



# PUBLIC WORKS PUSH UP WAGES

Most of the world's extremely poor live in rural areas, and at the bottom of the pyramid are landless agricultural workers subsisting on casual wage labour. Policies that can put upward pressure on agricultural wages are likely to be some of the most effective ways of improving the welfare of the poorest people on the planet. **Erlend Berg** analyses the effect of a large scale public works programme on wages in India.

**In principle upward pressure on wages for the poorest in society could be achieved by introducing minimum wages, but enforcing a minimum wage rate is unrealistic in most developing countries.** On the other hand, public works, which typically employ large numbers of unskilled workers to improve public infrastructure, may push wages up. If so, the welfare effects of public works programmes would reach well beyond the people who are directly employed by them.

In recent research, we look at a large-scale public works programme: the Indian government's National Rural Employment Guarantee (NREG). Using a decade's worth of wage data for >

250 Indian districts, we find that for each person-day of employment generated by NREG per capita in a district, agricultural wage rates increase by 1.6 percent. Since NREG generates approximately 3.3 person-days of employment per person per year on average, the implication is that the programme boosted real daily wages in India by 5.3 per cent ( $1.6 \times 3.3 = 5.3$ ).

In principle, there are two ways in which a large-scale public employment programme can influence market wages. The first is by shifting up the demand curve for labour, thereby increasing its equilibrium price. The second is that the public goods generated by the programme may increase labour productivity and thus wages. We are not able to separate these two effects econometrically, but we concur with a recent

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World Bank report stating that 'the objective of asset creation runs a very distant second to the primary objective of employment generation.' Our impression is that in reality, the infrastructure built under NREG is often of low quality and unlikely to raise local productivity by much.

We are also able to show that it takes six to 11 months for an NREG intensity shock to pass through to higher wages. This supports anecdotal evidence suggesting that it takes time for workers and employers to build trust in the safety net provided by continued presence of a certain level of employment provision, and also for workers to be able to use this alternative source of employment as a bargaining chip in bidding up their private-sector wages.

NREG also has an important gender perspective. Men and women have equal rights to employment under the programme, and they must be paid the same daily wage rates. Since women are paid significantly less than men in the private market for agricultural labour, one might expect that the upward pressure on wages caused by the equal wages provided under the programme would be greater for women. However, we find that effects on men's and women's wages are about the same. That is, NREG does not contribute to closing the gender wage gap, but nor does it exacerbate it.

Our focus is on wages for unskilled labourers, but we also look at the impact on wage rates for *skilled* labour. We would expect the impact to be less since NREG specifically provides employment for unskilled

labourers. To the extent that these are separate labour markets, NREG could have an effect on wage rates in one but not the other. The results confirm that NREG does not have an effect on skilled labour wages. The exception is a small positive effect on blacksmiths' wages, which seems to make sense given that this type of labour is probably more directly linked to standard agricultural field labour than the other two skilled labour categories for which we have data (carpenters and cobblers).

NREG was implemented across India's rural district in three phases. The poorest districts received the programme first, and the better-off districts, last. We find that the effect of the programme on wages is strongest in phase I and II districts, and not significant in phase III districts. This may be because wage rates in phase I and II districts were generally lower than phase III districts before the programme was introduced. Since the statutory NREG wage rates are equal across all districts in a state, they are likely to exert the most upward pressure in the poorest districts.

NREG is an enormous programme by any standards: in the financial year 2010–11, it generated 2.57 *billion* person-days of employment. It is therefore of considerable interest in its own right. The size implies that the scheme, notwithstanding the many problems in its implementation, is eminently scalable. Evaluations of small pilot schemes are often criticised on the basis that the observed effects may not be reproduced at larger scales. That critique does not apply here, and the lessons learned should be of broad interest.

## We find that the effect of the programme on wages is strongest in the poorest districts.

Public works programmes 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.

This article is based on a working paper by Erlend Berg, Sambit Bhattacharyya, Rajasekhar Durgam and Manjula Ramachandra, 2012. 'Can rural public works affect agricultural wages? Evidence from India.' University of Oxford, CSAE Working Paper Series WPS/2012-05.

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