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Evaluating India's National Rural Employment Guarantee Scheme:
The Case of Birbhum District, West Bengal

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Dedication:

To those distressed migrants who are looking for a job for their survival in the dirty town.

And

To those policy makers who can check this migration by more vibrant policy intervention.

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List of Acronyms

NREGA- National Rural Employment Guarantee Act

NREGS- National Rural Employment Guarantee Schemes.

NREGP- National Rural Employment Guarantee Programme

ELR- Employer of Last Resort

HH- Household

USD- United States Dollar

EGP- Employment Guarantee Programme

EGS- Employment Guarantee Schemes

PSE- Public Service Employment

BSE- Buffer Stock Employment

SDP- State Domestic Product

CSO- Central Statistical Organisation

GP- Gram Panchayat

CDA- Confirmative Data Analysis

IV- Instrumental Variable

RHS- Rural Household Survey

UNDP- United Nation Development Programme

WB- West Bengal

PDS- Public Distribution System

MPCE- Monthly Per-capita Consumption Expenditure

SGRY- Sampoorna Grameen Rojgar Yojona

PRI- Panchayati Raj Institution

NFFWP- National Food For Work Policy

OLS- Ordinary Least Square

SGSY- Swarnajayanti Grameen Swarojgar Yojona

IAY- Indira Awas Yojona

GUS- Gram Unnayan Samity

Rs. Rupees

BPL- Below Poverty Line

APL- Above Poverty Line

NSSO- National Sample Survey Organisation

CPI (M) - Communist Party of India (Marxist)

CPI- Communist Party of India

RSP- Revolutionary Socialist Party

SUCI-

TMC- Trino Mul Congress

BJP- Bharatio Janata Party

SC- Scheduled Caste

ST- Scheduled Tribe

OBC- Other Backward Caste

lnmpi- Logarithm of Monthly Per-capita Income

lnmpce- Logarithm of Monthly Per-capita Consumption Expenditure

p- Probability

OProbit- Ordered Probit.

Abstract:

The world's biggest Employment Guarantee Programme, India's National Rural Employment Guarantee Scheme (NREGS) has been in operation in rural India since February 2006. In principle, the scheme is a self-targeted programme designed to provide 100 days of employment to rural households and to serve as a safety net. More broadly its aim is to reduce rural poverty through the creation of sustainable rural infrastructure which is expected to foster rural economic growth. This study looks at the performance of the NREGS from three perspectives - it examines the targeting aspect of the programme, the efficiency of the implementing PRI bodies and the impact of the program on various outcomes at household level. The study is based on primary data collected from 500 randomly selected households, 2249 individuals and 70 schemes located in 13 Gram Panchayats in Birbhum District of West Bengal, India.

On the basis of this primary data, the study reveals that at least in Birbhum District the programme is far more likely to be accessed by poorer households (defined in terms of land holding, monthly per-capita income and other household related characteristics). At the same time there is a clear and substantial impact of left political inclination in terms of enabling access to a greater number of days of work under the scheme. In terms of the efficiency impact, the analysis reveals a clear violation of the formal clauses and the spirit of the NREG Act and thereby undermining the potential of the programme in terms of providing a safety net. In terms of the impact, the study finds no statistically significant impact on economic outcomes at household level but does find a statistically significant and substantial relation between reduction of stress related to joblessness and access to the NREGS. The estimates suggest that while the NREGS may not be creating any new employment, and may indeed be substituting for existing employment opportunities, the scheme is still considered valuable as it offers better working conditions..

Key Words: *NREGS, Targeting, Efficiency, Impact, labour-substitution, Birbhum, West Bengal*

Chapter 1

Introduction:

The idea of an Employment Guarantee or the government as an employer of last resort (ELR) has been used by many governments in different forms starting with the Poor Employment Act of 1817 in Britain, New Deal Programmes in USA in the 1930s, Argentina's Plan Jefes y Jefas, Morocco's Promotion Nationale (since 1961). During last few decades government intervention in the labour market as an employer of the last resort has become an integral part of labour market policies in many developing countries. Recent examples of the latter include public work programmes in India, Bangladesh, Pakistan, Philippines, Egypt, Botswana, Kenya and Chile (Subbarao, 1997; Lipton, 1996). Consistent with this line of thought employment is viewed as the most important area of intervention for welfare. (Kaboub 2007:2-3).

While generating employment is important, at the outset, it is necessary to emphasize that in many developing economies, a high incidence of rural poverty is found to co-exist with a high rate of participation of the rural population in non-farm activities (Saith, 1992:1) and a high incidence of 'urban' poverty also co-exists with a high rate of participation in the urban informal sector. Hence, it cannot be argued that unemployment is the only reason for impoverishment. On one hand, private sector investment has not been able to absorb the surplus labour resulting in growing unemployment; on the other hand, existing absorption in the informal sector and rural non-farm sector does not ensure the minimum income needed to eradicate poverty. Thus, 'the dichotomy between policies that target "only income" or "only employment" is no longer constructive. An effective safety net must provide a guaranteed source of income through a guaranteed source of work opportunities in meaningful, life-enhancing activities' (Tcherneva, 2007: 25).

Amongst public work programmes in developing countries, no public work programme has been studied as thoroughly as the Employment Guarantee Scheme (EGS) in the State of Maharashtra, India (Basu, 2007:1). In the fore of that development, in India, an ambitious National Rural Employment Scheme (NREGS) came into force in February 2006. The scheme is based on the National Rural Employment Guarantee Act (NREGA[1]) which was passed by the Indian parliament in September 2005. This new scheme has renewed interest in evaluating the effectiveness of such welfare through

[1] NREGA- National Rural Guarantee Act which is followed by a Programme called National Rural Employment Guarantee Programme (NREGP) which is again followed by the Scheme called National Rural Employment Guarantee Schemes (NREGS).

workfare programmes in terms of providing an economic safety net to the rural poor. Since the scheme has been established relatively recently, there is little research that has been conducted on its effectiveness in terms of meeting its stated goals. This paper examines three issues. First, the paper examines the *targeting performance of the program, second, the efficiency of the implementing institution* and finally the *impact* of the programme on various outcomes. The analysis is at the household (HH) level and relies on data collected from 500 households located in Birbhum District of West Bengal, India.

1.1. Contextual background and relevance of the research work

1.1.1 Indian Poverty debate and NREGA

If India's official poverty line of a monthly per capita consumption of 356 rupees or 9 USD in rural and 593 rupees in urban areas is taken as a benchmark, then 300 million Indians are officially poor. In absolute numbers this is not much lower than the figures thirty years ago, yet the share of the poor as a percent of the population has steadily dropped from 55% in the early seventies to 28% in 2005. However, the unchangeable factor is the deep-rootedness of poverty in rural areas where three-quarters of the poor live (Indian Planning Commission, 2008a).

The main reason for the vast poverty in rural areas lies in the continued economic dependence on agriculture. Of the rural poor, 41% are informal agricultural laborers and 22% are self-employed farmers. This also affects urban poverty as most poor households in the cities are distressed migrants from rural areas with stagnating farming incomes (Planning Commission, 2008b). Today, agriculture absorbs 52% of India's labor force but contributes less than one fifth to the country's GDP (Ravi & Engler 2009:7). The overwhelming dependence on a sector where productivity continues to fall behind the rest of the economy contributes to growing inequality between rural and urban areas

The main reason for low agricultural productivity lies in excess of (underemployed) farming labor. Despite unprecedented growth rates of almost 9% in recent years (since 2003 onwards), the manufacturing sector has not generated enough employment opportunities to absorb the underemployed workforce and its share in total employment is still lower than 20% (Ministry of Finance, 2008). Meanwhile, the creation of new jobs in the agricultural sector has slowed down considerably, from 1.8% annually between 1983 and 1994 to 0.4% between 1994 and 2005 (Planning Commission, 2008b).

As the workforce continues to grow, the earning situation becomes more acute not only for the landless, who always lacked the possibility of subsistence farming, but gets worse also for those owning land. Their available land plots decrease from generation to generation and the share of landowning farmers holding less than 1 hectare of land has risen from 56% in 1982 to 70% today (Planning Commission, 2008b). As a consequence, landowners, in order to supplement their incomes, have increasingly joined the landless in seeking wage labor. Since the low-skilled are widely barred from the formal sector (which accounts for only 14% of total employment), this intensifies the competition for informal jobs, thereby weakening the bargaining power of job seekers and abetting precarious employment without steady and reliable income flows or basic labor protection.

Against this background, the NREGP appears to be a promising policy for poverty alleviation through "workfare" approach. Since its initial launch in 200 districts in February 2006, the scheme has spread country wide and now operates in 596 of India's 625 districts. The scheme has created work opportunities for over 66.2 million households in the financial year 2008-09 (NREGA official website: http://nrega.nic.in/netnrega/MISreport.aspx?fin_year=2008-2009). The scheme may be classified as a self-targeted workfare programme and based on the available statistics it is the world's largest self-targeting programme. In terms of financial outlay the programme had an annual budget of USD 5 billion over the last 3 years and in 2009-10 the budget outlay is USD 7.8 billion. It has been hailed by Amartya Sen as, "a unique event in the pro-poor strategies in the world, as no country in the world has ever given a right (a constitutionally obligatory mandate!) of this kind to such a large section of the population" (cited in Hirway, 2007:7). The following section provides some more details on the programme.

1.1.2 Employment Guarantee Scheme and NREGA

The basic features of the Indian NREGA is similar to other Employment Guarantee Programmes (see Tcherneva, 2003:2-3 for details). The act envisages the provision of:

i. Federally funded jobs to anyone who is ready, willing and able to work.
ii. These jobs claim to provide a living wage and decent working conditions

All such programmes try to tackle poverty which is experienced by those whose income deprivation and social exclusion is primarily due to joblessness. Moreover, any such strategy is though primarily designed to tackle poverty but is not a "targeted" social protection programme for the poor. These are designed to provide universal "guarantee" of employment. Besides fulfilling availability of guaranteed

unskilled manual work on piece-rate basis on demand, the employment guarantee programmes also satisfy the following conditions:

i. The work which is chosen is labour intensive in nature
ii. After completion of the work under the scheme a productive asset is supposed to be generated.

In EGP, government provides the job opportunity with assurance of minimum wage. But whether to participate or not is decided by the beneficiaries themselves. That is why this is a self targeting programme & this option of self targeting is universal. Like all other poverty alleviation programmes, EGP has also a focus towards reduction of poverty. So the task of the policy maker is to design the outline of the programme and set the self-selection criterion for the potential beneficiaries. But this outline will be such that non-poor will not find any incentive to participate in a self-targeting manner and thereby ensuring the programme as a poverty alleviation programme. In EGP, the "minimum wage rate", "unskilled manual labour work", "piece-rate" – all these are designed in such a way that non-poor will supposedly find dis-incentive with these kinds of arrangements. Hence, these programmes are 'universal de jure, but targeting de facto' (Imai 2007:4).

At the moment, such types of EGP are operating in many parts of the world as mentioned in the introduction. More specifically, as far as the Indian programme is concerned, the formal Act states that it is**:**

An Act to provide for the enhancement of livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work and for matters connected therewith or incidental thereto.

The formal goals of the act 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 livelihood and create durable assets in rural areas. Effectively implemented, NREGA has the potential to transform the geography of poverty.
3. Empowerment of rural poor through the processes of a rights-based Law.

Salient Features of NREGA:

1. Adult members of a rural household, willing to do unskilled manual work, may apply for registration in writing or orally to the local Gram Panchayat (The Rural Local Self Government).
2. Employment will be given within 15 days of application for work, if it is not then daily unemployment allowance as per the Act, has to be paid. Liability of payment of unemployment allowance is of the States.
3. Work should ordinarily be provided within 5 km radius of the village. In case work is provided beyond 5 km, extra wages of 10% are payable to meet additional transportation and living expenses.
4. Wages are to be paid according to piece rate or daily rate. Disbursement of wages has to be done on weekly basis and *not beyond a fortnight in any case.*
5. At least one-third beneficiaries shall be women who have registered and requested work under the scheme.
6. Work site facilities such as crèche, drinking water, shade have to be provided.
7. Permissible works predominantly include water and soil conservation, afforestation and land development works
8. A 60:40 wage and material ratio has to be maintained.
9. Social Audit has to be done by the Gram Sabha.
10. Grievance redressal mechanisms have to be put in place for ensuring a responsive implementation process.
11. All accounts and records relating to the Scheme should be available for public scrutiny.

'Thus, NREGA fosters conditions for inclusive growth ranging from basic wage security and recharging rural economy to a transformative empowerment process of democracy.' (NREGA operational Guide line-2008 3rd ed.) By providing readily available employment –the program aims to put households in a better position to keep up a basic income flow when no other source of earning is available. Given the great destitution of many households, such immediate support might often boil down to mere survival aid. In addition, the NREGS also counteracts in-work poverty and powerlessness among the privately employed as, by intensifying the competition for casual laborers, it increases the pressure on employers to improve their terms of employment in the open market.

1.1.3 Where does West Bengal Lie?

In tune of this highly ambitious programme it may now be examined how the state of West Bengal, a so called backward state in India, could fit in the context of its backwardness. In comparison with the other states of India, in terms of per-capita state domestic product (SDP), West Bengal had been the richest state in India in 1960, but by the end of last millennium, the SDP per-capita rank of the state declined to 9. At the time of independence (1947) the share of the state in the total industrial production of the country had been 24%. But it is evident from the recent estimates that this share has reached 4.6% which places it at the bottom cluster among the 17 big states (Economic Census 2005). In spite of registering good performance in agriculture in the past, in recent years, the agricultural growth rate has also declined along with a sharp fall in productivity. In terms of the latest Human development report (2005), West Bengal is placed 10^{th} place among 17 major states of India. Compounding this situation, for small peasants, agriculture is now becoming un-remunerative and sizable section of the rural workforce is being pushed out from agriculture. At the same time, small enterprises are hardly able to absorb the surplus labour even when the wage rate remains depressed. Although work participation in West Bengal has increased between 1991 to 2001, this is largely accounted for by an increase in the marginal workforce (Table -1) coupled with a fall in the main workforce from 51.18 % in 1991 to 46% in 2001. This trend is declining even more in recent times unlike the other big states like Kerala, Maharashtra, Tamilnadu etc. (Economic census 2005). So rise in work participation with significant fall in main workforce percentage implies that new jobs must have been created mostly outside the organized sector of the economy and there by creating greater vulnerability for the workforce as a whole. The dismal performance in the non-farming enterprise sector (both rural and urban Table-2), relatively higher contribution of primary sector in the Gross SDP (as compared to similar states, fig-1) and the decline in growth and productivity of this sector, displays the vulnerable status of the workforce in terms of livelihood and employability.

Table-1 Marginal worker as a ratio of main worker (%)

States	2001
West Bengal	27.9
Maharashtra	17.9
Tamil Nadu	17.4
India	28.5

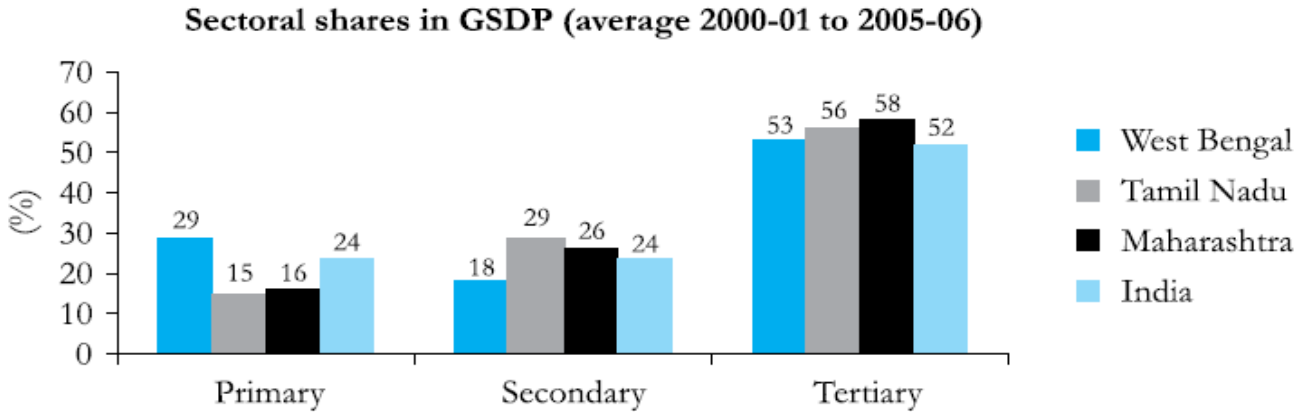
Source: Census of India, 2001

Table-2 Average annual Growth in employment in enterprises other than crop production and plantation (1998-2005) in percentage

States	Rural	Urban	Total
West Bengal	1.7	0.0	0.9
Maharashtra	3.3	0.9	1.8
Tamil Nadu	5.4	3.8	4.6
All India state average	3.3	2.4	2.5

Source: Economic Census, 2005, provisional figures

Figure-1



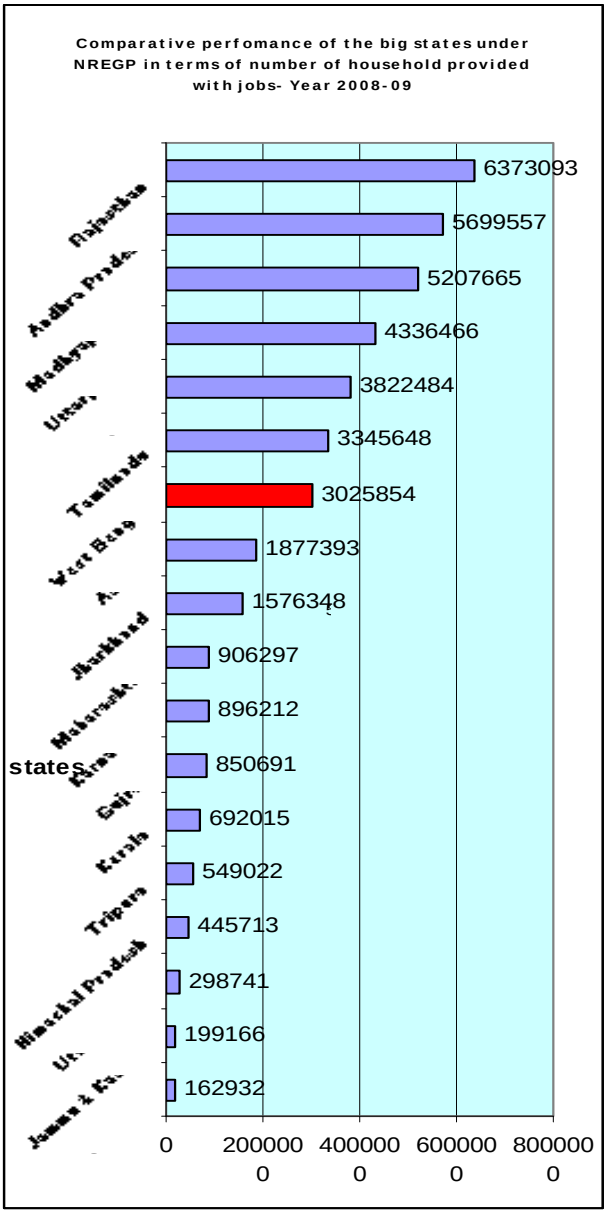
Source: Central Statistical Organization (CSO): 2006

Against this backdrop, NREGP has also been introduced in West Bengal in 2006 with a great deal of optimism and expectation. However, the performance of the state in terms of the Govt. of India administrative report seems a bit gloomy for the last three years. In the 1st year (2006-07) West Bengal provided an average 14 person days of jobs (to those who have registered and demanded jobs) as against the national average of 43 person days. In the 2nd year (2007-08) the figure improved to 25 person days as against a national average of 42 person days. The trend continued in the 3rd year (2008-09) and the state average was around 26 person days as against a national average of 47.53 person days.

Table 3: State wise average person-days generated.

Name of the State	Average Person days generated		
	2006-07	2007-08	2008-09
Rajasthan	85	77.33	75.75
Assam	72.31	34.76	34.85
Madhyapradesh	68.79	63.33	56.59
Tripura	67.44	42.73	63.94
Himachal Pradesh	48.52	35.98	45.24
Haryana	47.52	50.46	40.23
Gujrat	44.41	30.98	25.05
Maharashtra	41.38	38.94	46.25
Karnataka	40.32	37.33	31.73
Jharkhand	37.33	44.5	47.56
Bihar	35.34	22.16	25.95
Uttarpradesh	31.98	33.27	52.37
Andhra Pradesh	31.4	41.85	47.99
Uttarakhand	30.23	42.45	34.92
Tamilnadu	26.74	52.25	35.97
Jammu & Kasmir	26.62	24.15	36.76
Kerala	20.67	32.77	22.01
West Bengal	14.27	25.21	26.00
National average	43.01	42.35	47.53

Figure-2: State wise no. of HH covered (08-09)



Source: data compiled from the Official website of the nrega:
http://nrega.nic.in/writereaddata/mpr_out/empgenst_12_N_0809.html accessed on 16.09.2009 at 10.30 pm IST

Table-3 provides a comparative performance of the big Indian states in terms of number of person days provided on average as against demand for job under NREGS and West Bengal consistently performs amongst the bottom 5. On the other hand if we look at the figure-2, it tells us that West Bengal's performance places it amongst the top 10 in terms of reaching out to household through the NREGS. With this background following sub-section states the objectives of this study.

1.2 Research Objectives

While the intrinsic worth of using work requirements to transfer benefits to the most needy is widely recognized (Haddad and Adato, 2001), successive reports produced by internal government auditing agencies (Comptroller and Auditors General, Govt. of India 2007, 2008) and external social audits by many independent agencies reveal that the usefulness of the NREGS is not uncontested. There are doubts over whether the self-targeting mechanism of the NREGS is more successful as compared to targeted workfare programme. In addition there are concerns about the efficiency of the programme implementing govt. institution (i.e. Panchayati Raj Institution- PRI). Finally, there are apprehensions about whether there are any perceptible changes in terms of poverty and vulnerability status of the participating households (Planning Commission, 2008a). Motivated by these concerns, my research paper deals with three issues.

Since NREGS falls in the category of self targeted programmes, my ***first*** objective in this paper is to analyse the targeting aspect of the programme i.e. who is accessing NREGS and what are the major determinants of participation in the NREGS. I would examine these issues by using household level primary data on participation in the NREGS and the number of days worked under this scheme.

The ***second*** objective of my paper is to verify the efficiency of the PRI institutions involved in implementing the programme. More precisely I would focus on the Gram Panchayat (GP). I have made use of 70 case studies from the field to throw light on the debate of institutional efficiency. Here I have used a rather restrictive definition of efficiency and I examine whether the GPs are able to ensure payment of wages to labourer in due time after their work as mentioned in the act.

The ***Third*** and final objective is to examine whether there is any impact of the programme on various outcomes of interest. In particular, I have observed the impact of the programme on household consumption, income, savings, debt and reduction of stress or anxiety level related to joblessness.

The rest of the paper is structured as follows. Chapter 2 discusses the sampling process, the questionnaire and the sample. The conceptual framework of employment guarantee, the debates and the specific approach of this study is discussed in chapter-3. Results and findings are analysed in chapter 4. Chapter 5 summarizes and concludes the paper.

Chapter 2

Sampling process, questionnaire and the Sample

To meet the paper's research objectives, a household survey was canvassed in the months of July and August 2009 in Birbhum district. The major focus of this survey was to gather data on the functioning of the NREGS and to gather information on household livelihoods, income, expenditure, savings, indebtedness, livestock and other socio-economic variables. Prior to discussing the estimation approach and research findings, this section introduces the sampling process and approach used to gather the primary data for in this study.

2.1. Sampling process

The paper is based on a sample of 500 households and 2249 individuals drawn from 13 Gram Panchayats (the lowest tier of Rural Local Self Government) located in Birbhum district of West Bengal, India. While the choice of the district was driven by pragmatic concerns, the sampling approach within the district was designed to yield a sample which is representative at the district level. First, Gram Panchayats (GP) were chosen on the basis of a stratified sampling procedure and thereafter within each strata households were chosen on the basis of random sampling.

In the first stage, all GP of Birbhum district were stratified into different clusters according to their degrees of backwardness. The following indicators have been used for measuring backwardness, all of which are available at the GP level from existing data bases: (1) No. of 'backward village'[2] within that GP (2) No. of Below Poverty Line Household (as per Rural Household Survey-2005) within that GP and (3) average score away from 100 in the 'self-evaluation'[3] exercise (for 2006-07 & 2007-08) . I then stratified the entire GPs of district into cluster of GP as measured by these indicators according to the following procedure.

Denoting by $Q^{j}{}_{k}$, the k-th indicator for the j-th GP, we find the index of backwardness in the j-th GP in the district by the following formula

$$Bj = \left(\frac{\left(Q^{j}{}_{1} + Q^{j}{}_{2} + Q^{j}{}_{3}\right)}{3} \right)^{\frac{1}{3}} \quad \text{……………………………………………. (1)}$$

[2] See Glossary-1
[3] See Glossary-2

Instead of a linear index, we employ the above so as to take care of any skewness that may be present. This is a formula followed by UNDP in its Human Development Report.[4]

Denoting by B_{min} = Min (B^{j}) and B_{max} = Min (B^{j}), we can calculate the score of the j-th GP (S^{j}) by the following formula:

$Sj = \left(\frac{(B_j - B_{\min})}{(B_{\max} - B_{\min})} \right)$ x100 i.e. backwardness score for j= 1, 2, ……167(i.e. the no. of GP in Birbhum). B_{max} = maximum among B_j and B_{min} = minimum among B_j & $0 \le Sj \le 100$ as Sj increases implies backwardness score also increases and the concerned GP is more backward.

In this way, we assign a score for each GP within a [0, 100] interval. In effect, we can assign a rank for each GP within Birbhum district. Let this rank be denoted be R^{j} for j =1,2,…….,167.

In the next step, three clusters of GPs were considered namely *most advanced cluster*, *moderately advanced* and *backward* cluster depending upon the backwardness score. This analysis showed that that 13.48% of the district's total households were in the most advanced cluster, 36.97% of households were in the moderately advanced cluster and 49.55 % of the households live in backward clusters. Accordingly I chose 13.48% i.e. 67 households for my sample from the cluster of advanced GP, 36.97% i.e. 185 households from moderately advanced GP and and 49.55% i.e. 248 households from backward GP. In terms of GPs, 2 (Rupuspur and Bajitpur) were selected from the most advanced cluster, 4 GPs (namely Horisara, Kundala, Panrui & Bahiri-Panchshowa) were selected from moderately advanced cluster and 7 GPs (Ulkunda, Mallarpur-II, Parulia, Barrah, Gonpur, Joudev-Kenduli & Khoyrasole) were selected from the backward cluster. Households within GP were randomly selected.

2.2 The questionnaire*:*

The questionnaire used during field survey was comprehensive in the sense that it comprised the following blocks of information.

1. Block: 1- Descriptive identification of sample household
2. Block: 2- Specific identification of the sample household
3. Block :3 – Household assets (includes land, livestock, house, durables etc.) and income
4. Block : 4- Indebtedness and savings situation of the household

[4] See Human Development Report, 1997, Technical note 1, pp. 117 to 125 which is actually based on a background paper by Sudhir Anand and Amartya K. Sen, "Concepts of Human Development and Poverty: A Multidimensional Perspective".

5. Block: 5- Occupation and other particulars of the all household members.
6. Block: 6- Household consumption expenditure.
7. Block: 7- Household level information on NREGP.

One month and one year recall period were used separately for collecting data pertaining to income and expenditure. But for employment and labour market related information I used one year and three years time series recall period separately and also asked for information for the entire period and for lean periods. As discussed previously the data collected here are representative at the Birbhum District level but not at the state and national level.

2.3 Sample:

The main objective behind such rigorous sampling process for household selection was to ensure a robust representative sample from the district as far as possible so that findings on account of the NREGP could be placed at the policy advocacy level. In this sub-section an attempt is made to compare descriptive statistics from my sample with descriptive statistics based on secondary data at the district level.

Glimpses about sample vis-à-vis Birbhum District:

Birbhum District is situated in the Western part of West Bengal. It has 19 administrative Blocks and 167 Gram Panchayats. As per 2001 census of India, it accounts for 5.12% of land area of the state and 3.76 % of the state's total population. Hence this district has lower density of population (663 in per-square kilometer) as compared to the state (903 in per-square kilometer).

Table-4A: Sample vis-à-vis District- Compatibility of few important parameter

Level	% of Rural Male (†)	% of Rural female (†)	Sex Ratio (†)	Dependency Ratio (†)	% of Work Participation (†)			Average family size(†)	% of HH With zero holding (¡)	% of BPL HH (¡)	Houseless or kuccha (thatched shack) (¡)
					Male	Female	Total				
District	51.29	48.7	950	1.70	54	20	37.4	4.6	57	42.3	63.8 %
Sample	50.69	49.31	972	1.745	62.2	21.1	41.95	4.5	40.4	43.51	63.8%

Source: District Human Development Report Birbhum-2008 and calculation from sample survey by author.

Table-4B: Sample vis-à-vis District- Compatibility of few important parameter

Level	% of population having one or less than one meal in a day (¡)	Average monthly per-capita consumption expenditure (in Rs.)	Average monthly per-capita income (in Rs.)	Female Headed Household (in %)	Literate in percentage (†)			%of Marginal holding (i.e. land holding less than 1 Hc or 2.471 acre) (¡)	Land less (land owned< 0.0049 acre)(¡)	Average holding (¡)
					male	female	total			
District	4.7	569(*)	570(#)	17.6	70.89	51.55	61.48	92.06	6.2	0.73 acre
Sample	2.7	528.1 (**)	640.13(+)	11.6	76.14	65.01	70.65	90.2	9.8	0.87 acre

Source: District Human Development Report Birbhum-2008 and calculation from sample survey by author.

Note: (†) figure at the district level for this categories represent for 2001 i.e. based on last census of India.

(¡) figure at the district level for this categories represent for 2005 i.e. based on Rural Household survey-2005 for WB

(*) as per West Bengal State Human Development Report-2004 & (*), (**) both are at 99-00 prices (base 86-87=100),

(#) as per District Human Development report -2008,

(+) at 99-00 prices (base 86-87=100)

The tables above, 4A and 4B, show that based on certain indicators viz. land holding, family size, percentage of work participation, sex composition of population, dependency ratio, % of BPL household, literacy rate the data collected through survey represents certain degree of comparability with the district level findings from different secondary sources. However, it is to be noted that these secondary sources are representing a wide period of time span starting from 2001 to 2008. Still above tables are showing a nature of representativeness of primary surveyed data in respect of the Birbhum District. Considering this one could argue that findings from this study may be advocated at the policy plane at least at the district level.

Chapter 3:

Conceptual Framework: Employment Guarantee, the debate and approach of the study

3.1 Introduction:

In an Employment Guarantee Programme (EGP), a government provides a job opportunity with assurance of minimum wage. However, the decision to participate or not is decided by individuals. Accordingly, such programs are self targeted programmes and hence these schemes are 'based on self-regulatory tests that only the truly poor would pass' (Besley & Kanbur, 1993:78). In principle, in such schemes, the targeting costs are zero, though administrative costs other than identifying and counting the poor may still be large. In contrast, in the case of targeted interventions, governments specify the beneficiaries and administrative costs may be quite larger.

In the case of self-targeted EGP programmes, the task of the policy maker is to design the programme and set the self-selection criterion such that non-poor will not find any incentive to participate and thereby ensure that the programme serves as a poverty alleviation programme. While such self-targeted approaches have benefits, there are also potential concerns. For example, if we take into account the indirect effects of such type of programme then one could argue that since EGP effectively imposes a minimum wage rate it may lead to distortions in the labour markets and may promote displacement of labour from private farm and non-farm sector to the government sector, specially if such minimum wages are higher than the market rate. In the recent World Development Report (2009:163), NREGS has been criticized on the grounds of creating high disincentive in the form of restricting the gains from rural labourer's mobility. Additionally, in an empirical paper on Argentina's self targeted programme Plan Jefes, it has been shown that individuals who enter the programme are far less likely to exit to employment, meaning reliance on the programme may reduce the incentive to search for work and in the long-run may damage individual employability and perpetuate poverty (Iturriza, Bedi, Sparrow, 2008:4-5)

With this background on the pros and cons of self-targeted EGP and consistent with the research objectives of this paper, this section reviews the existing debate in the literature centering on '*targeting' 'efficacy of PRI institution'* and '*impact'* of EGS and more specifically NREGS. While doing so it elaborates on the methodology used to investigate the three issues under scrutiny.

3.2 Issue of Targeting

3.2.1 A review of the debate.

Several empirical papers have investigated the Maharashtra Employment Guarantee Programme (Hirway, 2004:5122; Ravallion,1991:155-156, Gaiha, 2003:3) and Morocco's Promotion Nationale (Jalal 2007:9-10). These studies reveal that these programmes have not faced a financial crunch, however, operational sustainability and the institutional capacity to run the programme along with reaching the targeted population are issues that arise. While, theoretically, jobs are guaranteed on demand, the speed with which these are made available varies widely. EGP operations face major challenge with the cyclical fluctuation of participation in the programme with the maintenance of buffer stock of jobs for the lean season. In most of the cases such institutional arrangements are highly inadequate. In terms of the outreach of the programmes there are two types of mistakes: 'E' mistake, i.e., excessive coverage of the non-poor which occurs when the intervention reaches a non-targeted population. Another type is 'F' mistake, i.e., failure to reach the underlying targeted population, precisely the poor people in this context. Empirical studies have also shown that in one of the oldest EGP Programme in Maharashtra, India, the share of the poor among EGP decreased over the years and attracted many non-poor over time (Gaiha 1996a, 1996b, 1997, 2000:206-208). Among many reasons organizational inflexibility, rigid nature of bureaucracy, excessive burden of utilization of federal allotment of funds are the main reasons for these errors. Identity based social exclusion and inclusion sometimes plays crucial roles in respect of 'E' & 'F' mistakes.

Beside those factors discussed above one of the major determinants or influential factor for accessing such kind of employment programme are the political inclination and the patron-clientelistic relation between the scheme participant and the local politicians. Gaiha (1997:304-305) pointed out the possibility that the poor without political support are excluded from the project. Similarly, Giraudy's (2007:38-39,52) study on different emergency employment programmes in Argentina between 1993 to 2002 claimed that politicians are able to access funds from the federal government, which are then used to buy political loyalties from voters and legislators. More interestingly this study has shown that not all political parties are equally suited to deliver public good in a clientelistic way because not all parties have equal access to the fiscal resources that allow politicians to deliver the employment programme clientelistically. Giraudy claimed that "there is wide agreement among scholars studying Argentine politics that poor and low-skilled voters are more susceptible to being turned into political clients than higher income/skilled voters" (Giraudy:2007:39). In a more deep rooted study based on the Maharashtra EGS, Patel (2006:5131-32) investigated the variety of ways in which the political

mobilisation of the oppressed could have take place and simultaneously examined the manipulations by the ruling *Maratha*, (the people of Maharashtra) landed caste to disempower and eventually co-opt such struggles in order to perpetuate its own political dominance in Maratha politics. In the context of my study area, i.e., West Bengal, where for the last 32 years a left ruling government is in operation, a very recent study by Bardhan et al. (2009:48-49,52,55-56) commented on the nature of democracy and clientelism behind such extraordinary political stability. Based on data from 2,400 rural households drawn from 85 villages in West Bengal this study shows that there is a strong existence of clientelistic relations between beneficiaries and the left ruled village panchayats when government's benefits are of a recurring nature. The NREGS is a recurring type of programme and it is possible that access to this program will also be influenced by the existing clientelistic patterns in the state.

In a recent paper on the performance of the NREGS in various states, Jha et al. (2009) point out that in spite of performing quite well in terms of administrative performance indicators (i.e. providing larger number of days of work to the job seekers) there is considerable participation of the non-poor (defined in terms of land holding and PDS[5] less participation). In related literature Lanjouw and Ravallion (1999:258-259), Alderman (2002:385,392,397), Ravallion (2000:337-339), Gaiha (2000a:210-211), Galasso and Ravallion (2005:719-723) and others empirically evaluate the higher chance of participation of non-poor and the issue of targeting in general in the context of self-targeted programmes. The findings are inconclusive as most of these authors note that targeting effectiveness is context specific and varies widely across programs, efficacy of the concerned government institution, levels of government, counties and regions. More interestingly Ravallion and Lanjouw also analyze the timing of programme capture and find that non-poor enjoy the majority of the benefit early on but the share of benefits to the poor increases over time. As already mentioned, in contrast, Gaiha (2000a:210-211) observes the opposite findings in the case of Employment Guarantee Scheme in the Indian State of Maharashtra where over time the programme experienced higher participation by the non-poor especially because of a sharp hike in the wage rate.

[5] PDS- Public Distribution System

3.2.2 The approach of this study

To analyze the issue of targeting, I examine the link between various variables that capture household wealth and income with i) whether households are participating in the NREGS and ii) the number of employment days obtained through the NREGS.

First, I propose to estimate the following binary response model assuming a standard normal distribution of my response variable *NREGSi.* This is written as,

$$NREGSi = \alpha + \beta_1 lanhold_i + \beta_2 mpce_i^{adj} + \beta_3 rhsscore_i + X_i \theta + \varepsilon_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where $NREGSi$ =1 if household i is participant in NREGS and 0 otherwise, $lanhold_i$ is total land holdings of the household i measured in acres, $mpce_i^{adj}$ is the monthly per-capita consumption expenditure adjusted after deducting the monthly per-capita income from NREGS, $rhsscore_i$ =1 if the household is a BPL and 0 otherwise, X_i is vector of all other determinants of participation in NREGS including number of cattle, religion, sex of head of household, household size, social group, religion, location proximity and variables showing political participation of the household and ε_i is the random error term. The impact of changes in the independent variables on the probability of NREGS participation is estimated by assuming a standard normal distribution. The coefficients β_1 , β_2 , β_3 indicate the impact of a change in the corresponding independent variable on the probability of participation in NREGS. I am interested in finding out the sign of the coefficient first and then the magnitude and statistical significance of the coefficients. If β_1 & β_2 <0 then participation in NREGS declines with size of land holdings and monthly per-capita income and consistent with the self-targeted design of the programme suggests that households with larger land holding and higher incomes are less likely to access the programme.

Going beyond the binary response model, I also use a censored regression (Tobit) model to estimate the link between the number of days of work and variables capturing various household characteristics. Based on the same specification (2) I run a Tobit model regression where $NREGSi$ is now treated as a censored variable (censored at 0) showing no. of days worked under NREGS since inception. These estimates will provide the marginal effects of various characteristics on the number of days accessed through the NREGS.

3.3 Issue of efficiency of PRI

3.3.1 A review of the debate.

At the drafting stage of the NREGA itself, the role of the GPs has been highlighted. The NREGS is designed as a program with a decentralized structure with GPs endowed with the power and authority to plan and implement the scheme with the active participation of the local people. The GPs are also accountable to their communities for the performance of the scheme (Vaidhyanathan, 2005:1586-87).

Research on the efficiency and ability of the GPs to fulfill their requirements is still at an incipient stage. Bela Bhatia and Jean Dreze (2006:3201) revealed that there are great lacunae in the institutional set up of the programme. They find that there is little difference between NREGA and the earlier employment programmes as National Food For Work Programme (NFFWP), Sampoorna Grameen Rojgar Yojona (SGRY) and the basic purpose of providing employment on demand at the statutory minimum wage is not close to being achieved. The study of PRIA[6], India (2008:8) stresses on the capacity building aspect of the programme implementing government institution i.e. precisely the Panchayati Raj Institutions (PRI) for the smooth and proper functioning of the NREGS. A study by the Planning Commission, India (2008c:10-11) also reveals that the programme implementing institutions (PRI bodies) are not able to provide employment on demand and on time. A majority of the households (82% in their large sample) expressed that they did not get work within the stipulated 15 days nor were they paid any unemployment allowances. Moreover, wage payments through bank or post office do not take place within a fortnight as enumerated in the guidelines.

3.3.2 The approach of this study.

Here I narrowly define *efficiency* in the sense of whether implementing government institutions (the Panchayati Raj Institution i.e. here GPs) are able to deliver a job and make the subsequent wage payments within the statutory 15 day limit as outlined in the NREG Act-2005). The main aim is to identify the time lag in terms of days between the date of start of work and the date on which payment is made. To trace this lag I analysed 70 individual schemes (representative no. of schemes from 2006-07 to 2009-10) located in 7 randomly selected Gram Panchayats in Birbhum. In addition, I examined whether jobs are created during the lean season. I analysed district monthly expenditure data on NREGS for last 3 financial years and studied whether there is an increase in expenditure during mid August to November as these are typically the lean periods in this area. To fulfill its role as a safety

[6] PRIA- Participatory Rural Initiative in Asia, an international NGO working on PRI issues, participation, decentralization. They recently published National Study Phase-II- the Role of Panchayati Raj Institution in implementing NREGA-2008

net it is expected that the programme should deliver better coverage both in money and person-days during this period.

3.4 Issue of Impact

3.4.1 A review of the debate

Apart from the targeting aspect there is also a live debate on the short and long run impact of such programs. While there is large literature on the impact of such programs, specific papers that deal with the NREGS are limited. However, a recent paper by Ravi and Engler (2009) uses panel data from Andhra Pradesh to measure the impact of the NREGS on participating households in terms of food security, probability of holding savings, anxiety level among low income households and non-food expenses. Across all these outcomes the authors find a positive and statistically significant impact. The key challenge in terms of isolating impact as noted by Ravi and Engler (2009:12) is that simple participant-nonparticipant comparison of outcome to assess the impact lead to bias-prone results. Ravallion and Datt (1995) pointed out that if the programme did not exist, workfare participants would not just be idle, but realize some income including output from subsistence production. Therefore the outcomes of interest of participants have to be corrected by foregone outcome (Ravallion and Datt, 1995:415; Haddad and Adato, 2001:3-5) or the performance of the participants has to be compared with that of *similar* group of non-participants (Jalan and Ravallion, 1999:4-10; Galasso and Ravallion, 2004:369).

3.4.2 The approach of this study

Since this NREGS is a self targeted workfare programme with differential disincentive (like unskilled manual labour work, unskilled piece rate of work, lesser coverage of other decent work environment etc.) for the non-poor, it is likely that households with lower income profile or economic prosperity will be more likely to participate. Accordingly, simple comparisons between participants and non-participants will not be a useful empirical strategy as economic outcomes such as consumption expenditure (and hence savings or loan) or income and number of days worked under NREGS will be simultaneously determined. Under such circumstances relying on OLS will lead to inconsistent and misleading estimates of the effect of the programme on outcomes.

To account for the simultaneous relation between household economic status and the number of days worked under the NREGS I turn to Instrumental Variable (IV) estimation techniques. The basic idea is to find variables which exert a strong influence on the number of days worked under the NREGS scheme but which do not have a direct effect on the outcome of interest. While the main challenge is

to find suitable instruments, an issue to which I will return in subsequent chapters, the mechanics of the approach are straightforward. Consider the two equation model below,

$$y_i = \alpha + \beta_1 NREGSi + \sum_{j=2}^{n} \beta_j X_{ji} + \varepsilon_i \quad \text{..... (3)}$$

$$NREGSi = \alpha + \beta_1 Z_{1i} + \beta_2 Z_{2i} + \beta_3 Z_{3i} + \sum_{j=2}^{n} \beta_j X_{ji} + u_i \quad \text{..... (4)}$$

$Cov(Z_{1i}, \varepsilon_i) = 0$
$Cov(Z_{2i}, \varepsilon_i) = 0$
$Cov(Z_{3i}, \varepsilon_i) = 0$
$Cov(NREGS_i, Z_{ki}) \neq 0 \text{ all k} = 1,2,3$

In the model above, y_i stand for the outcome of interest. To asses the impact on y_i I control for many other variables captured in Xji apart from NREGSi. In the second equation Z_1 ,Z_2, Z_3 are instrumental variables (IV) which are assumed to be correlated with NREGSi but are valid exclusions from (3).

In addition to variables which capture the economic status of the HH, I also asses the effect of the programme on a non-economic variable *'reduction of stress'*. This is an ordinal variable in my survey. During my survey, HH were asked to answer on the question,

'*Does this scheme (NREGS) reduce your anxiousness/worries/stress in terms of getting job? a) to a great extent b) moderately c) to a small extent d) extremely small e) not at all'*

I transform these responses into 3 specific outcomes. '0' as outcome-1 where responses e) are taken, '1' as outcome-2 where responses c) and d) are clubbed together, '2' as outcome 3 where responses a) and b) are clubbed together. Then my variable of interest 'reduction of stress' becomes an ordered variable with '0', '1', and '2' depending upon the order of response. To estimate this model I use an *Ordered Probit Regression* model.

Chapter 4:

Results and findings

4.1 Introduction

This chapter provides results and findings of my data analysis. This findings of the study draw upon information from 500 households, 2,249 individuals and 70 individual work schemes initiated under the NREGS. In addition, anecdotal evidence obtained during the field work is also used to supplement findings.

4.2 Results and findings on the issue of targeting

To examine the issue of 'who is accessing this programme', this study begins by exploring the data on the basis of bivariate statistical analysis and then provides an examination of this issue using probit and tobit regression models (as outlined in section 3).

4.2.1 Descriptive statistics - Targeting

To begin with the NREGS has been very successful in terms of disseminating information in a short period of time. In my sample survey, 99.40 % of households were familiar with the name of the scheme and it is by far the best known government scheme. For example, other schemes such as the IAY[7] and the SGSY[8] which have been in operation for longer periods of time are known by 61% of households and 56% of households in my sample. Although the scheme has started relatively recently, in terms of its potential outreach it is widespread as 84.60 % of household in my sample have a job card[9]. Among the job card holders 93.4 % household have applied for a job. More interestingly among the applicants, 68.35% of household said that they did not apply for the job by themselves rather they have been asked to do so by the Panchayat or some other agency like Gram Unnayan Samilty (GUS)[10] or PRI members. Among the applicants 95.95% of households have received jobs through the NREGS for at least one day since the inception of the programme in February 2006.

Table-5 provides information on the average person-days worked by those household who applied for NREGS job after having a job card. As the table shows, since inception, on average households have received about 20 days per year through the scheme as opposed to the 100 days. Additionally, the table shows that those who applied for NREGS job after being instructed by somebody else to apply

[7] IAY- Indira Awas Yojona, a schemes for building houses for below poverty line household having dilapidated housing condition.
[8] SGSY- Swarnojayanti Grameen Swarojgar Yojona, a schems for assisting self help group.
[9] See Glossary-3
[10] See Glossary-4

have got relatively larger number of person days of work compared to those who applied for a job by themselves. The relationship between the higher number of days for and being instructed to apply (by 'Gram Panchayat' or 'Panchayat Member', 'GUS Secretary' and local 'political person') is explored in more detail later on in this section.

Table-5: Average person-days worked with nature of Job seeker (i.e. who applied for Job).

Nature of Job seeker	No. of HH	Average no of person-days worked since inception of NREGS	Average no of person-days worked during last year in NREGS
Applied by themselves.	125	54.57	16.92
Applied as somebody else instructed to apply	270	64.40	19.65
Total	395	61.29	18.79

Source: Author's calculation from surveyed data from Birbhum District, West Bengal, India
Note: all the data refers till July 2009.

Tables 6 and 7 provide interesting information on accessing the NREGS and labour market returns. From Table 6 it is observed that those who have worked under NREGS in the last one year have received 24.36 days of work on average and earned Rs. 2126.01 at an average daily wage rate of Rs. 87. These same households have also worked in the Non-NREGS[11] sector for 339.19 days[12] on an average (household as a whole) and earned Rs. 26175.93 or an average daily wage rate of Rs. 77. These figures show that the non-NREGS labour market opportunities for those who have worked in the NREGS are not as attractive as working in the scheme.

Table-6: Comparison of value of Person-days in NREGS and Non-NREGS sector among those 304 HH who worked through NREGS during last one year after applying for Job.

Category of work sector	Average days worked as HH	Average Total Income (in Rs.)	Average daily-income from days of work (in Rs.)
In NREGS (as total HH)	24.36	2126.01	87.27
In Non-NREGS sector (as total HH)	339.19	26175.93	77.17

Source: *Authors Calculation from the surveyed data. Figure in the bracket showing the standard deviation*

[11] Here days worked in Non-NREGS sector includes sum of days of work in main occupation and subsidiary occupation other than NREGS. For detail elaboration please see annexure-5 and notes on definition.

[12] By *no of days of work* means how many days in a year HH as whole remained engaged in economic activity. For example if a person does 2 or 3 different economic activities in a day and if a person do only one activity (may be of 2 hr. or 8 hr.) in a day for both the person *no of days of work* worked during that day will be counted as one. Similarly we will define *no of days of work* for all member of the HH and then will add up to come up *no of days of work* worked as a HH.

The figures in Table 7 show that average income per working day for those who have not applied for NREGS jobs is far higher and clearly for them working in the non-NREGS sector is far more lucrative. As the figures show, non-NREGS options for those on the NREGS yield an daily wage rate of Rs. 77.67 while it is Rs. 190.26 for those household who have job cards but have not applied for jobs through NREGS, and it is Rs. 338.72 for those household who have no Job card at all. Thus, the programme appears to be successful in terms of supporting and attracting those individuals who do not have very good labour market alternatives.

Table-7: Comparison of Value of Person-days in Non-NREGS sector among different categories of HH.

Category of HH	Average Days worked	Average total Income	Average income from one working days
HH who Got Job through NREGS	337.59	26222.47	77.67
HH having Job card but not applied for NREGS	411.57	78307.71	190.26
HH having no Job card at all	384.51	130241.57	338.72

Source: *Authors Calculation from the surveyed data.*

Interaction of ' NREGS accessibility' with RHS Score[13]:

In my sample data set, 69.4 % households have been traced out that are enlisted in the RHS-2005 (prepared by Govt of West Bengal) among which 43.5% are BPL. Amongst these household (whose names are available in RHS), 76.65 % have got jobs through NREGS. The following table shows the interaction of 'NREGS accessibility' with RHS score. It is very interesting to note that those who have not applied for NREGS job (the bottom two categories of household in Table 8) have higher RHS scores, which implies they are further away from the poverty line (as RHS<=33 implies BPL). So Table 8 shows that those who have applied for NREGS job are living in the neighborhood of the poverty line. This pattern along with the earlier discussion (Tables 6 and 7) suggests that the NREGS appears to be much more likely to cater to the poor, that is, those with lower RHS scores.

Table-8: RHS status of Job seeker.

Nature of Household	Average RHS score
Those who applied for NREGS job by themselves.	35. 31
Those who applied for NREGS job as somebody instructed to apply	33.07
Having Job Card not applied for NREGS Job	43.91
Not applied because they do not even have the Job Card. (may be they don't need NREGS)	43.06

Source: author's calculation from the surveyed data

[13] See Glossary-5

Tables 9 & 10 show access to NREGS and number of days worked under NREGS with reference to the household lying below and above the state's poverty line reflected in RHS-2005. In my sample of 500 households there are 347 households who I have been able to locate in the RHS. Among these 347 households, 262 households have actually worked under NREGS for at least for one day since inception and out of 347, 219 households have worked for at least one day in NREGS during the last one year. It is again interesting to note from Table 9 that BPL household's participation is not only higher in comparison to APL but such representation is proportionately higher than the BPL household in total RHS itself. Moreover, no of days availed through NREGS reflected in table-10 is also higher for the BPL households as compared to APL households. This essentially shows greater access of NREGS by BPL households as compared to APL households.

Table-9: Comparison between APL and BPL in terms of getting access of NREGS (among those who worked for positive no. of day in NREGS and listed in RHS-2005)

Classification of household	% of HH got job under NREGS (since inception): (on total HH=262 out of 500)	% of HH got job under NREGS (during last one year): (on total HH=219 out of 500)	% of HH in Total RHS. (on total HH=347 out of 500)
BPL HH (RHS<=33)	51.15	52.97	43.52
APL HH (RHS>=34)	48.85	47.03	56.48

Source: author's calculation .from the surveyed data

Table: 10 Comparison of APL and BPL in terms of average no. of days worked (among those who worked for positive no. of day in NREGS and listed in RHS-2005)

Classification of household	No. of days worked under NREGS on average (since inception)	No. of days worked under NREGS on average (during last one year)
BPL (RHS<=33)	74.80	26.18
APL(RHS>=34)	64.46	24.12
ALL(RHS>=12)	69.75	25.21

Source: author's calculation .from the surveyed data

Interaction of ' NREGS accessibility' with land holding[14]:

In the sample of 500 households the average landholding of the household is 0.87 acre as against 0.73 acre for the district as whole. Among these, households with marginal land holding (i.e. less than 1 hectare or 2.471 acre as per NSSO, India) are 90.2%, households with zero land holding is 40.4% and *land less* households (i.e. land owned[15] <0.0049 acre as per NSSO, India) are 9.8%.

Table 11: Access of NREGS as per different Land holding Class.

Land Holding class (in acres)	% of HH in total Sample of 500 HH	% of HH those who worked under NREGS since inception of the programme (i.e. 370 HH)	% of HH those who worked under NREGS during last one year. (i.e. 303 HH)
Land holding=0	40.4	41.08	40.59
> 0 to < 0.5	14.2	16.22	15.84
0.5 to < 1.0	13.8	15.67	16.50
1.0 to < 1.5	11.2	12.43	11.88
1.5 to < 2.0	4.4	4.59	5.62
2.0 to < 2.471	6.2	4.59	4.29
2.471 and above	9.8	5.42	5.28
Total	100	100	100

Source: author's calculation .from the surveyed data

Table: 12 Land holding class wise average number of person-days worked

Land Holding class (in acres)	Average no. of person-days worked since inception of the programme	Average no. of person-days worked during last 1 yr.
Land holding=0	64.11	24.97
> 0 to < 0.5	62.72	21.25
0.5 to < 1.0	64.29	27.27
1.0 to < 1.5	67.61	22.75
1.5 to < 2.0	62.47	19.06
2.0 to < 2.471	53.53	24.61
2.471 and above	94.50	32.06
Total	65.43	24.49

Source: author's calculation .from the surveyed data

[14] Here land holding implies operational land holding which is sum of agricultural land owned and net lease in of agricultural land. i.e. Land Holding= (Agricultural land owned) + (Leased in Land) – (Leased out land).
[15] Land owned = (Homestead land + agricultural land owned)

Table: 13 Distribution of 'total person-days generated' as per land holding class of household.

Land Holding class (in acres)	% of HH in total Sample of 500 HH	Share of Person-days availed from total person-days generated by all participating HH within the sample (since inception.)	Share of Person-days availed from total person-days generated by all participating HH within the sample (during last one year)
Land holding=0	40.4	40.25	41.39
> 0 to < 0.5	14.2	15.54	13.74
0.5 to < 1.0	13.8	15.40	18.23
1.0 to < 1.5	11.2	12.85	11.04
1.5 to < 2.0	4.4	4.38	4.36
2.0 to < 2.471	6.2	3.76	4.32
2.471 and above	9.8	7.82	6.92
Total	100	100	100

Source: author's calculation .from the surveyed data

From table 11 it is quite clear that those who are availing NREGS work both since inception and during last one year by and large are small land holding households. Moreover, households with zero land holding are participating in highest percentage among all land holding class and their participation is higher than their total percentage in the sample itself. However, when we are looking at the average no of person days worked as per land holding class i.e. table 12 it is quite surprising that in spite of getting relatively less access in NREGS, households once entered in the programme are working considerably high no. of average person days if the household belongs to non-marginal land holding class. But, how far this phenomenon leading a real capture of the programme by the non-marginal land holding class that can be readily answered from the table 13. In my sample total person-days worked by all 500 households taken together are 24,208 since inception of the programme and 7,421 during last one year. Table 13 shows the distribution of the total person days generated by the programme to different land holding classes. It is evident from table 13 that non-marginal land holding classes account for a very small percentage (i.e. 7.82% since inception and 6.92% during last one year) of total person days generated through NREGS. Moreover, within the marginal land holding class there is an even distribution of total person days generated through this programme. In the lower tail of the land holding class such sharing is even better represented compared to the percentage in the sample itself and in the upper tails it is less represented compared to the percentage in the sample itself. The overall finding emerging from these three tables is that access to NREGS both since inception and during last one year is much higher for household with relatively lower land holding. This is essentially saying that if land holding is a proxy of economic prosperity of the household then relatively poorer households are more likely to participate in the NREGS.

But how far land holding correlates or establishes a causal relation with the poverty or economic status of the households is tested separately (see the appendix 5 & 6). Results[16] from these estimations confirm that land holding is a good predictor or proxy of household's poverty status and economic status.

Interaction of 'NREGS accessibility' with monthly per-capita expenditure adjusted after NREGS income (mpce_nregs):

As per the National Sample Survey Organisation (NSSO), India 61st round (2004-05), Rs. 382.82 (at 99-00 current prices) is the per-capita per-month requirement of consumer expenditure to stay just above the official poverty line in Rural West Bengal. Taking that figure into consideration and adjusting the per-capita per-month consumption expenditure of my sample with proper deflation with successive consumer price index and deducting per-capita income from NREGS, I generate the following table. Table 14 shows that households with relatively lower consumption expenditure are more likely to get a larger number of days of work under the NREGS.

Table 14: Access of NREGS and BPL threshold consumer expenditure.

Category of HH as per MPCE	No of days worked under NREGS on average (since inception)	No of days worked under NREGS on average (during last one year)
mpce_nregp<= Rs. 382.82	83.54	32.26
mpce_nregs>Rs. 382.82	60.27	22.07
All HH	65.42	24.49

Source: author's calculation .from the surveyed data
Note: Rs. 382.82 is the per-month per-capita Rural Expenditure for West Bengal as per the NSSO 61st Round 2004-05, here monthly per capita expenditure adjusted after NREGS income and rate of inflation.

[16] With fall in land holding a household likely to be a poor (as per BPL score under RHS) increases in a statistically significant manner under Probit estimate of BPL (appendix-5) and under OLS estimates of household economic status (appendix-6) on land holding showing as land holding increases $mpce_i^{adj}$, mpi and savings increases significantly.

Table 15: Access of NREGS and Different Class of MPCE adjusted after NREGS income.

Class of MPCE_NREGS (in Indian Rupees)	% of HH accessing NREGS	% of HH in the total sample of 500 HH	Share (in %) received from total generated person days (since inception)	No. of person-days worked under NREGS on average (since inception)
<=100	0.27	0.2	0.55	134
>100 to 200	1.89	1.6	3.19	110.28
>200 to 300	8.38	6.6	8.99	70.26
>300 to 400	14.86	11.8	18.99	83.62
>400 to 500	19.72	16.8	22.93	76
>500 to 600	16.76	16	16.57	64.71
>600 to 700	14.05	12.4	11.14	51.88
>700 to 800	9.19	9	6.72	47.76
>800 to 900	4.32	4.6	4.51	68.125
>900 to 1000	3.24	4.4	1.67	33.66
>1000	7.32	16.6	4.74	42.5
Total	100	100	100	65.43

Source: Authors' Calculation for the surveyed data

From table 15 it is evident that lowest four consumption classes representing 20.2% households in the sample but they are sharing 31.72% of total generated person-days through NREGS. On the contrary highest 4 consumption classes representing 34.6% households in the sample but they are sharing only 17.64% of total person-days generated through NREGS. Moreover, comparing column 3, 4, 5 in table 15 it is also clear that lower consumption classes are better represented both by share of total days and by no of person-days worked.

Therefore both by land holding and by consumption expenditure it is apparent that poorer households are mostly accessing this NREGS.

Interaction of* 'NREGS *accessibility' with political participation

During the survey respondents were asked whether any member from their household had participated in the election campaign in the West Bengal Panchayat Election (2008) and Indian Parliamentary Election (2009). The immediate question after this was for which party they campaigned and voted for. For the 1st question almost all the respondent replied with yes or no but for the following question we received different kinds of responses - some clearly responded by stating the name of the party they had voted for while the rest either did not respond or said they did not vote. We treat this non respondent category of household as either apolitical or non-political category and termed them as '*No vote'* category as against '*vote left'* and '*vote non-left*'. In table 17 the responses to these questions are classified in three categories. *Vote left* means they voted and campaigned for the ruling coalition i.e. either CPIM or CPI or Forward Block or RSP, *vote non-left* means they voted and campaigned for either Congress or TMC or BJP or Nirdal (protested left) or SUCI and *no vote* means either did not

vote and campaigned or not responded. Table 16 shows that there is little dividend in terms of accessing a greater number of working day in NREGS, if somebody takes part in election campaigns. However, table 17 shows that those who voted and campaigned for the left worked for 79.43 days on average (since inception) under NREGS and have access to 41.99 % (highest among all 3 categories) of total person-days created since inception of the programme in spite of accounting for only 31.6% of the sample. While it is possible that this simply reflects that the poorest households are more likely to vote for the left, we will investigate this aspect in more detail in the subsequent multivariate regression analysis where we will control for both poverty and party affiliation.

Table 16: Access of NREGS and campaign during election.

Take Part in the campaign(any member from HH)	% of HH	No of days worked under NREGS on average (since inception)	No of days worked under NREGS on average (during last one year)
Yes	52.52	68.71	26.27
No	47.48	61.14	22.12
Total	100	65.42	24.49

Source: Authors' Calculation for the surveyed data

Table 17: Access of NREGS as per Political Inclination (through campaign and vote)

Party Inclination	% of HH in total Sample of 500 HH	% of HH those who worked under NREGS since inception of the programme (i.e. 370 HH)	Share (or %) of Person-days availed from total person-days generated within the sample since inception.	Average person-days worked in NREGS (since inception)
Vote Left	31.6	34.59	41.99	79.43
Vote Non-left	27.4	28.38	25.20	58.11
No-Vote	41	37.03	32.79	57.95
Total	100	100	100	65.42

Source: Authors' Calculation for the surveyed data

Interaction of* 'NREGS *accessibility' with Social Group or Caste.

Finally, this study examines the interaction of NREGS accessibility with Social Group or Caste. Historically the Scheduled Caste (SC) and Scheduled Tribes (ST) community in India have been economically and socially deprived and it is likely that they are not able to access this programme. Table 18 shows that this is not the case. It is clear from this table that SCs and STs are better represented in the NREGS in terms of getting access of the programme and also availing proportionately higher share or percentage of total person-days generated through this programme in comparison to their own share in the sample household.

Table 18: Access of NREGS as per different Social Group or Caste

Social Group or caste	% of HH in total Sample of 500 HH	% of HH those who worked under NREGS since inception of the programme (i.e. 370 HH)	Share (or %) of Person-days availed from total person-days generated within the sample since inception.
General (Bramhin)	4.20	1.08	0.46
General (Non-Bramhin)	44.00	40.54	32.83
OBC	6.00	5.14	3.45
SC	41.80	48.38	56.43
ST	4	4.86	6.83
Total	100	100	100

Source: Authors' Calculation for the surveyed data

4.2.2 Regression based results and findings on targeting

4.2.2.1 Accessing the programme – Probit estimates

From the binary response model (i.e. probit model, estimates are provided in appendix 1 with different specification 1-5), based on different specifications, the following common findings emerge. I provide comments only on those determinants which are *statistically significant*.

Probability of getting access of NREGS job [i.e. P ($nregs_i$=1)] falls:

1) By 3 to 6 percentage points (depending on the nature of specification) with a 1 acre increase in land holding.
2) By 6 to 13 percentage points (depending on the nature of specification) if HH leases in land for cultivation instead of not leasing land.
3) By 1 to 2.5 percentage points (depending on the nature of specification) for every Rs.100 increase in monthly per-capita expenditure adjusted after NREGS.
4) By 13 percentage points (with specification-2) if household did not vote instead of voting for the left during the last election. Here, it is interesting to note that there is no statistically significant difference in accessing NREGS job if the household voted non-left instead of voting for the left.
5) By 4 percentage point (with specification-5) for every 10 point increase in RHS score

On the other hand probability of getting access of NREGS job [i.e. P ($nregs_i$=1)] increases –

1) By 3.4 to 3.5 percentage point (with specification 1 and 2) with the increase of one cattle in the household.
2) By 15 to 16 percentage points (with specification 1 & 2) if household's social Group is SC or ST instead of General caste.
3) By 7.6 to 9.2 percentage point (with specification 3, 4, 5) if the member of household knows the payment pattern of the NREGS instead of not knowing the procedure.

So if we assume higher land holding, land lease in feature, higher monthly per-capita expenditure, higher RHS score, General caste (higher caste in the society) are as good proxy of comparatively more prosperous household (which has already established through significant nexus between *Land holding-Poverty-Economic Status'* in previous sub-section- see also the appendix 5 and 6), then from the above findings one can say that targeting of NREGS at least in terms of access is working quite well. However, how far such trend persists in accessing the actual no of person-days, we have to dig more.

4.2.2.2 Number of days worked in NREGS since inception – Tobit Estimates

After having an idea on the issues related to accessing the programme, this sub section will try to predict the factors which are actually determining the extent of person-days worked through NREGS. After running the Tobit regression of *Number of days worked under NREGS since inception* on many factors related to household, following are the factors which appeared with significant statistical result among those are economically significant too (Tobit Regression and results are given in appendix-2).

Land effect:

'Land holding' is no more a significant determinant of availing jobs in terms of person-days in NREGS. Rather holding of 'Irrigated land[17]" plays a crucial role. If the *irrigated land holding* increases by 1 acre, then number of days worked under NREGS since inception decreases by around 4.5 days on average (specification-1). And it is to be noted that irrigated cultivable land is more precious than only cultivable land as irrigated land allows one to cultivate even in the non-monsoon period through the irrigation facility.

[17] Irrigated land is that kind of land where HH can cultivate even in non-monsoon period with the help of the available external irrigation facilities. HH with more irrigated land beside other cultivable land are treated as more prosperous HH.

Social Group effect:

There is huge effect of social group. The marginal effect of being a SC household as compared to belonging to the General caste is 13 to 18 days (depending on different specification). If the household is ST instead of being a General caste then the marginal effect ranges from 16 to 30 days (depending on different specification).

Religion Effect:

There is also the religion effect on the no. of days of work under NREGS. If the household is a Hindu instead of being Muslim then chances of getting jobs under NREGS reduces by 3 to 7 days (depending on different specification).

Party effect:

In the Tobit model under all the specification it is quite clear that there is consistent and significant (both economically and statistically) effect of political inclination on the no. of days worked under NREGS. Those who have campaigned and voted for non-left (i.e. supporter of non-left) received on an average around 7 days less under NREGS as compared to those household who voted for the left (i.e. the supporter of left i.e. the ruling coalition) and the difference is much sharper for those who have not voted (may be due to dejection about politics or may be due to indifference towards politics). For this category of household they received around 11 to 12 days of less NREGS work as compared to those who voted and campaigned for the left.

Awareness effect:

This is very interesting to mention that household who knows about the payment procedure and measurement procedure of the NREGS programme are getting on an average 10 to 13 days more NREGS job in comparison to those households who worked under NREGS but do not know the exact payment and measurement procedure of the work.

Monthly consumption Expenditure (adjusted after NREGS income) effect

From this Tobit regression this is also evident that with the rise in monthly consumption expenditure adjusted after NREGS (mpce_nregs), the no of person-days worked under NREGS decreases. Considering different model specification (1 to 4), if mpce_nregs of household increases by 100 Rupees then person-days worked under NREGS falls by 2 days. This means referring table 15, the lowest 2 consumption class will get around 14 days more job compared to the two highest consumption classes.

4.2.3 Conclusion on Targeting

So from descriptive stat analysis and regression based results on targeting aspect of NREGS it is to be asserted that there is no apparent evidence of mis-targeting in terms of access of NREGS keeping in view on the underlying objective of this self-targeted programme. After establishing the nexus between *Landholding-household's economic status-Poverty* with many other determinants of poverty, it is fairly comprehensible that NREGS in Birbhum district, West Bengal has not been mis-targeted through relatively higher non-poor participation. However, it has been partly tempered by those household who have a left inclination. On the other hand, NREGS is giving lesser dividends at least in terms of person-days worked under this scheme for those households which have 'left' alienation.

4.3 Results and findings on the issue of efficiency of the PRI

This sub-section will focus on the issue of the efficiency of the PRI from 3 different angles. First, I will examine the efficiency of PRI from payment lag perspective on the basis of 70 individual scheme based case studies i.e. whether GPs have been able to ensure wage payment within 15 days of start of each scheme. Second, efficiency will be judged on the basis of average person days created as against people's expectation in 13 sample GPs. Third, efficiency of the PRI will be investigated from lean period perspective based on secondary data on person-days creation and expenditure on NREGS available at the district level and responses on lean period job in primary survey.

4.3.1 Tracking payment delays

In this section we will focus on institutional efficiency more precisely efficiency of GP. I have already mentioned that here efficiency refers only to whether the institutions have been able to deliver wages of labourers who have worked under NREGS within the stipulated 15 days maximum time limit. To trace the overall lag between date of start of work to date of payment and to identify the source of the delay I noted the following dates in each step of the process from inception of work to payment:

1. *Date of start of work*: on which the work of a particular scheme starts with a minimum number of workers. (Source: Schemes register)
2. *Date of 1st measurement:* on which the technical person from the GP measures physical output of work done after 1st round of work. Then this physical output of work was converted into person-days equivalence on the basis of the piece rate of work. (Source: Measurement Book/sheet)

3. *Date of Muster Roll preparation:* on which clerical work to covert the physical output of work in terms of person-days are made to each worker in the form of muster roll. It is a list of names of workers with corresponding physical output of work and equivalent money as wages that a worker will receive after doing work in that round for which measurement has been done. (Source: Muster roll files)
4. *Date of advance received or payment advice sent to bank/ post office for payment:* After preparation of muster roll, amount of money to be paid as wages are drawn as advance (before the institutional payment system) by the GP officials from the GP's bank account or the officials send a payment advice for each worker to the disbursing bank or post office (after the institutional payments system was installed). (Source: GP Advance register)
5. *Date of Payment:* The exact date on which payment has been made or workers were received money as their wages. This date has been traced from the job-card or bank/post office account pass book of workers.

After tracing out these dates from 70 individual schemes over 2006-07 to 2009-10, I defined 1st round lag as the ***measurement lag*** i.e. lag between *Date of start of work* and *Date of 1st measurement,* then the 2nd round lag as the ***muster roll lag*** i.e. lag between *Date of 1st measurement* and *Date of Muster Roll preparation* and finally the 3rd round lag as the ***disbursement lag*** i.e. lag between the *Date of Muster Roll preparation* to *Date of Payment.* The ***total lag*** is the lag between *date of start of work* to *Date of payment.*

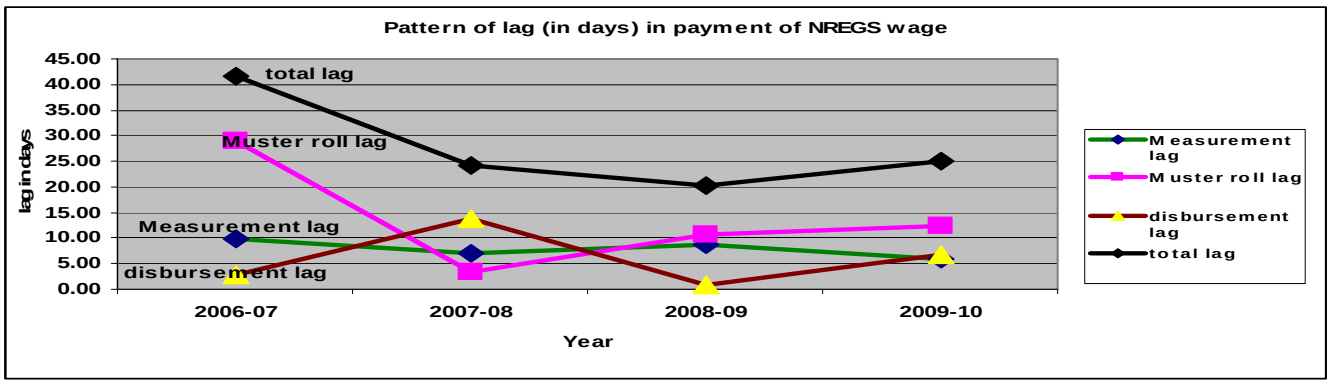
Findings from these case studies-

Table: 19: Total Payment lag and its break up over the years.

Year	**Measurement lag**	**Muster-roll lag**	**Disbursement lag**	**Total lag**
2006-07	9.87	29.00	2.80	41.67
2007-08	6.95	3.32	13.86	24.14
2008-09	8.61	10.67	0.94	20.22
2009-10	6.00	12.25	6.88	25.13
Average	8	12.67	6.65	27.32

Source: Calculated from field surveyed data by the author

Figure: 3 Pattern and composition of Payment lag of NREGS wage.



Source: Calculated from field surveyed data by the author

From the table 19 and the figure 3 it is evident that-

1. The average lag in my 70 odds individual scheme based case study is 27.32 days i.e. labourers are getting their daily wages every time after almost one month lag though it is mentioned in the schemes guide line that payment has to be made within 15 days of start of work. Moreover, such delayed payment negates the basic spirit of the safety net argument of NREGS.
2. 1st round lag is 8 days
3. 2nd round lag is 12.67 days
4. 3rd round lag is 6.65 days.
5. But if we look at the figure-3 then we can see from 2006-07 to 2008-09 the total lag on an average is falling but it again starts increasing from the end of the 2008-09, specially the period from when institutional payments begin to start.
6. In this sample of 7 GPs from where these case studies were drawn Harisara GP under Sainthia Block of Birbhum District registered highest average total payment lag of 64.6 days and Rupuspur GP under Khoyrasole Block of Birbhum District register lowest lag of 13.75 days.

4.3.2 Days created versus days desired

Table-20 provides information on the number of person-days created as against the desire for jobs in 13 Gram Panchayats. Overall, the figures show that the number of desired days per year is 204 while the days actually created is 61 days since inception or only about 20 days per year. Thus, the program is meeting about 10 percent of the demand for jobs while at the same time meeting only 20 percent of legal provision of 100 days. There is substantial variation in job creation across GPs with the best performing GPs creating about three times more jobs than the laggards. Clearly, the gaps across GPs deserve special administrative attention in order to identify the reasons for such a dismal performance.

Table 20: GP wise average person-days creation (based on sample household)

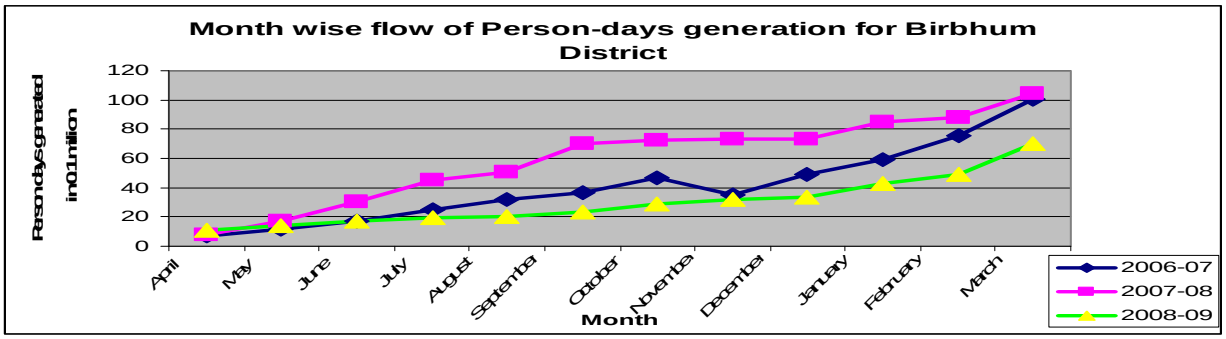
Rank on the basis of sample survey	Name of the GP	Average no of person-days generated since inception of NREGS	Average no of person-days wish to get in a year (feed back from HH respondent)
01	Khoyrasole	92.87	177.78
02	Panrui	84.75	157.22
03	Kundala	83.00	197.13
04	Parulia	81.42	213
05	Harisara	80.77	201.13
06	Bahiri Panch Soya	71.23	231.73
07	Rupuspur	51.38	245.31
08	Gonpur	45.80	168.65
09	Joydeb	40.03	216.78
10	Barrah	39.40	219.4
11	Mollarpur-II	29.63	249.54
12	Ulkunda	28.07	185.07
13	Bajit pur	27.26	159.63
	Total	61.29	203.84

Source: Calculated from field surveyed data by the author

4.3.3 Seasonality of NREGS performance- looking efficiency of PRI from safety net perspective.

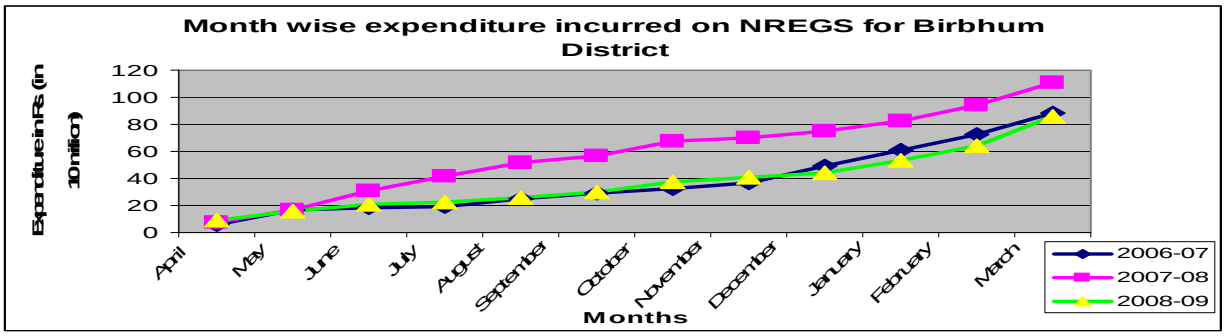
Based on secondary data from the Birbhum district, figure 4 & 5 depict the seasonality of the NREGS performance in terms of person days creation and the expenditure incurred on NREGS. Both the figures demonstrate that person days generation and expenditure on NREGS are gradually increasing from beginning to end for each of last 3 financial years. Both figures confirm the fact that the programme performed much better at least in terms of these 2 indicators for the financial year 2007-08 and for this year Birbhum was the highest spending district among all the districts in West Bengal. Year 2008-09 was a poor performing year as compared to the last 3 years. Expenditure and person days generated increases quite sharply at the end of each financial year implying there could be a pressure from the upper tier of government to spend money within that year so that spill over of money remain less. This trend essentially portrays the truth of administrative phenomenon of spending at the fag end of financial year. On the contrary when there is real need for creation of jobs specially in the lean period i.e. mid of August to mid of November, there is hardly any increase in the spending or job creation pattern and there by negating the possibility of promoting this programnme as a safety net in the lean period. We will check that aspect in next table 21.

Figure 4: Seasonality in person days creation:



Source: Office of the District Nodal Officer, NREGS, Birbhum District, Govt. of West Bengal

Figure 5: Seasonality in expenditure made on NREGS



Source: Office of the District Nodal Officer, NREGS, Birbhum District, Govt. of West Bengal

Table 21: Nature of Employment during '*LEAN PERIOD*' (Mid of August to End of November) within sample HH (those who got job through NREGS also).

Year	Average Days availed through non-NREGS	Average Income earned through non-NREGS	Average income from one working day through non-NREGS	Average Days availed through NREGS	Average Income earned through NREGS	Average income from one working day through NREGS
2006-07	41.76	826.01	19.78	5.25	361.2	68.80
2007-08	42.71	984.89	23.06	3.55	264.83	74.60
2008-09	42.12	1221.48	29	3.41	281.49	82.55
Average	42.19	1010.79	23.96	4.07	302.51	74.32

Source: Calculated from field surveyed data by the author

From Table 21 it is clear that in the agricultural lean period (as defined by Middle of August to End of November) NREGS has not served as an alternative source of livelihood. This period is typically characterized as severe scarcity of livelihood opportunity due to drying up of typical agricultural activity. Poor rural household has to cope up this situation typically either by distressed migration or selling durable possessions including livestock, utensils etc. The occasional jobs which are available in this period do not ensure any steady source of income. From the table 21 such phenomenon is also

evident from 4th column which shows how unproductive the days of work under non-NREGS sector. Surprisingly the jobs created through NREGS during this period are abnormally low meaning NREGS not at all appearing as a income safety net for these household. Anecdotes received from implementing PRI bodies that during this lean period monsoon does not allow to do earth work which is again predominant component of work under NREGS.

4.3.4. Conclusion on Efficiency of PRI

In section 4.3.1 to 4.3.3 we discussed institutional efficiency from 3 perspectives viz.

i) from payment lag perspective based on 70 case studies,
ii) from average person days created as against the people's expectation based on 13 sample GP
iii) from lean period perspective based on secondary data on person-days creation and expenditure on NREGS available at the district level and responses on lean period job in the primary survey.

From these case studies it is evident that implementing government institutions i.e. GPs seem to fail the efficiency of delivering the wages in 15 days due time as mentioned in the programme guide line. Though, over these 4 years total payment lag is by and large falling. However, an important question is whether the poor can afford this lag or whether these delayed payments are creating any disincentive for the participating households to remain employed in the programme. Moreover, how far these lagged payments reduce the stress or anxiety of the participating household in respect of joblessness is also an important point of concern. I will argue on this aspect again after accessing the impact of the programme on the household economic status along with its level of stress or anxiety related to joblessness in sub-section for impact. Person-days created against person-days desired to work seem also gloomy as the programme has been able to deliver only around 20 days average per year as against 204 days of expectation and 100 days legal obligation. Similarly NREGS has not been appearing as a source of safety net income by providing jobs in the lean period.

From these analysis of efficiency it is being revealed that PRI bodies and more precisely the GPs are not able to provide payments of wages in stipulated time frame as in the guideline, they are no way near to the people's expectation nor achieving the national average and finally the district trend and sporadic responses are showing that NREGS is not serving as a source of income safety net.

4.4 Results and findings on the issue of impact

After examining the targeting and efficiency aspects of NREGS this section turns to an examination of the impact of the program. More specifically, the paper investigates the impact of NREGS on household's monthly per-capita consumption expenditure, monthly per-capita income, total savings, total loan or outstanding debt and on reduction of stress or anxiety related to joblessness.

4.4.1. Impact on Household economic status:

OLS and IV regression estimates of the impact of NREGS

The main challenge in terms of identifying the impact of NREGS on outcomes is that due to the self-targeted nature of the programme households with the weakest economic outcomes are most likely to participate in the program and hence unless one can credibly control for other observed and unobserved characteristics that have a bearing on economic outcomes it will be difficult to obtain an unbiased estimate of the impact of the NREGS programme on economic outcomes. While it is difficult, this paper attempts to isolate the impact by first using OLS to compare those who access the NREGS programme with different control groups and second by using various control groups and an instrumental variables strategy (as outlined in chapter 3).

4.4.1.1 OLS estimates:

The paper assesses the impact of NREGS days of work on monthly per-capita income, monthly per-capita consumption expenditure, total savings and total loans. I begin by running OLS regressions based on the same specification for (i).All 500 HH – comparisons between those who access the NREGS and those who don't (ii) 423 households, that is, restricting the sample to those households who have a job card (iii) 395 households, that is, restricting the sample to those households who have applied for a job (iv) 379 households who have worked in NREGS. OLS estimates are presented in Table 22. From different combination of household as mentioned above (i to iv) one would be more interested to see the impact of NREGS days of work on outcome of interest for those households who have finally worked in NREGS i.e. in this case 379 households. From table 22 it is being observed that the OLS estimates are showing a negative relationship between 'NREGS days of work since inception' with income and expenditure and moreover these relations becoming statistically insignificant as one move from all households combination to only those households who finally worked in NREGS. The negative relation under OLS is not unexpected as the NREGS uptake is highest amongst the poorer and one would expect that an OLS specification displays such a pattern.

4.4.1.2 IV estimates

While the OLS estimates display that there is no statistically significant link between number of NREGS days and various economic outcomes, this may be driven by the endogeneity between participation in NREGS and economic outcomes (already discussed in part in section 3.4.2). To control for this I now use an IV approach. The main challenge is to find variables that have a bearing on access to NREGS but do not directly determine consumption (other economic outcomes). As I argue below, I use household political affiliation (vote left, vote no left, no vote,) and awareness of the NREGS payment procedure as instruments for NREGS participation.

Rationale for choosing instrumental variables:

Economic Logic:

In my bunch of 3 IV precisely I have two categories of variable. One as the political variable which comes from the answer against the question related to respondent's participation in election campaign and voting behavior during last two elections held in 2008 and early 2009. Another variable is like awareness about NREGS. Now in the context of West Bengal where left party rule is in operation from last 32 years and given the literature of clientelistic relation with left-party and different schemes beneficiaries my assumption is following-

Current period consumption, income, savings and loan will not be affected by such political participation which is heavily shaped by prolonged party-structure and party-machinery in last 32 years, rather dynamics of change of those economic variables (income, consumption, savings, loan) should have a systematic impact of such prolonged patron client relation influenced by specific political inclination.

However, direct benefit like NREGS could highly be distributed or tempered according to explicit political inclination even in the short run. On other hand awareness about NREGS could also imply the household or the individual is an advanced one and through same logic such advanced character of household should affect the change or dynamics of change of household economic variables or status but it will not significantly affect current period consumption, income, savings, loan in a significant way. Current period of consumption, income, savings, loan are more susceptible to sudden shock occurring in the very recent time like sudden flood, occasional deferred monsoon, bad harvest, experiment with new cash crop etc. On the other hand both political inclination and general awareness in this context are in no way sudden to the household and establishing direct non-association with current consumption, current income, current savings and current loan.

Econometric logic:

Condition for Relevance: I checked this condition by test of significance (via F test) between proposed IVs and NREGSi i.e. no of person days worked since inception of the programme. Eventually I got statistically significant results in terms of association between IVs and the NREGSi. Moreover, Tobit estimates have already gave us such a hunch in section 4.2.2.2

Condition for exogeneity: I checked this by looking at the statistically insignificant relation between IVs and the out come of interest.

Test for Validity of IV: Since this study proposes 3 IV for one endogenous regressor so it's become over identified. Then I ran the Sargan- Hansen test for validity of these IVs. This test allowed me to comment that residuals of IV estimates is uncorrelated with the proposed IVs i.e. they are truly exogenous. Apart from the chi-square Sargan-Hansen test statistics, exogeneity (and hence validity) is also evident from highly insignificant (extremely high 'P' value) relation between predicted residual of IV estimate and the proposed IVs.

4.4.1.3 Interpretation of Results of IV regression of impact of Household's economic status:

Table 22 shows the basic glimpses of the findings from IV estimation in comparison of the OLS to assessing the impact of NREGS days of work on log of monthly per-capita income (as lnmpi), on log of monthly per-capita consumption expenditure (as lnmpce), on total savings and on amount of loan or debt as remained outstanding.

Table: 22 impact of NREGS on HH economic status (detail estimation results are in the Appendix: 3)

Co-efficient of *'NREGS days of work since inception'* across different combination of HH under different estimation techniques.	**on *lnmpi***	**on *lnmpce***	**on *savings***	**on *loan***
OLS with all 500 HH	-0.0017239*** (0.0005185)	-0.0015293*** (0.0004471)	-93.24394** (4174776)	-29.57186 (27.86042)
OLS with 423 HH having Job-Card	-0.0007221 (0.0004988)	-0.0008327* (0.0004546)	-40.48589* (23.70982)	-26.54515 (28.49141)
OLS with 395 HH applied for job after having Job- Card	-0.000398 (0.0004995)	-0.000539 (0.0004718)	-18.19673 (12.03248)	-26.59956 (29.68626)
OLS with 379 HH who got the job after application	-0.0002409 (0.0005158)	-0.0004066 (0.0004882)	-21.60545* (12.84042)	-13.48738 (27.01507)
IV with all 500 HH	-0.0045348* (0.0025334)	-0.0058333*** (0.0020605)	-494.5025 (342.0592)	204.9259 (168.8276)
IV with 423 HH having Job-Card	-0.0022214 (0.0024991)	-0.0027282 (0.0020341)	-169.3132 (159.7635)	-43.85535 (105.31)
IV with 395 HH applied for job after having Job- Card	-0.0005601 (0.0026102)	-0.0012582 (0.0021329)	90.64136 (88.20285)	-58.89972 (110.0223)
IV with 379 HH who got the job after application	0.0004979 (0.0030157)	-0.0002761 (0.0024318)	102.4618 (103.1885)	-79.20647 (111.763)
*** p<0.01, ** p<0.05, * p<0.1 , Robust standard errors in parentheses				

Source: Calculated from field surveyed data by the author

To account for the simultaneous determination of the consumption expenditure (or income) and the number of days worked under NREGS I introduced the IV estimation technique with 3 IV said earlier. Table 22 shows that once I control for endogeneity across all measures of economic status of household the link is still insignificant. The point that emerges from this is that if one compares those who get a lot of work from NREGS with those who don't there is no statistical discernible difference in the economic status of those who get more as compared to those who get less. If this is so that those who get more days are the same in terms of impact on economic status as those who get less then it tells us that in the absence of the programme the levels of consumption of the two groups would not differ. This suggests that in absence of the programme those who have more days from the programme would have got jobs elsewhere which would have allowed them to have same consumption as in a situation where they have jobs in NREGS. So the programme is not creating effectively any new jobs in terms of person-days instead it is substituting. Therefore it seems that NREGS is appearing as substitute means of employment not as complementing or newer source of jobs. But if this is so then why the households are participating or availing these jobs as a substitute source. Does it have any psychological advantage because of being a government's guaranteed programme? Or is it providing any other benefit in terms of reducing stress or anxiety related to availability of jobs at any time? To examine this issue the next section will try to find out the impact of the NREGS on the 'reduction of the stress' related joblessness.

4.4.2 Impact of *'NREGS days of work since inception'* on *'reduction of stress' related to joblessness*

As mentioned earlier ordered probit regressions are used to investigate the effect of the NREGS programme on reducing job-related anxiety. Table 22 shows marginal effects for different samples. For the most part these effects are similar across the various samples and indicate that:

1) Probability of out come-1 i.e. 'reduction of stress=0' to be 1 falls with an increase in the no. of days worked in the NREGS i.e. as household works for one extra day in the NREGS then it is less likely the case that 'NREGS not at all reduces the stress or anxiety related to joblessness'.
2) Probability of out come-2 i.e. 'reduction of stress=1' to be 1 is falling with the increase in the no. of days worked in the NREGS i.e. as the household works for one extra day in the NREGS then it is less likely the case that 'NREGS reduces the stress or anxiety related to joblessness in to some extent'.

3) Probability of out come-3 i.e. 'reduction of stress=2' to be 1 is increasing with the increase in the no. of days worked in the NREGS i.e. as the household works for one extra day in the NREGS then it is more likely of the case that "NREGS reduces the stress or anxiety related to joblessness in a greater extent" .

So this implies that with the participation in the NREGS, the likelihood of the incidence of stress or anxiety related to joblessness within the household reduces across all different combinations.

Table: 23 Impact of NREGS on the reduction of stress (ordered probit estimate) (Appendix-4: detail results)

Co-efficient of *'NREGS days of work since inception'* across different combination of HH under different estimation techniques with same specification.	**Magnitude of the Co-efficient in OPROBIT**
Ordered Probit Regression	
With all 500 HH under ordered Probit regression	
OPROBIT Co-efficient	0.0085981*** (0.0014883)
Marginal effect under OPROBIT on the outcome-1	-0.0027472*** (0.00047)
Marginal effect under OPROBIT on the outcome-2	-0.0002669 (0.00021)
Marginal effect under OPROBIT on the outcome-3	0.0030141*** (0.00053)
With 423 HH (having Job-Card) under ordered Probit regression	
OPROBIT Co-efficient	0.0076823*** (0.0014788)
Marginal effect under OPROBIT on the outcome-1	-0.0022802*** (0.00043)
Marginal effect under OPROBIT on the outcome-2	-0.0005029** (0.00021)
Marginal effect under OPROBIT on the outcome-3	0.0027831*** (0.00054)
With 395 HH (applied for job after having Job- Card) under ordered Probit regression	
OPROBIT co-efficient	0.0071087*** (0.0014675)
Marginal effect under OPROBIT on the outcome-1	-0.0020121*** (0.00041)
Marginal effect under OPROBIT on the outcome-2	-0.0006087*** (0.00022)
Marginal effect under OPROBIT on the outcome-3	0.0026208*** (0.00055)
With 379 HH (who got the job after application) under ordered Probit regression	
OPROBIT co-efficient	0.006518*** (0.0014766)
Marginal effect under OPROBIT on the outcome-1	-0.0017694*** (0.0004)
Marginal effect under OPROBIT on the outcome-2	-0.0006555*** (0.00023)
Marginal effect under OPROBIT on the outcome-3	0.0024249*** (0.00055)
*** p<0.01, ** p<0.05, * p<0.1 , Robust standard errors in parentheses	

Source: Calculated from field surveyed data by the author

4.4.3 Conclusions on impact.

This subsection focused on the impact of the programme on economic and non-economic variable outcomes. The estimates showed that there is no significant impact of the NREGS on economic outcomes but there is a statistically significant impact on the reduction of stress. One possible explanation for the limited impact of the programme on economic outcomes is that the NREGS may not be creating any new jobs but substituting for existing jobs. Some of the information gathered during field work supports the idea that NREGS jobs provide a better working environment and individuals may prefer to move away from jobs in the private sector to an NREGS job. For instance, 78.70% HH responded that NREGS providing a better work-side environment as compared to the jobs available in the open market. At the same time 66.39% of the respondents said even if there was no NREGS it would not matter as they would look (and find) available alternative jobs. These responses combined with the limited number of days provided by the NREGS as compared to the annual demand supports the idea that at the moment in Birbhum district the main contribution of the programme is not in terms of improving economic outcomes but providing better quality jobs (better work environment and higher daily wages rates than the market, Rs. 80 as against Rs. 65.08 for unskilled workers). The estimates suggest that unless the programme gets closer to its target of providing 100 days, its impact on improving economic outcomes is likely to be limited. Following case study from the field also supports the argument that the NREGS does have the potential of improving economic and social outcomes if it could be delivered in greater extent.

Case Study-: Tulsi Bauri: A frustrated optimist woman.

Tulsi Bauri, a widow of age around 60 living with her only son and their family in Bagdhori Mouza of Sansad-III of Harisara GP, Sainthia Block, Birbhum District. This family has 6 heads, Tulsi and her son and daughter in-law and their 3 kids. Besides being a Below Poverty Line HH, this HH does not posses any cultivable land or any kind of other income generating assets. Even after many attempts after the death of her husband, Tulsi did not manage to get the Widow Pension from the government. At present her son Ranjit, a 32 year old man is the only bread earner of this poor HH. Apart from occasional NREGS work through Panchayat, Ranjit manages to get job mainly from Stone Crasher Unit which is 4-6 kilometer away from this village. According to Tulsi, the daily wages in Crasher vary widely ranging from Rs. 30 to 300 in a day depending on availability of the workers on the spot on the very day. During the time of survey Tulsi was trying to convince us how vulnerable this job is and was asking us if we could do anything about it. Ranjit has to start his journey from home for Crasher work very early in the morning just to get an early contract there but for many days in a month such early departure eventually can not ensure a good deal or a deal at all at the end. When Tulsi was asked to response on the choice between NREGS work vis-à-vis Crasher as a source of livelihood, she was responding just instantly that Crasher made her child susceptible to many nuisance activities like alcoholism. Moreover, the dust of crasher created lung related problem to her son. Apart from that when Ranjit attends Crasher the women in the HH have to prepare food for Ranjit very early in the morning and have to wait till late evening to gather grocery for dinner and next day meal for all the members of the HH. According to Tulsi when Ranjit occasionally gets jobs in NREGS, he can work within the vicinity and come at home in lunch time. Moreover, the overall hour of work in NREGS is much lower compared to crasher though full day's income in NREGS is less than the full day's income in Crasher. When we asked why she prefers NREGS in spite of getting lesser wage, Tulsi replied that while working for NREGS, Ranjit does not have to walk for 2-3 hour to reach the work spot, neither any dust problem nor the option of having nuisance activity since they are then working in their own locality; nor any such uncertainty of getting job and finally no hurry in the morning to prepare food for Ranjit. But Tulsi was expressing annoyance with the situation in her village saying that if the member of the Panchayat pays little more attention to their village then her Ranjit could have got few more days of work under NREGS. During our survey it was revealed that for the last 6 months Ranjit could not manage to get even a single day of work under NREGS but worked for more than 50 days in Crasher. While returning from Bagdhori Village in the evening we met Ranjit; he was then coming from crasher with his fellow workers. Identifying us as outsiders they instantly started to grumble on why there is no NREGS work in this village when the near by 'Motipur' is having it consistently. We apologized for not being able to give any specific reason. But in the midst of that twilight in the village concourse we witnessed a horde of frustrated rural youth looking for NREGS jobs.

Chapter 5

Conclusion:

This paper addressed 3 interrelated issues linked to India's recently introduced and much heralded National Rural Employment Guarantee Scheme. The paper investigated the *Targeting* aspect, the *Efficiency* aspect of the PRI institution and the *Impact* aspect of the programme. Based on primary data collected from West Bengal's Birbhum district in July-August 2009 the analysis presented in the paper showed that the programme is more likely to be accessed by poorer HH (defined in terms of land holdings, monthly per-capita income) and for the most part this self-targeted programme has been successful in reaching the poor. While the bulk of the benefits flow to vulnerable and poor households, the political inclination of a household plays a substantial role in household accessibility to the NREGS. It may be stated that while the programme is by and large accessed by the poor it is more likely that the poor who have a left political inclination are more likely to access the program while it is less likely to be accessed by the poor with left political alienation. Interestingly the findings showed that those who have no political inclination (do not vote and campaign) are least likely to access the programme, followed by those with a non-left inclination. The point is that political involvement of households plays an important role in determining access to NREGS jobs.

As far as the efficiency of the implementing agency is concerned, the paper found that on average, since program inception, the time lag between commencement of work and payment of wages is 27 days which may be compared with the statutory time lag of 15 days. In addition, while the annual demand for work is close to 200 days and legal obligation is 100 days, on average since inception programme has created 20 days in a year. Finally, analysis of the job creation patterns over the course of a year showed that the programme does not create more jobs during the lean season but that there is a tendency to spend more money at the fag end each financial year. While there are improvements over time but the analysis revealed a violation of clause and the spirit of the NREG Act and thereby undermines the potential of the programme in terms of serving as a safety net.

Analysis of the impact of the programme on a range of economic outcomes showed that there was a statistically insignificant relationship between NREGS days of work and household economic status. The analysis relied on comparing outcomes across different control groups and used an IV strategy to control for the simultaneous determination of access to NREGS and economic outcomes. Notwithstanding such attempts it is possible that the statistically insignificant relationship may simply be driven by an inability to account for such a relationship.

There are other alternative interpretations on insignificant impact. First, the number of days created by the NREGS (about 20 person-days per year for the sample) may be considered too limited to have an impact on household economic status. Second, an alternative which receives some support from the field work is that the NREGS does not create any new jobs in terms of person-days, that is, households swap their present private sector jobs for NREGS work - 66.39% of the respondents said that even if there was no NREGS they would look (and find) available alternatives. While this may be the case, the analysis showed that NREGS jobs are still appreciated as greater accessibility to such jobs reduces stress or anxiety related to joblessness. At the same time another reason for moving away from available jobs to NREGS work could be the better work-site environment offered by NREGS work, a claim supported by close to 79% of the households in the sample. More widely, work substitution implies that participants do not really have 'surplus labour' and supports the idea, raised in the introduction, that poverty comes not from lack of activity but from not earning enough from activity. This means that their return to their labour is not determined by so-called fair returns to factors i.e. here the labour in the market. If we assume that for NREGS such unfair return to labour is not happening then there must be the case that it is not appearing in critical magnitude which is also evident from the field. Therefore, NREGS does not address this fundamental underlying structural driver of rural poverty, it could only try to offer some form of stop gap security, less uncertainty etc which are also yet to establish at least in the context of Birbhum district. The agonies of working poor are not being addressed structurally so far.

Overall, while the NREGS programme of Birbhum District in West Bengal appears to be working well in terms of targeting and reaching a large number of poor households its main weakness appears to be the limited number of days of work that are generated through the programme and that there is little link between the lean period and the creation of jobs. Additional work days and projects that lead to the development of income-generating rural infrastructure are needed in order that the programme not only meets its objective of being a safety net but also in the long run sparking rural economic growth and contributing towards poverty reduction.

Word Count: 17,335

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Glossary: Definition of few concepts

01. Backward village:

In 2004, in order to pin-point the fight against poverty, Govt. of West Bengal identified 4612 villages as 'backward villages' on the basis of the following indicators from Census 2001: A) female literacy (rural) < 30%, B) Marginal worker + non worker > 60 %. On the basis of these two criterion there are 218 such Backward villages are spread over 167 GP in Birbhum district.

02. Self-Evaluation:

This is an evaluation process done by the GP them to evaluate their own performance on different issue. GPs assign their score on their own performance from a given scale with a maximum limit of 100, so higher score implies better performing GP and higher (100- score) implies relatively bad performing or backward GP. So I took score away from 100 for after having average score for two consecutive years 2006-07 and 2007-08.

03. Job Card

The documents that an applicant have to have to get job under NREGS, the official registration number of each house hold under the scheme is mentioned here and this is like a small note book where information of days worked and wage earned are noted down.

04. GUS

GUS i.e. Gram Unnayan Samity is a people's body encompassing few people at the village level constituency of each Gram Panchayat. It formed as per the instruction notified in the govt. notification.

05. RHS Score

RHS implies Rural Household Survey, 2005 done by the Govt. of West Bengal. The score ranging from 12 to 60 based on 12 parameters each with 5 scales. Any household who are getting score below or equal to 33 are treated as officially Below Poverty Line (BPL) household at the Govt. level

06. Household

A 'household' is usually a group of persons who normally live together and take their meals from a common kitchen unless the exigencies of work prevent any of them from doing so. Persons in a household may be related or unrelated or a mix of both. However, if a group of unrelated persons live in a census house but do not take their meals from the common kitchen, then they are not constituent of a common household. Each such person was to be treated as a separate household. The important link in finding out whether it was a household or not was a common kitchen. There may be one member households, two member households or multi-member households.A household with at least

one Scheduled Caste member is treated as Scheduled Caste Household. Similarly, a household having at least one Scheduled Tribe member is treated as a Scheduled Tribe household.

07. Head of the Household

The head of household for census purposes is a person who is recognised as such by the household. She or he is generally the person who bears the chief responsibility for managing the affairs of the household and takes decision on behalf of the household. The head of household need not necessarily be the oldest male member or an earning member, but may be a female or a younger member of either sex. In case of an absentee de jure 'Head' who is not eligible to be enumerated in the household, the person on whom the responsibility of managing the affairs of household rests was to be regarded as the head irrespective whether the person is male or female.

08. Main Workers

Those workers who had worked for the major part of the reference period (i.e. 6 months or more) are termed as Main Workers.

09. Marginal Workers

Those workers who had not worked for the major part of the reference period (i.e. less than 6 months) are termed as Marginal Workers.

10. Non Workers

A person who did not at all work during the reference period was treated as non-worker. The non-workers broadly constitute Students who did not participate in any economic activity paid or unpaid, household duties who were attending to daily household chores like cooking, cleaning utensils, looking after children, fetching water etc. and are not even helping in the unpaid work in the family form or cultivation or milching, dependant such as infants or very elderly people not included in the category of worker, pensioners those who are drawing pension after retirement and are not engaged in any economic activity. Beggars, vagrants, prostitutes and persons having unidentified source of income and with unspecified sources of subsistence and not engaged in any economically productive work during the reference period. Others, this category includes all Non-workers who may not come under the above categories such as rentiers, persons living on remittances, agricultural or non-agricultural royalty, convicts in jails or inmates of penal, mental or charitable institutions doing no paid or unpaid work and persons who are seeking/available for work.

11. Sex Ratio

Sex ratio has been defined as the number of females per 1000 males in the population. It is expressed as 'number of females per 1000 males'.

$$\text{Sex-ratio} = \frac{\text{Number of females}}{\text{Number of males}} \times 1000$$

12. Work Participation Rate

Work participation rate is defined as the percentage of total workers (main and marginal) to total population

$$\text{Work participation rate} = \frac{\text{Total Workers (Main+ Marginal)}}{\text{Total Population}} \times 100$$

13. Migration

Internal Migration It incldes any movement within the political boundaries of a nation which results in a change of usual place of residence. It may consist of the crossing of a village or town boundary as a minimum condition for qualifying the movement as internal migration. Thus, the concept of internal migration involves implicitly an imposition of boundary lines which must be crossed before a movement is counted as internal migratio

14. Intra-district Migrant

When a person moves out from his place of usual residence or birth to another politically defined area (village/town), which is within the district of enumeration, he/she is termed as an intra-district migrant.

15. Inter-district Migrant

A person who is in the course of migration crosses the boundary of the district of enumeration but remains within the State of enumeration, is termed as an inter-district migrant.

16. Main Occupation:

Occupation from where largest share of the income of the HH comes by using labour.

17. Subsidiary Occupation:

Other than main occupation from where any positive earning comes by using labour.

Appendix: 1 PROBIT REGRESSION

Determinants of getting NREGS Job (YES/NO): coefficient & marginal effect (Specification-1)

VARIABLES	Probit	dProbit	X
landholding	-0.221***	-0.0624***	.873462
	(0.0776)	(0.0217)	
irrigatedland	-0.129	-0.0365	.375086
	(0.0926)	(0.0263)	
Whether the HH lease in land (here leasein2 i.e. leasein yes is my reference category			
leasein1	-0.553**	-0.134***	.796
	(0.223)	(0.0442)	
cattle	0.127**	0.0359**	1.41
	(0.0514)	(0.0146)	
mpce_nregp	-0.000914***	-0.000258***	762.232
	(0.000266)	(8.05e-05)	
Sex of the head of the HH (sex_HH1 i.e. female as head as the ref. category)			
sex_HH2	0.250	0.0760	.884
	(0.214)	(0.0696)	
Social Gr (caste) of the HH (here social_gr1&2 i.e general and Bramhin as the reference category)			
social_gr3	0.223	0.0578	.06
	(0.285)	(0.0673)	
social_gr4	0.622***	0.168***	.418
	(0.171)	(0.0434)	
social_gr5	0.811	0.159***	.04
	(0.498)	(0.0576)	
Religion of the HH and the religion_nu2 i.e. muslim as the reference category)			
religion_nu1	-0.369*	-0.0939**	.814
	(0.197)	(0.0448)	
Constant	1.803***		
	(0.368)		
Observations	500	500	
R-squared	.		
L1	-200.278		
Lo	-276.687		
Peseudo R-Square	0.2762		
Getting NREGS Job Pr(nregs=1 at x-bar)		0.7969995	
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1			

Determinants of getting NREGS Job (YES/NO): Coefficient & Marginal effect (Specification-2)

VARIABLES	Probit	dProbit	X
landholding	-0.220***	-0.0611***	.873462
	(0.0785)	(0.0216)	
irrigatedland	-0.145	-0.0402	.375086
	(0.0949)	(0.0264)	
Whether the HH lease in land (here leasein2 i.e. leasein yes is my reference category			
leasein1	-0.549**	-0.131***	.796
	(0.225)	(0.0437)	
cattle	0.123**	0.0340**	1.41
	(0.0523)	(0.0146)	
mpce_nregp	-0.000903***	-0.000251***	762.232
	(0.000254)	(7.62e-05)	
Sex of the head of the HH (sex_HH1 i.e. female as head as the ref. category)			
sex_HH2	0.205	0.0605	.884
	(0.215)	(0.0674)	
Social Gr (caste) of the HH (here social_gr1&2 i.e general and Bramhin as the reference category)			
social_gr3	0.145	0.0381	.06
	(0.292)	(0.0723)	
social_gr4	0.626***	0.165***	.418
	(0.171)	(0.0431)	
social_gr5	0.755	0.148**	.04
	(0.499)	(0.0606)	
Religion of the HH and the religion_nu2 i.e. muslim as the reference category)			
religion_nu1	-0.323	-0.0818*	.814
	(0.201)	(0.0460)	
Voted to which party in the recent elections (voteleft as the reference categoty)			
votenonleft	-0.156	-0.0444	.274
	(0.197)	(0.0577)	
novote	-0.459***	-0.131**	.41
	(0.178)	(0.0518)	
Constant	2.064***		
	(0.374)		
Observations	500	500	
R-squared	.		
L1	-196.56164		
Lo	-276.68717		
Peseudo R-Square	0.2896		
Getting NREGS Job Pr(nregs=1 at x-bar)		0.8029286	
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1			

Determinants of getting NREGS Job (YES/NO): Coefficient & Marginal effect (Specification-3)

VARIABLES	Probit	dProbit	X
landholding	-0.230*	-0.0332**	.774301
	(0.118)	(0.0167)	
irrigatedland	-0.190	-0.0274	.313741
	(0.137)	(0.0198)	
Whether the HH lease in land (here leasein2 i.e. leasein yes is my reference category			
leasein1	-0.682**	-0.0761***	.776744
	(0.284)	(0.0237)	
cattle	0.0942	0.0136	1.3814
	(0.0632)	(0.00883)	
mpce_nregp	-0.000846***	-0.000122***	675.715
	(0.000280)	(4.49e-05)	
Sex of the head of the HH (sex_HH1 i.e. female as head as the ref. category)			
sex_HH2	0.209	0.0338	.881395
	(0.254)	(0.0452)	
Social Gr (caste) of the HH (here social_gr1&2 i.e general and Bramhin as the reference category)			
social_gr3	-0.0570	-0.00852	.053488
	(0.387)	(0.0600)	
social_gr4	0.331	0.0470	.45814
	(0.222)	(0.0313)	
social_gr5	0.258	0.0314	.046512
	(0.525)	(0.0527)	
Religion of the HH and the religion_nu2 i.e. muslim as the reference category)			
religion_nu1	-0.301	-0.0380	.813953
	(0.261)	(0.0288)	
Voted to which party in the recent elections (voteleft as the reference categoty)			
votenonleft	-0.0165	-0.00240	.274419
	(0.257)	(0.0375)	
novote	-0.416	-0.0641	.397674
	(0.258)	(0.0423)	
Whether any member of the Hh take part in the election campaign (here capaignN as the reference category.)			
campaignY	0.0765	0.0111	.546512
	(0.247)	(0.0360)	
Whether HH have any relative in the influential level (relativeofyourfamily 5 as ref. i.e. no relative)			
relativeofyourfamily1	0.129	0.0172	.07907
	(0.382)	(0.0468)	
relativeofyourfamily2	-0.696*	-0.151	.044186
	(0.376)	(0.111)	
relativeofyourfamily3	0.486	0.0503	.034884
	(0.900)	(0.0597)	
relativeofyourfamily4	-0.00594	-0.000859	.025581
	(0.538)	(0.0782)	
Whether HH know the payment procedure (knowpaymentprocedure 2 i.e. don't know as ref)			
knowpaymentprocedure1	0.564***	0.0760***	.4
	(0.181)	(0.0244)	
Constant	2.443***		
	(0.498)		
Observations	430	430	
R-squared	.		
L1	-117.18347		
Lo	-168.22497		
Peseudo R-Square	0.3034		
Getting NREGS Job Pr(nregs=1 at x-bar)		0.923168	
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1			

Determinants of getting NREGS Job (YES/NO): coefficient & marginal effect (Specification-4)

VARIABLES	Probit	dprobit	X
Landholding	-0.194*	-0.0286*	.769525
	(0.116)	(0.0169)	
irrigatedland	-0.192	-0.0283	.312688
	(0.136)	(0.0202)	
Whether the HH lease in land (here leasein2 i.e. leasein yes is my reference category			
leasein1	-0.508*	-0.0618**	.775744
	(0.268)	(0.0267)	
Whether the HH hired labour for cultivation (hire_lab_cult1 i.e. not hiring as the reference category)			
hire_lab_cult2	0.119	0.0172	.391304
	(0.212)	(0.0302)	
Cattle	0.0905	0.0133	1.373
	(0.0662)	(0.00952)	
mpce_nregp	-0.000692***	-0.000102***	676.103
	(0.000249)	(3.96e-05)	
Whether the HH has the access of mobile or ph (pnone1 i.e. no phone is the reference category)			
phone2	0.626***	0.111**	.707094
	(0.210)	(0.0443)	
Whether the HH own a house (owner_H2 i.e. having house as ref. category)			
owner_H1	-0.213	-0.0352	.114416
	(0.278)	(0.0509)	
Sex of Head of HH(sex_HH1 i.e. female as reference category)			
sex_HH2	0.376	0.0674	.881007
	(0.244)	(0.0515)	
Voted to which party in the recent elections (voteleft as the reference categoty)			
votenonleft	-0.0816	-0.0124	.272311
	(0.251)	(0.0390)	
Novote	-0.379*	-0.0593	.400458
	(0.222)	(0.0366)	
Whether HH know the payment procedure (knowpaymentprocedure 2 i.e. don't know as ref)			
knowpaymentprocedure1	0.597***	0.0819***	.395881
	(0.180)	(0.0244)	
Constant	1.499***		
	(0.469)		
Observations	437		
R-squared	.		
L1	-121.28733		
Lo	-171.09889		
Peseudo R-Square	0.2911		
Getting NREGS Job Pr(nregs=1 at x-bar)		0.9208001	
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1			

Determinants of getting NREGS Job (YES/NO): coefficient & marginal effect (Specification-5)

VARIABLES	Probit	dprobit	X
Landholding	-0.0334	-0.00383	.748026
	(0.146)	(0.0167)	
irrigatedland	-0.276	-0.0316	.336899
	(0.177)	(0.0201)	
Whether the HH lease in land (here leasein2 i.e. leasein yes is my reference category			
leasein1	-0.346	-0.0341	.781457
	(0.354)	(0.0298)	
Whether the HH hired labour for cultivation (hire_lab_cult1 i.e. not hiring as the reference category)			
hire_lab_cult2	0.292	0.0319	.384106
	(0.275)	(0.0283)	
Cattle	0.102	0.0117	1.39404
	(0.0749)	(0.00851)	
mpce_nregp	-0.000581**	-6.65e-05**	635.436
	(0.000244)	(3.00e-05)	
Whether the HH has the mobile or ph (pnone1 i.e. no phone is the reference category)			
phone2	0.750***	-6.65e-05**	.725166
	(0.264)	(3.00e-05)	
Whether the HH own a house (owner_H2 i.e. having house as ref. category)			
owner_H1	-0.156	-0.0196	.102649
	(0.381)	(0.0526)	
Sex of Head of HH(sex_HH1 i.e. female as reference category)			
sex_HH2	0.507	0.0796	.907285
	(0.331)	(0.0664)	
Voted to which party in the recent elections (voteleft as the reference categoty)			
votenonleft	0.0218	0.00248	.274834
	(0.313)	(0.0354)	
Novote	-0.193	-0.0227	.413907
	(0.278)	(0.0337)	
Whether HH know the payment procedure (knowpaymentprocedure 2 i.e. don't know as ref)			
knowpaymentprocedure1	0.844***	0.0922***	.430464
	(0.218)	(0.0263)	
rhsscore	-0.0370**	-0.00424**	34.4801
	(0.0154)	(0.00168)	
Constant	2.081**		
	(0.815)		
Observations	302	302	
R-squared	.		
L1	-75.212473		
Lo	-110.33226		
Peseudo R-Square	0.3183		
Getting NREGS Job Pr(nregs=1 at x-bar)		.9428941	
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1			

Appendix-2 TOBIT REGRESSION
Determinants of NREGS Job in terms of days since inception (Specification-1)

VARIABLES	Days Tobit (co-efficient)	Marginal Effect after Tobit			
		Pr.(Yi>0)	E(Yi/Yi>0)	E(Yi)	X
landholding	-2.452	-0.0142159	-1.250583	-1.768697	.873462
	(3.689)	(0.02141)	(1.88018)	(2.65934)	
irrigatedland	-8.946*	-0.0518748*	-4.56346*	-6.454094*	.375086
	(5.284)	(0.03062)	(2.69456)	(3.81035)	
cattle	4.357**	0.0252649**	2.222567**	3.143373**	1.41
	(2.019)	(0.01165)	(1.02529)	(1.45059)	
mpce_nregp	-0.0511***	-0.0002964***	-o.0260778***	-.0368818***	762.232
	(0.0119)	(0.00007)	(o.00573)	(.00817)	
Sex of head of HH (sex_HH1 i.e. female as head of HH s the reference category)					
sex_HH2	13.70	0.0833084	6.650154*	9.450274*	.884
	(8.520)	(0.05377)	(3.92873)	(5.59548)	
Social Group (Caste) of the HH (here social_gr1&2 i.e. general and Brahmin as the reference category)					
social_gr3	-0.584	-0.0033945	3.92873	-.4203631	.06
	(12.83)	(0.0748)	(6.51516)	(9.22063)	
social_gr4	34.90***	0.194579***	18.32162***	25.63967***	.418
	(7.485)	(0.03969)	(4.11326)	(5.64018)	
social_gr5	48.71***	0.2084017***	30.3022**	40.32748**	.418
	(17.35)	(0.04727)	(12.828)	(15.857)	
Religion of the HH and the religion_nu2 i.e. Muslim as the reference category)					
religion_nu1	-13.67*	-0.0755965*	-7.261231*	-10.18983*	.814
	(7.979)	(0.04215)	(4.40191)	6.12055	
Constant	54.84***				
	(11.85)				
Observations	500				
Left censored (at Yi<=0)	130				
Uncensored	370				
L1	-2119.5673				
Lo	-2196.1694				
(Pseudo) R-square	0.0349				
R-squared	.				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses					

Determinants of NREGS Job in terms of days since inception (Specification-2)

VARIABLES	Days Tobit (co-efficient)	Marginal Effect after Tobit			
		Pr.(Yi>0)	E(Yi/Yi>0)	E(Yi)	X
landholding	-2.875	-.0170218	-1.483229	-2.09404	.873462
	(3.608)	(0.02137)	(1.85825)	(2.62414)	
irrigatedland	-7.906	-.0468112	-4.078986	-5.758761	.375086
	(5.139)	(0.03046)	(2.65161)	(3.74293)	
cattle	3.094	.0183178	1.596159	2.253476	1.41
	(2.017)	(0.01189)	(1.03587)	(1.46333)	
mpce_nregp	-0.0467***	-.0002764***	-.0240887***	-.0340088***	762.232
	(0.0109)	(0.00007)	(0.00532)	(0.00757)	
Sex of head of HH (sex_HH1 i.e. female as head of HH is the reference category)					
sex_HH2	8.278	.0506245	4.141325	5.870205	.884
	(8.361)	(0.05257)	(4.05093)	(5.76023)	
Social Group (Caste) of the HH (here social_gr1&2 i.e. general and Brahmin as the reference category)					
social_gr3	-10.85	-.067311	-5.341632	-7.582844	.06
	(12.15)	(0.07856)	(5.71755)	(8.14414)	
social_gr4	33.31***	.1896703***	17.6787***	24.69518***	.418
	(7.272)	(0.03975)	(4.02772)	(5.51413)	
social_gr5	36.92**	.1730817***	22.29664**	30.07994**	.04
	(15.66)	(0.05347)	(10.927)	(13.936)	
Religion of the HH and the religion_nu2 i.e. Muslim as the reference category)					
religion_nu1	-8.912	-.0510954	-4.724193	-6.635121	.814
	(8.013)	(0.04457)	(4.36086)	(6.08885)	
‘Voteleft’ during last election as ref. category					
votenonleft	-15.12**	-.0925209**	-7.547332**	-10.69137**	.274
	(6.862)	(.04266)	(3.3447)	(4.73854)	
novote	-24.85***	-.1498046***	-12.56139***	-17.72932***	.41
	(6.673)	(0.03987)	(3.35608)	(4.70566)	
Whether HH know the Payment procedure ‘Knowpaymentprocedure2’ i.e. do’t know as the ref category.					
knowpaymentprocedure1	22.57***	.1279556***	12.04905***	16.86235***	.346
	(5.401)	(0.02975)	(2.97084)	(4.10757)	
Constant	62.46***				
	(12.25)				
Observations	500				
Left censored (at Yi<=0)	130				
Uncensored	370				
L1	-2102.6205				
Lo	-2196.1694				
(Pseudo) R-square	0.0426				
R-squared					
*** p<0.01, ** p<0.05, * p<0.1 , Robust standard errors in parentheses					

Determinants of NREGS Job in terms of days since inception (Specification-3)

VARIABLES	Days Tobit (co-efficient)	Days OLS (co-efficient)	Marginal Effect after Tobit			X
			Pr.(Yi>0)	E(Yi/Yi>0)	E(Yi)	
landholding	-4.014	-0.278	-.023972	-2.09569	-2.952848	.873462
	(3.861)	(2.440)	(0.02305)	(2.00909)	(2.83224)	
irrigatedland	-5.175	-2.883	-.0309069	-2.701954	-3.80708	.375086
	(4.878)	(2.688)	(0.02919)	(2.54755)	(3.58909)	
Whether the HH lease in land.(here leasein1 i.e. not lease in as reference category)						
leasein2	9.667	8.233	.0557491	5.190979	7.271237	.204
	(7.128)	(6.097)	(0.03958)	(3.93536)	(5.47503)	
Whether HH hired Lab for cultivation. (here hire_lab_cult1 i.e. not hired as the reference category)						
hire_lab_cult2	2.489	-1.595	.0148296	1.302329	1.834264	.416
	(6.905)	(5.247)	(0.04103)	(3.61839)	(5.09449)	
cattle	3.813*	1.943	.0227743*	1.99098	2.805312	1.41
	(1.995)	(1.506)	(0.01186)	(1.0381)	(1.46325)	
mpce_nregp	-0.0347***	-0.00851***	-.0002069***	-.0180917***	-.0254914***	762.232
	(0.00983)	(0.00256)	(0.00006)	(0.00496)	(0.00703)	
Sex of head of HH (sex_HH1 i.e. female as head of HH is the reference category)						
sex_HH2	8.717	7.363	.0539636	4.403212	6.233332	.884
	(8.237)	(6.587)	(0.0526)	(4.01842)	(5.71022)	
Social Group (Caste) of the HH (here social_gr1&2 i.e. general and Brahmin as the reference category)						
social_gr3	-8.193	-7.033	-.0508569	-4.127634	-5.845519	.06
	(11.08)	(7.433)	(0.07109)	(5.38661)	(7.65817)	
social_gr4	24.87***	19.39***	.144317***	13.2625***	18.55258***	.418
	(7.839)	(6.209)	(0.04409)	(4.30223)	(5.94249)	
social_gr5	28.57*	27.79**	.1421268**	16.90248*	23.00274*	.04
	(15.28)	(13.96)	(0.06014)	(10.166)	(13.261)	
Religion of the HH and the religion_nu2 i.e. Muslim as the reference category)						
religion_nu1	-5.026	-1.496	-.0294571	-2.665004	-3.743791	.814
	(8.135)	(5.942)	(0.04684)	(4.3797)	(6.13279)	
'Voteleft' during last election as ref. category						
votenonleft	-14.11**	-12.40**	-.0871184**	-7.141567**	-10.10032**	.274
	(6.647)	(5.470)	(0.04188)	(3.28367)	(4.64767)	
novote	-21.55***	-18.05***	-.130987**	-11.04913***	-15.57478***	.41
	(8.014)	(6.427)	(0.04893)	(4.04841)	(5.68754)	
Whether HH know the Payment procedure 'Knowpaymentprocedure2' i.e. do't know as the ref category.						
knowpaymentprocedure1	24.08***	15.81***	.1369325***	13.04748***	18.19545***	.346
	(5.307)	(4.533)	(0.02917)	(2.96166)	(4.07453)	
Whether the HH has the ph or mb, here phone1 i.e. having the phone as the reference category						
phone2	29.86***	23.55***	.1854157***	14.94966***	21.09022***	.648
	(7.226)	(5.377)	(0.04601)	(3.50348)	(4.90692)	
Whether any member from the HH took part in the least election campaign, here campaign i.e. not participated as the ref. category.						
campaignY	0.344	-1.190	.0020521	.179375	.2527443	.522
	(7.007)	(5.655)	(0.04186)	(3.65786)	(5.15405)	
Constant	28.16*	29.08***				
	(15.68)	(10.69)				
Observations	500	500				
Left censored (atYi<=0)	130					
Uncensored	370					
L1	-2091.0969					
Lo	-2196.1694					
(Pseudo) R-square	0.0478					
R-squared		0.258				

Determinants of NREGS Job in terms of days since inception (Specification-4)

VARIABLES	OLS	Tobit	Tobit Marginal Effect			
			Pr.(Yi>0)	E(Yi/Yi>0)	E(Yi)	X
landholding	-1.868	-5.784	-.0361169	-3.0964	-4.342189	.873462
	(2.309)	(3.637)	(0.02272)	(1.94094)	(2.72306)	
irrigatedland	-3.514	-6.594	-.0411765	-3.530178	-4.950492	.375086
	(2.869)	(4.970)	(0.03109)	(2.66226)	(3.73241)	
Whether the HH lease in land.(here leasein1 i.e. not lease in as reference category)						
leasein2	14.53**	18.02***	.1040343***	10.19712**	14.08727***	.204
	(5.739)	(6.634)	(0.03484)	(3.96803)	(5.38038)	
Whether HH hired Lab for cultivation. (here hire_lab_cult1 i.e.not hired as ref category)						
hire_lab_cult2	-3.051	-0.382	-.0023892	-.2046802	-.2870496	.416
	(4.972)	(6.395)	(0.03996)	(3.42185)	(4.79908)	
cattle	1.045	3.026	.0188932	1.619764	2.271452	1.41
	(1.481)	(1.871)	(0.01165)	(0.99791)	(1.40021)	
mpce_nregp	-0.00972***	-0.0361***	-.0002252***	-.0193049***	-.027072***	762.232
	(0.00286)	(0.00946)	(0.00006)	(0.00484)	(0.00685)	
Sex of head of HH (sex_HH1 i.e. female as head of HH is the reference category)						
sex_HH2	4.602	5.329	.0341539	2.79189	3.930646	.884
	(6.426)	(7.927)	(0.05203)	(4.059)	(5.73602)	
Who inform you most about the any new schemes: who_informed_most_newschemes4 as the ref.						
who_informed_most_newscheme1	17.49***	28.39***	.1591698***	16.34816***	22.41618***	.252
	(4.957)	(6.425)	(0.03253)	(3.92956)	(5.24627)	
who_informed_most_newscheme2	20.17***	31.67***	.180492***	18.03086***	24.77292***	.314
	(5.116)	(6.451)	(0.03345)	(3.87773)	(5.18699)	
who_informed_most_newscheme3	23.15***	36.49***	.1773002***	22.74315**	30.31555***	.08
	(8.541)	(10.48)	(0.0374)	(7.40205)	(9.32943)	
Social Group(Caste) of HH (here social_gr1&2 i.e.general and Brahmin as ref. category)						
social_gr3	-3.856	-1.844	-.0116353	-.978608	-1.374641	.06
	(7.830)	(11.19)	(0.07134)	(5.89211)	(8.28963)	
social_gr4	21.54***	26.80***	.1614713***	14.69682***	20.41461***	.418
	(5.578)	(7.184)	(0.04209)	(4.08863)	(5.57883)	
social_gr5	27.07*	27.69*	.1411746**	16.85014*	22.71451*	.04
	(14.94)	(16.33)	(0.06401)	(11.178)	(14.389)	
Religion of the HH and the religion_nu2 i.e. Muslim as the reference category)						
religion_nu1	-4.072	-8.827	-.0530069	-4.863482	-6.773536	.814
	(5.772)	(7.902)	(0.04571)	(4.49233)	(6.20451)	
'Voteleft' during last election as ref. category						
votenonleft	-12.81**	-13.34**	-.086417**	-6.92146**	-9.752065**	.274
	(5.433)	(6.685)	(0.04436)	(3.38468)	(4.7759)	
Novote	-19.90***	-23.49***	-.1499513***	-12.31406***	-17.2786***	.41
	(5.795)	(7.054)	(.04517)	(3.64096)	(5.08338)	
Whether HH know Payment procedure:Knowpaymentprocedure2' i.e.do't know as ref. category.						
knowpaymentprocedure1	12.33***	18.96***	.1133871***	10.46823***	14.54846***	.346
	(4.460)	(5.164)	(0.02976)	(2.93018)	(4.02476)	
Whether any member from HH took part in least election campaign,here campaign i.e. not participated as ref.category.						
campaignY	-3.814	-3.316	-.0206858	-1.77674	-2.491014	.522
	(5.296)	(6.391)	(0.03985)	(3.42399)	(4.79978)	
Block effect: here most advance block Bolpur-Santinikatan i.e. blocknum1 as ref. category						
blocknum2	16.55*	15.69	.0886632*	8.996616	12.38753	.072
	(9.226)	(10.62)	(0.0533)	(6.53739)	(8.80384)	
blocknum3	-24.17***	-29.18***	-.2064448**	-13.68392***	-19.39257***	.072
	(8.690)	(10.99)	(0.08566)	(4.50335)	(6.32854)	
blocknum4	-4.475	-2.360	-.0148728	-1.25453	-1.761759	.208
	(7.280)	(8.880)	(0.05659)	(4.68549)	(6.58883)	
blocknum5	-28.07***	-32.15***	-.2255595***	-15.20612***	6.58883***	.134
	(6.379)	(8.444)	(0.06447)	(3.55586)	(4.97859)	
blocknum6	-6.250	-8.778	-.0567963	-4.561154	-6.428906	.176
	(7.675)	(9.277)	(0.06228)	(4.67804)	(6.62026)	
blocknum7	-24.14***	-37.46***	-.2701686***	-16.9203***	-23.89941***	.072
	(9.314)	(12.52)	(0.09761)	(4.68812)	(6.45123)	
blocknum8	16.33*	21.51**	.1200475**	12.43019**	17.05832**	.154
	(8.530)	(9.960)	(0.04823)	(6.19994)	(8.28921)	
Constant	47.37***	47.03***				
	(11.53)	(15.19)				
Observations	500	500				
R-squared	0.341					
Left censored (atYi<=0)		130				
Uncensored		370				
L1		-2056.9475				
Lo		-2196.1694				
(Pseudo) R-square		0.0634				
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1						

Appendix -3: **Regression results on HH level economic status (income, consumption, savings, income)**
Result-1: Impact of NREGS on log of *Monthly per-capita income* (*lnmpi*) with different combination of HH under OLS

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	-0.00172***	-0.000722	-0.000398	-0.000241
	(0.000519)	(0.000499)	(0.000499)	(0.000516)
landholding	0.0260	-0.0304	-0.0157	-0.0110
	(0.0333)	(0.0315)	(0.0307)	(0.0328)
irrigatedland	0.0841*	0.174***	0.111**	0.104*
	(0.0443)	(0.0403)	(0.0555)	(0.0612)
hire_lab_cult2	0.168**	0.174***	0.167**	0.168**
	(0.0703)	(0.0659)	(0.0663)	(0.0690)
cattle	0.00870	0.0422**	0.0452**	0.0487***
	(0.0187)	(0.0175)	(0.0179)	(0.0184)
sex_HH2	0.225*	0.278**	0.323**	0.321**
	(0.133)	(0.125)	(0.132)	(0.134)
unmarried_HH	0.561***	0.868***	0.909***	0.922***
	(0.186)	(0.218)	(0.224)	(0.218)
widow_HH	0.410***	0.436***	0.452***	0.457***
	(0.128)	(0.120)	(0.131)	(0.132)
edu2	0.0311	0.0628	0.0517	0.0520
	(0.0655)	(0.0637)	(0.0643)	(0.0656)
edu3	0.193**	0.188**	0.154**	0.135*
	(0.0822)	(0.0732)	(0.0722)	(0.0745)
edu4	0.304**	0.163	0.150	0.124
	(0.127)	(0.116)	(0.120)	(0.125)
edu5	0.771***	0.600***	0.634***	0.636**
	(0.178)	(0.227)	(0.242)	(0.281)
edu6	0.945***	0.476***	0.344*	0.352*
	(0.173)	(0.156)	(0.182)	(0.183)
social_gr3	-0.0169	-0.00306	-0.0618	-0.0728
	(0.149)	(0.109)	(0.0870)	(0.0900)
social_gr4	-0.184**	-0.0840	-0.103	-0.0992
	(0.0815)	(0.0775)	(0.0773)	(0.0819)
social_gr5	-0.351***	-0.287**	-0.289**	-0.294**
	(0.130)	(0.139)	(0.141)	(0.143)
religion_nu1	0.131	0.0533	0.0598	0.0644
	(0.0995)	(0.0911)	(0.0907)	(0.0971)
blocknum2	-0.180	-0.135	-0.145	-0.140
	(0.122)	(0.123)	(0.124)	(0.127)
blocknum3	-0.309***	-0.157	-0.196*	-0.210*
	(0.107)	(0.106)	(0.109)	(0.110)
blocknum4	0.00959	0.0673	0.0548	0.0394
	(0.0995)	(0.0941)	(0.0984)	(0.0995)
blocknum5	0.0875	0.0381	0.0719	0.0790
	(0.118)	(0.0989)	(0.102)	(0.106)
blocknum6	0.0274	-0.00660	-0.000991	0.00226
	(0.0991)	(0.0941)	(0.0959)	(0.0982)
blocknum7	0.0645	0.198	0.0462	0.0532
	(0.149)	(0.145)	(0.134)	(0.135)
blocknum8	-0.0201	-0.0226	-0.00712	-0.00396
	(0.0894)	(0.0838)	(0.0862)	(0.0879)
Constant	5.951***	5.759***	5.706***	5.683***
	(0.170)	(0.151)	(0.157)	(0.160)
Observations	500	423	395	379
R-squared	0.409	0.332	0.271	0.260

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Result-2: Impact of NREGS on log of *Monthly per-capita income* (*lnmpi*) with different combination of HH under IV estimation technique.

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	-0.00453*	-0.00222	-0.000560	0.000498
	(0.00253)	(0.00250)	(0.00261)	(0.00302)
landholding	0.0302	-0.0248	-0.0151	-0.0147
	(0.0362)	(0.0384)	(0.0383)	(0.0416)
irrigatedland	0.0711	0.163***	0.111*	0.106
	(0.0458)	(0.0526)	(0.0643)	(0.0686)
hire_lab_cult2	0.159**	0.165**	0.166**	0.174**
	(0.0717)	(0.0656)	(0.0661)	(0.0695)
cattle	0.0128	0.0441**	0.0454**	0.0477**
	(0.0201)	(0.0182)	(0.0184)	(0.0189)
sex_HH2	0.239	0.289**	0.323**	0.317**
	(0.146)	(0.130)	(0.127)	(0.130)
unmarried_HH	0.498**	0.834***	0.905***	0.943***
	(0.249)	(0.243)	(0.237)	(0.246)
widow_HH	0.367***	0.422***	0.451***	0.464***
	(0.141)	(0.122)	(0.123)	(0.126)
edu2	-0.00463	0.0410	0.0496	0.0609
	(0.0853)	(0.0760)	(0.0729)	(0.0757)
edu3	0.134	0.157	0.151	0.146
	(0.109)	(0.0975)	(0.0941)	(0.0942)
edu4	0.205	0.112	0.144	0.146
	(0.145)	(0.135)	(0.138)	(0.146)
edu5	0.658***	0.555***	0.630***	0.648***
	(0.177)	(0.172)	(0.168)	(0.176)
edu6	0.815***	0.410**	0.339*	0.376*
	(0.174)	(0.176)	(0.192)	(0.200)
social_gr3	-0.0143	-0.00523	-0.0620	-0.0699
	(0.127)	(0.114)	(0.121)	(0.127)
social_gr4	-0.136	-0.0623	-0.100	-0.110
	(0.0928)	(0.0826)	(0.0847)	(0.0906)
social_gr5	-0.250	-0.244	-0.284*	-0.315*
	(0.184)	(0.153)	(0.154)	(0.161)
religion_nu1	0.139	0.0533	0.0596	0.0653
	(0.0960)	(0.0878)	(0.0880)	(0.0929)
blocknum2	-0.135	-0.114	-0.143	-0.152
	(0.144)	(0.124)	(0.120)	(0.126)
blocknum3	-0.379**	-0.199	-0.201	-0.191
	(0.150)	(0.139)	(0.141)	(0.146)
blocknum4	0.0131	0.0657	0.0548	0.0390
	(0.106)	(0.0930)	(0.0911)	(0.0931)
blocknum5	0.00937	-0.0135	0.0663	0.103
	(0.137)	(0.137)	(0.137)	(0.145)
blocknum6	0.0188	-0.00974	-0.00141	0.00173
	(0.111)	(0.0996)	(0.0980)	(0.101)
blocknum7	-0.00588	0.157	0.0422	0.0705
	(0.151)	(0.141)	(0.147)	(0.152)
blocknum8	0.0129	-0.00640	-0.00518	-0.0146
	(0.117)	(0.102)	(0.102)	(0.109)
Constant	6.107***	5.853***	5.717***	5.636***
	(0.230)	(0.222)	(0.229)	(0.249)
Observations	500	423	395	379
R-squared	0.383	0.320	0.271	0.256
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses				

Result-3: Impact of NREGS on log of *Monthly per-capita consumption expenditure* (*lnmpce*) with different combination of HH under OLS estimation technique.

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	-0.00153***	-0.000833*	-0.000539	-0.000407
	(0.000447)	(0.000455)	(0.000472)	(0.000488)
landholding	-0.0204	-0.0114	-0.00408	0.000608
	(0.0226)	(0.0257)	(0.0265)	(0.0280)
irrigatedland	0.0595*	0.0605	0.0385	0.0405
	(0.0337)	(0.0404)	(0.0514)	(0.0565)
hire_lab_cult2	0.145***	0.129**	0.127**	0.119**
	(0.0533)	(0.0508)	(0.0500)	(0.0506)
cattle	0.00534	0.0109	0.0121	0.0142
	(0.0153)	(0.0138)	(0.0142)	(0.0143)
sex_HH2	0.169*	0.165*	0.191**	0.189**
	(0.0960)	(0.0885)	(0.0911)	(0.0924)
unmarried_HH	0.223	0.396	0.427*	0.439*
	(0.169)	(0.245)	(0.258)	(0.258)
widow_HH	0.255***	0.242***	0.250***	0.249***
	(0.0884)	(0.0790)	(0.0825)	(0.0835)
edu2	0.0278	0.0499	0.0436	0.0348
	(0.0511)	(0.0507)	(0.0518)	(0.0527)
edu3	0.132**	0.128**	0.117*	0.0947
	(0.0621)	(0.0604)	(0.0606)	(0.0597)
edu4	0.187**	0.141	0.110	0.103
	(0.0906)	(0.0924)	(0.0869)	(0.0918)
edu5	0.501***	0.347**	0.339**	0.315*
	(0.129)	(0.150)	(0.159)	(0.186)
edu6	0.661***	0.355***	0.239	0.227
	(0.130)	(0.122)	(0.163)	(0.163)
social_gr3	0.0255	0.0295	0.0157	0.0168
	(0.115)	(0.0961)	(0.0839)	(0.0877)
social_gr4	-0.132**	-0.0988	-0.106	-0.124*
	(0.0610)	(0.0643)	(0.0677)	(0.0702)
social_gr5	-0.211**	-0.185*	-0.209**	-0.228**
	(0.0995)	(0.100)	(0.101)	(0.102)
religion_nu1	0.0331	0.0175	0.0140	0.0314
	(0.0709)	(0.0695)	(0.0726)	(0.0778)
blocknum2	-0.228**	-0.186**	-0.194**	-0.193**
	(0.0893)	(0.0869)	(0.0880)	(0.0887)
blocknum3	-0.216**	-0.0993	-0.120	-0.117
	(0.0951)	(0.0957)	(0.0926)	(0.0954)
blocknum4	-0.0592	-0.0121	-0.0250	-0.0433
	(0.0820)	(0.0766)	(0.0793)	(0.0797)
blocknum5	0.00457	0.0258	0.0481	0.0638
	(0.0885)	(0.0809)	(0.0838)	(0.0867)
blocknum6	-0.116	-0.0933	-0.0792	-0.0786
	(0.0810)	(0.0733)	(0.0749)	(0.0762)
blocknum7	-0.296***	-0.165*	-0.210**	-0.209**
	(0.100)	(0.0925)	(0.0947)	(0.0947)
blocknum8	-0.0270	0.0104	-0.00298	0.00142
	(0.0767)	(0.0728)	(0.0753)	(0.0770)
Constant	6.297***	6.178***	6.142***	6.131***
	(0.126)	(0.110)	(0.113)	(0.116)
Observations	500	423	395	379
R-squared	0.331	0.226	0.193	0.189
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses				

Result-4: Impact of NREGS on log of *Monthly per-capita consumption expenditure* (*lnmpce*) with different combination of HH under IV estimation technique.

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	-0.00583***	-0.00273	-0.00126	-0.000276
	(0.00206)	(0.00203)	(0.00213)	(0.00243)
landholding	-0.0139	-0.00429	-0.00119	-4.38e-05
	(0.0295)	(0.0313)	(0.0313)	(0.0335)
irrigatedland	0.0396	0.0467	0.0375	0.0408
	(0.0372)	(0.0428)	(0.0525)	(0.0553)
hire_lab_cult2	0.130**	0.118**	0.121**	0.120**
	(0.0583)	(0.0534)	(0.0540)	(0.0561)
cattle	0.0117	0.0134	0.0132	0.0140
	(0.0163)	(0.0148)	(0.0150)	(0.0152)
sex_HH2	0.190	0.180*	0.194*	0.189*
	(0.119)	(0.106)	(0.104)	(0.105)
unmarried_HH	0.126	0.353*	0.409**	0.442**
	(0.202)	(0.198)	(0.194)	(0.199)
widow_HH	0.189*	0.224**	0.243**	0.250**
	(0.114)	(0.0993)	(0.100)	(0.102)
edu2	-0.0268	0.0223	0.0343	0.0364
	(0.0694)	(0.0619)	(0.0596)	(0.0610)
edu3	0.0411	0.0887	0.104	0.0965
	(0.0887)	(0.0793)	(0.0769)	(0.0759)
edu4	0.0348	0.0753	0.0865	0.107
	(0.118)	(0.110)	(0.113)	(0.118)
edu5	0.329**	0.291**	0.320**	0.317**
	(0.144)	(0.140)	(0.138)	(0.142)
edu6	0.462***	0.271*	0.215	0.231
	(0.141)	(0.143)	(0.157)	(0.162)
social_gr3	0.0294	0.0267	0.0151	0.0173
	(0.103)	(0.0930)	(0.0992)	(0.103)
social_gr4	-0.0587	-0.0714	-0.0947	-0.126*
	(0.0755)	(0.0672)	(0.0692)	(0.0730)
social_gr5	-0.0575	-0.131	-0.187	-0.232*
	(0.150)	(0.125)	(0.126)	(0.130)
religion_nu1	0.0454	0.0174	0.0134	0.0316
	(0.0781)	(0.0715)	(0.0719)	(0.0749)
blocknum2	-0.160	-0.159	-0.183*	-0.195*
	(0.117)	(0.101)	(0.0983)	(0.102)
blocknum3	-0.324***	-0.152	-0.140	-0.113
	(0.122)	(0.113)	(0.115)	(0.118)
blocknum4	-0.0538	-0.0142	-0.0250	-0.0433
	(0.0863)	(0.0757)	(0.0744)	(0.0750)
blocknum5	-0.115	-0.0395	0.0235	0.0680
	(0.112)	(0.111)	(0.112)	(0.117)
blocknum6	-0.129	-0.0972	-0.0811	-0.0787
	(0.0906)	(0.0810)	(0.0801)	(0.0811)
blocknum7	-0.404***	-0.217*	-0.228*	-0.206*
	(0.122)	(0.115)	(0.120)	(0.123)
blocknum8	0.0236	0.0308	0.00563	-0.000460
	(0.0951)	(0.0833)	(0.0835)	(0.0880)
Constant	6.536***	6.297***	6.189***	6.123***
	(0.187)	(0.180)	(0.187)	(0.200)
Observations	500	423	395	379
R-squared	0.213	0.189	0.187	0.189
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses				

Result-5: Impact of NREGS on *Total Loan or debt (loan)* with different combination of HH under OLS estimation technique.

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	-29.57	-26.55	-26.60	-13.49
	(27.86)	(28.49)	(29.69)	(27.02)
landholding	7698**	3682	3852	1338
	(3127)	(2682)	(2839)	(1451)
irrigatedland	-4199	-4411	-3974	1009
	(4460)	(4217)	(5174)	(2818)
hire_lab_cult2	-806.2	-988.1	-118.9	1020
	(4700)	(2630)	(2655)	(2524)
cattle	-601.6	1214	1080	633.6
	(1047)	(775.7)	(755.3)	(616.3)
sex_HH2	-539.2	-67.32	308.2	475.5
	(4517)	(2926)	(2877)	(2396)
unmarried_HH	-15978*	-7872**	-6371*	-5320
	(8400)	(3825)	(3537)	(3812)
widow_HH	-4399	-2292	-1308	-172.1
	(4412)	(3007)	(3129)	(2471)
edu2	226.3	1257	1082	1471
	(2069)	(1583)	(1607)	(1483)
edu3	7355	9807**	8705*	7938
	(4665)	(4532)	(4643)	(5064)
edu4	-1542	-1397	-847.7	574.1
	(5426)	(3596)	(3979)	(3487)
edu5	26661**	23073**	21724*	29364**
	(12762)	(11464)	(11688)	(12521)
edu6	45379***	14165	9046	10241
	(17300)	(9798)	(10537)	(9896)
social_gr3	5270	5096	12553	16434**
	(9038)	(7937)	(8805)	(8275)
social_gr4	-3647	-2487	-2605	555.4
	(5090)	(3975)	(4159)	(3300)
social_gr5	-6911	-8174*	-7080*	-4611
	(4821)	(4178)	(4040)	(3434)
religion_nu1	-2380	987.2	1789	-1600
	(6386)	(3693)	(3828)	(3025)
blocknum2	-1677	-4853	-5013	-3644
	(4565)	(3130)	(3183)	(2917)
blocknum3	7145	8628	10698*	11035*
	(5891)	(5472)	(5976)	(5922)
blocknum4	-4719	-4643	-4306	-3152
	(3835)	(3106)	(3242)	(2978)
blocknum5	7968	-851.8	-1161	-1424
	(8025)	(3278)	(3438)	(3399)
blocknum6	13092*	2050	1823	150.1
	(7030)	(3710)	(3918)	(3423)
blocknum7	-2062	4540	-1349	-1478
	(6452)	(6387)	(4939)	(4895)
blocknum8	5556	7323	5864	774.6
	(5869)	(5936)	(6663)	(5094)
Constant	7407	5257	4223	4919
	(6319)	(4016)	(3971)	(3731)
Observations	500	423	395	379
R-squared	0.177	0.168	0.181	0.196
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses				

Result-6: Impact of NREGS on *Total Loan or debt (loan)* with different combination of HH under IV estimation technique.

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	204.9	-43.86	-58.90	-79.21
	(168.8)	(105.3)	(110.0)	(111.8)
landholding	7345***	3747**	3981**	1667
	(2414)	(1619)	(1615)	(1541)
irrigatedland	-3116	-4537**	-4020	862.8
	(3051)	(2217)	(2710)	(2543)
hire_lab_cult2	-22.13	-1090	-360.7	539.4
	(4778)	(2763)	(2787)	(2577)
cattle	-945.8	1237	1127	719.1
	(1336)	(768.8)	(775.7)	(700.3)
sex_HH2	-1702	68.96	460.6	793.5
	(9720)	(5471)	(5370)	(4804)
unmarried_HH	-10716	-8262	-7169	-7109
	(16583)	(10254)	(9994)	(9123)
widow_HH	-823.0	-2449	-1593	-808.4
	(9365)	(5141)	(5170)	(4665)
edu2	3203	1004	667.5	683.2
	(5687)	(3204)	(3074)	(2805)
edu3	12330*	9452**	8100**	7020**
	(7268)	(4108)	(3968)	(3490)
edu4	6759	-1993	-1907	-1398
	(9692)	(5672)	(5816)	(5411)
edu5	36049***	22556***	20863***	28309***
	(11785)	(7244)	(7102)	(6521)
edu6	56227***	13402*	7978	8103
	(11584)	(7418)	(8092)	(7430)
social_gr3	5053	5071	12526**	16178***
	(8474)	(4814)	(5118)	(4713)
social_gr4	-7639	-2236	-2116	1531
	(6184)	(3480)	(3569)	(3356)
social_gr5	-15299	-7677	-6115	-2735
	(12249)	(6452)	(6503)	(5978)
religion_nu1	-3049	986.4	1760	-1685
	(6397)	(3700)	(3709)	(3443)
blocknum2	-5375	-4609	-4551	-2624
	(9585)	(5215)	(5069)	(4673)
blocknum3	13039	8145	9802*	9366*
	(9995)	(5840)	(5925)	(5429)
blocknum4	-5014	-4662	-4305	-3110
	(7068)	(3920)	(3838)	(3449)
blocknum5	14484	-1448	-2265	-3543
	(9147)	(5761)	(5775)	(5390)
blocknum6	13814*	2013	1741	197.8
	(7425)	(4196)	(4131)	(3726)
blocknum7	3810	4068	-2138	-3022
	(10032)	(5958)	(6196)	(5639)
blocknum8	2802	7510*	6251	1724
	(7790)	(4311)	(4309)	(4046)
Constant	-5613	6343	6312	9112
	(15336)	(9342)	(9634)	(9212)
Observations	500	423	395	379
R-squared	0.119	0.166	0.177	0.172
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses				

Result-7: Impact of NREGS on *Total Savings (savings)* with different combination of HH under OLS estimation technique.

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	-93.24**	-40.49*	-18.20	-21.61*
	(41.75)	(23.71)	(12.03)	(12.84)
landholding	5797	4165	2693	2990
	(3882)	(3510)	(3075)	(3257)
irrigatedland	25523	13918	-1004	-994.2
	(16815)	(15148)	(1970)	(2179)
hire_lab_cult2	-2139	-8527	-6629	-7019
	(8755)	(5788)	(5148)	(5393)
cattle	-4095	1662	2544*	2613*
	(3100)	(2163)	(1527)	(1570)
sex_HH2	9917	10072	17407*	17373*
	(13706)	(10290)	(9482)	(9368)
unmarried_HH	-30313	3634	8384	8042
	(31959)	(8662)	(7754)	(7712)
widow_HH	-1550	9726	20237*	20008*
	(15235)	(12020)	(10958)	(10754)
edu2	-6334	132.8	2476	2352
	(4600)	(2730)	(1931)	(1930)
edu3	-4669	1901	-1141	-1409
	(8907)	(3339)	(1636)	(1750)
edu4	251.1	-9409	6037	6223
	(21745)	(12300)	(5335)	(5405)
edu5	-34892**	-4112	2278	3560
	(17330)	(7389)	(3807)	(4243)
edu6	62799**	694.4	122.6	-592.0
	(28112)	(15312)	(7964)	(8050)
social_gr3	-14600	-5505	-6763	-7762
	(15145)	(5852)	(4987)	(5430)
social_gr4	-20879**	-6315	-6849**	-7592**
	(9087)	(4993)	(3199)	(3574)
social_gr5	-15733*	-9291	-9091*	-9945*
	(9319)	(6230)	(5167)	(5526)
religion_nu1	21289**	3693	6325**	7292**
	(10103)	(5984)	(2541)	(2940)
blocknum2	-8300	-2331	-2724	-2285
	(11495)	(4014)	(3583)	(3411)
blocknum3	-17220	-3146	-3345	-3634
	(11214)	(4342)	(4035)	(4213)
blocknum4	-15042	-3216	-4630	-4749
	(12550)	(4864)	(4548)	(4579)
blocknum5	925.0	-2425	-1830	-1303
	(15850)	(3339)	(3159)	(2983)
blocknum6	14466	5197	-639.3	-44.48
	(15895)	(5970)	(4368)	(4224)
blocknum7	-34397*	-2535	5587	5634
	(17730)	(9707)	(9789)	(9773)
blocknum8	-22890*	-6704	-2884	-2303
	(13561)	(7835)	(4160)	(3891)
Constant	6647	-5596	-16063**	-16338**
	(17268)	(10044)	(8061)	(8128)
Observations	500	423	395	379
R-squared	0.215	0.208	0.229	0.238
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses				

Result-8: Impact of NREGS on *Total Savings (savings)* with different combination of HH under IV estimation technique.

VARIABLES	With all HH	With HH with Job-card	With HH who applied job	With HH finally got job
nregpwork_days_inception	-494.5	-169.3	90.64	102.5
	(342.1)	(159.8)	(88.20)	(103.2)
landholding	6400	4647*	2256*	2370*
	(4891)	(2457)	(1295)	(1423)
irrigatedland	23670***	12978***	-848.4	-718.8
	(6181)	(3363)	(2172)	(2348)
hire_lab_cult2	-3480	-9282**	-5814***	-6111**
	(9680)	(4192)	(2234)	(2379)
cattle	-3506	1830	2384***	2451***
	(2707)	(1166)	(621.9)	(646.6)
sex_HH2	11906	11087	16894***	16773***
	(19694)	(8300)	(4305)	(4436)
unmarried_HH	-39317	736.8	11073	11421
	(33599)	(15556)	(8012)	(8423)
widow_HH	-7670	8559	21198***	21209***
	(18973)	(7799)	(4145)	(4307)
edu2	-11428	-1745	3874	3839
	(11522)	(4861)	(2464)	(2590)
edu3	-13180	-746.6	898.6	324.2
	(14725)	(6232)	(3181)	(3222)
edu4	-13954	-13844	9605**	9945**
	(19637)	(8606)	(4663)	(4996)
edu5	-50957**	-7959	5179	5552
	(23878)	(10990)	(5693)	(6020)
edu6	44235*	-4984	3724	3444
	(23470)	(11253)	(6487)	(6860)
social_gr3	-14228	-5691	-6671	-7279*
	(17169)	(7303)	(4103)	(4351)
social_gr4	-14050	-4450	-8495***	-9434***
	(12529)	(5280)	(2862)	(3098)
social_gr5	-1379	-5589	-12344**	-13486**
	(24818)	(9788)	(5213)	(5519)
religion_nu1	22433*	3687	6423**	7452**
	(12960)	(5612)	(2973)	(3179)
blocknum2	-1972	-515.6	-4283	-4212
	(19420)	(7912)	(4064)	(4315)
blocknum3	-27305	-6739	-324.9	-483.4
	(20251)	(8860)	(4750)	(5013)
blocknum4	-14537	-3358	-4630	-4828
	(14321)	(5946)	(3077)	(3184)
blocknum5	-10226	-6862	1893	2698
	(18533)	(8739)	(4630)	(4976)
blocknum6	13231	4927	-360.5	-134.5
	(15043)	(6365)	(3311)	(3440)
blocknum7	-44444**	-6043	8243*	8548
	(20325)	(9039)	(4967)	(5206)
blocknum8	-18177	-5315	-4186	-4094
	(15783)	(6540)	(3454)	(3736)
Constant	28925	2488	-23100***	-24254***
	(31072)	(14173)	(7723)	(8505)
Observations	500	423	395	379
R-squared	0.176	0.180	0.145	0.134
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors in parentheses				

Appendix-4 Ordered probit regression results.

Result:1 **Impact of NREGS on *Reduction of Stress*** related to joblessness***:*** **With all HH** (Outcome-1: Stress reduced not at all; Outcome-2: Stress reduced in to some extent; Outcome-3: Stress reduced in great extent.)

VARIABLES	Co-efficient	Mfx after outcome-1	Mfx after outcome-2	Mfx after outcome-3
nregpwork_days_inception	0.00860***	-.0027472***	-.0002669	.0030141***
	(0.00149)	(.00047)	(.00021)	(.00053)
landholding	0.0632	-.0201997	-.0019623	.022162
	(0.0875)	(.02794)	(.0031)	(.03069)
irrigatedland	-0.288**	.092116**	.0089487	-.1010647**
	(0.133)	(.04271)	(.00737)	(.04617)
hire_lab_cult2	-0.0838	.0269075	.0023166	-.0292241
	(0.143)	(.04615)	(.00398)	(.04965)
cattle	0.0586	-.0187374	-.0018203	.0205577
	(0.0452)	(.01438)	(.00196)	(.01582)
sex_HH2	-0.267	.0791313	.0186505	-.0977818
	(0.287)	(.07821)	(.0317)	(.10929)
unmarried_HH	0.583	-.1477625	-.0760208	.2237833
	(0.522)	(.09726)	(.11125)	(.20748)
widow_HH	-0.262	.0884368	-.001551	-.0868858
	(0.261)	(.09266)	(.01254)	(.08159)
edu2	0.144	-.0447343	-.0064686	.0512028
	(0.145)	(.04409)	(.009)	(.05248)
edu3	-0.0271	.0087012	.0007453	-.0094464
	(0.186)	(.06028)	(.0045)	(.06474)
edu4	0.170	-.051595	-.0099231	.0615181
	(0.235)	(.06766)	(.02041)	(.08769)
edu5	0.331	-.0939576	-.0296712	.1236287
	(0.379)	(.09362)	(.05519)	(.14823)
edu6	-0.305	.1055063	-.0070946	-.0984116
	(0.361)	(.13372)	(.02903)	(.10553)
social_gr3	-0.0622	.0202201	.0012578	-.021478
	(0.291)	(.09624)	(.00304)	(.09893)
social_gr4	-0.110	.0352629	.0033149	-.0385778
	(0.167)	(.05363)	(.00551)	(.05854)
social_gr5	-0.0426	.0137907	.0009989	-.0147897
	(0.269)	(.08798)	(.00446)	(.09233)
religion_nu1	-0.0567	.0178929	.0021625	-.0200553
	(0.211)	(.06575)	(.00966)	(.07532)
blocknum2	-0.360	.1255459	-.0103282	-.1152177
	(0.276)	(.10245)	(.02481)	(.07904)
blocknum3	-1.241***	.4617879***	-.1752414**	-.2865465***
	(0.334)	(.11684)	(.08245)	(.04105)
blocknum4	-0.782***	.2770799***	-.0408241	-.2362558***
	(0.223)	(.0826)	(.0317)	(.0561)
blocknum5	-0.384	.132922	-.009223	-.1236989*
	(0.250)	(.09194)	(.02092)	(.0729)
blocknum6	-0.908***	.3290466***	-.0715662*	-.2574804***
	(0.226)	(.08459)	(.03995)	(.0503)
blocknum7	-1.029***	.3850847***	-.1276536*	-.2574311***
	(0.266)	(.09976)	(.06231)	(.04301)
blocknum8	-0.766***	.2758255***	-.0507867	-.2250388***
	(0.230)	(.08742)	(.03706)	(.05473)
cut1	-1.153***			
	(0.387)			
Cut2	0.0220			
	(0.385)			
Observations	420			
Pseudo R-squared	0.1212			
Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1				

Result:2 Impact of NREGS on *Reduction of Stress* related to joblessness: With HH with Job card
(Outcome-1: Stress reduced not at all; Outcome-2: Stress reduced in to some extent; Outcome-3: Stress reduced in great extent.)

VARIABLES	Co-efficient	Mfx after outcome-1	Mfx after outcome-2	Mfx after outcome-3
nregpwork_days_inception	0.00768***	-.0022802***	-.0005029**	.0027831***
	(0.00148)	(.00043)	(.00021)	(.00054)
landholding	0.115	-.0340639	-.0075121	.041576
	(0.0940)	(.02787)	(.0068)	(.03409)
irrigatedland	-0.302**	.0896884**	.019779*	-.1094674**
	(0.150)	(.04482)	(.01171)	(.05403)
hire_lab_cult2	-0.0810	.0242059	.0050144	-.0292204
	(0.147)	(.04405)	(.0088)	(.05264)
cattle	0.0496	-.0147149	-.0032451	(.01796)
	(0.0456)	(.01348)	(.00325)	(.01651)
sex_HH2	-0.174	.0488486	.0157046	-.0645532
	(0.312)	(.0827)	(.03629)	(.11874)
unmarried_HH	0.487	-.117142	-.0715508	.1886928
	(0.498)	(.09187)	(.10721)	(.19825)
widow_HH	-0.166	.0515483	.0069097	-.0584581
	(0.288)	(.09309)	(.00643)	(.09819)
edu2	0.107	-.031093	-.0080526	.0391457
	(0.148)	(.04215)	(.01274)	(.05463)
edu3	-0.0151	.004512	.0009619	-.0054739
	(0.191)	(.05702)	(.01174)	(.06875)
edu4	0.108	-.0307987	-.0089033	.0397019
	(0.245)	(.06761)	(.02459)	(.09206)
edu5	0.432	-.1072132	-.0593153	.1665285
	(0.408)	(.08123)	(.08182)	(.16223)
edu6	0.120	-.0339471	-.0103674	.0443145
	(0.423)	(.11435)	(.04568)	(.15993)
social_gr3	-0.153	.0478006	.0059164	-.053717
	(0.297)	(.09723)	(.00489)	(.10055)
social_gr4	-0.0616	.01831	.0040094	-.0223194
	(0.172)	(.05111)	(.01126)	(.06228)
social_gr5	-0.0151	.0045021	.0009477	-.0054498
	(0.272)	(.08144)	(.01639)	(.09782)
religion_nu1	-0.0764	.0222578	.005719	-.0279769
	(0.217)	(.06184)	(.01835)	(.08009)
blocknum2	-0.402	.1333835	-.0006085	-.132775
	(0.283)	(.10206)	(.02079)	(.08347)
blocknum3	-1.262***	.4621744***	-.1552211*	-.3069533***
	(0.344)	(.12394)	(.08571)	(.04473)
blocknum4	-0.830***	.281254***	-.0213237	-.2599304***
	(0.232)	(.0839)	(.02989)	(.06044)
blocknum5	-0.342	.1107645	.0051005	-.115865
	(0.262)	(.09088)	(.01194)	(.08194)
blocknum6	-0.933***	.3255752***	-.0488958	-.2766794***
	(0.235)	(.08713)	(.03843)	(.05491)
blocknum7	-1.122***	.4115914***	-.1254685*	-.2861228***
	(0.282)	(.10546)	(.06725)	(.04438)
blocknum8	-0.786***	.2708934***	-.0293565	-.2415369***
	(0.240)	(.08934)	(.03432)	(.06005)
cut1	-1.173***			
	(0.413)			
cut2	0.0355			
	(0.410)			
Observations	399			
PseduoR-squared	0.1073			
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1				

Result:3 Impact of NREGS on *Reduction of Stress* related to joblessness*:* With HH who applied for Job. (Outcome-1: Stress reduced not at all; Outcome-2: Stress reduced in to some extent; Outcome-3: Stress reduced in great extent.)

VARIABLES	Co-efficient	Mfx after outcome-1	Mfx after outcome-2	Mfx after outcome-3
nregpwork_days_inception	0.00711***	-.0020121***	-.0006087***	.0026208***
	(0.00147)	(.00041)	(.00022)	(.00055)
landholding	0.121	-.0341399	-.0103273	.0444672
	(0.0943)	(.02669)	(.00863)	(.03478)
irrigatedland	-0.216	.061231	.0185223	-.0797532
	(0.189)	(.05388)	(.01661)	(.06959)
hire_lab_cult2	-0.105	.0299897	.008477	-.0384667
	(0.150)	(.04311)	(.01171)	(.05452)
cattle	0.0368	-.0104024	-.0031467	.0135491
	(0.0459)	(.01295)	(.00408)	(.01692)
sex_HH2	-0.256	.0664293	.031044	-.0974733
	(0.331)	(.07773)	(.05196)	(.12927)
unmarried_HH	0.421	-.0985458	-.0652685	.1638144
	(0.495)	(.09191)	(.10599)	(.19722)
widow_HH	-0.146	.0430694	.0094372	-.0525066
	(0.303)	(.09319)	(.01377)	(.1065)
edu2	0.139	-.0382444	-.0136372	.0518815
	(0.149)	(.03981)	(.0166)	(.05601)
edu3	-0.00452	.0012811	.0003845	-.0016656
	(0.192)	(.05454)	(.01623)	(.07077)
edu4	0.0636	-.0176117	-.0060938	.0237055
	(0.255)	(.06884)	(.02697)	(.09574)
edu5	0.417	-.0983792	-.0637561	.1621353
	(0.408)	(.07697)	(.08621)	(.16239)
edu6	0.214	-.0554753	-.026247	.0817223
	(0.492)	(.11495)	(.07781)	(.19253)
social_gr3	-0.107	.0315271	.0071806	-.0387077
	(0.307)	(.09385)	(.01496)	(.10858)
social_gr4	-0.0687	.0194539	.0058629	-.0253168
	(0.176)	(.04996)	(.01511)	(.06497)
social_gr5	0.00450	-.0012708	-.0003886	.0016594
	(0.274)	(.0774)	(.0239)	(.1013)
religion_nu1	-0.0424	.0118655	.0038428	-.0157084
	(0.222)	(.06142)	(.0213)	(.08266)
blocknum2	-0.464	.1503812	.004062	-.1544433
	(0.289)	(.10373)	(.02184)	(.0848)
blocknum3	-1.415***	.5113456***	-.1751565*	-.3361891***
	(0.362)	(.12551)	(.09151)	(.04182)
blocknum4	-0.899***	.2965101***	-.0113267	-.2851834***
	(0.239)	(.08513)	(.03016)	(.06261)
blocknum5	-0.413	.1307239	.0100746	-.1407985
	(0.271)	(.0935)	(.0136)	(.08399)
blocknum6	-1.011***	.3463829***	-.0446678	-.3017151***
	(0.243)	(.08893)	(.04017)	(.05579)
blocknum7	-1.151***	.416558***	-.1170261*	-.2995319***
	(0.288)	(.10834)	(.06862)	(.04597)
blocknum8	-0.886***	.299773***	-.0265795	-.2731935***
	(0.246)	(.09071)	(.03644)	(.06036)
cut1	-1.353***			
	(0.441)			
Cut2	-0.127			
	(0.436)			
Observations	387			
Pseudo R-squared	0.0997			

*** p<0.01, ** p<0.05, * p<0.1; Robust standard errors in parentheses

Result:4 Impact of NREGS on *Reduction of Stress* related to joblessness*:* With HH who finally got the Job. (Outcome-1: Stress reduced not at all; Outcome-2: Stress reduced in to some extent; Outcome-3: Stress reduced in great extent.)

VARIABLES	Co-efficient	Mfx after outcome-1	Mfx after outcome-2	Mfx after outcome-3
nregpwork_days_inception	0.00652***	-.0017694***	-.0006555***	.0024249***
	(0.00148)	(.0004)	(.00023)	(.00055)
landholding	0.154	-.0417743	-.0154754	.0572498
	(0.0952)	(.02588)	(.01035)	(.03543)
irrigatedland	-0.251	.0682138	.02527	-.0934837
	(0.192)	(.05255)	(.01978)	(.07124)
hire_lab_cult2	-0.135	.0372331	.0127391	-.0499722
	(0.153)	(.04275)	(.01395)	(.05626)
cattle	0.0337	-.0091365	-.0033846	.0125211
	(0.0463)	(.01252)	(.00478)	(.01722)
sex_HH2	-0.261	.0646056	.0354971	-.1001027
	(0.334)	(.07432)	(.0571)	(.13097)
unmarried_HH	0.363	-.0830662	-.0580789	.1411451
	(0.501)	(.09383)	(.10623)	(.19955)
widow_HH	-0.179	.0514067	.0134693	-.064876
	(0.308)	(.09271)	(.01585)	(.10791)
edu2	0.160	-.0419675	-.0183324	.0602999
	(0.150)	(.038)	(.01938)	(.05692)
edu3	0.0245	-.0065966	-.0025384	.009135
	(0.196)	(.05251)	(.021)	(.0735)
edu4	0.0705	-.0186293	-.0078806	.02651
	(0.267)	(.06855)	(.03279)	(.10128)
edu5	0.395	-.0895428	-.0644492	.153992
	(0.412)	(.07518)	(.08974)	(.16419)
edu6	0.175	-.0439665	-.0227892	.0667557
	(0.498)	(.11501)	(.07944)	(.19431)
social_gr3	-0.172	.0497854	.0121525	-.0619378
	(0.310)	(.09522)	(.01301)	(.1075)
social_gr4	-0.118	.0320129	.0117834	-.0437963
	(0.180)	(.04898)	(.01819)	(.06691)
social_gr5	-0.0279	.0076643	.0026744	-.0103387
	(0.275)	(.07621)	(.0251)	(.1013)
religion_nu1	0.00249	-.0006758	-.0002495	.0009252
	(0.226)	(.06137)	(.02257)	(.08394)
blocknum2	-0.466	.1465094	.010885	-.1573945*
	(0.292)	(.10231)	(.01892)	(.08707)
blocknum3	-1.442***	.515553***	-.1689232***	-.3466298***
	(0.364)	(.12717)	(.09305)	(.04233)
blocknum4	-0.874***	.2800233***	.0024057	-.2824291***
	(0.241)	(.08459)	(.02794)	(.06503)
blocknum5	-0.421	.1290669	.0158591	-.144926*
	(0.273)	(.09209)	(.01201)	(.08565)
blocknum6	-0.980***	.3275941***	-.0287646	-.2988295***
	(0.245)	(.08924)	(.03832)	(.05813)
blocknum7	-1.161***	.4140184***	-.1068854	-.307133***
	(0.290)	(.10952)	(.06887)	(.0472)
blocknum8	-0.821***	.2683914***	-.0073821	-.2610093***
	(0.247)	(.0895)	(.03166)	(.06421)
Cut1	-1.402***			
	(0.446)			
Cut2	-0.151			
	(0.440)			
Observations	377			
Pseudo R-squared	0.0949	.	.	
Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1				

Appendix: 5:

Land Holding- Poverty-Economic status of HH- is there any nexus in the sample?

1) To check the Land holding- Poverty direct nexus in the sample I will run a Probit regression of BPL on landholding along many other possible determinants of BPL. Here my response variable is BPL=1 if the HH lies Below Poverty Line (i.e. RHS score <=33) and BPL=0 if the HH lies Above Poverty Line (i.e. RHS score>=34). Then we will concentrate on sign, magnitude and statistical significance of the co-efficient on land holding on the response of probability of the HH to be a BPL HH. Result of the probit estimates are as follows.

Determinants of HH to be BPL HH. A Probit Estimation

VARIABLES	Marginal effect on Prob.(bpl=1)	X
landholding	-0.0852**	.882439
	(0.0386)	
cattle	-0.0505**	1.48415
	(0.0226)	
mpce_nregp	-0.000212**	741.189
	(9.00e-05)	
migrate_day_last1yr_hh	-0.000312	45.1556
	(0.000352)	
hhsize	0.00233	4.61383
	(0.0169)	
Sex of Head of HH(sex_HH1 i.e. female as reference category)		
sex_HH2	0.0849	.907781
	(0.0840)	
Social Group (caste) of the HH (here social_gr1&2 i.e. 'General & Bramhin' (higher caste) as the reference category		
social_gr3	0.177	.069164
	(0.132)	
social_gr4	0.403***	.403458
	(0.0795)	
social_gr5	0.380***	.048991
	(0.133)	
Religion of the HH (here religion_nu2 i.e. Muslim as reference category		
religion_nu1	-0.196**	.789625
	(0.0992)	
Education of the Head of the HH (edu1 i.e. no education as the reference category)		
edu2	0.0243	.210375
	(0.0743)	
edu3	-0.203***	.210375
	(0.0738)	
edu4	-0.223**	.106628
	(0.0901)	
edu5	-0.297***	.057637
	(0.0830)	
edu6	-0.103	.072046
	(0.126)	
Observations	347	
Pseudo R2	0.2981	
Lo	-237.59597	
L1	-166.75832	
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1		

Findings: From Probit regression it is found that the probability that a HH will be a BPL HH is falling by 0.08 percentage points with the rise in the land holding by 1 acre controlling for others. This result is statistically significant at less than 5% level of significance. This mean that with the fall in land holding or as landholding falls the chances of a HH to be a poor HH increases in a statically significant manner.

Appendix: 6:

Land Holding- Poverty-Economic status of HH- is there any nexus in the sample?

2) I ran separately OLS estimation of HH level economic variable i.e. monthly per-capita consumption expenditure adjusted after NREGS income, monthly per-capita income adjusted after NREGS income, log of HH total saving, and log of HH total outstanding debt.

Determinants of HH level economic status -A OLS estimation

VARIABLES	mpce_nregp	mpi_nregp	lnsavings	lndebt
landholding	47.27*	118.2**	0.512***	-0.147
	(27.42)	(58.30)	(0.191)	(0.148)
cattle	-4.514	-51.37	-0.0900	0.127
	(19.35)	(41.14)	(0.135)	(0.104)
migrate_day_last1yr_hh	0.646**	1.875***	-0.000576	0.000371
	(0.296)	(0.628)	(0.00206)	(0.00159)
hhsize	-27.08*	30.95	0.190*	0.201**
	(15.57)	(33.10)	(0.109)	(0.0839)
Sex of Head of HH(sex_HH1 i.e. female as reference category)				
sex_HH2	-14.40	-148.9	-0.115	0.871*
	(92.19)	(196.0)	(0.643)	(0.497)
Social Group (caste) of the HH (here social_gr1&2 i.e. 'General & Bramhin'(higher caste) as the reference category				
social_gr3	-97.94	-224.1	0.736	0.596
	(125.2)	(266.3)	(0.874)	(0.675)
social_gr4	-231.9***	-384.1**	0.107	0.567
	(79.09)	(168.2)	(0.552)	(0.426)
social_gr5	-302.7*	-403.3	-0.0396	-1.065
	(156.4)	(332.5)	(1.091)	(0.843)
Religion of the HH (here religion_nu2 i.e. Muslim as reference category				
religion_nu1 (hindu)	156.8*	382.4**	1.017	-1.411***
	(91.14)	(193.8)	(0.636)	(0.491)
Education of the Head of the HH (edu1 i.e. no education as the reference category)				
edu2 (Primary)	41.79	28.95	1.284**	0.791*
	(76.54)	(162.8)	(0.534)	(0.413)
edu3 (Upper primary)	108.5	186.7	1.625**	1.241**
	(91.84)	(195.3)	(0.641)	(0.495)
edu4 (Secondary)	175.0	563.5**	2.003**	0.415
	(111.2)	(236.4)	(0.776)	(0.599)
edu5(higher secondary)	515.1***	1094***	3.557***	0.691
	(142.6)	(303.1)	(0.995)	(0.769)
edu6 (above HS)	1013***	2062***	4.488***	0.478
	(126.0)	(268.0)	(0.879)	(0.679)
Constant	671.5***	376.0	0.772	5.739***
	(116.8)	(248.4)	(0.815)	(0.630)
Observations	500	500	500	500
R-squared	0.253	0.248	0.152	0.076
Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1				

Findings: Similarly we also got similar results with the OLS estimation in the second case that taking control of other factors as land holding increases by 1 acre the monthly per-capita consumption expenditure adjusted after NREGS income increases by Rs. 47.27, monthly income adjusted after NREGS income increases by Rs. 118.2 and savings increases by around 51% and all such increase are statistically significant. But for debt we got the desired sign i.e. as land holding increases outstanding loan or debt falls but such result is not statistically significant.

Conclusion: Therefore, from these results one could argue more convincingly that land holding is a good predictor or proxy of HH poverty status and economic status.