

Financial Implications of an Employment Guarantee Act Preliminary Estimates¹

This note discusses the financial implications of a National Rural Employment Guarantee Act. It is shown that spending as little as one per cent of GDP on a well-designed Employment Guarantee Programme could have a major impact on rural poverty in India within a few years.

A. BACKGROUND

The policy agenda outlined in the Common Minimum Programme of the UPA government begins with the following pledge:

“The UPA government will immediately enact a National Employment Guarantee Act. This will provide a legal guarantee for at least 100 days of employment to begin with on asset-creating public works programmes every year at minimum wages for at least one able-bodied person in every rural, urban poor and lower middle-class household.”

As a step in that direction, a draft National Rural Employment Guarantee Act has been prepared by the National Advisory Council. The draft Act entitles every rural household to 100 days of wage employment per year at the statutory minimum wage. This note discusses the financial implications of this proposed Act, or more precisely, of the Employment Guarantee Programme to be launched under the Act.

B. UNIT COSTS

In this note we assume that each person-day of employment generated costs one hundred rupees at 2004-5 prices. This would roughly consist of Rs 60 for wages and Rs 40 for the non-labour component, including administrative costs. The figure of Rs 60 for the wage component is quite close to the population-weighted average of state-specific statutory minimum wages for agricultural labourers in different states (see Appendix).

¹Note prepared by Jean Drèze on behalf of the National Advisory Council, 15 August 2004.

The assumed ratio of non-labour costs to total cost, namely 40%, is in line with recent norms under public employment programmes such as Sampoorna Grameen Rozgar Yojana (SGRY). Note, however, that this 40% ratio is significantly higher than the corresponding ratio in Maharashtra under the Employment Guarantee Scheme (EGS): about 30% per cent on average since the inception of the EGS in 1975-6, and 25% during the last five years for which data are available.² With lower benchmarks for the non-labour component, the unit costs would be correspondingly lower. For instance, with a lower ratio of 25 per cent for non-labour costs, the unit costs would come down to Rs 80 per person-day of employment.

C. BASELINE ESTIMATES

1. Immediate implementation

The cost of an Employment Guarantee Programme (hereafter EGP) depends crucially on the number of person-days to be generated. The principle of an employment guarantee programme is that this should be "demand-driven". But the demand itself depends on a variety of factors such as the distance at which work is provided, the level of wages, the procedures required to obtain work, and so on. In other words, the extent of employment generation under EGA is at least partly a matter of public policy. Seen in this light, the crucial issue is – "what should the goal be?"

One possible answer is that the goal, initially at least, is to ensure that every household below the poverty line actually gets 100 days of employment in public works over the year. In practice, not every poor household is likely to avail itself of the full guarantee of 100 days; and some non-poor households are likely to apply for work. However, "100 days per poor household on average" is a useful benchmark for the initial goal of an Employment Guarantee Programme. This is not a very ambitious goal, but it could have a major impact on rural poverty (see below).³

² Calculated from Krishnaraj *et al* (2004), Table 1.

³ We are not suggesting that employment in the Programme should be restricted to "BPL households". Self-selection is the basic principle of an Employment Guarantee Programme, and there should be no eligibility criteria other than age and willingness to do casual manual labour at the statutory minimum wage. The idea here is that the conditions of employment will be such those who opt for employment under the Programme effectively correspond, roughly, to the population below the poverty line.

Combining the benchmark of "100 days per poor household on average" with the assumed unit cost of Rs 100 per day, it is easy to estimate the cost of a full-fledged Employment Guarantee Programme. This simply involves multiplying the number of households below the poverty line by Rs 10,000. The relevant calculations are presented in Table 1. The estimated cost is Rs 40,000 crores per year at 2004-5 prices, or 1.3% of GDP.

2. Phased implementation

The preceding calculations assume that the Employment Guarantee Programme is fully implemented in one go. In fact, the draft Act provides for phased implementation over several years – two years according to the draft initially submitted to the National Advisory Council (NAC), five years in the revised NAC draft. In this note, we assume phased implementation over four years, starting from 2005-6.

To estimate the cost implications of phased implementation over four years, we make the following assumptions:

1. Each year, starting in 2005-6, one fourth of India's districts are added to the coverage of the Employment Guarantee Programme.
2. The poorest districts are covered first, and other districts are added in decreasing order of poverty.
3. The EGP is to generate 100 days of employment per poor household on average.
4. The absolute number of poor households (in the absence of EGP employment) remains constant over time.

Note that the last assumption implies a small upward bias in the cost estimates, since the absolute number of poor households is actually declining over time, according to official poverty figures.

The resulting estimates are presented in Table 2. As the last row indicates, the total cost of the proposed Employment Guarantee Programme with phased implementation rises from 0.5% of GDP in the first year (2005-6) to 1% of GDP in the last year of the inception phase (2008-9). Thereafter, the ratio is likely to decrease, as the number of households below the poverty line decreases and the GDP increases. This is assuming that the goal of "100 days

per poor household on average" is retained. An alternative would be to continue spending at least 1% of GDP on the Employment Guarantee Programme, and set a higher goal, e.g. by removing the cap of 100 days per year or giving guaranteed employment to every adult instead of every household.

D. FURTHER CONSIDERATIONS

1. The "participation ratio"

The baseline estimates assume that the Employment Guarantee Programme generates 400 crore person-days of employment per year. This implies that the number of persons employed on an average day would be 1.1 crore, which is equivalent to 5.5% of the total population below the poverty line (20 crores) – see Table 1. Let us define this ratio (the number of persons employed on an average day as a proportion of the total population below the poverty line) as the "participation ratio". How does this participation ratio of 5.5% compare with earlier experiences of open-ended employment programmes?

A useful reference point here is Maharashtra's experience in the seventies and eighties. During this period, the participation ratio in Maharashtra was much lower than 5.5%, and reached a *peak* of only 3% or so in the late eighties, at a time of severe drought across the state. This is in spite of the fact that (1) Maharashtra's EGS offers an open-ended employment guarantee throughout the year, instead of being restricted to 100 days per household, and (2) poverty levels in rural Maharashtra were quite high at that time, in comparison with most other Indian states. This suggests that the participation ratio of 5.5% implicit in our baseline estimates may be on the high side. With lower participation ratios, all the cost figures would correspondingly come down. For instance, with a participation ratio of (say) 3%, the baseline figure of Rs 40,000 crores at 2004-5 prices would decline to Rs 22,000 crores.

These lower estimates need to be carefully interpreted. It is of course possible to lower the cost of an Employment Guarantee Act to almost any figure simply by putting obstacles in people's way (distance from the work site, work conditions, etc.) and reducing the

“participation ratio”.⁴ We are not advocating this at all. Rather, we are pointing out that the participation ratio is quite uncertain, and may turn out to be much lower than the baseline estimates assume. One must hope that the national Employment Guarantee Programme will go much beyond Maharashtra’s Employment Guarantee Scheme, in terms of the extent of employment generation. But as far as the legal obligations are concerned, the proposed National Rural Employment Guarantee Act does not go beyond Maharashtra’s own Employment Guarantee Act. In fact, it is more restrictive, since the proposed Act involves a cap of 100 days per household, unlike the Maharashtra Act which provides an open-ended guarantee of employment throughout the year. In short, there is no reason for the Government of India to have cold feet at the prospect of enacting an Employment Guarantee Act, since the Government of Maharashtra has already crossed that bridge without running into a fiscal crisis, despite taking on more demanding legal obligations.

2. The labour-material ratio

The preceding calculations assume a labour-material ratio of 60:40. As noted earlier, the corresponding ratio is much lower in Maharashtra – about 25% on average during the last five years. In many areas, it is indeed possible to organize large-scale public works with labour-material ratios much lower than 60:40. In particular, there is much scope for highly labour-intensive work in the field of environmental conservation and restoration, involving works such as watershed development, land regeneration, prevention of soil erosion, restoration of tanks, etc.⁵ Works of this kind would serve the twin goals of environmental protection and employment generation. They would also enhance land productivity and promote rural employment in the future.

With a labour-material ratio of, say 75:25 (similar to the Maharashtra ratio today) instead of 60:40, the unit costs would come down from Rs 100 per day to Rs 80 per day (assuming, as before, that the average wage rate is Rs 60 per day at 2004-5 prices). Correspondingly, all the cost figures would come down by 20 per cent. For instance, the baseline figure of Rs 40,000 crores at 2004-5 prices would decline from Rs 40,000 crores to Rs 32,000 crores.

⁴ This is, it appears, what has happened to an alarming extent in Maharashtra itself in the nineties (see e.g. Lyla Bavadam, 2003).

⁵ On this see particularly Shah *et al* (1998); also Reddy and Vijayshankar (2004).

3. Dovetailing and related cost-saving devices

The cost of an Employment Guarantee Programme can be substantially reduced by "dovetailing" the Programme with other, existing schemes. For instance, during the last two financial years (2002-3 and 2003-4), the central government has already been spending close to Rs 10,000 crores each year on labour-intensive public works programmes such as the Sampoorna Grameen Rozgar Yojana (SGRY). Most of these programmes could be merged with the proposed Employment Guarantee Programme. However, the reverse side of this coin is that the employment generated would not be additional to the employment already being generated under the existing schemes. This kind of dovetailing is useful as a short-term "transition" strategy (to facilitate the transition towards a full-fledged EGP), but it is not a long-term answer to the problem of financing an employment guarantee.

A related possibility is to use more labour-intensive techniques on various government programmes, and perhaps even in the public sector as a whole. Indeed, the draft National Rural Employment Guarantee Act provides ample scope for employing labour under the Programme in different contexts. To illustrate, more labour-intensive techniques could be used to build roads and highways, with the labour component being paid under the Employment Guarantee Programme. With the EGP in place as envisaged in the draft Act, state governments will have a strong incentive to use labour-intensive techniques in public works, and this could substantially reduce the cost of providing guaranteed employment.

E. IMPACT ON POVERTY

The benchmark figure of one per cent of GDP (see Table 2) is not very high, yet it could lead to a major decline in standard indicators of rural poverty if the funds are properly utilized. To see this, note that 100 days of employment at Rs 60 per day would provide income support of Rs 6,000 per year. As it happens, an increase in household income of Rs 6,000 per year would lift a large majority of poor households below the poverty line. To illustrate, in 1999-2000, about 75% of poor households in rural India would have been able to cross the poverty line with additional earnings of Rs 6,000 per year.⁶

⁶ Provisional calculation, based on data presented in National Sample Survey Organisation (2001).

These illustrative figures probably overstate the potential impact of an Employment Guarantee Programme on poverty, if only because they ignore the fact that the Programme may displace other income-earning activities.⁷ Nevertheless, they help to convey a simple and essential fact about the economics of poverty: the share of the poor in aggregate GDP is very small, and therefore, transferring even a small proportion of aggregate GDP (say 1%) to them can make a major difference to their living conditions.

F. IS IT AFFORDABLE?

Is it possible for India to spare 1% of its GDP for an Employment Guarantee Programme, four years from now? Considering the stakes involved, the financial burden looks quite reasonable. If the Programme is gradually extended to the whole of India over four years, starting in 2005-6, the inception phase will run well into the Eleventh Plan (which starts in 2007). The transition from the Tenth to the Eleventh Plan provides ample opportunities to restructure public expenditure in new directions, including a National Rural Employment Guarantee Programme.

There is also much scope for raising the tax-GDP ratio. Indeed, India has a very low tax-GDP ratio in international perspective: about 15% (for centre and states combined) compared with, say, 37% in OECD countries. The ratio of central taxes to GDP was only 9.3% in 2003-4, compared with 10.6% in 1987-8.⁸ As discussed in a number of expert committee reports in recent years, there are vast possibilities for increasing the tax-GDP ratio in the near future, arising inter alia from (a) the introduction of VAT, (b) the extension of indirect taxation to services (which account for more than 50% of GDP and are virtually untaxed today), (c) the rapid trend growth of income tax revenue (both individual and corporate), (d) the extensive use of Information Technology to broaden the tax net and improve compliance, and (e) ample opportunities to crack down on tax evasion, arbitrary exemptions, and other forms of erosion of the tax base. If these possibilities are well used, plan expenditure could be raised by much more than 1 per cent of GDP during the next four years.⁹

⁷ On the other hand, an Employment Guarantee Programme could also have positive "second-round effects" on household income, e.g. by raising agricultural wages or land productivity.

⁸ Government of India, 2004, p. 15.

⁹ The tax revenue projections presented in Government of India (2004), based on wide-ranging tax reforms aimed at raising the tax-GDP ratio, make room for an increase of Rs 110,000 crores in plan expenditure between 2004-5 and 2008-9 (this is in nominal terms, equivalent to roughly Rs 90,000 crores at today's prices).

G. CONCLUDING REMARKS

In this note we have presented preliminary estimates of the financial implications of the National Rural Employment Guarantee Act proposed by the National Advisory Council. In the “baseline scenario”, whereby a nation-wide Rural Employment Guarantee Programme is gradually introduced over a period of four years, the total cost of the Programme rises from 0.5% of GDP in 2005-6 to 1% of GDP in 2008-9. The cost can be brought down, if needed, by raising the labour-material ratio, stretching the inception phase beyond four years, or taking measures to reduce the “participation ratio”. However, these cost-reducing measures are best avoided. One per cent of the country’s GDP is not a high price to pay to protect the bulk of the rural population from hunger, insecurity and extreme poverty – once and for all.

References

- Bavadam, Lyla (2003), “Undermining a Scheme”, *Frontline*, 2 August.
- Deaton, Angus (2003), "Regional Poverty Estimates", mimeo, Princeton University.
- Government of India (2004), Report of the Task Force on Implementation of the Fiscal Responsibility and Budget Management Act, 2003 (New Delhi: Ministry of Finance).
- Krishnaraj, M, Pandey, P., and Kanchi, A. (2004), “Does EGS Require Restructuring for Poverty Alleviation and Gender Equality?”, *Economic and Political Weekly*, 17 April.
- Mahendra Dev, S., and Ranade, A.K. (2003), “Employment Guarantee Scheme and Employment Security”, in Mahendra Dev *et al* (eds.), Social and Economic Security in India (New Delhi: Institute for Human Development).
- National Sample Survey Organisation (2001), Draft NSS Report 457: Level and Pattern of Consumer Expenditure in India, 1999-2000 (New Delhi: NSSO).
- Reddy, C. Rammanohar, and Vijayshankar, P. (2004), "Making Employment Guarantee a Reality", forthcoming in Seminar.
- Shah, M. Banerji, D., Vijayshankar, P.S., and Ambasta, P. (1998), India’s Drylands: Tribal Societies and Development through Environmental Regeneration (New Delhi: Oxford University Press).

Table 1**Cost of a national Rural Employment Guarantee Act:
Baseline estimate**

Total rural population, 2001 (crores)	74.2
Proportion of rural population below the poverty line^a (%)	26.8
Estimated rural population below the poverty line, 2001^b (crores)	20
Total number of rural households below the poverty line^c (crores)	4
Total person-days to be generated, assuming "100 days per poor households on average"^d (crores)	400
Cost per day, at 2004-5 prices (Rs)	100
Total cost of the Employment Guarantee Programme	40,000
Total cost as a percentage of India's GDP in 2004-5^e	1.3

^a Official estimate (Planning Commission) for 1999-2000.

^b 26.8% of 74.2 crores

^c Assuming an average household size of 5.

^d See text (section C) for further discussion of this benchmark.

^e GDP = Rs 3,104,857 crores (Budget Estimate, reported in Government of India 2004, p. 33).

Note: These calculations assume that there has been no decline (more precisely, no change) in the *absolute number* of poor households since 2001. This is likely to introduce a small upward bias in the cost estimates, since the trend decline in poverty, according to official estimates, implies a *decline* in the number of poor households over time.

Table 2

**Cost of a national Rural Employment Guarantee Act:
With phased implementation over four years**

	2005-6	2006-7	2007-8	2008-9
GDP at 2004-5 prices^a (Rs crores)	33,30,881	35,65,383	38,07,857	40,57,701
Number of districts to be covered	150	300	450	600
Estimated "head-count ratio" in the reference districts, 1999-2000^b (%)	45	38	32	27
Estimated population below poverty line in reference districts^c (crores)				
Persons	8.35	14.10	17.81	20
Households	1.67	2.82	3.56	4
Employment generation @ 100 days per poor household (core person-days per year)	167	282	356	400
Cost per day, at 2004-5 prices (Rs)	100	100	100	100
Total cost at 2004-5 prices (Rs crores)	16,700	28,200	35,600	40,000
Total cost as a ratio of GDP (%)	0.50	0.79	0.93	0.99

^a Based on the projections of the recent "Kelkar Report" (Government of India, 2004), p. 33, assuming a GDP deflator of 4.4%, as in the Kelkar report (p. 29).

^b Based on Deaton (2003), assuming that the Employment Guarantee Programme is gradually extended to the whole of India over four years, from the poorest districts to the less poor districts. The head-count ratio is the proportion of the population below the poverty line. The reason why the "head-count ratio in reference districts" is sharply declining over time is that the programme starts with the poorest districts.

^c These estimates are obtained by combining the 1999-2000 headcount ratios with 2001 population figures, and assuming no change in the absolute number of poor households after 2001 (as in Table 1).

Appendix: Statutory minimum wages in different states

State	Minimum wage
Andhra Pradesh	80
Assam	46
Bihar	59
Chhattisgarh	53
Gujarat	60
Haryana	80
Himachal Pradesh	60
Jharkhand	63
Karnataka	46
Kerala	91
Madhya Pradesh	53
Maharashtra	45
Orissa	50
Punjab	82
Rajasthan	60
Tamil Nadu	54
Uttar Pradesh	58
Uttaranchal	58
West Bengal	62
All states (population-weighted average)	59