



## Research Project No. 34

“Impact of Employment Guarantee Programmes on  
Gender Equality and Pro-Poor Economic Development”

# POLICY BRIEF

## Case-Study on India

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# POLICY BRIEF OF INDIA

## INTRODUCTION

### **Employment Generation in Indian Economy**

The high growth rate of the Indian economy in the recent years has failed to generate adequate “decent” employment for the labour force. The annual average growth rate of the economy in the last decade has been between 7 and 8 percent, with the growth rate reaching almost 9 percent during the last four years of the Tenth Five Year Plan (2002–07). As against this, the annual rate of growth of employment has been very low and it has declined from 2.01 during 1983–1993/94 to 1.84 percent (1.45 percent in rural areas and 3.14 percent in urban areas) during 1993/94–2004/05. This rate is much below the rate of growth of the labour force, which is now higher than the rate of growth of the population. Again, a significant number of the employed are working under precarious conditions and therefore live in poverty. The incidence of poverty has been estimated at 28.27 percent in 2004/05, against 3.1 percent of unemployment rate (usual status unemployment in 2004/05). This implies poor quality of employment for most of the poor in the economy. It has been observed that most of the additional employment generated in the last decade has been of poor quality and is in the informal sector.

### **National Rural Employment Guarantee Act and Scheme**

The Government of India therefore launched an employment guarantee programme in February 2006 under the National Rural Employment Guarantee Act (NREGA) 2005 that guarantees 100 days of wage employment in manual work for all those who want work. The act covered 200 of the most backward districts in the country in its first year. One hundred more districts were added in the second year and, beginning on April 1, 2008, the Act will cover all districts of the country. The Act was followed by National Guidelines, on the basis of which each state government was asked to design an employment guarantee scheme. All the state governments subsequently designed the schemes, which are now being implemented in the respective states. The main features of the Act and the Scheme are: (1) a guarantee of work (within 15 days of asking, for at least 100 days in one year at the stipulated minimum wages within 5 km of distance from the worker’s homes and payment of an unemployment allowance if work is not provided); (2) a guaranteed provision of some minimum entitlements in terms of amenities, facilities, and allowances while at work; (3) systematic planning for works in a decentralized manner and assured funding; and (4) transparency and accountability of the administration that implements the Scheme. It is expected to generate employment in the short run and promote labour-intensive economic activities in the medium and long term. The programme is also likely to improve labour productivity in the sectors where a large number of workers are employed and modify the development path to make it more labour intensive and poverty reducing.

## **Unpaid Work and NREGS**

Another important role that the NREGS can play in India is in terms of reducing unpaid work, particularly of women and the poor, by taking up suitable works. An important characteristic of the Indian economy, like many other developing countries, is the paradox of the simultaneous existence of un-/under-employment on the one hand and sizable amount of unpaid work on the other. Unpaid work covered under the Production Boundary of the UN System of National Accounts (SNA),<sup>1</sup> as well as unpaid non-SNA work covered under the General Production Boundary<sup>2</sup> of the UN System of National Accounts. Unpaid SNA work includes non-marketed work such as the collection of free goods like water, fuel wood, etc. from common lands and forests for meeting basic needs or as raw materials for income-generating activities and other subsistence work. Unpaid non-SNA work includes domestic work that consists of household upkeep and management (cleaning, washing, cooking, shopping for the household, etc.); care of children, the sick, the old, and the disabled in the household; and community services. This work is also predominantly performed by women and sometimes by children. Men's involvement is usually very low in these activities. There is a need to expand the purview of employment guarantee programmes from providing employment to the un-/under-employed in the labour market to releasing unpaid workers engaged in unpaid SNA and non-SNA work for accessing better opportunities in the labour market.

## **Objectives of the Study**

This study has been undertaken in India with a view to assessing the impact of substituting portions of unpaid work of men and women in a village through the National Rural Employment Guarantee Act (NREGA). The specific objectives of the study are: (1) to study the nature and extent of SNA and non-SNA unpaid work carried out in the selected village using the time use statistics collected through the time use survey conducted in 1998–99; (2) to examine the performance of the NREGA in the selected village to see how much unpaid work has been reduced by NREGA works and identify potential NERGS works that can reduce unpaid work in the village; (3) to study the impact of the NREGA works, including the potential impact on the unpaid work and on employment and incomes of the villagers, as well as on the village economy, by constructing a Social Accounting Matrix (SAM) and conducting multiplex analysis; and (4) to draw inferences for policy interventions.

## **Approach of the Study**

Nana Kotda, a medium-sized village located in Idar block (Taluka) of the Sabarkantha District in Gujarat state in India, has been selected for the purpose of constructing the village SAM. The reasons for the selection of this village are: (1) this village is a poor village, located in a backward district; (2) it is covered under the National Rural Employment Guarantee Act; and (3) it is also covered under the time use survey that was conducted in India in 1998–99 on a pilot basis. The study involves the construction of a village SAM to

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<sup>1</sup> This production boundary includes the activities that fall within the purview of national income accounts.

<sup>2</sup> The general production boundary includes those activities that fall outside the production boundary and are related to production of services by households for household members and community services.

understand the village economy and it uses multiplier analysis to assess the impact of NREGA works, particularly those that address the unpaid SNA and unpaid non-SNA work of men and women and on the household production, incomes, and employment, as well as on the village economy as a whole.

## KEY FINDINGS OF THE STUDY: THE VILLAGE ECONOMY

*Nana Kotda is a mid-size village*, whose economy is mainly agricultural, with most households engaged in crop cultivation and animal husbandry. About 91 percent of the households in the village, to a small or large extent, depend on primary sector activities for their living. The other activities include small shops and other trading, carpentry, rural artisan work and services (including government services and other labour). About 19 households depend on a pension, interest/rent income, or help from relatives. The majority of the village population belongs to low castes and tribes. Of the total 404 households in the village, 283 belong to Other Backward Castes (OBC), 94 belong to Scheduled Castes, and 4 belong to Scheduled Tribes. The rest of the 23 households belong to middle and high castes.

### **Poverty and Human Development in Nana Kotda**

According to the official data, 67 households (16.58 percent) are below poverty line (BPL) households. This figure is misleading, as the concept of poverty is extremely narrow here. The poverty line neither includes adequate nutrition nor other basic needs like clothing, housing, etc., or basic literacy and education, health, and well-being. The highest incidence of poverty is among labour households, followed by self-employed in non-agriculture and marginal farmers; about 93 percent of the poor belong to the low castes and tribes, and more than half of the female-headed households are poor. About half the adult women and 22.35 percent of the adult men are illiterate, and only 14 percent of men and 7 percent of women have studied above the 10<sup>th</sup> standard. About 17 percent of children of school age do not attend the school.

### **Amenities and Facilities**

Though the village has quite a few basic facilities and amenities (like all-weather approach roads, bus service, electricity, etc.), there are several gaps in basic services. The village does not have dependable and reliable supply of water in all the wards and in all the seasons; it lacks a drainage facility, clean arrangement for disposal of solid and liquid waste, internal paved roads in all the wards, and toilets and bathrooms. The schools in the village do not have an adequate number of rooms or facilities like toilets and drinking water. There is no public health facility in the village.

*The village economy of Nana Kotda is a small, open, and predominantly agricultural economy.* The total production of all the sectors inside the village is Rs. 186.00 million and items worth Rs. 158.9 million come from outside the village. However if we remove the large (and only) factory (the cotton ginning factory, which does not have much impact on the village economy because it gets most of the raw material, labour, and other inputs from

outside and sends its products outside), the total output in the village is Rs. 18.62 lakhs.<sup>3</sup> To this, agriculture contributes 54 percent, animal husbandry 16 percent, and the rest is comprised of services, trade, and construction. The average annual income per household in the village is Rs. 45,296, which comes to Rs. 9,846 per capita (US\$252). The highest income is earned by large farmers, followed by service households and small farmers. The lowest income is earned by the labour households, who constitute 47.3 percent of the total households.

***Agriculture*** is the most important economic activity in Nana Kotda. The major crops grown in the village are cotton, maize, jowar, wheat, tur, and other pulses, as well as castor and groundnut. About 30 percent of the cultivated area is irrigated and 70 percent area is rainfed. Agricultural production in the village therefore shows wide annual fluctuations due to the variations in the rainfall. Every five years there are two to three years of droughts or floods that result in agricultural losses. Such losses result in farmers mortgaging or selling their land and incurring debts. Controlling fluctuations by ensuring a stable supply of water is a major need in the village. In fact, ensured and increased water supply will also improve cropping intensity (by promoting multiple cropping) and crop yields in the village. NREGS can contribute considerably here.

***Animal husbandry*** is another important occupation in the village that provides the primary or secondary incomes to a large number of households. Since milk is a major output, there is a full-fledged milk cooperative society in the village with more than 410 members. It collects all surplus milk from the village to send it to the district dairy, Sabar Dairy. In 2006–2007 about 4.15 lakh liters of milk was collected by the cooperative society and earned profit of Rs. 1.14 lakh. This came to an average of Rs. 285 per member (in addition to milk price), which is very small. There is a very good scope for raising this amount by improving the productivity of the animals. Again, NREGS can help a considerable amount by regenerating grass lands and promoting water harvesting.

***Non-agricultural sectors*** in Nana Kotda include non-agricultural enterprises, as well as services, including government services. This sector contributes to 37 percent of the total output in the village. The different occupations under this group are services (government and private), vendors (bangle vendors, fruits and vegetable vendors, barbers), rural artisans/manufacturing (carpenter), and shops (a cloth shop, pan shops, a PDS shop). The highest income is earned by the cloth shop owner (Rs. 137,777 per annum), followed by the transport business owner (Rs. 97,128 per annum). The rest earn less than Rs. 40,000 per annum, with the lowest earning (Rs. 16,000 per annum) going to the bangle vendor. In short, the non-agricultural sector is far from developed in the village.

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<sup>3</sup> 1 lakh = 100,000

### **Consumption Pattern and Savings**

The large farmers in the village enjoyed the highest consumption expenditure (Rs. 71,389) in 2006–07, followed by service households (Rs. 62,953) and small farmers (Rs. 51,367). The labour households have the lowest consumption expenditure of Rs. 24,514. The most important item in consumption is food. The households belonging to the lowest income groups spend a very high percentage of their total expenditure on health and medical services. These amounts are larger than the corresponding amounts spent by large farmers and those employed in government services! This indicates the poor health conditions and a high incidence of morbidity of the poorer groups, as well as their very low access to government health services (where they get medical services almost free). There is a good scope for strengthening health-related infrastructure in the village. Provision of potable drinking water to all, drainage facilities, toilets, and paving of internal roads can contribute towards improving the overall health status of people and NREGS can help here.

### **Indebtedness**

The low and unstable incomes have pushed many households in to incurring debts. Households in the village incur debt for consumption (for consumption of food for survival, for social functions like funerals, marriage, etc., as well as for emergencies like ill health and education), as well as for production (for buying capital or inputs, etc.). Since financial institutions do not give loans for consumption purposes, consumption loans are taken from private source, the terms of which are highly unfavorable. About 48 percent of households have incurred debts for consumption, the average amount of the debt being Rs. 33,667, while only 9.01 percent households have incurred debt for production purposes. That is, the number of households incurring debt for consumption is more than five times higher than the number incurring debt for production! The highest incidence of indebtedness is on agricultural labour households and on small farmers. The most important reason for incurring debt is social functions, followed by survival and ill health. About one-fourth of the indebted households have incurred debt for health reasons and about one-third households have borrowed money to survive, for food, and for basic necessities of life. Once again, NREGS can help here.

### **Employment and Labour in Nana Kotda**

The workforce participation rates for men and women are high, 78.38 and 64.52 percent, respectively. However, workers are highly under-employed, with an average employment of 132 days in a year. There is not much difference in the days of work for men and women who work in the labour market. Except for those employed in government services, no occupation provides full employment. This is mainly because of the predominance of single-cropped farming and the lack of non-agricultural employment. In the absence of assured water supply, most farmers grow only one crop (i.e., kharif crop) and suffer from low employment in the lean season. Men's SNA work is relatively more diversified than that of women: Men spend 42 percent of their days on agriculture (crop farming) compared to 70 percent of women and spend almost half of their working days on non-agricultural activities (including services) as against a mere 11 percent by women. That is, women workers are

crowded in to agriculture and animal husbandry, with 78 percent of their person-days of employment spent on these activities.

Hired labour and family labour constitute 61.36 percent and 38.74 percent shares, respectively, in the total workforce. Of these, women's shares are 20.05 and 10.03, respectively. In other words, women contribute 34.94 percent of the total family labour and 25.89 percent of the total hired labour. Of the total work force in agriculture, 53.87 percent is male labour and 46.13 percent is female labour, which indicates that women's share is significant in the total agricultural work force. All workers in the village are local—except for some school teachers and some workers in the ginning factory who come from outside. Also, all employment in the village —except for employment of some government servants (60 percent of them are permanent)—is temporary, contractual, or casual employment. There is no social protection or social security provided to workers, and there is no legal regulation of work conditions that have been implemented effectively in the village except in government services, where there are rules regarding working hours, leave, and (sometimes) social protection.

#### **KEY FINDINGS: TIME USE PATTERN IN NANA KOTDA**

***Women spend 37.55 hours on non-SNA work while men spend only 3.25 hours.***

Combined with the fact that, on average, men spend 44.83 hours in a week on SNA work as against 23.90 hours of women, the weekly average time spent by men and women on total work (SNA + non-SNA) is 48.08 hours and 61.45 hours, respectively. That is, women spend 28 percent more time on work than men, but their work is predominantly unpaid work, which is not recognized. Women get much less personal time, about 13 hours less than men.

The time use activities that are relevant for the purpose of designing an employment guarantee programme are: (1) non-market SNA activities, such as free collection of basic necessities like water, fuelwood, fruits, vegetables, berries, and other edible goods, and collecting timber (small), grass, etc. for repair and construction of shelter; (2) non-market SNA activities like free collection of raw material for income-generating activities including collection of fodder for animals, bamboo/wood or other raw material for craft, etc.; (3) unpaid non-SNA activities such as direct and indirect care of children, as well as care of the sick, the old, and the disabled members of the household; and (4) unpaid non-SNA activities for household management and maintenance. The time spent on unpaid work that can be reduced through NREGS is presented in table 1, below.

**Table 1. Time Spent on Unpaid Work that Can Be Reduced through NREGS**

Activity	Men			Women		
	No. of NK	Total Time	PR	No. of NK	Total Time	PR
Fetching of water	15	46.40	1.7	295	1,634.30	36.80
Collection of fuel/fuelwood/twigs	6	18.20	0.7	135	565.60	16.90
Collection of fodder	80	661.30	9.3	203	2,689.80	25.40
Collection of other items	4	38.20	0.4	29	131.00	3.50
Grazing animals outside	109	2,043.75	12.7	66	1,281.70	8.24
Making dung cakes	2	7.60	0.2	144	563.40	18.00
Care of children—direct & indirect	53	253.40	6.1	243	2,626.10	30.40
Cooking food items and serving	52	197.50	6.1	368	5,697.70	46.10
Do-it-yourself home improvement	8	49.10	0.9	56	304.80	6.90
<b>Total</b>		<b>3,315.45</b>			<b>15,494.40</b>	

The total person-days spent on unpaid work is 18,810 (15,494 for women and 3,315 for men). Assuming that 80 percent of the time is saved through suitable NREGS works, the number of days available for NREGS works will be 15,048. Taking the wage rate Rs. 60 per day for men and women, extra total income generated through NREGS is Rs. 902,880 (15,048\*60).

#### KEY FINDINGS: NREGS IN NANA KOTDA

The NREG Act, which guarantees 100 days of manual work to all households located in the 200 most backward districts in India, came into force in February 2006 in Gujarat. The first works undertaken by NREGS started in Nana Kotda on April 10, 2006—2 months and 8 days after the Act came in to being. So far six works—all works for de-silting the check dams—have been taken up in the village and Rs. 586,131 has been spent, with the entire cost being labour cost. In all, 238 persons (127 women and 111 men) from 161 households have participated in NREGS. They worked for 9,812 person-days (5,492 women-days and 4,320 man-days). The average daily wage rate under the programme has varied between Rs. 55 to Rs. 74. At the household level, the participating households got employment of 53.62 person-days during the first 18 months, against the target of 100 days per 12 months. For the entire village the employment generated was 21 days per household in 18 months of the programme. This comes to 14 days of work per year, as against the target of 100 days of work per year, per household.



**Table 2. Employment Generated under NREGS Works**

	Person-days			Wage Incomes Earned (Rs.)			Average Wage Rate (Daily)
	Men	Women	Total	Men	Women	Total	Rs.
<b>Work No. 1</b>	1,655	2,104	3,759	74,475	94,680	169,155	45
<b>Work No. 2</b>	1,074	1,287	2,361	78,402	93,951	172,353	73
<b>Work No. 3</b>	463	467	930	29,632	29,632	59,264	64
<b>Work No. 4</b>	236	269	505	12,980	14,795	27,775	55
<b>Work No. 5</b>	493	708	1,201	36,482	52,392	88,874	74
<b>Work No. 6</b>	399	657	1,056	25,935	42,705	68,640	65
<b>Total</b>	<b>4,320</b>	<b>5,492</b>	<b>9,812</b>	<b>257,906</b>	<b>328,155</b>	<b>586,061</b>	<b>60</b>

Source: Village records at Nana Kotda and records at Block Office at Idar

The highest participation in NREGS came from landless households (90 households), followed by farmers with less than 2.5 acres of land, i.e., marginal farmers (64 households). The participation from medium and large farmers was very small. In terms of the percentages of the total, however, 43.24 percent of the marginal farmers and 38.8 percent of labour households participated in NREGA works. The poorest households constituted only 2.48 percent of the total participating households. This is because many of the poorest commute to neighboring villages to work in farm and non-farm activities as manual labourers. They have a long-term contract (formal or informal) with the employers according to which the workers get continuous employment for several days. As against this, the work on NREGS is short term, scattered, and without any employment guarantee component. Even though many of the workers who commute reported that though they prefer to work in their own village, they cannot do so as the NREGS work is not dependable. The guarantee component of the scheme is missing in practice. The poorest households who are able to migrate (as many of them are landless) therefore prefer to migrate rather than participate in NREGS work.

About 80 percent of the households in the village are interested in participating in NREGS if guaranteed work is available. Some of them are interested in working during the lean season or for limited number of days, while some are interested in working whenever work is available.

Based on the needs of the village in the areas basic facilities/infrastructure/services and the nature of unpaid work of women and poor on the one hand and the priorities of local people on the other hand, some potential NREGS works have been identified for the village. These include: (1) a drinking water facility; (2) regeneration of common lands for energy security; (3) works that reduce the burden of unpaid domestic work; (4) works that improve the quality of life of people; and (5) productive assets for income generation.

**Table 3. Some Potential NREGS works for Nana Kotda**

	Skilled Labour	Material Cost	Unskilled Labour	Total	Skilled Labour (%)	Material Cost (%)	Unskilled Labour (%)	Total
Deepening of the tank	0	0	36,000	36,000	0.00	0.00	100.00	100.00
Laying pipelines to distribute water in the wards		1,695,200	423,800	2,119,000		80.00	20.00	100.00
Regeneration of common lands		60,000	45,000	105,000	0.00	57.14	42.86	100.00
Construction of child-care centers	50,000	300,000	150,000	500,000	10.00	60.00	30.00	100.00
Paving of internal roads								
<i>First phase: Only earth work</i>			156,750	156,750	0.00	0.00	100.00	100.00
<i>Second phase: Surfacing the roads</i>	100,000	600,000	300,000	1,000,000	10.00	60.00	30.00	100.00
Construction of toilets (under Total Sanitation Campaign Programme)	80,000	480,000	240,000	800,000	10.00	60.00	30.00	100.00
Construction of drainage	45,000	270,000	135,000	450,000	10.00	60.00	30.00	100.00
Digging two more tanks								
<i>Phase one: Digging</i>	0	0	400,000	400,000	0.00	0.00	100.00	100.00
<i>Phase two: Pitching</i>	50,000	300,000	150,000	500,000	10.00	60.00	30.00	100.00
<b>Total cost</b>	<b>325,000</b>	<b>3,705,200</b>	<b>2,036,550</b>	<b>6,066,750</b>	<b>2.36</b>	<b>61.07</b>	<b>35.57</b>	<b>100.00</b>

Though the list is not exhaustive in the sense that many more works can be taken up to promote short- and long-term employment avenues in the village, it indicates that the scheme has a good potential for relieving men and particularly women from their unpaid work and enabling them to access better opportunities in life in terms of reduced time stress, improved quality of life, improved access to infrastructure, improved productive assets, and increased employment and incomes. The scheme, however, is not working very well, with the result that the potential of the scheme is not being tapped in the village.

### IMPACT OF NREGS WORKS: MULTIPLIER ANALYSIS

*The output multiplier* indicates that the total increased output in the village due to the NREGS works is Rs. 4.52 lakhs. In absolute terms, the increase is the highest in agriculture (Rs. 1.75 lakhs), followed by self-employed in non-agriculture (Rs. 1.67 lakhs). However the growth rate is the highest in sectors under self-employed in non-agriculture.

**Table 4. Increased Output Due to De-silting of Six Check Dams**

<b>Output</b>	<b>Base (Rs.)</b>	<b>Increased (Rs.)</b>	<b>Growth (%)</b>
<b>Agriculture</b>	10,256,406	174,535	1.70
<b>Animal husbandry</b>	2,989,812	53,077	1.78
<b>Construction</b>	1,927,027	25,451	1.32
<b>Self-employed in non-agriculture</b>	3,687,510	167,023	4.53
<b>Total</b>	18,860,755	452,218	2.22

*The income multiplier* shows that the NREGS investments in de-silting the six check dams has raised the income by Rs. 1.97 lakhs through the income multiplier. That is, the base income of Rs. 167.90 lakhs has increased by 1.17 percent. This is in addition to the direct increase in income of Rs. 5.86 lakhs through NREGS works. In other words, NREGS has increased the income in the village by Rs. 7.83 lakhs. The increase is highest for marginal farmers, followed by labour households; it is negligible for service households. The increase in terms of percentage is the highest for large and small farmers.

**Table 5. Increased Household Income Due to Construction of Six Check Dams**

<b>Household Income</b>	<b>Base</b>	<b>Increased</b>	<b>Growth</b>
<b>Marginal farmer</b>	3,879,411	55,891	1.44
<b>Small farmer</b>	2,043,283	32,851	1.61
<b>Large farmer</b>	2,057,010	32,999	1.60
<b>Self-employed in non-agriculture</b>	1,423,202	19,918	1.40
<b>Labour</b>	4,744,524	46,973	0.99
<b>Services</b>	2,170,760	1,204	0.06
<b>All other households</b>	472,098	6,986	1.48
<b>Total</b>	16,790,288	196,822	1.17

If the potential NREGS works are taken up, there will be an increase of Rs. 15.60 lakhs in output and an increase of Rs. 14.60 lakhs in income. The cost of the identified NREGS works in the village is Rs. 60.6 lakhs.

*The employment multiplier* indicates an additional employment of 994 person-days (826 man-days and 168 women-days) as indirect employment generated through NREGS, the value of the multiplier being 1.84 for men and 1.30 for women. The present employment base is 59,998 person-days (44,861 man-days and 12,768 woman-days) and the additional indirect employment is 994 person-days. This is in addition to the direct employment of 9,812 person-days of work generated directly under the NREGS.

**Table 6. Impact of NREGS Works on Employment (person-days)**

	Direct Employment			Indirect Employment (multiplier )		
	Male	Female	Total	Male	Female	Total
<b>NREGS works undertaken</b>	4,320	5,492	9,812	826	168	994
<b>Potential NREGS works</b>	17,932	22,809	40,731	2,780	578	3,358

The potential NREGS works are likely to generate much more employment in the economy if implemented. They are likely to generate 2,780 man-days and 578 woman-days of work, bringing the total to 3,358 person-days of employment. This will be in addition to the direct employment of 40,731 person-days generated in the implementation of the potential works.

The employment multipliers are expressed in person-days because if we measure employment in persons, there would be duplication in estimation as people would work in more than one sector.

#### **IMPACT OF REDUCTION IN UNPAID WORK**

As seen above, women and men spend 18,810 person-days (3,315 man-days and 15,494 woman-days) in the village on unpaid work that can be reduced through NREGS works. The potential NREGS works are likely to reduce this unpaid work considerably. If we assume that 80 percent of the unpaid work is likely to be reduced through NREGS, 15,048 person-days will be released for NREGS works in the village. At the wage rate of Rs. 60 per day, this will generate Rs. 9.03 lakhs in the economy.

This investment, in addition to the income/employment generated directly, will have a (output, income, and employment) multiplier impact on the economy. Out of Rs. 9.03 lakhs, the households will spend Rs. 437,688 (approximately 50 percent of Rs. 902,880) on items that are produced inside the village (such as wheat, jowar, bajra, etc.) and the rest of the expenditure is made on items that are imported or bought from outside the village (rice, pesticides, etc.). By distributing the amount Rs. 437,688 among the sectors in the ratio of household expenditure of all the households put together, we get a column. This column is multiplied with the inverse matrix and, by adding these, we get an additional output of Rs. 656,848, additional value-added of Rs. 346,385, and additional household income of Rs. 294,329 in the village economy. This clearly indicates that reduction in unpaid work will have a large impact in terms of an increase in employment. This will have an additional multiplier impact on the level of employment in the economy.

## GENERAL COMMENTS

### **Low Values of Multipliers**

A striking feature of the above discussion is the low values of the multipliers. The main reason for the low value is the fact that: (1) about half the products consumed in the village come from outside the village and therefore a considerable part of the impact will go outside the village—which is not really a loss to the economy; and (2) since the village is backward, the output, income, and the employment coefficients are quite low. These coefficients will increase rapidly once the village experiences growth in productivity.

### **Multipliers Underestimate the Overall Impact**

It is also important to note that the multipliers tend to underestimate the impact of NREGS works. This is because SAM is a static model and it assumes that all multiplying coefficients are static. However, this is not true. For example, farmers in the village have already shifted to more productive, more remunerative, and more labour-intensive crops after the NREGS works have improved water tables in the village. Secondly, it is assumed that the share of the goods coming from outside the village remains the same. This assumption is also not valid as consumption of local crops has already increased in the village and the surplus generation in the village may lead local production of other consumption goods in the future. In short, the value of the multiplier is likely to increase rapidly in the near future if the right kind of NREGS works are taken up.

### **Going Beyond Multiplier Analysis**

NREGS works are likely to have impact on the village economy in several other areas that cannot be estimated through a multiplier analysis. The NREGS works that reduce unpaid SNA and non-SNA work of women and the poor are likely to improve the health status of the village population. The availability of clean, potable drinking water and the construction of drainage and toilets, as well as a reduction in the unpaid drudgery of women will improve the health status of people in the village. Again, assuring water supply at the door step, regeneration of common lands for fuel and fodder, and child-care centers will reduce the unpaid work of children. This will enable them to attend the school regularly. This will particularly be beneficial to girl children, who often stay back at home either to take care of younger siblings or to help in collection of water, fodder, etc., and other household work. In addition, construction of two pre-school rooms will ensure healthy intellectual development of young children in the village. NREGS can release women for more productive work in the labour market. This will enable them to participate in NREGS works in the short run and provide productive employment in the long run through promoting the development of the labour-intensive sectors in the economy.

### **NREGS and Pro-Poor Development**

NREGS is likely to raise productivity and incomes of workers employed in crop cultivation, animal husbandry, and allied activities. The NREGS works completed so far have already showed this impact. The potential NREGS works will further increase productivity in

agriculture and animal husbandry. It will reduce poverty and help in turning subsistence farming into profitable farming, promote diversification of crops, increase the area cultivated under more productive crops like wheat, bajri, jowar, or under new crops, and increase productivity in agriculture.

The village economy is likely to move to diversification as: (1) the increased agricultural incomes and surplus may lead to increased savings and investment in agri-business or agro-processing and in non-farm economic enterprises; (2) the increased demand for non-food products will encourage local enterprises to undertake new enterprises; and (3) there will be an overall increase in trading in the village. This diversification is likely to be labour intensive, as it will promote labour-intensive agriculture, diversification in the primary sector and, labour-intensive processing, as well as trading.

***NREGS is only a component of a full employment and pro-poor development strategy.*** It needs to be underlined that supplementary policies ought to be implemented to promote agricultural growth, infrastructure development, credit, financing, etc.

In short, the present study has shown that, if planned well, NREGS can enhance productivity and incomes of the poor where they are located and diversify these sectors to promote allied sectors and release labour to non-farm sectors, reduce poverty and promote human development, reduce unpaid SNA work (including subsistence work and non-SNA work), and enable unpaid workers to access better opportunities in the labour market. It can relieve women from spending long hours on collection of water, fuel, wood, fodder, etc., as well as on care by strengthening local infrastructure. Though NREGS is not a panacea, it will be the first necessary step towards broad-based, labour-intensive development of the economy.

## RECOMMENDATIONS

***Systematic planning*** for NREGS is essential for ensuring its full benefits to the village economy. There is a need to develop a long-term perspective in the planning of the NREGS. It needs to be realized that the programme is not for creating a permanent army of manual workers, but is a transitional programme that contributes towards transforming a labour-surplus economy to a full employment economy. Secondly, NREGS is to be viewed also as a programme that addresses the unpaid SNA and non-SNA work of people and transforms this into the public domain by constructing suitable infrastructure, amenities, services, and assets. Thirdly, NREGS needs to be dovetailed with ongoing rural development programmes in a way that these programmes supplement the basic role of the NREGS.

***It is important to underline the role of time use statistics in this context.*** Time use statistics provide information on how much time people spend on the different unpaid activities and insight in to how their time use can be made more productive, less stressful, and more conducive to their well-being through NREGS works. The time use data throw

light on the wide gender inequalities that are the cause as well as the result of the wide gap that exists between men and women in the economy. The data therefore help in planning for works that transfer unpaid work to public infrastructure/services and thereby improve access of women and the poor to better opportunities in the labour market as well as in life.

***It has been laid down that the ratio of the labour cost to material cost should be 60:40 under the NREGS. However, this does not at all mean that each and every work taken up under the NREGS should maintain this ratio.*** This ratio needs to be maintained for all projects put together in a village in a year. This means that each work/asset can be made durable by planning in a manner that balances the labour-intensive part of one work with the skill-/material-intensive part of another so that the overall ratio is maintained. Also, funds from other programmes, including the funds for MLAs and MPs, can be used to finance the material component of NREGS works. Unfortunately a very narrow and distorted interpretation of the ratio has resulted into construction of non-durable assets. There is a need to disseminate the correct interpretation so as to ensure construction of durable assets under the NREGS.

***Planning for NREGS needs to have a strong gender dimension.*** Women seem to prefer NREGS works for different reasons, like a high incidence of unemployment, local availability of work under NREGS, willingness to work hard, etc. However, as our study has shown, women are not able to participate enough because child-care facilities are not always available on NREGS work sites and because works that suit women have not been designed. Also, there is a need to make payment of wages directly to participating women rather than to the heads of the participating households. Payment of wages to the male head of the household does not really empower women. Lastly, NREGS needs to be engendered in terms of selection of works, i.e., by selecting those works that reduce drudgery and time stress of women

***In order to achieve the goals laid down for NREGS certain modifications need to be made in the designing of NREGS,*** including: (1) the limit of 100 days should be removed so that NREGS either prevents distress migration of labour from the village or raises the wage rate; (2) stress should be laid on dissemination of NREGS to villagers so that they know their entitlements clearly under the programme; (3) social audit should be organized to ensure public participation and the accountability of administration to the people they serve; and (4) supervision and monitoring, as well as social audit, must be made mandatory to ensure that employment guarantee and other entitlements are enforced.