Chapter - I

INTRODUCTION

1.1 Preamble:

Globally, 70 per cent of the 1.5 billion people living on one dollar a day of less are women (Nikki Van der, 2004), there are many factors which contribute to women being disproportionately poorer, and many ways in which women experience poverty differently from men. Though women are responsible for 60 to 80 per cent of food production in developing countries (Anon, 2005a) inheritance and property laws often exclude women from land ownership. In post-tsunami Aceh, Indonesia and India, women’s lack of property rights contributed to reconstruction inequities, as women in these countries do not have ownership rights to land registered in their husband or father’s name and were not recognized as heads of households. Within families and communities, women have little decision making power, which further limits their access to resources.

Rajani Murthy from ACTIONAID Asia points out, “Women from ethnic minorities, Indigenous women, refugee women, single women, disabled women, girl children and elderly women are more found in poverty than others as they are excluded more from societal institutions than others: be it from community institutions, households, markets, state or global bodies (Anon, 2005b)

Globally, women work more hours than men. Much of this work is unpaid and within the home, though many women must work to balance their unpaid work with other kinds of income generating activities, whether those include formal employment, domestic work, or making and selling goods in the market.
Self-decision regarding education, participation, mobility, economic independency, public speaking, awareness and exercise of rights, political participation, and many more factors ensure women empowerments. In short, women empowerment is the breaking of personal limitation. UNDP focuses on gender equality and women’s empowerment not only as human rights; but also because they are a pathway to achieving the Millennium Development Goals and sustainable development. A critical aspect of promoting gender equality is the empowerment of women with a focus on identifying and redressing power imbalances and giving women more autonomy to manage their own lives. Women’s empowerment is vital to sustainable development and the realization of human rights for all. (UNDAW, 2001)

Gender Equality and empowerment of women is recognized globally as a key element to achieve progress in all areas. In order to promote development of women, the UN adopted “convention on the elimination of all forms of discrimination against women” on 18th December 1979, which came into force on 3rd September 1981.

In spite of many conventions and time-bound measurable goals, women in both socio-economic and political levels have been inferior to men in the context of Indian Society. The principle of gender equality is enshrined in the Indian Constitution in its preamble, fundamental rights, fundamental duties, and directive principles. The Constitution not only grants equality to women but also empowers the state to adopt measures, a position; indiscrimination of women. Within the framework of democratic polity, our laws, development policies, plans, and programmes are aimed at women’s advancement in different spheres. Women are yet to be accorded equal status by the society through Panchayati Raj.
In order to empower rural women, the Ministry of Rural Development, Government of India has formulated a wage employment Act Known as Mahatma Gandhi National Rural Employment Guaranteed Act, which is a rights based wage employment programme. The Act enables the gender equity in entire process of implementation especially decision making and equal wages.

The National Rural Employment Guarantee Act, which was later christened as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), was the landmark legislation in the context of social security legislation passed by parliament in the year 2005. The Act was culmination of consistent and successful struggle by social activists and exclusive emphasis on poverty alleviation by the government as well. The academic circles considered the Act as a successful struggle for employment guarantee legislation and perceive this legislation as a partial victory towards a full-fledged right to employment in any developing country context. The essential feature of this legislation which segregates itself it from any other public service provisioning scheme is its enactment through the parliament of India. Clubbed with the Right to Information Act, this legislation has been bringing about a silent revolution in rural areas of the country.

The Act provides 100 days of employment for every household in rural areas in manual work, if demanded. The unique features of the Act were various transparency and accountability measures and provisions for social audits.

1.2 Poverty reduction: Past Experiences in India:

Experience worldwide indicates that poverty reduction and sustainable development require sound macroeconomic policies, open trade relations, and increases in human and physical capital. But sustained development also requires a comprehensive frame work that
includes (1) good governance; (2) sound legal, incentive, and regulatory frameworks that protect property rights, enforce contracts, and stimulate competitive markets; (3) a sound financial sector, adequately regulated and supervised with a basis in internationally accepted accounting and auditing standards; (4) health, education, and social services that reach the poor, women, and girls effectively; (5) quality infrastructure and public services to promote rural development and livable cities; and (6) policies to promote environmental and human sustainability (Wolfensohn 1998).

Poverty in India remains predominantly rural: three of every four poor persons live in rural areas. A wide disparity in poverty across Indian states and their uneven progress in poverty reduction is a key feature of the evolution of poverty in India. In most instances, better-off states remained relatively affluent and reduced poverty, while poorer states remained poor and made less progress in poverty reduction but there are also cases where poorer states made major progress in poverty reduction and growth.

The Government implemented workfare programmes that offered wage employment on public works at minimum wages. The wage employment programmes started as pilot projects in the form of Rural Manpower programme (RMP) [1960-61], Crash Scheme for Rural Employment (CRSE) [1971-72], Pilot Intensive Rural Employment Programme (PIREP) [1972], Small Farmers Development Agency (SFDA), Marginal Farmers & Agricultural Labour Scheme (MFAL) etc. These experiments were translated into a full-fledged wage-employment programme in 1977 in the form of Food for Work Programme (FWP). In the 1980's this programme was further streamlined into the National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP). Jawahar Rozgar Yojana (JRY) [1993-94], Employment Assurance Scheme (EAS). The Jawahar Rozgar Yojana (JRY)
was merged with Jawahar Gram Samriddhi Yojana (JGSY) during 1999-2000 and recoined as Rural Infrastructure Programme (RIP). The RIP programme was further merged with Sampoorna Grameen Rozgar Yojana (SGRY) from 2001-02, and with National Food for Work programme (NFFWP) [2005]. These wage employment programmes implemented by State Governments with Central assistance were self-targeting, and the objective was to provide and enhance livelihood security, especially for those dependent on casual manual labour. At the State level, the Government of Maharashtra formulated the Maharashtra Employment Guarantee Scheme and Maharashtra Employment Guarantee Act, 1977 to provide wage employment to those who demand for employment.

Thus, series of Schemes, one after another, with an aim to provide wage employment to the manual workers in rural areas had come into operation both at national level and in States, ever since India adopted a planned process of development. The State of Maharashtra experimented for some the first time, the idea of replacing a Government orchestrated rural employment scheme by a full-fledged law providing for the workers entitlement to manual jobs as a matter of right. The country on the whole experienced the implementation of a series of schemes, each given a distinct title along with a specific set of physical targets and financial allocations. The latest instances of such schemes operating at national level prior to the enactment of NREGA are SGRY (Sampoorna Grameen Rozgar Yojana) and NFFWP (National Food For Work Programme).

The rich experiences of drought-relief measures undertaken in Rajasthan and Maharashtra provided the base for considerations behind MGNREGA.

1.3 The Need for MGNREGS:

The experiences of previous/former wage employment programmes could not able to yield required results and, as a result, the rural
employment scenario (unskilled wage employment) was suffering due to lack of opportunities and built pressure on urban areas through migration, in search of employment. The severe droughts on one hand and depletion of natural resources on the other have eroded the base for wage employment opportunities in rural areas. This also severely affected the small and marginal farmers who eke out their livelihood with seasonal agriculture activities (during rainy season) and as agriculture/casual laborers in lean seasons. Further, the agriculture sector experienced series of revolutions through modernization and mechanization processes resulting in reducing the labour component as well, especially from the large-farm holdings. As a sequel, the wage earning capacity of rural land-less poor in particular was fast eroding. This situation was much severe in backward districts.

On the other hand, the Economic Reforms – though resulted in faster economic growth – resulted in positioning more gains for the richer rather than the poor.

This resulted in altering the adhoc approach to address the rural unemployment issue and also the need for social security in more authentic manner.

These approaches gave rise to two important ideas before launch of NREG Act. The first one was ‘assured employment as a social security measure’ and the other one was ‘to keep employment schemes under rights framework. The attention on social security emanated from the fact that Indian economy has been growing rapidly with increasing inequalities. The thinking behind in this regard was MGNREGA may take care of the re-distribution quite well.

In view of the reasons cited above, MGNREGA emerged not only as mere means of providing wage employment but also for addressing issues like creating productive assets, empowering women, reviving local
economy, strengthening grass-root institutions, reducing distress migration and sustain natural resources to attain agriculture growth.

1.4 About Mahatma Gandhi National Rural Employment Guarantee Act (2005):

The Government of India passed the National Rural Employment Guarantee Act during September 2005. Initially, the act was executed or launched in 200 backward Districts (2006-07), another 130 districts were included in 2007-08 and extended to whole country (625 districts) from April, 2008.

The National Rural Employment Guarantee Act (NREGA) aims at enhancing the livelihood security of the people in rural areas by guaranteeing hundred days of wage employment in a financial year, to a rural household whose members volunteer to do unskilled manual work. The objective of the Act is to create durable assets and strengthen the livelihood resource base of the rural poor. The permissible works suggested in the Act addresses causes of chronic poverty like drought, deforestation, soil erosion, so that the process of employment generation is on a sustainable basis.

The act directs state governments to implement the national wage employment "schemes". Under the MGNREGA the Central Government meets the entire cost towards the payment of wages, 3/4 of material cost and percentage of administrative cost. State Governments meet the cost of unemployment allowance, 1/4 of material cost. Since the State Governments pay the unemployment allowance, they are heavily incentivized to offer employment to workers.

However, it is up to the State Government to decide the amount of unemployment allowance, subject to the stipulation that it not be less
than 1/4 the minimum wage for the first 30 days, and not less than 1/2 the minimum wage.

a. **The major Goals of MGNREGS are:**

1. Strong social safety net for the vulnerable groups by providing a fall back employment source, when other employment alternatives are scarce or inadequate.
2. Growth engine for sustainable development of an agricultural economy through the process of providing employment on works that address causes of chronic poverty such as drought, deforestation and soil erosion; the Act seeks to strengthen the natural resource base of rural house hold and create durable assets in rural areas.
3. Empowerment of rural poor through the processes of a rights based law.
4. New ways of doing business as model of governance reform anchored on the principles of transparency and grass root democracy.

Thus, NREGA fosters conditions for inclusive growth ranging from basic wage security and recharging rural economy, addressing gender equity to a transformative empowerment process of democracy.

b. **Salient Features of the Act:**

Salient features of the Act as on 28.08.2012 are summarized below:

a) Adult aged >18 years members of a rural household may apply for employment if they are willing to do unskilled manual work.

b) Such a household will have to register their family members with (aged >18 years) the local Gram Panchayat, in writing, or orally.

c) The Gram Panchayat after due verification will issue a Job Card to the household as a whole. The Job Card will bear a group photograph of all adult members of the household willing to work
under NREGA. The Job Card with photograph is provided at free of cost to the wage seeker.

d) A Job Card holding household may submit a written application for employment to the Gram Panchayat, stating the time and duration for which work is sought. The minimum days of employment have to be given for a number of days in different periods during the year for which employment is required.

e) The Gram Panchayat will issue a dated receipt for obtaining the application for employment, against which the guarantee of providing employment within 15 days operates.

f) Employment will be given within 15 days of application for work by an employment seeker.

g) If employment is not provided within 15 days, daily unemployment allowance, in cash has to be paid. Liability of payment of unemployment allowance is of the States.

h) At least one-third of persons to whom work is allotted work have to be women.

i) Wages are to be paid according to minimum wages as prescribed under the Minimum Wages Act 1948 for agricultural labourers in the State, unless the Centre notifies a wage rate applying the percentage increase in the consumer price Index for Agriculture labour (CPIAL) during the relevant period.

j) Disbursement of wages has to be done on weekly basis and not beyond a fortnight.

k) Panchayat Raj Institutions [PRIs] have a principal role in planning and implementation.

l) Each district has to prepare a shelf of projects. The selected works to provide employment are to be selected from the list of
permissible works. Until 2011-12, there were eight categories of permissible works as follows:

- water conservation and water harvesting including contour trenches, contour bunds, boulder checks, gabion structures, underground dykes, earthen dams, stop dams and springshed development;
- drought proofing including afforestation and tree plantation;
- irrigation canals including micro and minor irrigation works
- provision of irrigation facility, dug out farm pond, horticulture, plantation, farm bunding and land development on land owned by households specified in paragraph 1C;
- renovation of traditional water bodies including de-silting of tanks;
- land development;
- flood control and protection works including drainage in water logged areas including deepening and repairing of flood channels, chaur renovation, construction of storm water drains for coastal protection;
- rural connectivity to provide all weather access, including culverts and roads within a village, wherever necessary;

From 2012-13 additional eight categories of works are included to increase the scope for identifying an array of works.

- construction of Bharat Nirman Rajiv Gandhi Sewa Kendra as Knowledge Resource Centre at the Block level and as Gram Panchayat Bhawan at the Gram Panchayat level;
- agriculture related works, such as, NADEP composting, vermi-composting, liquid bio-manures;
• livestock related works, such as, poultry shelter, goat shelter, construction of pucca floor, urine tank and fodder trough for cattle, azolla as cattle-feed supplement;
• fisheries related works, such as, fisheries in seasonal water bodies on public land;
• works in coastal areas, such as, fish drying yards, belt vegetation;
• rural drinking water related works, such as, soak pits, recharge pits;
• rural sanitation related works, such as, individual household latrines, school toilet units, anganwadi toilets, solid and liquid waste management;
• Any other work which may be notified by the Central Government in consultation with the State Government.

The shelf of projects has to be prepared on the basis of priority assigned by Gram Sabha. At least 50% of works have to be allotted to Gram Panchayats for execution. A 60:40 wage and material ratio has to be maintained. Contractors and use of labour displacing machinery is prohibited.

m) Work should ordinarily be provided within 5 km radius of the village or else extra wages of 10% are payable.

n) Work site facilities such as crèche, drinking water, shade have to be provided

o) Social Audit has to be done by the Gram Sabha.

p) Grievance redressed mechanisms have to be put in place for ensuring a responsive implementation process.

q) All accounts and records relating to the Scheme are to be made available to any person desirous of obtaining a copy of such records, on demand and after paying a specified fee.

c. **Funding Pattern:**
The Central Government bears the costs on the following items:

- The entire cost of wages of unskilled manual workers.
- 75% of the cost of material, wages of skilled and semi-skilled workers.
- Administrative expenses as may be determined by the Central Government, which will include inter alia, the salary and the allowances of the Programme Officer and his supporting staff, work site facilities.
- Expenses of the National Employment Guarantee Council.

The State Government bears the costs on the following items:

- 25% of the cost of material, wages of skilled and semi-skilled workers.
- Unemployment allowance payable in case the State Government cannot provide wage employment on time.

**d. Statutory Institutional Mechanism:**

The MGNREG Act has made provision to monitor the implementation of scheme, at the various levels. The statutory institutional mechanisms enforced in the Act are discussed here under:

**(i) Central Council :**

The Central Employment Guarantee Council (CEGC) was constituted under Section 10(1) of the Act. CEGC Rules 2006 were Notified on 25.05.2006 and set up vide notification dated 22.09.06. The Council advises the government on all the matters concerning the implementation of this Act. The Council also reviews the monitoring and grievance redressed mechanism from time to time and recommends improvements.
(ii) **National Fund:**

Under Section 20(1) of the NREGA, a National Employment Guarantee Fund (NEGF) has to be constituted. The Central government established a non-lapsable fund called National Employment Guarantee Fund to be managed according to the Rules. The rules for National Fund were notified on 2.1.2007.

(iii) **State Councils:**

The State Employment Guarantee Council (SEGC) is to be constituted by each State Government under Rule 12(1) of the NREG Act.

At the district, sub-division and block level, exclusive personnel were placed in to oversee the implementation of the schemes.

1.5 **Interventions of the programme (Physical and Financial):**

As per the latest information available, MGNREGA resulted in providing employment to 4.98 Crore Person Days of employment in the year 2011-12.

The person-days of employment provided, progress on works taken up and expenditure incurred since inception is provided below:

### Table -1.1: Demand for Employment and Its Status in India

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Financial Year</th>
<th>Cumulative No. of HH issued job</th>
<th>No. of households who have</th>
<th>No. of households provided</th>
</tr>
</thead>
</table>
Table 1.2: MGNREGA: Person days Employment Generated in India

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Financial Year</th>
<th>Person days (in Lakhs)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>SCs</td>
<td>STs</td>
<td>Others</td>
<td>Women</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2011-12*</td>
<td>211.42</td>
<td>46.60</td>
<td>38.38</td>
<td>126.43</td>
<td>101.86</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2010-11</td>
<td>257.15</td>
<td>78.75</td>
<td>53.61</td>
<td>124.78</td>
<td>122.74</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2009-10</td>
<td>283.59</td>
<td>86.44</td>
<td>58.74</td>
<td>138.40</td>
<td>136.40</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2008-09</td>
<td>216.32</td>
<td>63.36</td>
<td>55.02</td>
<td>97.95</td>
<td>103.57</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2007-08</td>
<td>143.59</td>
<td>39.36</td>
<td>42.07</td>
<td>62.16</td>
<td>61.15</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2006-07</td>
<td>90.5</td>
<td>22.95</td>
<td>32.98</td>
<td>34.56</td>
<td>36.40</td>
<td></td>
</tr>
</tbody>
</table>

Source: www.nrega.nic.in as on 28th, May, 2012.

Table 1.3: MGNREGA: Status of Funds Released and Expenditure at the National level (In Crores)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Financial year</th>
<th>Funds Available</th>
<th>Central Release</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2011-12*</td>
<td>41563.51</td>
<td>9951.50</td>
<td>37548.79</td>
</tr>
<tr>
<td>2</td>
<td>2010-11</td>
<td>52648.89</td>
<td>10382.87</td>
<td>39377.27</td>
</tr>
<tr>
<td>3</td>
<td>2009-10</td>
<td>45682.46</td>
<td>24714.19</td>
<td>37909.78</td>
</tr>
<tr>
<td>4</td>
<td>2008-09</td>
<td>37397.06</td>
<td>29939.60</td>
<td>27250.10</td>
</tr>
<tr>
<td>5</td>
<td>2007-08</td>
<td>19305.81</td>
<td>12610.39</td>
<td>15856.89</td>
</tr>
<tr>
<td>6</td>
<td>2006-07</td>
<td>12073.55</td>
<td>8640.85</td>
<td>8823.35</td>
</tr>
</tbody>
</table>

Source: www.nrega.nic.in as on 28th, May, 2012.

Table 1.4: MGNREGA: Status of Physical Works Undertaken in India (in lakhs)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Financial Year</th>
<th>Works (in Lakhs)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Works</td>
<td></td>
</tr>
</tbody>
</table>

Source: www.nrega.nic.in as on 28nd, May, 2012.
Table 1.5: Progress of MGNREGS under various indicators

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2006-07</th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no of job cards issued</td>
<td>379048</td>
<td>44544</td>
<td>37992</td>
<td>26911</td>
<td>1247</td>
<td>489742</td>
</tr>
<tr>
<td>Total no of adult members enrolled in job card</td>
<td>813198</td>
<td>102053</td>
<td>108000</td>
<td>111575</td>
<td>24849</td>
<td>1159675</td>
</tr>
<tr>
<td>No of works administratively sanctioned</td>
<td>11924</td>
<td>20840</td>
<td>32839</td>
<td>57123</td>
<td>62502</td>
<td>81377</td>
</tr>
<tr>
<td>Estimated Value (Rs. in Crores)</td>
<td>196.69</td>
<td>321.47</td>
<td>650.10</td>
<td>1270.52</td>
<td>1392.74</td>
<td>1751.12</td>
</tr>
<tr>
<td>No of works in progress</td>
<td>5058</td>
<td>8408</td>
<td>13708</td>
<td>20319</td>
<td>27556</td>
<td>-----</td>
</tr>
<tr>
<td>Estimated value (Rs. in Crores)</td>
<td>125.93</td>
<td>204.62</td>
<td>403.72</td>
<td>618.02</td>
<td>860.12</td>
<td>-----</td>
</tr>
<tr>
<td>No of works completed</td>
<td>1997</td>
<td>4272</td>
<td>4335</td>
<td>9709</td>
<td>5704</td>
<td>24579</td>
</tr>
<tr>
<td>Estimated value (Rs. in Crores)</td>
<td>18.56</td>
<td>40.60</td>
<td>93.49</td>
<td>240.38</td>
<td>164.22</td>
<td>522.59</td>
</tr>
<tr>
<td>No of house holds provided wage employment</td>
<td>149911</td>
<td>226655</td>
<td>271359</td>
<td>307979</td>
<td>308360</td>
<td>383596</td>
</tr>
<tr>
<td>No of wage seekers provided employment</td>
<td>192095</td>
<td>334186</td>
<td>448246</td>
<td>562321</td>
<td>573068</td>
<td>736219</td>
</tr>
<tr>
<td>No of man days generated</td>
<td>3871779</td>
<td>10075985</td>
<td>13587522</td>
<td>28168500</td>
<td>19519981</td>
<td>73829787</td>
</tr>
<tr>
<td>Average days of employment provided per family</td>
<td>25.83</td>
<td>44.46</td>
<td>50.07</td>
<td>91.46</td>
<td>63.30</td>
<td>-----</td>
</tr>
<tr>
<td>Average wage rate per day per person (Rs.)</td>
<td>66.28</td>
<td>77.79</td>
<td>76.43</td>
<td>83.98</td>
<td>89.94</td>
<td>82.39</td>
</tr>
<tr>
<td>No of families completed 100 days</td>
<td>2007</td>
<td>21003</td>
<td>34131</td>
<td>115076</td>
<td>56872</td>
<td>229089</td>
</tr>
<tr>
<td>Total Expenditure (Rs. in Crores)</td>
<td>28.29</td>
<td>88.45</td>
<td>129.71</td>
<td>253.50</td>
<td>216.49</td>
<td>716.44</td>
</tr>
</tbody>
</table>

Source: www.nrega.nic.in

1.6 Impact of the programme:
Irrespective of the criticism on MGNREGA, a massive cash-flow programme through wages of this nature has indeed resulting in positive results such as:

- Better wages for laborers in rural areas in view of payment of prescribed wages. This in turn triggered enhanced wage negotiation capacity of workers in the private sector.
- Parity of wages between men and women is another important outcome. This in turn also enhanced the wage
- Negotiating capacity of women to strive for parity of wages with men.
- Availability of works within the vicinity of their habitation, especially in the lean agriculture season, has indeed made a positive impact on reducing the migration. Several research studies have confirmed the fact that MGNREGA is successful in largely reducing the distress migration.
- The nature of works taken up under the Act – which mostly focus on strengthening natural resources like water and land – are indeed strengthening right physical atmosphere for agriculture operations, either tiny or large landholdings. Several research studies estimated better crop-output in this regard. In few district waste lands are converted into productive lands.
- Steady rise in household savings
- Increased investment on human resources among laborers’ households etc.

Besides these, scores of other positive results were also emanating from the field-studies which need to be corroborated through well-designed research efforts.
On the other hand, there was several criticism about MGNREGA as well. For instance, there was an argument that MGNREGA wages are causing food inflation.

For instance, MGNREGA creates purchasing power among wage seekers. When those wage seekers spend the additional money, they create demand for commodities. The production of these commodities, in turn, creates demand for capital, raw materials and workers.

After overcoming the initial setbacks like lack of administrative structure, flaws in planning and execution, MGNREGA has been steadily settling down to address the grass-root problems. However, it is a matter of time to overcome the criticisms and strengthen the desired outcomes.

1.7 The Road Ahead:

MGNREGA could be considered to play vital role in strengthening rural economy. With the steady progress being made by the schemes under MGNREGA, improved administrative and implementation structure in place and other associated factors. However, this can be possible unless several issues are addressed in the future.

For instance, more than half of the MGNREGA workers were holding small patch of land either as small or marginal farmers. Most of their land is being left as fallow or leased out due to lack of investment power with them. Over a period of time, it is expected that the investment power of these workers is likely to be optimized and they may in turn invest the same on their lands. The investment will in turn enhance the agriculture productivity in small and marginal land-holdings. However, the investments needs to be focused through a convergence efforts from the different government line departments, especially agriculture and extension workers etc.

As the works taken up under MGNREGA is resulting in massive earthen works for soil and water conservation, the same cannot be
sustained unless these structures are dovetailed to other development works by converging the efforts of different departments.

Though MGNREGA has the uniqueness in terms of its transparency since the works are subjected to social audit by the public forums yet this needs to be strengthened for better tomorrow. It is the responsibility of each and every adult individual in a rural area to focus on his rights and responsibilities in this regard. Otherwise, the social-audit can be usurped by greedy classes. Hence, the very institution of social audit has to be strengthened in a right earnest.

Finally, MGNREGA can be considered as a great opportunity to the rural labour but the opportunity may evaporate if they do not focus on their rights and responsibilities. Towards this, government officials, social activists, the educated class has to wage an integrated campaign to strengthen the rural economy and in turn Indian economy.

1.8 MGNREGS and Women participation:

NREGA promises from the perspective of women’s empowerment as well. Most boldly, in a rural milieu marked by stark inequalities between men and women – in the opportunities for gainful employment afforded as well as wage rates – NREGA represents action on both these counts. The act stipulates that wages will be equal for men and women. It is also committed to ensuring that at least 33 per cent of the workers shall be women. By generating employment for women at fair wages in the village, NREGA can play a substantial role in economically empowering women and laying the basis for greater independence and self-esteem.

The available statistics in regard to participation of women in MGNREGS was quite substantial. Though, the women were expected to cover nearly 1/3rd of the work-force under MGNREGS yet the targeted percentage was not well within the reach in few states like UP, Bihar, J&K and North East states like Assam, Mizoram. However, most of the
states have reported substantial progress over a period of time and currently the coverage of women under the MGNREGS workforce was substantial as per the figures presented in Table-1.6.

Table-1.6: Women's participation in NREGA

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>States</th>
<th>2011-12 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANDHRA PRADESH</td>
<td>57.79</td>
</tr>
<tr>
<td>2</td>
<td>ARUNACHAL PRADESH</td>
<td>40.38</td>
</tr>
<tr>
<td>3</td>
<td>ASSAM</td>
<td>24.92</td>
</tr>
<tr>
<td>4</td>
<td>BIHAR</td>
<td>28.64</td>
</tr>
<tr>
<td>5</td>
<td>GUJARAT</td>
<td>45.23</td>
</tr>
<tr>
<td>6</td>
<td>HARYANA</td>
<td>36.45</td>
</tr>
<tr>
<td>7</td>
<td>HIMACHAL PRADESH</td>
<td>59.51</td>
</tr>
<tr>
<td>8</td>
<td>JAMMU AND KASHMIR</td>
<td>17.73</td>
</tr>
<tr>
<td>9</td>
<td>KARNATAKA</td>
<td>45.93</td>
</tr>
<tr>
<td>10</td>
<td>KERALA</td>
<td>92.85</td>
</tr>
<tr>
<td>11</td>
<td>MADHYA PRADESH</td>
<td>42.64</td>
</tr>
<tr>
<td>12</td>
<td>MAHARASHTRA</td>
<td>45.98</td>
</tr>
<tr>
<td>13</td>
<td>PUNJAB</td>
<td>43.23</td>
</tr>
<tr>
<td>14</td>
<td>RAJASTHAN</td>
<td>69.18</td>
</tr>
<tr>
<td>15</td>
<td>SIKKIM</td>
<td>44.72</td>
</tr>
<tr>
<td>16</td>
<td>TAMIL NADU</td>
<td>74.02</td>
</tr>
<tr>
<td>17</td>
<td>TRIPURA</td>
<td>38.65</td>
</tr>
<tr>
<td>18</td>
<td>UTTAR PRADESH</td>
<td>17.14</td>
</tr>
<tr>
<td>19</td>
<td>WEST BENGAL</td>
<td>32.44</td>
</tr>
<tr>
<td>20</td>
<td>CHHATTISGARH</td>
<td>45.25</td>
</tr>
<tr>
<td>21</td>
<td>JHARKHAND</td>
<td>31.28</td>
</tr>
<tr>
<td>22</td>
<td>UTTARAKHAND</td>
<td>44.58</td>
</tr>
<tr>
<td>23</td>
<td>MANIPUR</td>
<td>33.46</td>
</tr>
<tr>
<td>24</td>
<td>MEGHALAYA</td>
<td>41.59</td>
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<td>25</td>
<td>MIZORAM</td>
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<td>26</td>
<td>NAGALAND</td>
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<td>27</td>
<td>ODISHA</td>
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<tr>
<td>28</td>
<td>PUDUCHERRY</td>
<td>80.44</td>
</tr>
<tr>
<td>29</td>
<td>ANDAMAN AND NICOBAR</td>
<td>46.30</td>
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<td>30</td>
<td>LAKSHADweep</td>
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</tr>
<tr>
<td>31</td>
<td>CHANDIGARH</td>
<td>0</td>
</tr>
<tr>
<td>32</td>
<td>DADRA &amp; NAGAR HAVELI</td>
<td>0</td>
</tr>
<tr>
<td>33</td>
<td>DAMAN &amp; DIU</td>
<td>0</td>
</tr>
<tr>
<td>34</td>
<td>GOA</td>
<td>75.56</td>
</tr>
<tr>
<td>All India</td>
<td>48.18</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Min. of Rural Development as on 22nd, May, 2012.*

In a country where labour is the only economic asset for millions of people, gainful employment is a prerequisite for the fulfillment of other basic rights - the right to life, the right to food, and the right to education. One of the important features of MGNREGS is that it protects
“employment” as a fundamental right of the individuals with all its strict rules. So that this programme is called the “employer of last resort” and this programme is entirely different from those other developmental and welfare programmes. Through this, it was protected the women justice and rights. There is much that the MGNREGA promises from the perspective of women’s empowerment as well. Most boldly, in a rural milieu marked by stark inequalities between men and women - in the opportunities for gainful employment afforded as well as wage rates - MGNREGA represents action on both these counts. The act stipulates that wages will be equal for men and women. It is also committed to ensuring that at least 33 percent of the workers shall be women. By generating employment for women at fair wages in the village, MGNREGS can play a substantial role in economically empowering women and laying the basis for greater independence and self-esteem.

Though the programme is not specifically directed at women yet the provisions made drew wider participation of women and thus leading to their empowerment. For instance, specific preference for women labor participation, parity in wage payment is the two principal issues of the scheme wherein there was every likelihood of empowering woman. Similarly, payment of wages through banks and post offices may also lead to savings indirectly and this may in turn empower women while managing their domestic economic requirements.

In this regard, Jawed Akthar et al observes the scope of empowerment through MGNREGS through the following manner:

“Women’s empowerment was not among the original intentions of the MGNREGA, and is not among its main objectives. However, provisions like priority for women in the ratio of one-third of total workers (Schedule II (6)); equal wages for men and women (Schedule II (34)); and crèches for the children of women workers (Schedule II (28)) were made in the Act, with the view of ensuring that rural women benefit from the scheme in a
certain manner. Provisions like work within a radius of five kilometers from the house, absence of supervisor and contractor, and flexibility in terms of choosing period and months of employment were not made exclusively for women, but have, nevertheless, been conducive for rural women. Nevertheless, women have availed of the paid employment opportunity under MGNREGS in large numbers. Interestingly, this occurred largely spontaneously. Women’s participation under MGNREGS, measured in person-days, also exceeded their participation in erstwhile employment generation programmes like the Sampoorna Gramin Rojgar Yojana (SGRY) and the Maharashtra Employment Guarantee Scheme (MEGS)

Thus, there was wide scope for women empowerment while they participate in MGNREGS as workers.

At the same time, it is also quite essential to observe that the process of participation in MGNREGS emanates from the stage of planning as per the guidelines being implemented. For instance, at the initial level, identification and planning of works leading to formulating shelf-of-works has wider scope for participation. However, the question was whether women were able to participate in these processes or not. Many a research observations in this regard were not so encouraging. Factors that have encouraged women workers’ participation include the nature of the job not requiring special knowledge and skill (Krishnaraj et al 2004 in the context of MEGS); outmigration of male family members (Bhatty 2006; Mehrotra 2008; Talukdar 2008); the employment opportunity being available at the doorstep (Bhatty 2006; Khera and Nayak 2009); a tradition of rural women working in others’ fields (Narayanan 2008); the provision of equal, non-discriminatory wages (Sudarshan 2008; Khera and Nayak 2009); and innovative experiments in implementation like the female mate system in Rajasthan (Khera 2008), synergisation of MGNREGS with Kudumbashree in Kerala.
(Vijayakumar and Thomas 2008), and in Bihar, gender differential tasks for uniform (minimum) wages (Pankaj 2008a).

1.9 Statement of the Problem:

The existing institutional structure and gender relations are such that restrict women's power and mobility, vis-a-vis men. The large majority of women lag far behind men on the issue of power in gender relations. Much remains to be done to bridge the wide gap in power that exists between men and women. Advocates of the empowerment approach emphasize the importance of women's say at the personal level of gender relations in family and household and at societal level of social processes and social change.

Given the rural wage employment scenario, the equal wages, ensured employment, work-site facilities, nature of works taken up all have either direct or indirect bearing on status of rural wage seekers.

Further, as the responsibility of implementing various works under the Mahatma Gandhi National Rural Employment Guarantee Act is with the State Govt. the process of its promotion and facilitating factors also assume importance while galvanizing the attention of women wage seekers so as to effectively access the benefits under the Act. Since each district administration was adopting different methods of popularizing the Act and the provisions under the act as well as implementation of the programmes with specific interventions, there is also need to elucidate on the process of promotion and implementing the provisions under the Act and ensuring attention from women wage seekers in rural areas. Otherwise, the Act under reference may have potential provisions for women but faulty promotion and implementation may not yield required
results for the women wage seekers. Hence, the very study of the promotion and process of implementation was also important.

Further, as the MGNREGA promises several women-centric provisions it was bound to yield positive results on women empowerment.

Among the various influences, which reduce the bias against females, Dreze and Sen (1996: 159-60) consider that two factors are most important: female education and women's ability to earn an independent income through paid employment. This opportunity tends to enhance the social standing of a women in the household and society. Her contribution to the prosperity of the family is, then, more visible and she also has more voice, because of being less dependent on others.

Ghosh (1993) identifies two views regarding the impact of women's employment on empowerment. One view is that of Standing (1989) that it does little about women's subordination and may even enhance it. The other view, put forward by Sen (1991), claims that wage work does increase the bargaining power of women in the household and the economy and thus enhances their empowerment. The Standing's position, argues Ghosh, is essentially a sweeping and logically untenable generalisation from some limited data, which cannot be applied to many, in totally dissimilar situations. It is very much an outsider's view which does not take into account the initial position of the women concerned and patriarchal norms which treat women basically as a flexible family resource rather than as a person with independent rights and priorities.

In a seminal study of the Maharashtra EGS and women's participation (Jain D./ISST 1979), it is reported that a higher percentage of women than men were seen on the sites, that more women came to
work than were registered, that the majority were between 30–50 years of age, and that they were principally landless or small or marginal farmers lacking any other work. The women reported an improvement in family food/ nutrition as a result of the EGS work. Female employment under the scheme as a percentage of total employment in person days was reported as 38 per cent in 1995–96. It increased to 73 per cent in 1998–9, but declined to 57 per cent in 1999–2000 (Krishnaraj et al 2004). Studies have also shown that in terms of family coping strategies, men are the first to use migration or alternative employment to improve the family’s economic status, while women are responsible for basic survival strategies (Krishnaraj and Pandey 1990; Ranadive 2002). Another study (Dattar 1990) found that EGS supplies core income to many women and that this economic power accorded them higher status within the family.

Concentrating a large number of women in one place can increase interaction, break down social taboos, expand social awareness and instill confidence in women (Dattar 1987).

Micro studies have shown that wealth in the form of total assets was very strongly and inversely related to participation in EGS for women. More women from households with low or no assets participated in the scheme than from land-owning households (Krishnaraj, 2003). While all studies report that more women are seen on work sites than men, women have not been able to influence the actual choice of work.

Women as workers are concentrated in agriculture (85 % of all women workers) informal work and, in particular, home-based work (over 50 % of non-agricultural workers). As agricultural workers, women have a strong connection with the land and are heavily influenced by fluctuations in agricultural output. As informal/ home-based workers, women are often invisible, dependent on informal arrangements and contracts and, as some research suggests, most dependent on local and domestic markets. Their lower mobility into new areas is dependent on
several factors, including household and care responsibilities, traditional social norms, and a lack of information and skills. Understanding gendered roles is a key factor. In a context where the large majority of women are dependent on agriculture and where household access to water and fuel relies heavily on common property, local resources are clearly a major source of wellbeing – or risk.

The MGNREGA, with its guarantee of 100 days of unskilled work for every household, has been envisaged as a gender sensitive scheme. However, a gendered analysis of the programme is necessary to make rural asset generation an inclusive process and address the crises underlying an increasing feminisation of poverty in India. The main way in which social protection seeks to be ‘gender sensitive’ – and this is true also of the NREGA – is to suggest that a certain percentage of beneficiaries must be women. Given that agriculture is increasingly dependent on women cultivators as more men move out of agriculture, the availability of NREGA work is expected to be especially beneficial to women. Today 53 per cent of all male workers but 75 per cent of all female workers, and 85 per cent of all rural female workers, are in agriculture. Women constitute 40 per cent of the agricultural workforce and this percentage is rising.

The NREGA provides some explicit entitlements for women to facilitate their full participation. These include:

- Participation in management and monitoring of the programme. As per the guidelines, a local Vigilance and Monitoring Committee is to be appointed with members from the immediate locality or village where the work is undertaken, to monitor the progress and quality of work. ‘The gram sabha will elect the members of this Committee and ensure that SC/STs and women are represented on it.’
Participation in social audit. The guidelines mention a social audit forum, convened by the gram sabha every six months as part of the continuous auditing process. There is stress on the quorum of these meetings maintaining female participants alongside those from other disadvantaged groups. The timing of the forum must be such that it is convenient for people to attend – that it is convenient in particular for REGS [Rural Employment Guarantee Scheme] workers, women and marginalised communities.’

- ensuring that single women are eligible. Finally, through recognising a single person as a ‘household’, the Act makes it possible for widows and other single women to access this work.

Thus, MGNREGA has direct bearing on the women empowerment by virtue of its specific focus on rural women wage seekers, the initiatives under the Act were bound to infuse positive results in this regard. However, study of such impact is quite important in the present context of social transition.

The existing literature thus elucidates that MGNREGA is an opportunity for women to get empowered in view of the provisions made in the Act. However, the crucial issue was to access empowerment, the process of implementation, awareness generated, actions facilitated etc. matters most. Hence, it is essential to understand the process of implementation of MGNREA is quite important to study the empowerment process among women.

Thus, keeping in view, the importance of MGNREGA in the rural wage sectors, the specific nature of works taken up which have emphasis on strengthening agriculture sector and its direct bearing on women empowerment in rural areas, especially among rural women wage seekers, the present study on “Impact of MGNREGS on Empowerment...
of Women Wage seekers in Andhra Pradesh: A Case Study of Vizianagaram District” was taken up.

1.10 Objectives of the study:

The objectives of the present study are as follows:

- To review the literature on rural women empowerment relate to elimination of rural poverty under different five year plans of India.
- To study the various provisions under MGNREGS to ensure participation from clientele group;
- To examine the socio-economic profile of women wage seekers under MGNREGS.
- To study the perception of women wage seekers on the provisions under the Act.
- To analyse the impact of MGNREGS on empowerment of women wage seekers.
- To conclude and suggest some measures to achieve women wage seekers empowerment under MGNREGS.

1.11 Research Questions:

1. How MGNREGS is implemented in Vizianagram district?
2. Why did Vizianagram district achieved the best performance award in MGNREGS?
3. To what level the women wage seekers are able to take decisions?
4. Are the women empowered through MGNREGS?
5. Does the scheme beneficial to the rural poor in general and women wage seekers in particular?

1.12 Hypotheses:

The following are the null hypothesis:

- The MGNREGS has no impact on women wage seekers.
- There is no association between the MGNREGS women wage seekers and Rural Development Programmes.
There is no impact and association between the MGNREGS women wage seekers and Benefits accrued to self from Rural development programmes.

There is no impact and association between the MGNREGS women wage seekers and their awareness on social audit.

There is no impact and association between the MGNREGS women wage seekers and the factors responsible for their participation into MGNREGS.

There is no impact and association between the MGNREGS women wage seekers and their sharing house-hold responsibilities after accessing MGNREGS.

1.13 Research Setting:

The present study was conducted in Vizianagaram district in Andhra Pradesh. The district was specifically selected on the following criteria:

- The district was part of 1st Phase district and programmes under the Act were likely to yield substantial benefits to rural women wage seekers.
- The district has ranked top three district position in terms of quantum of employment days provided and employment days provided to women wage seekers.
- The district was conferred with MGNREGS National Award for the year 2010-11 for its excellence in executing the MGNREGS programme effectively through formation of Shrama Shakthi Sangams (SSS).
- Vizianagaram districts ranks first in the state in effective implementation of SGSY programmes and formation of women federation at district level.
- The district has larger participation of rural women wage seekers and thus providing enough opportunities for rural women wage seekers.
Keeping the above, Vizianagaram district was selected for the purpose of research study.

1.14 Selection of the Mandals:

The selection of Mandals was restricted to three in number which have strong performance in regard to quantity of women participation in MGNREGS, number of works completed, and timely wage payments. The study mandals are viz., of Garividi, Gantiyada and Cheepurupalle. From each mandal three villages were selected adopting the similar criteria and they are Baguvalasa, Koduru and Kumaram from Garividi Mandal, Ramavaram, Budathapalli and Lakkidam from Gantiyada and Cheepurupalle, Alajangi and Ravivalasa from Cheepurupalle mandal, respectively.

1.15 Methodology:

The primary and secondary data was collected through pre-tested structured schedule as well as personal interaction with the women wage seekers during Focused Group Discussions (FGD). The questionnaire consists of socio-economic data on women wage seekers who participated in MGNREGS, benefits accrued, perception on various issues of empowerment etc.

The secondary data was collected from village records on MGNREGS, records at Mandal headquarters and District headquarters. At the district level Project Director, DRDA, Statistical officers and district computer centers were approached in getting the secondary information of the district. At the Mandal level Programme officer, MPDOs, APOs, Mandal Computer Centre and Technical resource Persons were consulted to get the information of women wage seekers at Mandal level. Field Assistants, Gram Panchayat Presidents, Mates and through SSS (Shrama Shakthi Sanga’s) information was gathered at village level.

1.16 Sample Size:
The sample is multi-staged stratified random sample. A total of 450 wage seekers were selected for the purpose of the study. From each Mandal, 150 women wage seekers and from each village 50 women wage seekers were selected on random basis from those who have accessed at least 75% person-days of employment.

1.17 **Statistical Techniques:**

The data collected were subjected to various statistical analysis, which includes simple frequency analysis and application of percentage method, Averages, Chi-square test, Scaling statistical techniques and Regression analysis. Wherever applicable, cross-tabulation was also adopted to understand the perceptions of beneficiaries’ vis-à-vis influence of other variables.

i. **Pearson Chi-square test:**

The qualitative variables (ordinal and nominal variables) chi-square can be used to find out the strength of association chi-square ($\chi^2$) is also used to test the representativeness of the sample.

$$\chi^2 = \sum \frac{(\text{observed} - \text{expected})^2}{\text{expected}}$$

Calculate the chi square statistic $\chi^2$ by completing the following steps:

1. For each *observed* number in the table subtract the corresponding *expected* number ($O - E$).
2. Square the difference [ $(O - E)^2$ ].
3. Divide the squares obtained for each cell in the table by the *expected* number for that cell [ $(O - E)^2 / E$ ].
4. Sum all the values for $(O - E)^2 / E$. This is the chi square statistic.

ii. **The method of estimation of the regression equation in Ordinary Least Squares (OLS):**
OLS is a technique for estimating the unknown parameters in a linear regression model. This method minimizes the sum of squared distances between the observed responses in a set of data, and the fitted responses from the regression model. The linear least squares computational technique provides simple expressions for the estimated parameters in an OLS analysis, and hence for associated statistical values such as the standard errors of the parameters. OLS can mathematically be shown to be an optimal estimator in certain situations, and is closely related to the generalized least squares (GLS) estimation approach that is optimal in a broader set of situations. OLS can be derived as a maximum likelihood estimator under the assumption that the data are normally distributed, however the method has good statistical properties for a much broader class of distributions.

Regression analysis can be applied when data of the form $\{y_i, x_i\}_{i=1}^n$ on $n$ statistical units are observed. The data for each unit includes a scalar response $y$ and a vector of predictors $x$. In a linear regression model, the conditional mean of the response given the predictors is modeled as a linear function of the predictors

$$E(y|x) = \beta' x,$$
Where, $\beta'x$ is the dot product between the vectors $\beta$ and $x$. A concrete statistical model that gives this form of conditional expectation involves adding errors to the conditional mean

$$y_i = x_i^T\beta + \varepsilon_i,$$

Where, $\varepsilon_i$ is an unobserved scalar random variable with expected value zero given $x$, representing the errors in the data, and $\beta$ is a $p \times 1$ vector of unknown parameters. Generally an "intercept" or "constant term" is included in the set of regressors, for example by setting $x_{i1} = 1$ for all $n$ units.

It is convenient to write this model in matrix notation as

$$y = X\beta + \varepsilon,$$

Where, $y$ and $\varepsilon$ are $n \times 1$ vectors, and $X$ is an $n \times p$ matrix called the design matrix.

Two interpretations of this model are possible. In one interpretation, the regressor’s $x_i$ are treated as random variables, sampled together with the $y_i$’s from some population, as in an observational study. This approach is more intuitive when studying asymptotic behavior of the estimators. In the other interpretation, the regressors $X$ are treated as known constants set by a design, and $Y$ is sampled conditionally on the values of $X$ as in an experiment. For practical purposes, this distinction is often
unimportant, since estimation and inference is carried out while conditioning on $X$.

**Assumptions:**

- The response variables are uncorrelated with each other: $\text{corr}(y_i, y_j) = 0$ whenever $i \neq j$. Since regression analysis is always carried out while conditioning on the predictor variables $X$, there is no need for the predictor variables to be uncorrelated with each other, or to be representative of a population. When OLS is applied to linear time series data, panel data, cluster samples, hierarchical data, repeated measures data, longitudinal data, and other data with dependencies, correlations between the responses will often exist. Extensions of the OLS approach, including GLS, can be used in these situations.

- Identifiability: The random variables $x_i$ have second moments, and the matrix $Q_{xx} = E[x_i x'_i]$ is non-singular. This assumption is equivalent to saying that the regressors are linearly independent from each other. Note that if the $x_i$ do not have second moments (that is, the matrix $Q_{xx}$ is infinite), then regular OLS estimators will be not only consistent, but even superefficient.

- The errors have mean zero when conditioned on the regressors: $E[\varepsilon_i | x_i] = 0$. 
Homoscedasticity: The errors have finite second moments that are the same for all units $i$: $E[\varepsilon_i^2 | x_i] = \sigma^2$. Here $\sigma^2$ is a nuisance parameter in the model, which generally must also be estimated. Without this assumption, the OLS estimator for $\beta$ is still consistent, but no longer efficient even within the class of linear unbiased estimators. Also if the errors do not have second moments (that is if $\sigma^2 = \infty$) then the OLS method lacks desirable asymptotic properties. Some robust estimation techniques have better properties than OLS in such a case.

**Estimation:**

Suppose $b$ is a “candidate” value for an estimate of parameter $\beta$. The quantity $y_i - x_i'b$ is called the *residual* for the $i$-th observation. The sum of squared residuals:

$$S(b) = \sum_{i=1}^{n} (y_i - x_i'b)^2 = (y - Xb)'(y - Xb)$$

is a measure of how well the line $x'b$ fits the data. We want this sum of squares to be as small as possible.

The value of $b$ which minimizes the sum of squared residuals $S(b)$ is called the least squares estimator for $\beta$, and is given by the explicit formula:
\[ \hat{\beta} = (X'X)^{-1}X'y = \left( \frac{1}{n} \sum_{i=1}^{n} x_i x_i' \right)^{-1} \cdot \frac{1}{n} \sum_{i=1}^{n} x_i y_i. \]

This estimator is unbiased \[\text{[proof]},\] and also is linear in the dependent variable \( y \). The Gauss-Markov theorem states that, provided the errors are homoscedastic and uncorrelated with each other, this estimator is best (in the sense of having smallest variance) in the class of all linear unbiased estimators.

After we have estimated \( \beta \), the vector of least squares residuals will be equal to

\[ \hat{\epsilon} = y - X\hat{\beta} = (I - X(X'X)^{-1}X')y = M y, \]

Where, \( I \) is the identity matrix, and \( M \) is the projection matrix onto the space orthogonal to \( X \). Using these residuals we can construct the least squares estimator for \( \sigma^2 \):

\[ \hat{\sigma}^2 = \frac{1}{n} \hat{\epsilon}' \hat{\epsilon} = \frac{1}{n} y' M y = \frac{1}{n} S(\hat{\beta}). \]

The expected value of this estimate is \((n-p)\sigma^2/n\), so it is negatively biased. The alternative unbiased estimator

\[ \frac{1}{n-p} S(\hat{\beta}) \]

is also often used.
It is common to assess the goodness-of-fit of the OLS regression by comparing how much the initial variation in the sample can be reduced by regressing onto $X$. Pearson’s coefficient of determination $R^2$ is defined as a ratio of “explained” variance to the “total” variance of the dependent variable $y$:

$$R^2 = \frac{y'LPy}{y'Ly} = 1 - \frac{y'My}{y'Ly} = 1 - \frac{\sum(y_i - \hat{x}_i^T\hat{\beta})^2}{\sum(y_i - \bar{y})^2}$$

where $L = I_n - \mathbf{1}'/n$, and $\mathbf{1}$ is an $n$-vector of ones; this projection matrix (or “centering matrix”) is equivalent to regression on a constant, it simply subtracts mean from a random variable. Note that in order for $R^2$ to be meaningful, the regressors $X$ must contain an intercept (constant) term. In such a case, $R^2$ will be a number between 0 and 1, with values close to 1 indicating a good degree of fit.

iii. **Interpretation of the regression equation:**
When we obtain the results, the following aspects need to be considered in the interpretation of the results.

a) magnitude and sign of the intercept;

b) the t-ratio of the regression co-efficient;

c) sign and magnitude of the regression co-efficient; and

d) $R^2$

If $R^2$ is very low, it cannot be used for prediction / forecasting purpose. If the t-ratio of the regression co-efficient is low, the chosen independent variable has little influence on the dependent variable. In other words, it can be dropped from the model.
The sign of the regression co-efficient shows whether the dependent variable value increases or decreases whenever the independent variable increases.

**iv. Regression Analysis:**

In regression we have estimated two regression models taking income before of the respondents and income after joining in MGNREGS of the sample respondents on decision making process at household level in the study area, where income of the respondent before and after joining MGNREGS has taken as dependent variable and other relative variables are taken as independent variables. Those independent variables are like Age, Education, Occupation, and Occupation of spouse, Work participation, Family size, Earning members Land ownership and Wage days.

The two models estimated are related to

Total number of respondents in the selected area (N=450)

In mathematical notation the function of the total income before and after joining MGNREGS of the respondents for the total sample can written as follows:

Income before joining MGNREGS \( (Y_1) = Y = a + xb_1 + x_2b_2 + x_3b_3 + x_4b_4 + x_5b_5 + ... \)  

Model-I

Income after joining MGNREGS \( (Y_2) = Y = a + xb_1 + x_2b_2 + x_3b_3 + x_4b_4 + x_5b_5 + .. \)  

Model-II

Where Income = Total income of the households from all sources by the respondents of the selected area.

**Multiple Regression Model**
\[ Y = a + x_1 b_1 + x_2 b_2 + x_3 b_3 + x_4 b_4 + x_5 b_5 + \ldots \]

X1: Age = Age of the woman wage seekers

X2: Education = Literacy level of the woman wage seekers estimated by ranking of literacy level, where, illiterate has given zero rank, primary has given one, secondary has given two, higher secondary has given three and PG and professional has given four

X3: Occupation = Dummy variable, whether the respondent is employee (public / private) or not. Employees measured by one and others measured by zero,

X4: Husband Occupation = Dummy variable, whether the husband of respondent is employee (public / private) or not

X5: Work participation = Working hours of the woman wage seekers

X6: Family size = Family size of the respondents

X7: Earning members = No. of Earning members in the family

X8: Land ownership = Dummy variable, whether the respondent is holding land or not

X9: Wage days = Average number of wage days participated by woman wage seekers in a year
v. Scaling Methods:

A number of different methods can be used for psychological scaling. All methods involve the presentation of objects to observers who must give some overt indication of the relative position of the objects on some designated psychological dimension (e.g., perceived weight, brightness, or preference). Traditional methods for obtaining reactions to the objects in a scaling experiment include paired-comparisons, rank orderings, and numerical ratings. Perhaps the simplest psychophysical measurement method conceptually is the method of paired comparisons. Objects are presented to observers two at a time, and the observer is required to indicate which has the higher value on the underlying scale; e.g., in the case of preferences, the observer indicates which of the two is most preferred. A related procedure is the rank-order procedure. Here the observer places a relatively small set of objects (rarely more than 10) in order from lowest (least preferred) to highest (most preferred). At their most basic level, these two procedures produce ordinal data, based on the proportion of times each stimulus is preferred in the paired-comparison case, and on the assigned ranks in the rank-ordering procedure. One of the most popular methods for obtaining reactions from observers in a psychological measurement context uses rating scales. The procedure requires observers to assign ratings to objects to indicate their attitude about some statement or object, or their perception of some property of the object.

In each of these methods, the overt responses of the observers (choices, ranks, or ratings) are not taken as direct measures of the psychological scale values, but are used as indicators from which estimates of the psychological scale are derived using mathematical
procedures appropriate to the method. In theory, the psychological scale values derived for a set of objects should not differ between different scaling methods. For example, if a paired-comparison procedure and a rating scale are used for indicating relative preferences for a common set of objects, the psychological preference scale values for the objects should be the same, or within a linear transformation. While the basic data from the paired-comparison and rank-order procedures are originally at the ordinal level of measurement, psychometric scaling procedures have been developed that, given certain theoretical assumptions, provide interval level measures. Perhaps the best known procedures are those developed by Thurstone (see Nunnally (1978) and Torgerson (1958)), whereby choices or ranks provided by a number of observers (or by one observer on repeated occasions) are aggregated to obtain percentiles, which are then referenced to a normal distribution to produce interval scale values for the objects being judged. A related set of methods, also based on normal distribution assumptions, was developed for rating scale data. Later sections of this paper describe and compare procedures used with rating data. Additional, more detailed presentations of the theoretical rationale and the computational procedures are found in the texts by authors such as Torgerson (1958) and Nunnally (1978). Discussion of these issues in the context of landscape preference assessment can be found in papers by Daniel and Boster (1976), Buhyoff et al. (1981), and Hull et al. (1984).

1.18 Study Map:

```
Andhra Pradesh
  ↓
Vizianagaram District
  ↓
Cheepurupalle Mandal       Gantiyada Mandal       Garividi Mandal
```
Table-1.7: Number of Women Wage Seekers Selected for the Study

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Mandals</th>
<th>Villages</th>
<th>Number of Beneficiaries selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cheepurupalle</td>
<td>3 (50 wage seekers from each village) 3x50=150</td>
<td>150</td>
</tr>
<tr>
<td>2</td>
<td>Gantiyada</td>
<td>3 (50 wage seekers from each village) 3x50=150</td>
<td>150</td>
</tr>
<tr>
<td>3</td>
<td>Garividi</td>
<td>3 (50 wage seekers from each village) 3x50=150</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>450</td>
</tr>
</tbody>
</table>

1.19 Period of Study:

The study was conducted during November 2009-July 2010.

1.20 Chapterization:

The present study is divided into six chapters

- **Chapter one** deals with introduction, background of the study, objectives, methodology and need for the study.
- **Chapter two** deals with Review of Literature.
- **Chapter three** deals with The Socio-Demographic Profile of Women Wage Seekers under MGNREGS
- **Chapter four** deals with The Perception of Women Wage Seekers on Decision Making Process under MGNREGS
- **Chapter five** deals with An Analysis: The Impact of MGNREGS on Empowerment of Women Wage Seekers (Case studies)
- **Chapter six** deals with Conclusions and Suggestions

1.21 Conclusion:

The importance of MGNREGA in the rural wage sectors, the specific nature of works taken up which have emphasis on strengthening agriculture sector and its direct bearing on women empowerment in rural areas, especially among rural women wage seekers, the present study on “Impact of MGNREGS on Empowerment of Women Wage Seekers in Andhra Pradesh: A Case study of Vizianagaram District” was taken up. The above chapter dealt with introduction, methodology and quantitative techniques. The next chapter deals with the Review of literature.