specific objectives:

- To analyze performance of MGNREGA from 2006-07 to 2011-12.

- To analyze the trend in wages in rural areas and compare with MGNREGA wages.
- To study the district wise differences.

The secondary data for the study was collected largely from the website of The Mahatma Gandhi National Rural employment Guarantee Act 2005 (www.nrega.nic.in) of the Ministry of Rural Development, Government of India. The secondary data was collected on the employment generation through NREGA for all the districts in Punjab. The data pertained to employment generation, caste differentials, various categories of projects completed under MGNREGA such as rural connectivity, water conservation and harvesting, micro irrigation, irrigation facilities, renovation of traditional water bodies, etc.

5.2 Employment Generation and the Socio-Economic Profile

A critical analysis of the issuance of the job cards, demand for employment by job card holders, share of lower castes and gender in employment and the proportion of households completing 100 days of employment in NREGA activities was done to understand the extent, nature and pattern of employment generation under the scheme. It showed that there had been a substantial increase in the number of job cards issued over time with the current number reaching at about 8.27 lakh. More than three-fourth of the job cards have been issued the scheduled caste households largely representing the rural poor in Punjab. The proportion of scheduled caste households in total number of job cards issued varied widely from as low as 70 per cent in Patiala to as high as 92 per cent in Jalandhar. Almost one-third of the job card holders in Punjab demanded employment during 2010-11 with their proportion varying between 20 to 50 per cent in various districts. Such proportion was not related to the phase of implementation of MGNREGA in these districts.

The second objective of the study was to examine the impact of MGNREGA on socio-economic aspects of various districts of Punjab. In this we will discuss the functioning of National Rural Employment Guarantee Act (NREGA) during three phases of its implementation in six districts of Punjab namely, Hoshiyarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda. The objective is to examine the change in pace and nature of work being undertaken during this period. The achievements in terms of the employment generation across different caste and gender groups, quantity of work done along with its quality and usefulness of the work has also been attempted. In order to fully understand the extent, nature and pattern of employment generation through NREGA, a critical analysis of the issuance of the job cards, demand for employment by job card holders, share of lower castes and gender in employment and the proportion of households completing 100 days of

employment in NREGA activities is important. It is clear that in Hoshiyarpur, a cumulative number of more than 75 thousands job cards were issued by 2011-12. The number of job cards issued was 63516 in 2008-09 which then increased to about 69903 thousands by 2009-10 (an increase of more than 10 per cent). There was a small increase of 0.62 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Hoshiyarpur by 1.75 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 57 per cent and that of other households around 42 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Amritsar, a cumulative number of more than 65297 thousands job cards were issued by 2011-12. The number of job cards issued was 52184 in 2008-09 which then increased to about 62896 thousands by 2009-10 (an increase of more than 20 per cent). There was a small increase of 1.67 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Amritsar by 2.1 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 85 per cent in Amritsar and that of other households around 12 to 13 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Jalandhar, a cumulative number of more than 34299 thousands job cards were issued by 2011-12. The number of job cards issued was 29390 in 2008-09 which then increased to about 32905 thousands by 2009-10 (an increase of more than 11 per cent). There was a small increase of 2.23 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Jalandhar by 1.95 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 92 per cent in Jalandhar and that of other households around 7 to 8 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Taran Taran, a cumulative number of more than 57335 thousands job cards were issued by 2011-12. The number of job cards issued was 44670 in 2008-09 which then increased to about 54411 thousands by 2009-10 (an increase of more than 21 per cent). There was a small increase of 2.64 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Taran Taran by 2.66 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 75 per cent in Taran Taran and that of other households around 25 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Patiala, a cumulative number of more than 38944 thousands job cards were issued by 2011-12. The number of job cards issued was 28006 in 2008-09 which then increased to about 35561 thousands by 2009-10 (an increase of more than 26.97 per cent). There was a small increase of 3.2 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Patiala by 6.2 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 68 per cent in Patiala and that of other households around 28 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

In Bhatinda, a cumulative number of more than 43367 thousands job cards were issued by 2011-12. The number of job cards issued was 31600 in 2008-09 which then increased to about 40137 thousands by 2009-10 (an increase of more than 27 per cent). There was a small increase of 1.55 per cent in the number of job cards issues during 2009-10 to 2010-11. In 2011-12, there was a marginal increase in the number of job cards issued in Bhatinda by 6.3 per cent. The proportion of scheduled caste households in the total number of job cards issued always remained above 88 per cent in Bhatinda and that of other households around 12 per cent. It reflects that job cards are being issued largely to the poor rural households with larger concentration of the scheduled castes but even the other poor also seemed to get the job cards issued for getting assured wage employment for 100 days.

All the districts of Punjab where NREGA was implemented in the third phase registered comparatively higher growth in the number of job cards during the period of 2008-09 to 2010-11. While the proportion of scheduled castes in the total number of job cards issued was as high as about 92 per cent in Jalandhar, such proportion was between 80-90 per cent in more than 10 districts and was the lowest at 41 per cent in Gurdaspur, 54 per cent in Ropar and 58 per cent in Hoshiarpur. Such proportion does not seem to have any relationship with the phase of implementation of NREGA, but appears to be related more to the proportion of SC population in the respective districts.

Almost all the households demanding employment during a given year (97 to 100 per cent) were provided employment, which seems to be quite encouraging. However, there is need to significantly increase the proportion of households demanding employment from the current levels of about 35 per cent. Based on the previous trend, such proportion is expected to increase with time but the pace of increase needs to be made much faster. Lesser awareness about the proper provisions of NREGA among the rural households, lack of sufficient provisions for employment on demand, etc., may be some reasons for such situation.

In Hoshiarpur, 9.88 lakh person days of employment were generated through MGNREGA activities in 2009-10 (Table 6). The extent of employment generation was more by a meagre 1.59 percent in the year 2010-11. However, employment generated through MGNREGA in Hoshiarpur significantly declined by 40 per cent in 2011-12. Table 6 also shows how the employment generated through MGNREGA got distributed in rural areas among various sections of society. In Hoshiarpur, 56 per cent employment went to scheduled castes (SCs), 0.04 per cent to scheduled tribes (STs), 37.11 per cent went to women and the rest went to others during 2009-10. By 2011-12, share of scheduled castes (SCs) has increased to 61.66 per cent in employment generated through MGNREGA. The share of women also has risen to 43.11 per cent by 2011-12. However, the share of others had declined marginally by 2011-12.

In Amritsar, 7.77 lakh person days of employment were generated through MGNREGA activities in 2009-10 (Table 6). The extent of employment generation increased by only 14.45 percent in the next year, 2010-11. However, employment generated through MGNREGA in Hoshiarpur significantly declined by 59 per cent in 2011-12. Table 6 also shows how the

employment generated through MGNREGA got distributed in rural areas among various sections of society. In Amritsar, 86 per cent employment went to scheduled castes (SCs), 0.02 per cent to scheduled tribes (STs), 9.59 per cent went to women and the rest went to others during 2009-10. By 2011-12, share of scheduled castes (SCs) has remained constant at 86 per cent in employment generated through MGNREGA. The share of women, however, has risen from 9.59 to 13.54 per cent by 2011-12 in Amritsar.

In Jalandhar, 3.93 lakh person days of employment were generated through MGNREGA activities in 2009-10 (Table 6). The extent of employment generation decreased by 8.31 percent in the next year 2010-11 in Jalandhar. This fall in employment generated through MGNREGA in Jalandhar was significant and declined by 42 per cent in 2011-12. In Jalandhar, over the sample years more than 90 per cent employment went to scheduled castes (SCs). In Taran Taran, more than 88 per cent employment generated through MGNREGA went to scheduled castes (SCs) over the sample period. In Patiala, 70 per cent employment went to SCs, roughly 29 per cent employment went to others and roughly 20 per cent went to women over the sample period. However, in Bhatinda, around 90 per cent employment generated through MGNREGA went to SCs over the sample period during 2009-10 to 2011-12.

5.3 Work Profile and Wage Structure

The study showed that the poorest of the poor were found to be relatively more inclined to get employed under MGNREGA as, on an average, more than one worker per household was getting employment in such activities. A beneficiary household gained employment for 54.15 working days per annum on an average. The average number of employment days for scheduled caste households (the poorest) was relatively more than that of backward caste and general caste rural households. MGNREGA seems to have a positive impact on the labor force participation of rural females. Rural connectivity and renovation of traditional water bodies were found to be two major employment generation activities followed by other works such as sewage works and tree plantation as approved by the MRD in some districts. Despite huge gender differentials in the wage rate along with high variability, MGNREGA ensured equal wages for male and female workers without any variability. No major short-term impact was witnessed on checking the rate of migration of rural workers to urban areas due to lack of employment opportunities.

From the analysis of agricultural wages in India, it is clear that there is positive trend in average daily wage of both agricultural wages and non-agricultural wages of carpenter, mason, etc during the sample period. The average annual growth rate of agricultural and non-agricultural wages were 12.97 and 11.42 respectively over the sample period. Thus, wages in rural areas is increasing on average at 12 per cent per annum. The results of hypothesis test of equal wages indicate that the null of no difference in two wages cannot be rejected at 5 per cent significance level implying that both types of wages are essentially equal in rural areas.

In agricultural related works such as ploughing, sowing, etc, comparison of the wages of men with women from 2006-07 to 2009-10 showed that average agricultural wage of men and women were Rs.83.52 per day and Rs. 61.34 per day over the sample period. The gap between agricultural wages of men and women seem to be high and gender discrimination in this respect is clearly visible.

Comparison of growth rate in agricultural wages of men and women, the study found that wages of men was growing at a rate of roughly 13% per annum. However, average annual growth rate in women wages was around 15.11 per cent. Therefore growth rate in agricultural wages of men and women were more or less the same. There was not much difference in this case. In fact, growth rate in wages of women was higher than growth rate in wages of men over the sample period. A growth rate of 12 to 15 percent in agricultural wages of men and women might be result of MGNREGA wages.

The study also conducted hypothesis test on these two sets of wages. The null hypothesis was that there was no difference in agricultural wages of men and agricultural wages of women. Results showed that the null of equal agricultural wages of men and wages of women was rejected at 5 per cent significance level. When the MGNREGA wages was compared with minimum agricultural wages of 2011-12 for various states in India, the study found there was a gap of Rs. 10 between MGNREGA wages and minimum agricultural wages. The variation in MGNREGA wages and minimum agricultural wages as indicated by standard deviation of wages showed that there was less variation in MGNREGA wages across the States in India.

5.3 Policy Implications

MGNREGA is one of the most important rural employment guarantee scheme which provides employment to rural people in India. Since its inception in 2006, around Rs 1,10,000 crore has gone directly as wage payment to rural households and 1200 crore person-days of employment has been generated. On an average, 5 crore households have been provided employment every year since 2008. Eighty per cent of households are being paid directly through bank/post office accounts, and 10 crore new bank/post office accounts have been opened. The average wage per person-day has gone up by 81 per cent since the Scheme's inception, with state-level variations. The notified wage today varies from a minimum of Rs 122 in Bihar, Jharkhand to Rs 191 in Haryana. Scheduled Castes (SCs) and Scheduled Tribes (STs) have accounted for 51 per cent of the total person-days generated and women for 47 per cent, well above the mandatory 33 per cent as required by the Act. 146 lakh works have been taken up since the beginning of the programme, of which about 60 per cent have been completed. Though the achievements of MGNREGA have been impressive, there have been issues with regard to its implementation that need to be recognised and addressed. In our study, we found that extent of employment generated through MGNREGA in six districts of Punjab (Hoshiarpur, Amritsar, Jalandhar, Taran Taran, Patiala and Bhatinda) had significantly declined by 40 to 50 per cent during 2010-11 and 2011-12. Since the MGNREGA provides 70 to 90 employments to SCs and women in Punjab, this programme has to be implemented with full sincerity as it will result in social and women empowerment. Increased employment generation under the programme will also bring significant enhancement in household incomes and consumption and will reduce the income and consumption variability as well as inequality. Increased participation of females in rural labour force will also boost the household incomes, bring down gender wage differentials and will improve consumption and food security of the households. Hence, special provisions should be made to further increase the share of females in total employment. Secondly, government can take initiative to reduce the variation in MGNREGA wages prevailing across various States of India. Also, initiative can be taken to reduce the gap between wages of men and women in India.

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