

## CHAPTER 3

### LITERATURE REVIEW

In this chapter we look at the findings of previous studies on employment guarantee programs. In the first section we review studies from abroad, followed by studies on non MGNREGA employment programs in India, and finally we end the chapter by discussing the findings of studies on MGNREGA.

#### **3.1 Studies on employment guarantee programs of foreign countries**

There are a number of studies that look at the theory and practice of public works programs. Early reviews include Dreze and Sen (1989) of famines and public works programs in Africa and India, Mukherjee (1997) of several public works programs in Africa, India and Latin America, and the comprehensive review of Subbarao et al (1997) that looked at safety nets and public works programs in Africa, Asia, Latin America, and the Middle East. More recent reviews include, among others, Devereux and Solomon (2006), Lal et al (2010), McCord (2009) and Nino et al (2009). In general, reviews converge in pointing out that public works programs, if well designed and implemented, can constitute a powerful policy to reach the poor and transfer resources to them. The work requirement combined with a low wage makes the program only attractive to the poor, who thereby self-select themselves to the program. Self-selection is an attractive feature as it reduces administrative costs of the program. Nevertheless, geographical and ethnic targeting is sometimes recommended as a complementary tool to better reach the poor. Wages, which should not be too low to render the program incapable of meaningfully supporting households, neither too high to avoid attracting better off households, which can lead to crowding out of the poor, inflate the program budget and substitute productive jobs in labour markets.

Nino et al (2009), who review 37 work programs spanning over 20 years, highlight the link between poverty reduction and public works programs. In their view, these programs have the potential to reduce poverty in low income countries. Devereux and Solomon (2006), drawing mainly from 4 national employment programs, stress two points relevant to our discussion of the link with poverty reduction. First, the authors argue that although public works programs were generally adopted for their self-targeting capabilities, it is increasingly recognized that the assets produced by programs are also important. Public works programs have created assets with long lasting benefits for individuals, communities and society in general. Second, public works programs provide workers with life skills that can help them to escape poverty and build institutions that entail the creation of individual and community capacities for employability and development.

The capacity of public works programs to reduce poverty necessitates, among other things, a sizeable, timely and continuous transfer of resources to the poor. However, most public works programs are temporary and small. In a study of more than hundred work programs, McCord (2009) finds that almost half of them were conceived as one-time interventions, 11 percent had a life time of 6 or more years, only 6 percent were open ended, and their average life length was only 3 years.<sup>2</sup> In a multi-region study, Nino et al (2009) report findings pointing in the same direction - about 40 percent of the 27 public works programs reviewed were designed to respond to a one time shock. They also found that programs were small, particularly outside the Sub Saharan African and the South Asian region. In these two regions programs cover between 7 and 9 percent of the economically active population, which is not very large, but in the remaining regions programs provided jobs that accounted for less than 2 percent of the economically active population.

### **3.2 Studies on employment guarantee programs in India**

Numerous studies have been conducted on employment guarantee programs in India. The findings of some of the studies that are closely linked to the objectives of this thesis are presented below.

The Maharashtra EGS is one of the foremost examples of employment guarantee schemes in the world. The scheme provides unskilled manual labour on small-scale rural public works projects, such as roads, irrigation facilities, and reforestation. The EGS was introduced during the severe drought of 1970-73 and expanded rapidly to reach average monthly participation of about 500,000 persons over the period 1975-89. In a typical year the scheme provides about 100 million person-days of employment in a state with a rural work force (including cultivators) of about 20 million persons, though we do not know the figure net of displaced employment. There has been much debate about how effectively Maharashtra's EGS has reached the rural landless. Dandekar and Sathe (1980) estimated that the scheme eliminated three-quarters of unemployment among landless or near landless households in 1977-78. Under more conservative assumptions Osmani (1988) argued that the scheme could not have eliminated more than one-third of this group's unemployment. The Planning Commission's report on the EGS (PEO 1980) was critical of the scheme's targeting performance, on the grounds that there was significant participation by small farmers, as well as the landless. Acharya and Panwalkar (1988) reported that the mean income of participating households was found to be about 20 percent below the poverty line. From this evidence, the EGS would appear to have performed well in reaching the poorest. Walker and Ryan (1990) and Bhende et al (1990) have studied the targeting performance of the EGS using household-level data over five years (1979-83) for two Maharashtra villages. Their results suggest that the scheme is well targeted, days of participation on EGS decrease rapidly with increases in wealth, and participation is higher in the poorer of the two villages. The program effectively screens the poor, particularly in the richer village, where the potential losses from leakage are larger.

An ex ante analysis by Murgai and Ravallion (2005) for a lean season scheme providing 100 days of work for rural households indicates that such a program would be progressive and that income gains to the poor would be significant (see Table 3.1). The authors find that a lean season employment guarantee has a significant poverty reduction impact, with whole year poverty rates reduced from 37 to 27 percent at a wage rate sufficient for a typical family to reach the poverty line. The impact is also seen in reductions in the poverty and squared poverty gap indices. The scheme would also reduce inequality, though the impacts are diluted once the wage rate is raised above Rs. 40-45 (in 1999-00 prices). The simulated distribution of gainers by quintile is quite progressive, with around 55 percent of gainers in the bottom two quintiles of the consumption distribution. Just as importantly, the transfer gains as share of pre-EGS consumption are even more pro-poor with the proportional gain for households in the poorest quintile around 9 times those of the richest quintile at the mid-range wage rate and approaching twice the proportional gain of even the second poorest quintile.

According to the World Bank cash transfers have a much greater impact because even though they are less well targeted to the poor, they do not result in any foregone income. The cash transfers also benefit those households which are poor but are unlikely to enter the labour market (like senior citizens). With even highly imperfect targeting, cash transfers would have far greater short-term impact on poverty. The study suggests that unless the program's design assures that the indirect benefits to the poor through the assets created and the extra insurance provided are sufficiently high, policy-makers would be better advised to consider other options to reach the poor. This could include expansion of existing schemes such as social pensions for destitute elderly, widows and disabled, or social security for unorganized workers. It might also include conditional transfer schemes, i.e., family allowances targeted to poor areas and conditional on children attending school and receiving adequate health care (such as Bangladesh's Cash-for-Education, Mexico's Progresa and Brazil's Bolsa Escola).

**Table 3.1: Estimates of poverty and inequality impact of rural EGS during the lean season in India**

	Headcount index (%)		Poverty gap	Squared poverty gap	Gini
	Lean season	Annual	Index (x100)	Index (x100)	Index
<b>Pre-EGS</b>	<b>37.3</b>	<b>34.0</b>	<b>8.3</b>	<b>2.7</b>	<b>0.261</b>
<b>Post EGS at wage rate (Rs/day):</b>					
25	34.8	33.4	7.4	2.3	0.255
30	32.5	32.8	6.7	2.1	0.251
35	29.8	32.1	6.0	1.8	0.247
40	26.9	31.4	5.3	1.6	0.246
45	24.4	30.7	4.9	1.5	0.247
50	22.7	30.3	4.5	1.4	0.250
55	21.4	30.0	4.3	1.3	0.256

*Source:* Murgai and Ravallion (2005). *Notes:* Poverty measures based on distribution of per capita expenditures from the 1999-00 Employment- Unemployment NSS survey and estimated using the Official Planning Commission poverty lines. Wage rates are in 1999-00 Rs. 50 Rs/day is the comparator to the Rs 60 figure discussed for the national EGS in 2005.

Creation of quality assets under workfare schemes clearly has a significant impact on the cost effectiveness of the intervention. The aggregate economic impacts of assets created are generally held to be positive. Analysis from Bangladesh confirms significant impacts on output from assets created under the FFWP. PEO assessment also indicates sizable output gains from irrigation works under MEGS. Under the Bolivia SIF, rates of return on projects have been estimated at 22 percent. In contrast, Planning Commission evaluations of the JRY scheme found that the quality of assets created was not up to specified standards in around 56 percent of gram panchayats.

Less is known, however, about the distributional impact of the indirect gains from assets created, and there are concerns over disproportionate gains to the non-poor. While precise quantification of the poverty impacts of the assets created is difficult, ex-post beneficiary assessments suggest that there were important (pecuniary and non-pecuniary) benefits from the assets created by Argentina's Trabajar program, which were typically in relatively poor areas that would not otherwise have received help. Poor-area targeting of this program was very effective in most provinces of

Argentina, particularly after design changes that enhanced the incentives for provincial authorities to make efforts to reach poor areas. Design features matter greatly to the gains to the poor from the assets created.

An important additional challenge in many workfare schemes has been ensuring adequate maintenance of assets created. There has been a strong tendency worldwide to encourage new asset creation, often to the neglect of existing infrastructure. However, evaluations of workfare programs by public agencies in India have indicated that lack of maintenance of assets created remains a major issue.

Evidence on the insurance impact of public works schemes is limited. However, available evidence points to significant reductions in income variability from workfare schemes. Estimates from MEGS have found that incomes of landless agricultural households in two villages where the scheme operated were 50 percent less variable than in a village with similar agro-climatic conditions where the scheme did not operate. In Bangladesh, the FFWP has helped avert famine in 1988, when conditions were similar to those during the 1974 famine, which occurred prior to the program's introduction. Comparisons of India and Bangladesh have also found that the volume of land sales is highly correlated with famine incidence in a Bangladeshi village, while no such correlation existed in India, where access to relief works, including the EGS, was available. Evidence from post-crisis safety net programs in Indonesia supports the hypothesis of important insurance impacts from workfare schemes. In a comparison of four major safety net programs, workfare was much more likely than subsidized food, school scholarships and community block grants to reach households who had suffered large expenditure shocks due to the crisis, in large part due to self-targeting features. Achieving the insurance benefits depends crucially on avoiding rationing; the poor must be able to get help when they need it. This is the great attraction of the idea of an employment guarantee scheme.

Evidence from workfare programs points to the importance of strong community participation in identification of works to be undertaken. Experience also points to the importance of basic capacity building at local level to strengthen community roles in project planning and execution. India has acknowledged the importance of this in the increased role of panchayats in sub-project identification in successive workfare schemes. Argentina presents an interesting case of a competitive and demand-driven project approval process. On the demand side, the proposing agency (generally municipalities and NGOs) must commit to co-financing the non-labour costs of the project. Beyond that there is a points system that determines whether or not a proposal will be funded under the program. The points system emphasizes proposals which: (i) are from poor areas; (ii) are held to yield higher public benefits; (iii) are from areas which have had relatively low prior participation; (iv) undercut the wage rate; (v) have a higher share of labour costs in total project costs; and (vi) are from sponsoring agencies with good implementation track records.

Evidence from India on sub-project identification in workfare programs suggests that the role of communities in sub-project identification has been less thorough than guidelines would suggest. A detailed study of FFW implementation in Andhra Pradesh revealed that the sub-project identification process was conducted by contractors, and gram sabhas were sidelined in works selection and execution. CARD assessment of Madhya Pradesh workfare schemes also reveal a strong bias towards works in the villages of sarpanchs, and other assessments from Andhra Pradesh confirm concerns about the role of contractors in the sub-project identification process. Concerns had also been expressed on earlier workfare schemes, with JRY in the early 1990s found to have proposals for works primarily prepared by block officials rather than gram panchayats, and EAS planning and implementation characterized as "top-down" rather than "bottom-up", often with little or no knowledge by communities of the scheme's existence and intended benefits.

Like all public programs, employment guarantee schemes work within fiscal constraints. Murgai and Ravallion (2005) have estimated the potential costs of a rural employment guarantee at different wage rates. The results are presented in Table 3.2 under different assumed wage rates (in 1999-00 rupees) for both a full year (300 day) employment guarantee and a lean season (100 day) guarantee. The fiscal costs of even a lean season guarantee remain substantial. At the wage rate of Rs. 50, the cost of a lean season employment guarantee scheme is estimated to be 1.7 percent of GDP for full country coverage. Thus, the costs of employment guarantee schemes are huge, and given India's constrained fiscal position issues related to financing of such schemes have often been raised.

**Table 3.2: Estimated gross fiscal costs of full and lean season guarantees for India**

<b>EGS wage rate (Rs./day)</b>	<b>300 day guarantee (percent of GDP)</b>	<b>100 day guarantee (percent of GDP)</b>
40	3.7	1.3
45	4.3	1.5
50	4.9	1.7
55	5.5	1.9

Source: Murgai and Ravallion (2005). Note: (i) wages in 1999-00 rupees (ii) assumes inelastic demand.

Imai (2004) has analyzed the direct and indirect effects of Maharashtra's EGS in the village of Kanzara. He looks at direct and indirect effects, and compares the EGS with an equivalently budgeted uniform transfer. The analysis uses the Kanzara 1984 village SAM that integrates data from the ICRISAT Village Level Studies (VLS) and data collected by Subramanian (1988). Building on Subramanian and Sadoulet (1990) and Subramanian (1996), Imai uses ICRISAT VLS collected over a number of years to define change in exogenous variables that would correspond to the EGS. The village SAM features 6 activities/commodities, three factors (hired male, hired female and farm servants), and 5 types of households defined by occupation (landless salaried and unsalaried; small, medium and large farmers). The accounts for 'rest of India', government and market agriculture are exogenous. The reference scenario includes the jobs created by Maharashtra's EGS. The simulation exercise consists of sequentially subtracting EGS



wage payments in the exogenous factors account (rest of India) and replacing the EGS with a uniform transfer. The EGS wage shock has two variants, one considering in full all EGS wage payments, i.e. assuming that people taking EGS were all unemployed or inactive; the other assumes that some EGS beneficiaries shifted jobs and therefore it subtracts their forgone income. The imputed forgone income is based on Datt and Ravallion (1994) and Ravallion and Datt (1995) estimates. Finally, the impact of the EGS' works is assessed by comparing a scenario in which EGS introduces irrigation in some dry lands with a scenario in which EGS effects no change in the quality of land. The total cost of the EGS in this scenario is composed of two thirds in wages and one third in investment. For comparison purposes, Imai also runs a simulation of an equivalently budget uniform transfer. Imai's results suggest that the impact of the full wage bill of Maharashtra's EGS increases village household income by 2.6 percent. Multiplier effects result in an increase of 1.3 percent in total output and 0.9 percent in savings. The distribution effects of the EGS are reasonably good. Households classified as landless unsalaried and small farmers benefit the most, while medium farmers make moderate gains as well. If the effect of the assets created by the EGS is considered, there are further increases in household income (0.5 percent), village output (0.7 percent), and savings (0.7 percent). Taking into account foregone income reduces gains from the EGS, so household income only increases by 1.6 percent. Somewhat surprisingly, introducing foregone income into the modeling has no effects on distribution, meaning that the poor and non-poor equally shift out of their jobs to join the EGS.

The results of comparing the EGS with a uniform transfer depend on the size of foregone income and the EGS efficiency to create useful assets. If foregone income is zero, the balance tilts in favor of the EGS. If foregone income has the size suggested by Datt and Ravallion (1994) the uniform transfer gives better results. Introducing the effects of the assets created by the EGS program into the analysis and taking into account foregone income makes the two programs comparable. But

considering that the creation of assets would have long run effects, Imai argues that the comparison should favor the EGS.

Imai also looks at the distribution and poverty effects of the programs considered. Most simulations result in higher increases the lower the income. But the income effect of a uniform transfer is more progressive than the income increase that follows from an EGS after taking into account forgone income. This leads Imai to conclude that a uniform transfer is a more efficient way to reduce poverty than an EGS, even after indirect effects are taken into account. However, these results are driven by forgone income. If the comparison is made between a uniform transfer and an EGS with no allowance for foregone income, the EGS has better re-distributive effects. This raises the need to look carefully into the modeling of foregone income.

Imai concludes that EGS can be an effective way to reduce poverty if assets are adequately created and maintained and if the EGS self-targeting mechanism is supplemented with other targeting instruments. Otherwise, a uniform transfer is a more efficient policy tool to transfer resources to the poor.

Narayana et al (1988) use a computable general equilibrium model to assess the impact of a rural public works program on growth, welfare and income of poor households. The simulated program provides 200 person days per year to every household in the bottom 40 percent of the rural income distribution. The program is assumed to operate only in the lean season and to have no effect on agriculture wages. The conclusions of are - first, the program is an effective policy tool to eliminate hunger at a modest cost to growth. If no investment or leakage failures are incurred and the program is financed with a tax increase, which means other public investments are not reduced, the model suggests that the economy gains 0.13 percent points in the average growth rate between 1980 and 2000. If tax rates remain constant, the program has a cost to the economy equivalent to a

reduction of 0.25 percent points in the average growth rate, for public investment is reduced, but no damage is done to the re-distributive effects of the program. Second, the impact on welfare of poor households compare favorably with those of a transfer of a similar total budget to everyone. Third, if well planned and executed, the program also compares well with a uniform transfer. Always assuming fixed taxes, the reduction in GDP that follows from a uniform transfer is significantly smaller compared to a badly run public works program, but the public works program has a more positive impact on the welfare of poor households. Comparing the uniform transfer with the best public works scenario results in similar costs, but the public works program clearly has superior re-distributive effects. The comparison thus makes it evident that rural public works programs are potentially excellent tools to reduce poverty but they need to be well planned and executed to obtain the maximum benefits. Finally, the authors acknowledge that past rural work programs suffered from implementation problems, but argue that these are not arguments against public works programs per se.

Investment in basic rural infrastructure is widely thought to have a high economic rate of return in developing economies, through increased agricultural output (Antle 1983; Hazell, Khandker, and Singh 1989; Binswanger 1989; Binswanger, Khandker, and Rosenzweig 1989). The key issues are, jointly, the extent to which that return is realized by the infrastructure actually created by rural public works schemes whose prime objective is to alleviate poverty and the extent to which the poor have shared those benefits. A common criticism of the rural public works schemes in India is that the assets created have often been "privatized," with benefits going to the rural non poor (Dandekar and Sathe 1980, PEO 1980).

The effect of rural public works schemes on agricultural labour markets and tenancy contracts is an important but relatively unexplored issue. There have been studies of the general equilibrium effects of poverty alleviation schemes in this setting, but the models used have not included a

labour market (see Parikh and Srinivasan 1989). The transfer benefits from a rural public works project include effects on wages and other earnings from alternative activities. Time series evidence for India suggests that increases in the real agricultural wage rate generally reduce poverty (van de Walle 1985).

There is evidence that employment guarantee schemes have pushed up agricultural wages. Osmani and Chowdhury (1983) report this effect for the Bangladesh scheme, and it is widely believed that the EGS wage rate has influenced the agricultural wage rate in Maharashtra. The EGS wage rate is a credible threat in bargaining over agricultural wages. Indeed, an effective employment guarantee scheme can enable enforcement of a minimum wage rate in agriculture. However, if the wage rate is set too high, and work has to be rationed, then there may be little impact on agricultural wages. There is evidence that this has been happening in the EGS in recent years (Ravallion, Datt, and Chaudhuri 1990).

Like many social programs in developing countries, workfare programs involve a transfer to the rural poor funded by mostly urban tax payer money. Through their effect on labour markets, workfare programs also trigger a redistributive effect within rural areas, from households which are net labour buyers to households which are net labour sellers. Anecdotal evidence suggests that farmers have opposed the implementation of the scheme during the peak season of agriculture precisely because of its effect on wages [Association for Indian Development, 2009]. These political economy considerations could explain why the implementation of MGNREGA has been poor in some states (like Bihar, Jharkhand, West Bengal) despite the large potential demand for public employment.

It is sometimes argued that employment guarantee schemes should not be allowed to compete with existing employment opportunities, because they distort market allocations. The economics of this

argument needs to be looked at carefully. Avoiding new distortions to existing labour markets is imperative only if those markets were functioning efficiently before the policy intervention and if better policy instruments were available for achieving distributional objectives. However, rural labour markets do not function efficiently and there are a very limited number of alternate policy options. A well-functioning public works scheme can make a positive contribution to both efficiency and equity by reducing existing noncompetitive features in rural labour markets. Alternative income sources (such as from public employment guarantee programs) can help break down the exploitative labour relations at the village level - discriminatory wage rate differentials, such as between men and women, between migrants and local workers, and across caste divisions - that arise from monopsonistic power of large landowners (PEO 1980, Dandekar 1983, Binswanger and others 1984, Subbarao 1989). Further, the displacement of other employment sources is not necessarily a bad thing for the efficiency of transfers, since the transfer benefit to the poor depends on the gain in their earnings, not just their employment. The relevant economic comparison to make here is with the alternative forms of policy intervention, rather than the economy's first-best equilibrium. If labour market responses allow higher transfer benefits to the poor for the same social cost, this is a more efficient policy.

A concern frequently expressed is that a public scheme may displace existing private and (nongovernmental) social insurance arrangements. The poor may find that family or community-based support at the village level declining after the introduction of rural public works providing employment in the lean season. To the extent that the existing risk-sharing arrangements work well, this would be worrying. But there are reasons to suspect that they do not. Casual observations suggest that savings by the poor are often insufficient to cope with even seemingly small deviations from normal seasonality or with more than one or two bad years in a row. The poor typically face restricted access to formal credit. Social insurance arrangements are thought to be important in the traditional rural societies of South Asia and elsewhere (Platteau 1988, Ravallion and Dearden 1988,

Cox and Jimenez 1990). These institutions are plausible outcomes of repeated interaction among households in risky environments, but they can be expected to cope well only under certain circumstances (Coate and Ravallion 1989).

The stabilization benefits of public employment schemes can thus be very important in risky agricultural settings. Rural public works have had a long and generally successful history as an instrument of seasonal stabilization and famine relief in India (see Jodha 1978, Lieberman 1985, Walker et al 1986, Dreze 1988, Dreze and Sen 1989). Walker et al (1986), for example, estimate that income streams in landless agricultural households in two villages where the EGS operated were 50 percent less variable (as measured by the coefficient of variation) than in a third village in an agro-climatically similar region where no such scheme existed. EGS employment peaks each year in the dry summer period (March to June), when there is little other employment, and declines rapidly afterward. Participation also fluctuates from year to year, depending in large part on the vagaries of the preceding year's monsoon.

If the EGS provides an effective employment guarantee it will tend to increase the prevailing level of agricultural wages. This might be due to (i) gains in agricultural productivity through the assets created and, associated with such gains, a shift in the demand for agricultural labour, and (ii) a higher reservation wage as a consequence of a "guaranteed" employment option in slack periods. Analysis of ICRISAT data has confirmed the existence of such an effect (Gaiha, 1997). Specifically, if EGS wages rise by a rupee, agricultural wages are estimated to rise by about 17 paise in the short-run, and by about 28 paise in the long-run. The higher long-run effect could plausibly be explained by the contribution of the EGS to a sense of collective identity among rural workers (Joshi and Moore 2000), in turn strengthening their bargaining position vis-a-vis that of large landholders.

### 3.3 Studies on MGNREGA

There is a growing literature on MGNREGA, and a few papers relevant from the point of view of this study are discussed in the following paragraphs.

Berg et al (2012) have studied the effects of MGNREGA on agricultural wages at the district level in India. They analyzed the impact of MGNREGA on agricultural wages using monthly data from 249 districts spread over 19 Indian states over the period May 2000 to June 2011. After controlling for average rainfall, district and time fixed effects and phase-wise linear, quadratic and cubic time trends, we find that MGNREGA intensity treatment in an average district boosts real daily agricultural wage rates by 1.6 per cent. This translates into an average annual effect of MGNREGA on real daily agricultural wages of 5.3 per cent. The study finds no statistically significant difference in the impact of MGNREGA on male and female wages. Further, the scheme only affects unskilled wages and not skilled wages. The wage effect appears to be increasing gradually and is driven by the gradual increase in the MGNREGA intensity. However, it takes 6 to 11 months for a single MGNREGA intensity shock to have an effect on wages and the effect does not last beyond 18 months. The effect appears to be significant across all months of the year but smaller in magnitude for agriculturally slack months of March and April. Public works programs provide governments with an additional mechanism with which to influence wage rates in the rural unskilled labour market. Since the link between agricultural wages and poverty rates are well established, if public works can influence agricultural wages then they constitute an attractive policy instrument to reduce poverty.

Kloner and Oldiges (2012) have analyzed the welfare impacts of the MGNREGA arguing that a pure labour market perspective is certainly important in its own right but not a sufficient basis to judge the MGNREGA's effects on the quality of life of rural households. Considering that higher

wages are only a means to an end the authors explored whether the MGNREGA does translate into higher levels of living. The difference in differences analysis of rural households relies largely on NSS consumption expenditure survey data from 2005-06 to 2007-08. The authors find that several measures of welfare do improve with the MGNREGA in place and that the scheme especially impacts extreme poverty. For example, the authors estimate that the poverty gap measure falls by about 20 per cent in Phase 2 districts, while MPCE inequality declines by 11 percent. Bearing in mind that the MGNREGA is especially attractive to otherwise marginalized and impoverished groups, the authors examine the subsample of SC/ST households separately and find similarly high welfare effects for both moderate and extreme poverty for Phase 2 districts. The changes in MPCE shares indicate a shift towards non-food items, which is in line with field reports and regional studies (for example, Ravi and Engler, 2009). Further, the authors argue that money metric welfare measures may not be sufficient in capturing the entire effect of a program like MGNREGA. Being employed under the MGNREGA may not only increase wages or consumption but may also improve the status of women and marginalized groups. The entitlements under the Act have the potential to empower marginalised groups in many ways, which a multi-dimensional welfare analysis might capture much better.

Dutta et al (2012) use India's National Sample Survey of 2009-10 to test some of the claims that have often been made in debates regarding MGNREGA using data for all the major states of India. The paper has focused on a distinctive and important feature of MGNREGA: the guarantee of employment at the stipulated wage rate. The paper confirms expectations that the demand for work under MGNREGA tends to be higher in poorer states. This appears to reflect the scheme's built-in self-targeting mechanism, whereby non-poor people find work on the scheme less attractive than do poor people. However, actual participation rates in the scheme are not any higher in poorer states. The reason for this paradox lies in the differences in the extent to which the employment guarantee is honored. Rationing is common, but far more so in some of the poorest states. The paper does not



find that the local-level processes determining who gets work amongst those who want it are generally skewed against the poor. There are places where the poor are left out, but it does not appear to stand up as a generalization. The study finds evidence that the poor fare somewhat less well off when it comes to the total number of days of work they manage to get on the scheme. However, despite the pervasive rationing, the scheme is still reaching poor people as well as the scheduled tribes and backward castes. Participation rates on the scheme are higher for poor people than others. This holds at the official poverty line, but the scheme is also reaching many families just above the official line. It is only at relatively high consumption levels that participation drops off sharply. This should not be interpreted as indicating that well-off families in rural India are turning to MGNREGA as there may be individual needs for help that are not evident in household consumption aggregates.

The study finds that targeting performance varies across states. Some of those living above the official poverty line in better-off states will no doubt be relatively poor, and need help from the scheme. The overall participation rate seems to be an important factor in accounting for these inter-state differences in targeting performance, with the scheme being more pro-poor and reaching scheduled tribes and backward castes more effectively in states with higher overall participation rates. While the allocation of work through the local-level rationing process is not working against the poor, there are clearly many poor people who are not getting help. While the scheme is clearly popular with women who have a participation rate that is double their participation rate in the casual labour market, the rationing process does not appear to be favoring them. The authors also find evidence of a strong effect of relative wages on women's participation - both wages on the scheme relative to the market wage and the male-female differential in market wages. As one would expect, poor families often choose whether it is the man or the woman who goes to the scheme according to relative wages. It has been claimed by some observers that the scheme is driving up wages for other work, such as in agriculture; some observers see this as a good thing,

others not. For India as a whole, the study finds that the scheme's average wage rate is roughly in line with the casual labour market wage rate in 2009-10. Further, there is a significant negative correlation between the extent of rationing and the wage rate in the casual labour market relative to the wage rate on the scheme. The authors suggest that other economic factors might be at work for this observation. The correlation largely vanishes when there is control for the level of poverty. Poorer states tend to see both more rationing of work on the scheme and lower casual wages, possibly due to a greater supply of labour given the extent of rural landlessness.

Thus, the main conclusion from the literature survey is that employment guarantee programs if well designed and properly implemented constitute a powerful policy tool to reach the poor and transfer resources to them. Further, such schemes lead to reduction of inequality and enhance the welfare of disadvantaged groups. On the flip side, such schemes are prone to leakages of resources and administrative bottlenecks. Despite these shortcomings the returns to investments on such schemes are likely to outweigh the costs.

This study differs from previous studies in this area mainly in terms of the way the labour market is modelled in the CGE framework. The labour market is disaggregated into rural and urban, and unemployment is taken into account in both the markets, as discussed in greater detail in the next chapter. This disaggregation of the labour market helps to disaggregate the effects of MGNREGA on the two labour markets, and thus facilitates comparison of the effects of the program between the two segments (rural and urban) of the population. Further, this study also analyzes the effects of the creation of productive assets in rural areas, due to the program, on the economy. Finally, investments in MGNREGA are compared to investments (in the form of subsidies) in agriculture and manufacturing. With this background we now come to the analytical part of the study. The next chapter discusses the modelling framework and data related issues.