

Is There a Case for the Employment Guarantee Scheme in India?
Some Recent Evidence

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Abstract

Overall participation in the Employment Guarantee Scheme (EGS) in Maharashtra (an Indian state) fell sharply over the period 1980-97. Some of this reduction was due to expansion of irrigation facilities leading to expansion of farm employment. Alongside, expansion of non-farm employment led to a further reduction in the demand for the EGS. Although there was a slight rise in participation in subsequent years, it was dampened by a change in the composition of the EGS. Specifically, substitution of community assets (e.g. soil conservation works) by individual assets (e.g. wells) involved fewer workers. The official explanation for the decline in EGS participation in recent years in terms of expansion of farm and non-farm employment opportunities is thus partly valid. In some of the poorer regions (e.g. tribal villages), however, the EGS continues to confer significant transfer and stabilisation benefits during long seasonal slacks. As alternative employment options are few and far between, the dependence on the EGS is unavoidably high for those who are able to participate in it. If the overall participation rates are low, it is partly a consequence of the nature of projects undertaken and low outlays and not so much a result of slackening of demand for the EGS. A case therefore is made for enhanced outlays under the EGS with a substantially higher reallocation in favour of the poorest regions.

Key words: Participation, transfer and stabilisation benefits, backward regions, poverty.

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Introduction

The Employment Guarantee Scheme (EGS) in the Indian state of Maharashtra is an innovative anti-poverty intervention. Its success has prompted similar interventions elsewhere. A variant, the Employment Assurance Scheme (EAS), for example, was launched on a large scale in some of the most backward regions a few years ago.² In recent years, however, the composition of the projects undertaken under the EGS has changed, and the participation has also declined. This raises the concern whether the poverty reducing potential of this scheme has diminished. The present paper makes an attempt to reexamine the case for the EGS on the basis of some new evidence collected from the Planning Department of Maharashtra government, and field-data collected from a specially designed survey in two villages of Ahmadnagar district in Maharashtra in 1999/2000. It is argued that the poverty alleviating potential of the EGS continues to be high in some of the most backward regions, as the choices facing the poorest in these regions (e.g. tribals) during long slack periods are often grim involving high search costs and low-paid employment in distant areas. A case is then made out for a larger outlay under the EGS and a substantially higher reallocation in favour of the poorest regions with appropriate changes in its design and implementation.

The scheme is as follows. First, the salient features of the EGS are described. This is followed by a brief description of sample design and data collection in two villages of Ahmadnagar district in Maharashtra. In the third section, some new features of the EGS are reviewed, based on data supplied by the Planning Department. In the next section, an attempt is made to assess the transfer and stabilisation benefits of the EGS in the sample villages of Ahmadnagar district. In the fifth section, some observations are made on the design and implementation of the EGS, followed by concluding observations from a broad policy perspective in the final section.

¹ This is part of a larger study sponsored jointly by IFPRI and IFAD, under the overall direction of Nurul Islam. Thanks are due to Nurul Islam, Ganesh Thapa, Shantanu Mathur, T.N Srinivasan, Jean Dreze, S. Howes, M. Lipton, C. J. Bliss, K.L. Krishna, P. Seabright, Pasquale Scandizzo and K. Imai for helpful comments and discussions. The sample survey in Ahmadnagar villages was carried out by P. Sadolikar of Empirical Research Agency in Pune. Mani A. Nandhi helped with the interpretation of the survey data with commendable efficiency and competence. An earlier version was presented in a seminar at Columbia University in November, 2002. The comments of the participants- especially Sanjay Reddy- were extremely useful in carrying out the revisions. Any remaining errors are the responsibility of the author.

² The EAS was introduced in 1,752 backward blocks in which the revamped Public Distribution System was in operation in 1992. The scheme aims at providing 100 days of unskilled manual work to the rural poor seeking employment. It is funded in the 80:20 ratio by the Centre and the States, respectively. The scheme operates largely during lean agricultural periods. For details, see GOI (1994). The EAS and *Jawahar Rozgar Yojana* were, however, discontinued and a new scheme *Sampoorna Grameen Rozgar Yojana* was launched in 2001 (Nayyar, 2003).

1. EGS – Salient Features³

In a large part of India – especially in the semi-arid region to which Maharashtra belongs – agriculture is a highly seasonal activity. During the lean periods, large sections of rural households eke out a bare subsistence through short spells of mostly unremunerative employment. If employment opportunities expand, the severity of hardships would lessen. Motivated by this concern, Mr. V. C. Page initiated the EGS experimentally in 1965. (In fact, it was known for some time as the Page scheme). It was subsequently expanded as part of an integrated rural development project, culminating in the EGS Act (No. XX of 1978) and its implementation in Maharashtra in 1979. From a modest beginning, the EGS expanded rapidly into the most important poverty alleviation programme in Maharashtra.

The scheme guarantees that every adult who wants a job in rural areas will be given one, provided that the person is willing to do unskilled manual work on a piece - rate basis.⁴ Self-selection of the poor is built into the EGS. First, no choice of work is offered. Secondly, until 1988, the wage rate was usually below the agricultural wage rate.⁵ Thirdly, as the guarantee holds at the district level, a person may be required to travel a long distance for a few days of temporary work.

The employment seeker has to get his/her name registered under this scheme with the registering authority of the village (e.g. the Village Level Worker (VLW) or *Gram Sevak*) by filling in a form. Thereafter a formal request for employment is made to the Samiti Officer (i.e. the *Tahsildar*) by filling in another form. The *Tahsildar* is obliged to provide work within 15 days of receiving the 'demand for work'. The employment seeker is required to work for a minimum of 30 days on the site assigned by the *Tahsildar*. The person must present himself/herself for work within 7 days of the issuing of the letter by the *Tahsildar*. Failure to provide employment within 15 days entitles the person to an unemployment allowance. *Ex-gratia* payment up to Rs. 10000 is admissible in case of death or disablement of a worker on the site. Some amenities provided on the site include potable water, crèches, resting place and first aid.

The scheme operates through identification of projects which must satisfy two criteria: they must be labour – intensive and create productive assets. The labour – intensity criterion is defined rather strictly- the ratio of cost of unskilled labour to equipment, materials, supervision charges and so on must be 51:49 or higher.^{6, 7} Productive works are, however, somewhat loosely defined as those which directly or indirectly lead to an increase in production or which, if not undertaken, would cause production to decline. With a view to minimising the recurrence of droughts, priority is given to moisture conservation and water conservation works (e.g. percolation and storage tanks). Other priorities are soil conservation and land development works, afforestation, roads, and flood protection schemes. It is mandated that work under the EGS should be so organised that it does not interfere with

³ This draws upon GOM (1997).

⁴ However, a person who is between 15-18 years old can be given employment if there is no earning member in the family.

⁵ Following the High Court directive, the EGS wage rate was hiked in conformity with the Minimum Wages Act. The piece-rates for different types of manual/unskilled work are so fixed that an average person working diligently for 7 hours a day would earn a wage equal to the minimum wage prescribed for agricultural labour for the concerned zone, under the Minimum Wages Act (GOM, 1997).

⁶ This is down from 60:40. A few exceptions include canal works of medium and major irrigation projects which involve rock cutting.

⁷ Often as a consequence of inflation of material costs some of these are deliberately included in labour costs in order to maintain this norm (Dev, 1993)

normal agricultural activities. Also, this scheme is not activated when work is available on other plan or non-plan works in progress.⁸

A three – tier set up, comprising committees for planning, direction and co-ordination, exists at the state, district and *Panchayat Samiti* levels. At the state level, overall responsibility is vested in the Planning Department, at the district level, in the Collector, and, at the *Panchayat Samiti* level, in the *Tehsildar*.

The Planning Department makes a budgetary provision. Quarterly credit limits are released to the Collectors. An account of expenditure is required to be maintained at the district and *Panchayat Samiti* levels in accordance with the normal government procedures.

Weekly and monthly progress reports are sent by the implementing agencies to the Collectors for onward transmission to the Planning Department. To minimise the malpractices, a high level vigilance committee under the chairmanship of the Revenue Secretary has been constituted. Vigilance squads have also been constituted at different levels. The workers have been given identity cards-cum-wage books in which their attendance and wages are shown.

The scheme is financed through taxes levied specifically for it and a matching contribution from the state government. The former include (i) a tax on profession, trades, etc., (ii) an additional tax on motor vehicles, (iii) a surcharge on sales tax, (iv) a surcharge on land revenue, and (v) a tax on non-residential urban land and buildings.

2. Data

As the analysis is based mostly on two different data sets, a brief description of their salient features is given below.

District-wise data on participation in the EGS, type of EGS works and expenditure were obtained from a document prepared by the Planning Department, Govt. of Maharashtra (GOM, 1997).

Although I shall draw upon my earlier work on the EGS based on the ICRISAT panel survey, much of the focus of the household level analysis presented here is based on a survey designed specifically for this study, conducted in two villages in Ahmednagar district in Maharashtra. The sample design and its implementation are discussed below.⁹

To supplement the analysis based on the ICRISAT panel survey, a special survey was designed for this study. While there is some overlap between the two surveys, the latter focuses more on the process of implementation of the EGS. But more importantly, it seeks to illustrate some of the mechanisms through which the EGS impacts on household incomes and well-being of some of the poorest sections. Accordingly, a small sample of participating and non-participating households, and representatives of official agencies at the state, district, *tehsil*/block and village levels were interviewed in late 1999 and 2000.¹⁰

⁸ New projects under this scheme are undertaken only when (i) at least 50 labourers are available, and (ii) they cannot be absorbed in on-going works. However, exceptions can be made for works in hilly areas (GOM, 1997).

⁹ For a review of the findings based on the ICRISAT survey, see Gaiha (1997a, 2003a).

¹⁰ The interviews were carried out by P. Sadolikar of Empirical Research Agency Pvt. Limited in Pune, under the overall guidance of the author.

Given the time and budget constraints, it was decided to conduct the field-work in Ahmednagar district as the level of EGS activity was reported to be high there. Besides, since a major concern of this study was to examine the exclusion of the poorest from anti-poverty interventions, another consideration that favoured the selection of this district was the high concentration of the tribal population in it. In this district, two *tehsils* were selected viz. Akole and Sangamner, with the former recording the highest number of registered labourers and the latter the next highest (for the EGS). From each *tehsil*, one village was selected in consultation with *tehsil* officials. From the tribal zone in Akole, Padoshi was chosen, and, from the dry region in Sangamner, Panodi. Hereafter this is sometimes referred to as the Ahmadnagar sample.

As a wide range of topics was included in the questionnaire and detailed responses had to be obtained, it was decided to restrict the sample to 20 EGS participants. In consultation with the *Sarpanch* (the Chairperson of the village *Panchayat*), a list of participants in the EGS was prepared. A random sample was then selected, making sure that SC/ST, agricultural labourers and women were represented in it. From the two sample villages, 10 non-participants were randomly selected, making sure that these belonged to (relatively) poor households (i.e. SC/ST/ Other Backward Classes (OBC)). Several officials involved in the implementation of the EGS at different levels were interviewed. These comprised officials in the Planning Department, District Collector, *Tehsildar* and Village Level Worker (VLW).¹¹

3. Recent Developments

First, the performance of the EGS in terms of some broad indicators is reviewed. This is followed by a review of the changes in the composition of EGS projects and their implications for the self-selection of the rural poor and the nature of assets financed. This analysis is based largely on the data obtained from the Planning Department of Maharashtra government.

(a) Indicators of Performance

Over the period 1980-97, there was a sharp decline in EGS participation – the person days of employment fell from 20.55 crores to 9.01 crores. The expenditure (at constant prices) also fell over this period – from Rs.30.17 crores to Rs.24.66 crores. Although participation fluctuated, there was a sharp reduction in 1989, following the hike in the EGS wage rate. Between 1987-89, there was a reduction in person days of employment of over 5.50 crores. A large part of this reduction was due to rationing, and the brunt of the reduction was borne by the poor.¹² Soon after there was a gradual rise in EGS participation until 1993, followed by a steady decline in subsequent years.¹³ Considering that the peak of 1980 has not been surpassed and the gap between it and participation in subsequent years has widened considerably – especially during the 1990s – it may be inferred that the importance of the EGS as a supplementary source of employment has diminished in recent years. However, as argued later, the EGS continues to perform an important poverty alleviating role in backward regions and a reallocation of EGS outlays in their favour is thus necessary.

¹¹ A list of persons interviewed for this study is available on request.

¹² About 50 per cent of the reduction in EGS participation between 1988 and 1989 was a direct consequence of the lowering of the EGS expenditure and the hike in the wage rate. Taking this as an approximate measure of rationing, it follows that the extent of rationing was large. For details, see Gaiha (1997a). Ravallion et al. (1993), however, attribute 86 per cent of the reduction to rationing.

¹³ Except for 1996 when there was a slight rise in EGS participation.

Over the period 1991-96, the share of female participants (i.e. female participants/total participants) ranged between 30 to 39 per cent. Although these are high shares, it is arguable that they are lower than expected. In Pune district, for example, the number of females registered for employment in the EGS was considerably higher than the number of males registered. Yet the share of females in total EGS employment was much lower.¹⁴ Another neglected group is tribals, usually confined to isolated settlements lacking basic amenities (e.g. access to drinking water). Possessing few income earning skills or assets, if any, most of them are condemned to abject poverty. Even the EGS has bypassed them – their share in total participants fell from a meagre 13.30 per cent in 1991 to 8.50 per cent in 1996. Limited participation of deprived groups – women and tribals – raises a concern about the effectiveness of the “guarantee”. What adds to this concern is that barely a quarter of those registered under the EGS secured employment within 15 days (of registration) in Pune.¹⁵

Over the period 1991-96, the composition of EGS expenditure also changed significantly. The share of (usual) EGS projects fell slightly – from over 74 per cent to about 70 per cent; that of the *Shram Shaktidware Gram Vikas* (SSGV) nearly halved – from about 12 per cent to about 6 per cent; while that of Jawahar Wells rose sharply – from over 13 per cent to nearly 23 per cent¹⁶. Similar patterns are observed in *all* 29 districts of Maharashtra in which the EGS operated during this period.¹⁷

It is plausible that these compositional changes – especially the increasing importance of Jawahar Wells Scheme – impinged on the poverty reducing effect of the EGS.¹⁸ Some implications of this shift may be serious. Replacement of community assets with individual assets (i.e. wells) could divert the benefits of the EGS away from the poorest landless households to the moderately poor or relatively affluent owning land¹⁹. Moreover, it is not obvious whether financing of such assets through the EGS is preferable to that through a micro-credit scheme or through easier access to credit from banks. Finally, to the extent that (small) contractors are involved in the construction of wells, it is unlikely that the (direct) employment benefit accrues largely to the poorest workers. Guided by profitability considerations, contractors prefer physically strong and dextrous workers, making it harder for the poorest to fend for themselves.^{20, 21} Besides, the contractors are notorious for some malpractices (e.g. use of inferior material, diversion of resources, etc).

¹⁴ In 1995, for example, the share of females among the persons registered for the EGS was 57 per cent while their share in total person days of employment was about 37 per cent.

¹⁵ Such estimates are no more than illustrative, as the registration numbers tend to be unreliable.

¹⁶ As these schemes are reviewed later, their details are not given here.

¹⁷ Except for Pune where the χ^2 statistic is weakly significant (i.e. at the 13 per cent level), in all other districts it is significant at the 5 per cent level, implying significant changes in the pattern of allocation of EGS outlays.

¹⁸ $L_t = \alpha + \beta_1 E_t + \beta_2 D_t + \varepsilon_t \dots\dots\dots(1)$

where L_t represents person days of employment, E_t denotes EGS expenditure, D is a dummy that takes the value 0 upto 1990 and 1 in all subsequent years, ε is the error term and t denotes year. Using an AR(2) specification, a (significant) negative coefficient of the dummy was obtained, implying a reduction in EGS person days, given the EGS expenditure. This is partly consistent with our conjecture, as the negative coefficient also embodies the dampening effect of expansion of irrigation on EGS demand.

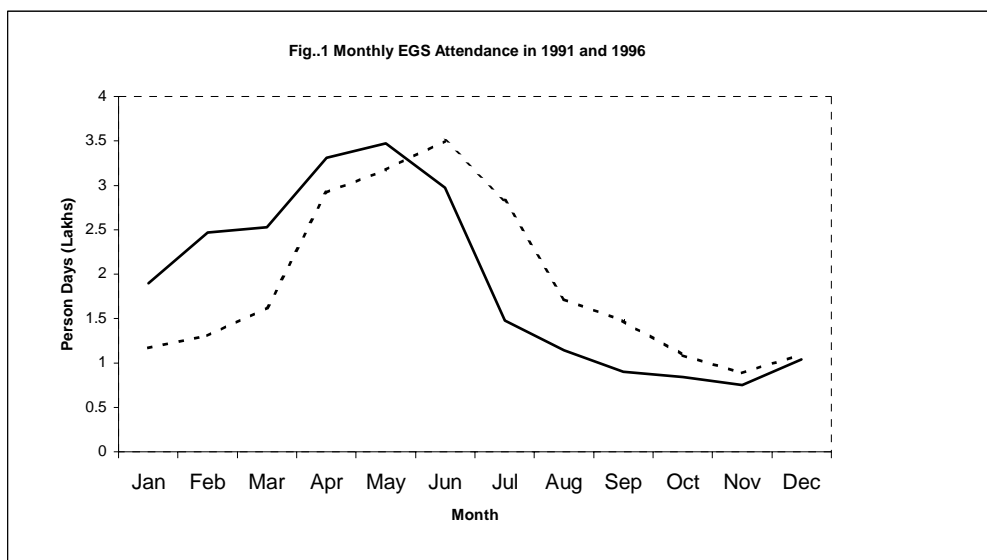
¹⁹ Even if employment created through additional crops is taken into account, this argument is likely to hold.

²⁰ Since the cost of a well varies from Rs.70,000 to Rs.1,00,000, it is not too low to attract (small) contractors.

²¹ There may be elements of the poverty trap here, as emphasised by Dasgupta (1995). If there is a large number of assetless persons relative to the aggregate wealth in an agrarian economy, some of them may find employment at a wage equal to the energy intake at which efficient productivity is maintained while the rest are forced to eke out a bare subsistence. In the next period, the employed have a nutritional advantage over the rest, making it harder for the latter to improve their employment prospects and to break out of the poverty trap. For a critique questioning the existence of the poverty trap, see Srinivasan (1994), and Subramaniam and Deaton (1996).

As shown in Fig.1, EGS employment continued to peak during the slack period i.e. April - June. Although the mean EGS participation (about 2 lakhs) remained unchanged over the period 1991-96, the coefficient of variation declined slightly – from 53.24 to 49.11. As may be seen from Fig:1, EGS employment was slightly more evenly spread from its peak in 1996 relative to 1991. Whether in fact this is a manifestation of the changing composition of EGS activities (e.g. a higher share of Jawahar Wells Scheme) cannot be ruled out. Digging of wells is often spread over a few months as the subsidy is released in instalments at different stages of completion. Since some small farmers are unable to raise loans to supplement the subsidy quickly, the construction gets delayed. If this trend continues, EGS may have a stronger effect on agricultural wage rate through a spillover of its activities into busier months.²²

A few earlier studies have drawn attention to the concentration of EGS activities in a few districts.²³ Almost two – thirds of all EGS employment (averaged over the period 1979 – 97) was concentrated in one – third of the districts.²⁴ If, however, the districts are ranked in terms of an index of development, weighted by their shares in the total rural population, a less skewed distribution of EGS employment is observed.²⁵ The main findings are as follows. (i) The (cumulative) share of the five least developed districts in total EGS employment was over 18 per cent in 1990, as against about 16 per cent in the total rural population.



By contrast, in the five most developed districts, the corresponding shares were about 12 per cent and 18 per cent, respectively. These figures suggest that on a rural population weighted basis the employment benefits of the EGS were slightly greater in the least developed areas. (ii) Over the period 1990-95, the spatial distribution of EGS activities changed little. In fact, the shares of both the least and most developed districts in EGS employment rose slightly i.e. by less than 1 percentage point. Even though the share of the poorest districts continues to be slightly larger, a case for a substantially larger allocation can be made if the findings from the Ahmadnagar sample are replicated in other backward regions with long slack periods.

²² For an analysis of the effect of EGS on agricultural wage rate, see Gaiha (1997 b).

²³ See, for example, Ranade (1998).

²⁴ The top ten districts were: Ahmadnagar, Aurangabad, Beed, Bhandara, Bhule, Nanded, Nasik, Osmanabad, Pune and Solapur. For further details, see Ranade (1998).

²⁵ This index was devised by the Centre for Monitoring the Indian Economy, taking into account social and physical infrastructure.

(b) New Schemes

Major components of the EGS introduced in recent years are reviewed below.

(i) SSGV

A sub-scheme of the EGS – *Shram Shaktidware Gram Vikas (SSGV)* – was launched in June, 1989. It is designed to take up all development activities in a village in an integrated manner. More specifically, backward and forward linkages are emphasised in selecting them. The construction of a percolation tank, for example, will be linked to the construction of wells and installation of pumps. Once a village is selected for this programme, its implementation will continue until all works undertaken are completed. Individual beneficiary schemes such as wells, horticulture and farm forestry on land owned by marginal and small farmers will be financed by the government.²⁶ All other beneficiaries will bear 50 per cent of the expenditure. The participation of a village in this scheme will be conditional upon an undertaking by the *Gram Sabha* (the village assembly) that 50 labourers must be available per day, two (land owning) workers must provide free labour for one day in a month (or, alternatively, bear the labour cost involved). Also, there will be stall feeding of cattle and a ban on cutting trees illegally. Villages with surface irrigation exceeding 20 per cent of the land will be excluded from this scheme. Beyond a radius of 5 km of selected villages, the usual EGS works will continue.

In the absence of details, serious doubts about the workability of this scheme persist. Specifically, the issues are: who will identify the projects? Will the project selection be guided by the preferences of the community? If the outlay is predetermined, and there is a binding budgetary constraint, what will be the project selection criteria? Will all selected projects be subject to the labour intensity norm of the EGS? If some projects are subject to this norm, and others are not, who will ensure that these norms are adhered to? Who will select the workers and whether appropriate criteria for their selection will be followed? As noted already, it is plausible that some of these difficulties are causally linked to the decline in the relative importance of this scheme in the overall EGS outlay during the early 1990s (the share fell from 12 per cent to 6 per cent during 1990 –96). Fulfilment of the various criteria may exclude some of the poorest communities and thus limit disbursements. But more seriously, wherever it continues to be implemented, given the lack of transparency in the functioning of the *Panchayats* and limited role of the *Gram Sabha* in ensuring their accountability, there is a real risk of a substantial share of the benefits accruing to (relatively) affluent sections- both through selection of assets and wage employment.²⁷

(ii) Horticulture Programme

Horticulture is increasingly emphasised in rural development programmes, as it is highly labour intensive and remunerative under certain conditions. Accordingly, a horticulture programme linked to the EGS was introduced in 1990. During the 8th Plan period, 10 lakh hectares of land was to be covered under it. Its salient features are: (i) it is not restricted to any group; (ii) however, the entire cost of extending it to the lands of SC/ST/small farmers will be borne by the government while others will bear part of it;²⁸ and, finally, (iii) plantations are allowed on landholdings between 0.2 and 4 hectares.

²⁶ The definition of marginal and small farmers used corresponds to that of National Bank for Agriculture and Rural Development (NABARD). This takes into account whether the land is irrigated or rainfed. Typically, the cut-off point for small farmers in rainfed areas is at least twice as much as in irrigated areas. In Baramati block (Pune district), for example, the cut-off point for small farmers is 7 acres in irrigated areas, and 18.25 acres in rainfed areas.

²⁷ For an elaboration with illustrative evidence, see Gaiha (2003b), and Gaiha and Kulkarni (2003).

²⁸ For details, see GOM (1997).

Some prerequisites for the success of horticulture are: availability of irrigation, transportation and marketing. Even if these requirements are met, a few other concerns remain. In particular, while some benefits of additional employment will accrue to agricultural labourers, the bulk of the gains is likely to accrue to the landowners. Since the scheme is not restricted to a specific group of landowners, participation of even large landowners is not ruled out. Moreover, it is not clear whether there is any additional provision of extension to enable marginal and smallholders to benefit from it.

Some findings based on field-work in Akole *tehsil* are as follows²⁹. (i) The income enhancing potential of this scheme is substantial –especially in plantations. After 4 years, for example, one hectare of land devoted to mangoes yields an additional income of 8-12 thousand rupees (assuming a survival rate of 60-70 per cent for mango saplings). (ii) Although precise estimates of employment generated were not given, high female participation was reported (e.g in watering the trees). (iii) The participation of medium and large farmers was high-accounting for about 40 per cent of the cases processed annually.³⁰

(iii) Jawahar Wells Scheme

Given the semi-arid conditions, and limited expansion of irrigation, crop yields are highly dependent on rainfall. In the absence of efficiently functioning credit markets, it could be argued that there is thus a case for public financing of wells for the benefit of smallholders unable to bear the full cost. Guided by these considerations, as a sub-scheme of the EGS, Jawahar Wells Scheme was launched in 1988. Initially, it was confined to marginal and small farmers below the poverty line. In 1991, however, in accordance with the NABARD definition, it was extended to all marginal and small farmers. Wells are dug on their lands at government cost. However, quotas have been fixed for backward classes by size of landholding.^{31, 32} As argued below, this shift of emphasis from community assets to individual assets has important implications for the cost- effectiveness of EGS in reducing poverty. Also, there are other serious concerns relating to inadequate planning and inability of smallholders in raising their share of the financial contribution. Finally, as noted earlier, a better option would be to overcome credit market imperfections through, say, micro-credit interventions in which credit is channelled through self-help groups.

Some findings of a survey of eight districts and field-work in Akole are illustrative of the functioning of the scheme.³³ (i) There was considerable variation in the targeting of this scheme. In more than a few cases, the proportions of relatively affluent farmers were non-negligible. In Akole, for example, about 70 per cent of the beneficiaries were marginal or smallholders (as specified by NABARD) and the rest relatively affluent.³⁴ (ii) The digging of wells is often organised by the farmers themselves or assigned to contractors. (iii) Delays in completion are not uncommon mostly because of the inability of marginal/smallholders to provide their share of the cost in time (in absolute terms, the latter could be as much as Rs.50000). In Aurangabad, for example, 30 per cent of the wells were incomplete.

²⁹ The field-work was conducted by P. Sadolikar. The names of officials interviewed are withheld.

³⁰ For other illustrative evidence from Mewat, a backward region in Haryana, see Gaiha (2001).

³¹ For details, see GOM (1997).

³² However, as there is a large subsidy (of Rs 45,000 in a total cost of Rs 70,000 - Rs 1,00,000), manipulation of these quotas is not implausible.

³³ The survey of Million Wells Scheme (renamed as Jawahar Wells Scheme later) in eight districts was sponsored by Padmavati Agro Irrigation, and a summary of the main findings was provided by P. Sadolikar. These findings were supplemented by interviews of a few key officials in Akole by P. Sadolikar.

³⁴ These estimates must be treated as notional.

(iv) Government subsidy is given in several small instalments- in gross violation of the guidelines- to extract bribes. In some cases, the bribes paid were as much as Rs. 5000. (v) Lack of careful attention to geological features (e.g whether soil strata are muddy or rocky) and their cost implications meant that the costs exceeded the estimates by a wide margin, forcing the beneficiaries to incur large debts. Also, in one district (i.e. Dhule), 70 per cent of the wells were submerged due to heavy floods. (vi) Access to a well leads to changes in crop intensity and pattern. In Akole, for example, it is feasible to grow an additional *rabi* (winter) crop. Also, it is profitable to grow tomatoes, onions, etc. (vii) On certain assumptions, an additional *rabi* crop of wheat could yield an income of Rs 5000 per hectare.

4. Household Analysis

In principle, RPW confer transfer and stabilisation benefits.³⁵ Both benefits matter in poverty alleviation. The transfer benefits can be direct – the gross benefits to participants less any cost they incur in participating – or indirect – including the share of the poor in the extra income generated by the scheme’s output, and any other second – round effects on income from other sources. The stabilisation benefits arise mainly from the scheme’s effect on the risk faced by the poor of a decrease in consumption. Since many of the poor only just manage to survive, a reduction in the risk of consumption falling below a subsistence level matters a great deal.

If there is unemployment and the opportunity cost of participating in RPW is negligible, the (net) direct transfer benefit is equivalent to the wages earned. Indirect transfer benefits may take different forms. One is through an upward pressure on agricultural wages. RPW may, for example, strengthen the bargaining position of agricultural labourers and, as a consequence, the agricultural wage rate will be higher. Another form is through the assets created by RPW. An issue is whether these assets (e.g. percolation tanks, rural roads) have sizeable output effects. Another is the extent to which the poor share the project output. In this context, sometimes the location of the asset matters. If, for example, a percolation tank is built in an area with small plots of land, the poor cultivators in its vicinity are likely to benefit from the rise in the water table. Alternatively, if it is located in an affluent area with just a few large plots, the benefits are likely to accrue mainly to the more affluent cultivators.

Turning to the stabilisation benefits, two issues are important. One is whether the concentration of RPW activity in lean periods or when there is a local crop failure would displace existing private and non-governmental social insurance arrangements. The other is the trade – off between transfer and stabilisation benefits, since the former are likely to be more substantial in peak periods.³⁶

The assessment of the poverty reducing effect of the EGS in the Ahmadnagar sample takes these benefits into account. Some attention is also given to the (dis)incentive effects of public support in the form of an employment guarantee. In particular, whether such a guarantee discourages job-search and investment in income augmenting skills.³⁷ Although precise estimates of the benefits and disincentives could not be obtained, some notional figures are given that support the contention that in backward regions the (net) benefits continue to be substantial. Indeed, if this analysis has any validity, in the absence of alternative employment opportunities, a scaling down of the EGS could result in severe economic hardships to some

³⁵ For an exposition, see Ravallion (1991).

³⁶ For an exposition, see Ravallion (1991).

³⁷ For a formal exposition of the incentive case of workfare, see Besley and Coate (1992), and, for a comment, see Gaiha (2000a).

sections. The official justification for an across-the-board scaling down of the EGS is thus contentious.³⁸

Specifically, the ensuing analysis is complementary to my earlier work based on the ICRISAT sample in several respects. First, some design and implementation aspects of the EGS are subjected to a more critical scrutiny. Second, the grimness of choices that some sections of the population face in these villages for several months of slack in a year and the extent to which the severity of deprivation is alleviated by the EGS are better assessed. Third, although the analysis is sketchy and the conclusions are conjectural in the absence of panel data, the dynamic effects of the EGS—specifically its promotional and protective roles—are corroborated³⁹. Finally, if the conclusions of this analysis are validated in other backward regions, a stronger case for a reallocation of EGS outlays in their favour can be made than with the ICRISAT sample, primarily because the Ahmadnagar sample is the more recent one and includes some of the poorest segments of the rural population in Maharashtra.

(a) Village Profiles

Padoshi is a small tribal village. There are 225 households and the total population is 1182. It is located in a hilly terrain. The total area is 1176 hectares, with a forest cover of 153 hectares and an unirrigated area of 989 hectares. It is a predominantly tribal village as the STs account for 92 per cent of the population. The nearest market is 5 km away. The main (*kharif*) crop is paddy.

Panodi is a (relatively) large village. There are 411 households and a total population of 2766. The total area is 2112 hectares, out of which 708 hectares are irrigated. The SCs/STs account for 22 per cent of the village population. The main crops are *jowar* and *bajra*. Although Panodi was a relatively backward village some years ago, it has witnessed some expansion of both farm and non-farm activities. As a result, farm wages are much higher in this village, as compared with Padoshi. Yet the extent of unemployment/underemployment during a few months of agricultural slack is by no means negligible.

(b) Awareness, Participation and Earnings

Most respondents participated in the EGS as the employment opportunities in the two villages and elsewhere were few and far between during long slack periods (of up to 7 to 8 months in Padoshi). Failure to secure work within the village meant a long and difficult job search in neighbouring villages. The few who succeeded travelled one way up to 20-35 km daily. Although wages were higher (Rs.60 per day as against EGS wages ranging from Rs.30 to Rs.50), the net earnings were lower (as travel expenses amounted to Rs.10 – Rs.15 per day). Another reason cited in favour of the EGS by some respondents was the chance to earn substantially higher amounts, depending on the quantity and quality of work performed. Finally, the female participants preferred the EGS as it allowed them to work with their

³⁸ Various officials at the district and state levels attributed the sharp decline in EGS attendance to the low wage rate offered compared with prevailing agricultural wage rates. In the interviews of households that the author conducted in Pune district, however, it was confirmed that the EGS wage rates *quoted* were considerably *lower* than the *actual*. So the justification offered for lower EGS outlays is specious. Further details will be furnished on request.

³⁹ The protective role focuses on the protection of the vulnerable from falling into poverty and the promotional on enabling the poor to escape persistent poverty.

husbands.⁴⁰ Typically, whether a female member would participate in the EGS was decided either by the husband or the male head of the household.⁴¹

The participants became aware of the EGS through village meetings organised by a few officials, notices displayed in *Panchayat* offices, neighbours, and initiative of the *Mukadam* (the Assistant Supervisor of the EGS).⁴² There was no formal registration in most cases. The *Mukadam* recorded the names in a diary, usually at the work-site. The waiting period was short, varying from 3 to 12 days. The distance between residence and work-site varied from 1 km to 5 km. No choice of work was offered. The work was essentially unskilled e.g. digging and carrying of mud. Usually, the male participants performed the more strenuous and physically demanding tasks (e.g. digging). Men and their wives worked together on the same site. The duration of participation was moderately high – varying from 30 days to 90 days. Few amenities were provided. Creches were non-existent.⁴³ But drinking water and first-aid (e.g. bandages) were provided.

Considering limited irrigation facilities, much of agricultural employment was seasonal and of a short duration (4-7 months). Although the incidence of landlessness was low in both villages - in fact, negligible in the tribal village (Padoshi) – ownership of land was of limited consequence in itself as yields were low. Consequently, the dispersion in household incomes was low. There is thus a risk of overstating the distinction between the poor and non-poor. Nevertheless, it is of some interest that out of the twenty participants, twelve were poor⁴⁴. Among the poor, ten were extremely poor.⁴⁵ In most cases, acute poverty stemmed from the meagreness of agricultural labour earnings during a few months in a year. Although there were eight non-poor participants, none of them could be classified as affluent as their (per capita) incomes were only slightly higher.⁴⁶ Differences in land and other endowments were not marked either. Average land owned among the poor participants was 1.29 acres as against 2.43 acres among the non-poor. Moreover, while about 37 per cent of the non-poor had primary or secondary schooling, 25 per cent of the poor had similar educational attainments. For the bulk of the poor, as also the non-poor (75 per cent and 87 per cent, respectively), the main sources of income were agricultural labour, and cultivation and related activities (e.g. dairying). Among the non-poor, the dependence on the latter (i.e. cultivation and related activities) was slightly higher. Average EGS earnings were substantial for both groups –

⁴⁰ In a few cases, if the men succeeded in finding more rewarding work elsewhere, the wives joined the EGS.

⁴¹ There were a few variations i.e. either it was a joint decision of the husband and wife or a family decision.

⁴² A few female participants attributed their awareness to their husbands.

⁴³ The absence of this facility was a major concern of the female participants, as they were forced to divide their time between the EGS and taking care of their children who often accompanied them to the work-sites.

⁴⁴ This is in sharp contrast to other not-so-recent evidence for the ICRISAT sample. While 39 per cent of the EGS participants were non-poor in 1979, their proportion rose to 55 per cent in 1989. Thus an excess of the poor turned into an excess of the non-poor among the EGS participants over the period 1979-89. Besides, the share of poor participants in EGS earnings declined. Although the poor continued to account for the larger share of RGS earnings, the non-poor augmented substantially their share. An important reason for the poor accounting for a larger share was that they worked for more days in a year. For details, see Gaiha (2000a, b).

⁴⁵ In a few cases, extreme poverty was a manifestation of a high dependency burden. Consider, for example, the case of a tribal agricultural labourer in Padoshi. Although his household owned 3 acres of land (1.2 hectares), the main source of income was agricultural labour. A total household income of Rs.18000 (net of EGS earnings) was shared among 16 members, out of whom 10 were children. All adults were seasonally employed for a few months in a year. Consider another tribal participant-a female. Although she belonged to a small household (consisting of 6 members) in the same village, the acute poverty of her household was also a manifestation of inadequacy of agricultural labour earnings of three adults employed for a few months in a year.

⁴⁶ Consider, for example, another female participant with a total household income of Rs.12000 per annum. Although she owned a few consumer durables (e.g. a tape recorder) that a poor household could not afford, the per capita income was only moderately higher than the poverty – cut – off point (Rs.4000 as against a poverty cut – off point of Rs.2500). In other cases, per capita incomes were only slightly higher than the cut – off point.

Rs.3878 among the poor and Rs.4312 among the non-poor (at current prices). The share of EGS earnings in total household income, however, was higher among the poor (30 per cent as against 27 per cent among the non-poor). Thus, not surprisingly, the importance of the EGS as a supplementary source of income was high for both the poor and non-poor in the two villages.

Daily EGS wage rates varied over a wide range – from Rs.30 to Rs.50 among the poor and from Rs.35 to Rs. 80 among the non-poor. Considering that these are based on piece rates and that some of the non-poor are healthier than the rest, a wider range for the non-poor is not surprising.⁴⁷ The work done was assessed jointly by the *Mukadam* and the Overseer or Agriculture officer. Most respondents agreed that wages were paid fortnightly, usually on the day before the market day. If a worker was absent when wages were paid, alternative arrangements existed to make the payment soon after.⁴⁸ A few respondents, however, experienced delays of up to one month. None protested for fear of termination of employment.⁴⁹ Wages were paid after obtaining a signature or thumb impression in the presence of two witnesses.

EGS wages were substantially higher than agricultural wages – especially during the slack period.⁵⁰ There were a few options outside the village that offered higher wages but involved expensive search and travel.⁵¹ Net of search and travel costs, the differences between such options and EGS were small, if not negligible. What further reduced the attractiveness of some options outside the village was their shorter duration.^{52,53}

There was a mixed response to the choice between piece and time rates, with the majority of the respondents favouring piece rates.⁵⁴ The preference for piece rates rested on the possibility of higher earnings. Moreover, especially from the point of view of female participants, an advantage was the flexibility in the work schedule.⁵⁵ The few who favoured time rates did so for two reasons. One was an assured amount at the end of the day. Another was that it did not involve elaborate calculations.⁵⁶

⁴⁷ Some of the piece rates reported were: Rs.7 per square metre for digging and Rs.17-18 per square metre for gully plugging.

⁴⁸ Either the worker was paid the next day or the *Mukadam* personally handed over the amount at the residence or friends/relatives/neighbours delivered it. In short, there were few cases of delays.

⁴⁹ The response of a tribal in Padoshi was typical. He pointed out that sometimes there were delays of up to one month. But none protested fearing a vindictive reaction from the project authorities.

⁵⁰ (a) Since there was some vagueness about whether the wages corresponded to slack or peak periods, it is appropriate to treat the figures cited here as the upper bounds for slack period wages.

(b) Five poor tribals from Padoshi confirmed this. As against a (daily) agricultural wage of Rs.20, the EGS offered anywhere between Rs.30-50, depending upon the volume and quality of work performed. A few respondents from Panodi, however, were somewhat ambiguous, as agricultural wages tended to be higher.

⁵¹ A few illustrations suffice here;

(i) agricultural wages: Rs.60 per day (for males), Rs.40 per day (for females),

(ii) sugarcane sowing: either paid at the same rate as agricultural wages or Rs.1000 per acre (on a contractual basis);

(iii) digging of wells: Rs.70-80 per day; and

(iv) watering of crops: Rs.50 per day.

⁵² Two of the poorest respondents- one in Padoshi and another in Panodi – were somewhat unenthusiastic about the EGS, as an advance (either in cash or food grains) during a contingency was not permissible.

⁵³ Another discordant note was struck by a respondent in Panodi. His reservation against the EGS stemmed from the possibility of a reduction in EGS wages if the work performed did not meet certain specifications.

⁵⁴ Seven out of the twelve poor respondents, for example, expressed a preference for piece rates.

⁵⁵ They could, for example, take time off to take care of their children or feed the cattle.

⁵⁶ The VLW in Panodi, however, feared that in the absence of effective supervision the output of workers would fall under time rates.

Majority of respondents were satisfied that the wages paid were fair and that there was no cheating.⁵⁷ Some of the reasons cited in support of this view cannot be rejected outright. One was that the work done was measured and recorded in their presence. Another reason given was the fear of surprise checks by district/state officials. A third reason was that, if a mistake occurred in the assessment of work, it was quickly corrected.⁵⁸ Some other responses, however, suggest that it would be somewhat *naïve* to accept these reasons *uncritically*. A few participants, for example, were emphatic that, given their illiteracy, they were not in a position to judge whether they were paid appropriately. Moreover, since the records were not in the public domain, it was harder to detect any cheating or irregularity. Finally, fear of abrupt dismissal following a complaint weighed heavily in their minds.⁵⁹ A few anomalies were in fact reported.⁶⁰

In sum, contrary to earlier reports, there were few cases of delays and underpayment of wages.⁶¹ This is not to suggest that disbursement of wages was altogether fair and efficient. Rather, the deficiencies were far from glaring.

(c) Transfer and Stabilisation Benefits

Using the classification of EGS benefits into transfer and stabilisation benefits, a few illustrative estimates are given below. EGS earnings were a large share of household incomes of both the poor and non-poor. Among the former, the share of EGS earnings ranged from 18 to 40 per cent while among the non-poor it ranged from 18 to 33 per cent. However, in order to calculate *direct* transfer benefits, the opportunity cost of time spent in the EGS must be deducted from EGS earnings. As high job-search and travel costs render the option of working in neighbouring villages much less attractive than the wage differences imply, a more likely alternative to participating in the EGS is farm/non-farm employment in the same village. Since slack period opportunities are few and far between, the opportunity cost of participating in the EGS is taken to be no more than Rs.20 for day.⁶² Using this estimate, the direct transfer benefit to one of the poorest households worked out to be Rs.2400 (i.e. about 60 per cent of the EGS earnings).⁶³

The effect of the EGS on agricultural wages is a form of indirect transfer benefit. Although agricultural wages rose in the last three years, they were well below those in some

⁵⁷ Eight out of the 12 poor respondents were emphatic that there were no malpractices in the payment of wages.

⁵⁸ This is based on the response of a poor tribal in Padoshi.. Shortly after the mistake was detected, he was paid the additional amount (of Rs.25) due to him.

⁵⁹ The response of one of the poorest EGS participants in Panodi is illustrative. He lamented “.... we do not have access to the records maintained. We have to accept whatever the *Mukadam* gives us. We do not complain because we are afraid that, if we complain, they may not give us the job in the future.”

⁶⁰ The case of an illiterate EGS participant in Panodi is revealing. At the official rate of Rs.7 per square metre of digging and carrying mud, he and his wife (who worked as a team) should have been paid Rs.70 for digging and carrying 10 square metres of mud per day, as against an actual payment of Rs.35. As the alternatives were few and far between, they were forced to continue.

⁶¹ Shortly after his appointment as District Collector of Dhule district in 1981, Arun Bhatia began an investigation into EGS corruption. He ordered his staff to verify 315 muster rolls randomly selected from the 44,500 that had been prepared in Dhule from September, 1980, to August, 1981. They detected 42 cases of misappropriation involving Rs.43,000. Bhatia estimated that total corruption in the district was at least Rs.8.6 lakhs – some 13.50 per cent of total EGS expenditure in Dhule in 1980-81. (Echeverri – Gent, 1993). Another estimate of corruption in the districts of Nasik, Dhule and Jalgaon for 1993-95 amounted to Rs.17 to 20 crores (Mhatre, 1997).

⁶² This may be a little more than the slack period wage in Padoshi and a little less than that in Panodi. So as an average it is approximately right.

⁶³ As an illustration, two members of this household participated in the EGS. Both worked for 40 days each and earned Rs.50 each per day. The direct transfer benefit measured as the net daily gain of Rs.60 (i.e. Rs.100 – Rs.40) multiplied by the duration of participation in the EGS (i.e. 40 days) thus worked out to be Rs.2400 (i.e. 60 per cent of total EGS earnings of Rs.4000).

neighbouring villages. Expansion of irrigation on a small scale made it easier to grow a summer crop. As this crop coincided with peak EGS activity, there was competition among farmers to hire labourers and agricultural wages rose. However, whether the EGS alone made a significant difference was contested by some respondents.⁶⁴ So, given the scale and duration of EGS activities, a small positive effect on agricultural wages is plausible.⁶⁵

Another form of indirect transfer benefit is through the output of EGS assets (e.g. percolation tanks enabling irrigation of farms in neighbouring areas). That location of such assets matters a great deal was reflected in the responses of several poor EGS participants. As the percolation tank in Padoshi was located in the foothills and their farms were on top of the hill, they were deprived of its benefits. Even among those with farms around the tank the benefits accrued to those with wells. Those who benefited in this way were able to grow another crop. Drinking water facility during the summer of course benefited a larger number. The benefits would have been greater if the village *Panchayat* had been actively involved in the design of EGS assets. That the maintenance of these assets would be a self-interested response from the community in case their ownership was vested in it was not considered.⁶⁶

Without the EGS, the prospects for the majority of the participants (including the non-poor) of making ends meet were grim. If unable to find (relatively) unremunerative employment in the same village, an option would be to seek employment in better irrigated neighbouring villages or work in a brick making unit elsewhere.⁶⁷ Not only does it entail an expensive job search but also long daily journeys (in a few cases of up to 20-35 km one way).

Failure to secure employment of any kind of course involved grimmer choices: cuts in food expenditure, liquidation of assets and loans at exorbitant rates of interest.⁶⁸ To the extent therefore that the EGS facilitated consumption smoothing among poor households and prevented them from making costly adjustments (e.g. sale of livestock) during slack months, the stabilising benefit is likely to be substantial.⁶⁹

(d) (Dis)Incentives

The responses were mixed, with a large number of respondents denying the disincentive effects of the EGS.⁷⁰ Two reasons were emphasised in support of this view. One was the scaling down of the EGS and associated with that the small duration of employment in recent years. This meant that the benefit accrued to a few and only for part of the slack period. So, the dependence on it was limited, if any. Another reason was the keen desire for economic betterment through self – employment in a non-farm activity (e.g. brick making). What prevented them from engaging in such activities was not the availability of employment under the EGS but their lack of access to credit facilities. Whether the latter would do away with the need for anti-poverty interventions such as the EGS was disputed by a few on the

⁶⁴ The VLW in Panodi, for example, discounted a significant positive effect of the EGS on the ground that other options had also become available.

⁶⁵ The short and long-run results of the EGS on agricultural wages in the ICRISAT sample are, however, large. Specifically, if EGS wages rise by a rupee, agricultural wages would rise by 17 paise in the short-run, and by about 28 paise in the long-run. For details of the Granger-Sims causality tests, see Gaiha (1997b).

⁶⁶ Convinced that technical departments/line agencies could not be expected to be responsible for the maintenance of such assets, the VLWs were emphatic that only the *Panchayats* could handle this responsibility. If this view is shared by higher level officials, it is puzzling why budgetary provisions for maintenance are so niggardly.

⁶⁷ A tribal labourer in Padoshi concentrated on collection and sale of forest produce while her husband looked for a job in neighboring villages.

⁶⁸ A tribal labourer in Panodi reduced the intake of oil and spices; another – a labourer in Panodi – sold his wife's earrings to cover the deficit; and a third- a labourer in Panodi – was forced to take a loan at 6 per cent per month.

⁶⁹ The VLW in Panodi was, however, emphatic that liquidation of assets was a response to acute scarcity (as in a drought).

⁷⁰ Seven out of the twelve poor participants, for example, denied the disincentive effects.

ground that some protection against market uncertainties would in any case be necessary.^{71, 72} There was, however, some evidence of a mild disincentive effect of the EGS, discouraging job search in neighbouring villages. Availability of work nearer the home and flexibility in work-schedules were the underlying considerations – especially for the female participants.⁷³

Since all control group respondents had participated in the EGS during recent years, they did not lack awareness of this programme. Their exclusion was largely a result of scaling down of EGS activities. Work-sites had become few and far between and duration of work had shortened considerably. Attention was also drawn to small-scale EGS works substituting for longer lasting labour - intensive works. To some extent, expansion of irrigation facilities made it possible to grow an additional summer crop, resulting in expansion of farm employment. Alongside, there was growth of non-farm employment opportunities as well (e.g. brick making, construction). Altogether therefore there was some weakening of the demand for the EGS too – more so in Panodi.⁷⁴ So voluntary withdrawal from the EGS in favour of other options was an additional factor⁷⁵. But there was little evidence of malpractices in disbursement of wages (e.g. delays and underpayment) discouraging the poor from participating in the EGS.

(e) Assessment

The performance in the sample villages (one extremely poor) in Ahmadnagar was quite impressive in some respects. The targeting was good as there were hardly any affluent persons among the participants. Besides, the proportion of the poorest among the participants was high. The duration of participation was (moderately) high too, enabling the participants to supplement substantially their incomes through the EGS. Although there was some slackening of the demand for the EGS as a consequence of expansion of farm and non-farm employment opportunities during the slack period(s), for *most* participants – especially the poorest – it made a significant difference to their economic well – being, as costly adjustments (e.g. liquidation of assets, loans at exorbitant rates of interest) were avoided. There was a small positive effect on agricultural wages. However, the benefits of the assets created under the EGS (e.g. percolation tanks) were confined largely to households in their immediate vicinity. Attention was also drawn to slow and inefficient execution of EGS projects, occasionally as a result of non-cooperation from some landowners in the sample villages. Although there was some evidence of malpractices in disbursement of wages (e.g. delays and underpayment), it does not point to blatant cheating of EGS workers. An issue then is whether this new evidence can be reconciled with earlier not-so-favourable assessments⁷⁶. Partly of course the superior performance of the EGS in the two sample villages in Ahmadnagar reflects their pervasive poverty. In such a context, targeting failures are unlikely. Moreover, to the extent that the awareness of the EGS was widespread, blatant violation of the wage schedules would be harder. But whether the district administration also

⁷¹ In fact, four control group respondents were emphatic that their dependence on anti-poverty schemes would lessen substantially if access to credit improved. But this was contested by a few on the grounds of uncertainty of agricultural yields and returns.

⁷² Several respondents (including those in the control group) pointed out that the number of EGS sites had declined in recent years.

⁷³ A female respondent in Padoshi, for example, admitted candidly that the EGS discouraged her from seeking work outside the village. After completing work on one EGS site, she looked for work on another EGS site in the same village, as opposed to exploring farm/non-farm opportunities in another village.

⁷⁴ In general, alternatives to the EGS were more remunerative in Panodi than Padoshi.

⁷⁵ An analysis based on the ICRISAT panel data suggests that the poor withdrew from the EGS when there was a rapid expansion of farm and non-farm employment opportunities. Of those who withdrew from the EGS, there was a sizeable section that became better-off. For details see, Gaiha (1997a). For a more detailed analysis of switches between the EGS and regular labour market opportunities in a dynamic optimization framework, see Scandizzo et. al. (2003).

⁷⁶ For details, see Gaiha (1997a, 2003a).

had an important role in ensuring some measure of efficiency in implementing the EGS cannot, however, be ruled out.

Viewing these findings from the perspective of dynamic effects of the EGS- or, more specifically, its protective and promotional roles- it is arguable that the poverty alleviating potential is likely to be high, given that alternative options were few and far between. Although a definitive assessment is not feasible for lack of panel data, some tentative inferences could be drawn from the responses obtained. If the EGS results in significant income and consumption smoothing for those above the poverty threshold- corroborated by the evidence presented- and helps prevent adverse nutritional effects, its protective role is likely to be strong. On the other hand, to the extent that the EGS enables a subset of the poor to raise their income levels above the poverty threshold even temporarily for a month or two- also corroborated by the Ahmadnagar sample- it performs a promotional role as well. Although under certain assumptions both effects were present, given the income distribution of the participants and gains of the poor and non-poor, it is likely that the protective role was stronger. What lends credibility to these results is the general absence of remunerative employment options in the sample villages.⁷⁷

5. Design and Implementation

Combining the findings of the Ahmadnagar sample with earlier work based on the ICRISAT sample and other relevant evidence, there is a legitimate concern about the poor design and execution of RPW in general (and the EGS in particular). Some observations are made below to remedy these deficiencies.⁷⁸

(a) Project Selection, Location and Other Considerations

If public investment substitutes for private investment e.g. contour bunding to prevent soil erosion in a large neighbouring farm, the overall effect of this investment on that area's development would be negligible (relative to the contribution of private investment) and the bulk of the benefits would accrue to the non-poor. Public investment should therefore concentrate on public good activities e.g. roads and flood protection structures. To the extent feasible, it should be ensured that the benefits of such activities are widely dispersed, especially among the rural poor.⁷⁹ From this perspective, the growing importance of Jawahar Wells Scheme in EGS outlays during the 1990s is a matter of concern. First, given the large subsidy, the number of ineligible/relatively affluent landholders is non-negligible. Second, as the number of wells completed and successful is unsatisfactory, both the employment generated in their construction and through higher cropping intensity is well below the potential. Third, it seems unlikely that financing of wells for the benefit of smallholders through a subsidy is more cost-effective than through easier access to credit.

Social returns to the assets can also be enhanced by ensuring that projects are well integrated into a comprehensive rural development plan. Projects designed largely for the immediate

⁷⁷ Simulations with the ICRISAT panel data confirm that the protective and promotional roles of the EGS are significant when substantially larger outlays are combined with a Rawlsian variant in which priority is given to the poorest. For details, see Gaiha and Imai (2002).

⁷⁸ A glaring example of misuse of EGS funds is reported by Echeverri – Gent (1993). A percolation tank that should have cost Rs.2.26 lakhs cost instead Rs.28 lakhs.

⁷⁹ To illustrate, a road that connects a remote village to a nearby town where the unemployed may find employment during a lean period would be a better investment than a road that helps a few affluent farmers to transport their produce to the nearest wholesale market.

alleviation of poverty can often be co-ordinated with local and regional development plans. Besides, local village level participation in project design and execution can help to avoid wastage and promote labour - intensive methods. In this context, SSGV – an offshoot of the EGS – has considerable potential in terms of integrated rural development through a poverty alleviation programme. However, its share in EGS outlays during the 1990s has halved. This reflects the absence of an implementable blueprint, weak co-ordination among technical departments / line agencies and somewhat restrictive conditionalities for community participation.⁸⁰ If instead the state government contribution is linked to the contribution of the village community, and the latter is assigned greater responsibility in selection of activities and their monitoring, under certain conditions, the outcomes would be better. A few pointers from earlier work may be helpful.⁸¹

Community involvement in the selection and design of projects helps governments to overcome lack of knowledge of local conditions. This is important where the cost of acquisition of such knowledge is high- a case in point is irrigation systems. Local factors such as soil conditions, water velocity and shifting water courses are important considerations in their design; external planners and engineers often lack detailed information. Community involvement in such projects is important in ensuring that these are designed appropriately and sited where they are most likely to be used (IFAD,2001).^{82, 83} On the question of mobilising local resources, two remarks suffice. One is that involvement of the intended beneficiaries in the initial stages of project formulation matters. Another is that the poorer groups are often more willing to contribute than the better –off, provided they are not required to carry a disproportionate share of the burden (Bardhan, 1996).

In a review of the performance of the JRY, implemented by village *Panchayats*, the targeting was unsatisfactory.⁸⁴ Specifically, poor participants comprised less than 50 per cent of the JRY workforce in 11 out of 15 states. The mistargeting was not unrelated to some features of this scheme viz. excess of JRY wages over local wages, delays in payment of wages and part payment of wages in kind. Although there was some evidence linking the mistargeting to the functioning of *Panchayats*, a composite measure taking into account their representativeness, autonomy and accountability did not discriminate so well between the worst and best performers in terms of JRY targeting. However, an alternative measure comprising procedural violations viz. use of private contractors, and non-availability of muster rolls, despite instructions to the contrary, discriminated better⁸⁵. Some of these malpractices and the associated corruption would be checked if there is greater transparency in the functioning of *Panchayats*. Of particular significance in this context is the initiative of an NGO, *Mazdoor Kisan Shakti Sangathan* (MKSS), or Workers and Farmers Power Organisation, in improving the accountability of local governments (including *Panchayats*) through a sustained agitation for the right-to-information in Rajasthan. MKSS demands, and often succeeds in gaining access to official government records, which are then subjected to a people's audit. Some of

⁸⁰ As an illustration of restrictive conditionalities, recall that in every participating village two landowning households are obliged to provide free labour for one day in a month (or, alternatively, have to bear the labour cost involved). It is not obvious that such selective mechanisms involving a section of the affluent are preferable to contributions proportional to household income.

⁸¹ See also Gaiha and Kulkarni (2003), and Nayyar (2003).

⁸² This is particularly important in view of the fact that end use of many EGS assets continues to be low (Hirway and Terhal,1994).

⁸³ Decentralised small infrastructure projects (e.g. rural roads and bridges, school buildings, water supply systems) often cost one-half to two-thirds as much as similar projects managed by state or federal agencies (Bardhan, 1996).

⁸⁴ For details, see Gaiha et al.(1998).

⁸⁵ There is some evidence that irregularities in wage payment are more frequent when contractors are involved, and the quality of assets is much inferior (Hirway and Terhal, 1994).

the records have revealed large scale embezzlement of funds meant for the rural poor. In January, 1988, for example, a study of five village *Panchayats* found that as much as Rs 100000 of public funds were unaccounted for in each village (IFAD, 2001). Despite resistance from government officials, MKSS has played an important role in promoting the transparency of local administration but on a small scale. It has also been effective in mobilising the rural poor in asserting their rights at local level. To the extent that lack of awareness of programmes designed for the benefit of the poor restricts their benefits, initiatives similar to that of MKSS are crucial to their success^{86, 87}.

Since the performance of a public agency is often judged in terms of new projects undertaken and completed, the maintenance of RPW projects is seldom an important concern. RPW are sometimes associated with roads that get wasted away in the next monsoon.⁸⁸ A review of assets built under National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) in Gujarat confirmed that lack of funds was a major constraint.⁸⁹ Specifically, maintenance funds were not available for 54 of the 88 assets reviewed. While financial provision for regular maintenance of these assets is necessary, it is perhaps equally necessary to ensure that there is local participation in their maintenance.^{90, 91} Greater awareness of the benefits of such assets, a deliberate community initiative in this regard and an effective coordination mechanism would make a significant difference. In this context, the maintenance of NREP assets by village *Panchayats* in Midnapore (a district in West Bengal) is instructive.⁹² 37 village *Panchayats* in four blocks spent 48.8 per cent of their NREP resources on new assets, 44.9 per cent on the maintenance of existing assets and 6.3 per cent on their improvement. This strikingly different pattern of allocation had much to do with the autonomy granted by the state government to village *Panchayats* and their perception of local needs (Echeverri-Gent, 1993).

(b) Wages, Coverage and Labour - Intensity

One choice in designing RPW is to aim at a wide coverage of the rural poor or to cover a small subset. Given a fixed outlay, a wide coverage would imply low wages per participant while limited coverage would imply high enough wages to enable the participants to cross the poverty threshold. Sen (1975) drew attention to this choice and argued persuasively in favour of wide coverage of RPW. While more work will be done and more people will be employed, it does not follow, however, that poverty will fall sharply. The outcome depends to some extent on the poverty index – specifically, whether it is distributionally sensitive or not. Moreover, the size of the outlay may matter. If the outlay is small relative to the size of the poor population, a slightly wider coverage at a lower wage may not make much of a difference.⁹³

⁸⁶ But for the efforts of the Bhoomi Sena, awareness of the EGS would have been confined to selected areas and groups (Hirway and Terhal, 1994).

⁸⁷ On this, see Gaiha (2003b) and Nayyar (2003).

⁸⁸ See, for example, Basu (1981).

⁸⁹ For details, see Hirway and Terhal (1994).

⁹⁰ Wade's (1987) analysis of maintenance of common property resources by villagers themselves in South India is instructive.

⁹¹ Maintenance is usually the responsibility of the *Zilla Parishads*, but there is no specific budgetary provision. As a result, nearly 25 per cent of EGS works are poorly maintained (Echeverri – Gent, 1993).

⁹² For details of the survey, see Echeverri-Gent (1993).

⁹³ Simulations with Bangladesh data are illustrative. When the budget is small, universal coverage of RPW is less cost – effective than limited coverage with sufficiently large benefits to enable a subset of the poor to escape poverty. This result holds for both the head – count and distributionally sensitive indices (in the FGT class with $\alpha > 1$). However, with a large budget and/or low administrative costs, universal coverage of RPW is more cost – effective for all such indices. For details, see Ravallion (1989). With a Rawlsian welfare function, however, the ranking may change. See, for example, the simulations in Gaiha and Imai (2002).

The case for wide coverage assumes that the policy maker can fix the wage rate on the scheme. But, if the wage rate is (statutorily) predetermined, employment cannot be guaranteed without violating the budget constraint. As noted earlier in the context of the EGS, the hike in the wage rate had two serious consequences i.e. it led to rationing of employment and the poor had to bear the brunt of it. The case therefore for lowering the wage rate is not without merit, provided of course the statutory restriction is relaxable. But independently of this restriction an issue is the priority assigned to the poorest. If, for example, a Rawlsian variant is assumed, and the administrative costs of a regional reallocation of EGS outlays in favour of backward regions are negligible, the case for concentrating the benefits on the poorest cannot be rejected.

The choice between piece and time rates may make a difference. Two groups of persons usually opt for piece rates. One is the group of highly skilled workers (i.e. those who can complete a large number of tasks with the same time effort) and another comprising persons who, for lack of physical strength and stamina, prefer a slower pace of work than that under time rates.⁹⁴ But piece rates often result in delays and underpayment. If feasible, a mix of time and piece rates may thus be more appropriate.

Given the severity of the liquidity constraint among the poor, part payment of wages in the form of foodgrains reduces the attractiveness of RPW (relative to other employment options).⁹⁵ Moreover, overburdening of official agencies with the responsibility for transporting and distributing food grains when markets function may be socially wasteful.⁹⁶

The desire for promoting the employment of unskilled labour is reflected in a minimum share of labour costs in total variable costs (51 per cent in the EGS), with a few exceptions. These restrictions tend to reduce the use of material inputs to their technological minimum levels, at which substitution possibilities with labour are negligible. Such a restriction presupposes that the benefits of RPW to the poor consist of direct wage benefits only while all benefits from the 'outputs' of RPW accrue largely to the non-poor. To the extent that the poor share in the output benefits also, the case for such restrictions is not so strong.⁹⁷

(c) Financing

RPW in principle can be financed either through taxation or cuts in other public expenditure, borrowing or foreign aid, or a combination of some of these⁹⁸. New taxation may add to the existing burden and consequently weaken the incentive to work. Cuts in some items of public expenditure e.g. health and education, may directly affect the poor. The prospects for foreign aid are not likely to improve in the foreseeable future. Thus the financing options appear to be quite limited, and the choice cannot be made independently of the context. Whether an additional dose of taxation, for example, would be feasible can only be determined relative to

⁹⁴ See, for example, Baland et al. (1996).

⁹⁵ Although this is not an issue in the context of the EGS, it did affect adversely the participation of the poor in *Jawahar Rozgar Yojana* (JRY) – a nation-wide RPW. In Gujarat, for example 52 per cent of the JRY workers opposed wages in kind (Gaiha et al. 1998). Unfortunately, the *Sampoorna Grameen Rozgar Yojana* also aims for combining the objectives of supplementary employment in slack periods and droughts with food security by offering wages in cash and kind.

⁹⁶ This is cogently argued in Dreze and Sen (1989).

⁹⁷ Some activists see the reduction in the ratio of labour costs to other costs from 60:40 to 51:49 "as a success for the contractor lobby who were the losers in projects employing a high labour ratio as well as the engineering lobby who thought it was difficult to control for quality of assets created" (Joshi, 1998, p.12). But whatever the perception a rigid labour - intensity criterion does not have a strong economic justification for the reason stated above. For a formal exposition, see Ravallion (1991).

⁹⁸ These options do not include mobilization of community resources, as the latter perform a supplementary role.

the existing incidence. However, there may be choices in the time- phasing of RPW and thus an unacceptably high burden of taxation in the initial stage may be avoided.

Simulations of the dynamic effects of the EGS in Gaiha and Imai (2002) drew attention to the need for significant improvement in its targeting and larger outlays. As remedial measures for improving the targeting have already been dealt with, a comment on the feasibility of the latter is made here. Since higher taxes may be difficult, an option is merging of different RPW (such as the JRY and EAS). To the extent that duplication and waste are avoided, availability of resources would be greater.⁹⁹ It is, however, necessary to pool the outlays under one implementing agency for more effective implementation. While the EGS has undergone significant changes in its composition and the outlays have declined in recent years, the merging of the JRY and EAS under the SGRY has further diluted the ‘guarantee’ that was a feature of the EAS.

(d) Coalitions

Arguably the EGS has contributed to political activism and organisation among the rural poor. Concentration of a large number of workers in one place increases their interaction and helps them overcome their social and other differences. Also, the EGS as a fall back option provides a measure of security. Finally, eager to secure the support of EGS workers, politicians build independent organisations. As a result, multiple channels emerge to represent workers’ interests and the political system becomes more responsive to them¹⁰⁰. Nevertheless, it is often asserted, targeting failures or leakages to non-target groups are justifiable as they help expand the political constituency for the EGS. This is not persuasive as such leakages are not inherently self-limiting.

6. Concluding Observations

Some observations from a broad policy perspective are made below.

Overall participation in the EGS fell sharply over the period 1980-97. Some of this reduction was due to expansion of irrigation facilities leading to expansion of farm employment. Alongside, expansion of non-farm employment led to a further reduction in the demand for the EGS. The rationing following the hike in the EGS wage rate in 1988 was responsible for a sharp reduction in participation in the following year, with the poor bearing the brunt of it. Although there was a slight rise in participation in subsequent years, it was dampened by a change in the composition of the EGS. Specifically, substitution of community assets (e.g. soil conservation works) by individual assets (e.g. wells) involved fewer workers. The official explanation for the decline in EGS participation in recent years in terms of expansion of farm and non-farm employment opportunities is thus partly valid. As demonstrated in the preceding analysis and argued below, in some of the poorer regions (e.g. tribal villages) the EGS continues to confer significant transfer and stabilisation benefits (during long seasonal slacks). As alternative employment options are few and far between, the dependence on the EGS is unavoidably high for those who are able to participate in it. If the overall participation rates are low, it is partly a consequence of the nature of projects undertaken and low outlays and not so much a result of slackening of demand for the EGS.

⁹⁹ Since the targeting of the EGS is better than that of other RPW in general, some gains in targeting are also likely. For some recent estimates, see Gaiha et al. (2001).

¹⁰⁰ This summarises Echeverri – Gent’s (1993) view.

The direct transfer benefits of the EGS to the poor in the Ahmadnagar sample are high, given the high proportion of acutely poor participants and their heavy dependence on the EGS. The indirect benefit through a positive effect of the EGS on agricultural wages was not so strong, presumably because of the short duration of agricultural employment – especially in the tribal village. The benefits of the output of EGS assets accrued largely to those living in their vicinity – a case in point being farmers located around a percolation tank. As EGS projects were handed down by district authorities often *independently* of the proposals put up by village *Panchayats*, this is not surprising. The income stabilising benefits were of course substantial, given that alternative employment options were limited. In fact, for some of the poorest participants failure to secure EGS employment would have resulted in severe economic hardships, as a likely option was liquidation of a few assets that they possessed. Even non-poor participants benefited as they were protected from falling into poverty while a subset of the poor managed to cross the poverty threshold. There was thus some evidence consistent with protective and promotional roles of the EGS. A view widely shared was that decline in EGS participation had little to do with withdrawal in favour of other employment opportunities. Rather, there had been a marked reduction in the scale and duration of EGS projects, forcing many to engage in expensive job search in neighbouring villages. Evidently demand for the EGS far exceeded actual employment.

In striking contrast to some earlier evidence, the registration formalities were minimal and discretionary; the waiting period was short; while men concentrated on physically demanding tasks, women were usually assigned less demanding duties; except in a few cases, wages were paid fortnightly; although illiterate workers were not in a position to check whether the wages paid were fair, there was little evidence of blatant cheating; nor was manipulation of the muster rolls a serious problem.

Although it is not easy to reconcile (relatively) clean and honest implementation of the EGS in the Ahmadnagar sample with other evidence, some features of this sample seem pertinent. These are (i) absence of acute economic disparities, (ii) widespread awareness of the EGS, and (iii) small outlays. So perhaps what the poor lost in terms of small outlays was to some extent compensated for by clean and honest implementation of the EGS.

From a broader perspective, it is arguable that the contribution of the EGS to political activism and building of coalitions among the poor is of considerable significance in itself, as it makes the political system more responsive to their interests. A sense of collective identity – despite social and religious differences – is inculcated through close interaction on work-sites. Reinforced by a sense of economic security during lean periods, prospects of collective action among the poor are likely to improve.

Some concerns about the design and implementation of RPW in general and the EGS in particular, however, remain (i) If public investment substitutes for private investment – as in the case of Jawahar Wells Scheme as a component of the EGS – the (net) benefit may well be small. It may be more appropriate to promote private investment through easier access to micro-credit. (ii) Failure to integrate EGS projects into a comprehensive rural development plan remains a major concern. A somewhat glaring reflection of this failure is the rapid decline in the relative importance of the SSGV in overall EGS outlays. Under certain conditions, greater involvement of the community in the selection and implementation of EGS projects could reduce the risks of such failures. (iii) As no separate provision for the maintenance of EGS assets is made, their potential benefits are not fully realised. Adequate provision must be combined with vesting of responsibility for maintenance in the local community as that is likely to be cost-effective (iv) Given a fixed outlay, a lower wage would

allow a wider coverage of the poor. However, if the wage is statutorily fixed, as in the case of the EGS, it is not obvious how this constraint could be relaxed. But, more importantly, if welfare of the poorest is assigned highest priority, their deprivation must be mitigated to an acceptable level first. (v) If feasible, a mix of piece and time rates may be more appropriate as it would retain the flexibility to earn more and reduce delays in payment of wages. (vi) There is no economic justification for part payment of wages in the form of foodgrains when markets function efficiently. (vii) Minimum labour-intensity requirements could be relaxed if the benefits of the assets created accrue to the workers. (viii) Enhanced outlays under the EGS are feasible provided other similar interventions (e.g. *Jawahar Rozgar Yojana*) are merged under it, ensuring that the 'guarantee' is not diluted. As wastage is smaller under the EGS, it would be more cost-effective than administering each intervention/programme separately. If larger outlays are accompanied by a reallocation in favour of backward regions, the benefits to the poorest would be substantially greater without additional administrative costs.

In conclusion, contrary to official assertions, the poverty alleviating potential of the EGS with a reallocation of the outlay in favour of the poorest regions is high *despite* a sharp fall in total participation in this scheme in recent years.

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