

Food for Work Programmes: Beyond Roads That Get Washed Away

Author(s): Kaushik Basu

Source: *Economic and Political Weekly*, Vol. 16, No. 1/2 (Jan. 3-10, 1981), pp. 37-40

Published by: Economic and Political Weekly

Stable URL: <http://www.jstor.org/stable/4369409>

Accessed: 07-09-2017 18:06 UTC

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://about.jstor.org/terms>



JSTOR

Economic and Political Weekly is collaborating with JSTOR to digitize, preserve and extend access to *Economic and Political Weekly*

Food for Work Programmes : Beyond Roads that Get Washed Away

Kaushik Basu

The Food for Work Programme (FWP) in India provided 2,864 lakh mandays of jobs in 1978-79. This is equivalent to providing a year's employment to almost one million people.

The enormity of the programme requires theoretical as well as empirical research. So far, most studies of the FWP have been primarily empirical.

This paper attempts to use some of these studies as a basis for deriving analytical results and for questioning the validity of certain widely-held views about the impact of this programme. It aims to provide the elements of a theoretical frame for future empirical work.

WITH 15.4 million tonnes of foodgrains in the granaries, the FWP was initiated to fulfil the following basic objectives:¹ (i) Generate employment, (ii) Create durable community assets and rural infrastructure, (iii) Utilise the surplus foodgrains.

The Centre distributes to the state governments certain quantities of foodgrains. These state governments then set up projects in the rural sector and pay the labourers with the foodgrains, often supplemented with cash payments.

In 1977-78, 2.04 lakh tonnes of wheat were allocated to the states under the FWP, but only 1.27 lakh tonnes were actually utilised. The Programme really took off in 1978-79 when 12 lakh tonnes were utilised. In that year, the FWP provided 2,864 lakh mandays of employment — the equivalent of a year's employment for one million people.² According to the *Economic Survey* (see note 9 for detailed reference), in 1979-80 approximately 25 lakh tonnes of foodgrains were distributed under this programme.

Against this brief backdrop, we may examine the FWP and make some tentative suggestions.³

I

Wages and Poverty

Let us first take a look at a widely-held view which, in my opinion, is fallacious. This concerns the level of wages paid out to the workers at the FWP. This popular view is cogently *EPW*, April 12, 1980). Dandekar and Manju Sathe ('Employment Guarantee Scheme and Food for Work Programme', *EPW*, April 12, 1980). Dandekar and Sathe analyse the FWP (cum Employment Guarantee Scheme, EGS) in Maharashtra and find that 90 per cent of the people working on this scheme continue to be below the poverty line. Thus the FWP has failed to retrieve people from below the poverty line. Inference? According to Dandekar and

Sathe it is obvious: wages should be raised.

But this is surely extremely unappealing. The implicit objective function which leads to this conclusion is that we should minimise the number of people below the poverty line. Thus, given a total wage bill of X kilos of grain (and assuming for simplicity that wage payment is entirely in kind), we should, according to this view, concentrate it on a fewer people and ensure that they rise above the poverty line. But clearly, if we are genuinely concerned about poverty and equity, this is quite unacceptable. It is in fact preferable to spread out X over the poorest sections, even if that leaves the numbers on the two sides of the poverty line unchanged. To achieve this, we should do precisely the opposite of the common prescription: We should pay as low wages as is possible without running short of labour at the projects. Given an upward sloping supply curve of labour, we can be sure that the wages will not drop to absurdly low levels. A bit more formal statement of this may help.

Consider a state in the country. Assume that labour is homogeneous in this state. The amount of labour supplied to the FWP, denoted by L , will be a function of (*ceteris paribus*) the wage paid at the Programme, w (in kilos). Thus

$$L = L(w), L' > 0$$

Let \bar{X} be the total grain allocated to the state. What I am suggesting is that we should minimise w subject to $L(w) \geq \bar{X}/w$. Given that $L'(w) > 0$, the solution is given by solving

$$L(w) = \bar{X}/w \quad \dots (1)$$

for w . Let such a wage be denoted by w^* . This is the lowest wage at which the state can distribute the entire stock of foodgrains, \bar{X} through the FWP.

The study bemoans that "there is also no system under which any preference is given to the poorer sections", such as landless labourers and small farmers. The scheme of wages

being suggested here would automatically solve this problem. Usually a lower wage would attract only the poorer sections of society. Thus, by paying w^* , we would ensure, without having to hire detectives, that the poor and downtrodden get preference in the FWP.

What will happen to w^* as the FWP is expanded? Dandekar and Sathe have argued that this Programme needs to be expanded, and I completely endorse this view. By the scheme of wages being suggested here, as the FWP increases in size, wages will naturally move upwards. This is obvious from (1). As \bar{X} increases, the w which solves (1) has to rise as well. Given $L'(w) > 0$, L will increase as well. Thus as the FWP expands the size of employment and w^* will rise.⁴

Are the actual wages being paid at the FWP in India below or above w^* . A firm answer is not possible without more detailed empirical research. But, from the sketchy evidence available, it appears that it is not in general below w^* . According to the study 55.7 per cent of the beneficiaries interviewed wanted more work on the Programme and they demanded that the work be more regular and permanent. Some more evidence for believing that the currently paid wage is not less than w^* is available from the following table compiled from the study.

Note that in 15 of the 20 districts the percentage increase in income of the workers caused by the FWP is greater than the percentage increase in mandays worked. This indicates that, in these districts, $\bar{w} > w_m'$ where \bar{w} is the wage paid at the FWP and w_m is the market wage. Consequently, it is likely that even more people would be prepared to work on the FWP if jobs were available and reasonably permanent. Hence $\bar{w} > w^*$.

The other five districts (starred in the references) are paradoxical at first sight. The data suggest that $\bar{w} < w_m$. If this

TABLE

State	District	Relevant Number of Beneficiaries Interviewed	Their Percentage Increase in Employment after FWP Was Started	Their Percentage Increase in Income after FWP Was Started
Andhra Pradesh	Guntur	20	22.6	97.3
	Medak	40	5.3	17.8
Bihar	Bhojpur	30	0.9	2.7
	Samastipur	30	0.7	10.8
Gujarat	Amreli	35	0.9	18.9
	Panchmahal	40	76.1	73.1*
Haryana	Bhiwani	40	6.4	11.3
	Sonepat	40	15.2	10.3*
Madhya Pradesh	Indore	38	19.2	16.4*
	Raisen	30	58.5	57.0*
Maharashtra	Bhandara	30	6.8	20.2
	Nasik	30	6.1	6.3
Orissa	Cuttack	40	9.8	10.6
	Dhenkanal	40	3.2	1.4
Rajasthan	Jaipur	40	2.8	20.0
	Jodhpur	40	4.1	15.0
Uttar Pradesh	Bulandashahar	20	6.9	8.1
	Lakhimpur Kheri	40	21.4	34.7
West Bengal	Burdwan	40	5.6	3.2*
	Nadia	40	8.4	45.4

was so, why did workers agree to work on the FWP? The most likely reason is the existence of wage rigidities in these regions. This could imply that, at w^m there exists an excess supply of labour. Thus, even though the FWP wage is below the market wage, there are labourers who are prepared to work. These are labourers who were rationed out of the open market. Thus despite $w^w < w^m$ labourers were available at the FWP. Whether or not there would be an adequate supply of labour to the FWP with a further lowering of wages, cannot be deduced from this. But there is no reason to believe that the FWP wages were below w^* , particularly since there was no evidence of labour scarcity.

Thus an analysis of the table suggests — however, tentatively — that in most of the districts, there was some room for lowering the FWP wage. What seems quite clear is that there is very little ground for the common view that wages should be raised.

II

Wages in Cash or Kind?

What would be the consequences of paying labourers at the FWP in cash rather than in foodgrains (such a programme will be called a cash for work programme, CWP)? This is a very important question. If the Programme is expanded, we shall be forced to rely more on cash payments and thus we ought to know its consequence. Moreover, there may be arguments for

switching over anyway to greater cash payment.

One of the reasons for paying in grain is to do with an unwritten objective of the Programme. For political and administrative reasons, typically, the wage paid by the FWP is constrained at the level of wages paid in other comparable public sector schemes. Payment in grain allows us to circumvent this constraint and to pay a higher real wage. This is done by underpricing foodgrain when calculating the foodgrain equivalent of a certain money wage. This is, however, not a sufficiently important reason for payment in kind for two reasons. First, even by paying a portion of the wages in kind we get considerable leverage over the wages by manipulating the conversion price. Consequently, we need not pay the entire wage in kind. Secondly, as already argued above, it is not very clear that we want to pay very high wages in the Programme.

The main reason for payment in foodgrain is actually to fulfil objective (iii) of the FWP. But does payment in kind necessarily ensure a greater consumption of foodgrains? The answer is in general no. First, if a family wants to consume less foodgrains than it receives, it will (given that transaction costs are not too high) sell off a part of the food received and buy other commodities. Some evidence of such selling has been noted in the study.

Secondly, even if selling food received as wages is banned or the transactions cost happens to be prohibitive, payment in kind will not ensure a greater con-

sumption of foodgrains. Most families have some outside earning, and when they receive wheat from the FWP they can cut down the amount of wheat they would have bought with the outside earning.

Let a household earn G kilos of grain from the FWP and Rs Y from other sources.⁵ The price of grains is Rs p per kilo. I am ignoring the fact that price will be non-unique (conversion price, market price, etc); it is easy to incorporate this into the analysis that follows.

In the absence of the FWP, the budget set is OYB. With the FWP, given no selling of grains received as wages, the budget set is OCDY. If instead of G kilos of grain an equivalent amount of cash (ie, Rs pG) was paid, the budget set would be OCE. Clearly then, payment in kind will induce extra consumption of grain *only* if the tangency of the indifference curves to EC occurs to the left of D (as shown in the diagram).

Assuming linear Engel curves, this can be captured in a useful algebraic form. Let the propensity to consume grain be g, i.e, a rupee's rise in income leads to Rs g of additional grain consumption. Hence, total grain consumption with cash payment = $g(Y + pG)/p$. Total grain consumption with payment in kind and no selling of grain received as wages = $\max \{ G, g(Y + pG)/p \}$. Thus payment in kind would induce a larger grain consumption if

$$G > g(Y + pG)/p \dots (2)$$

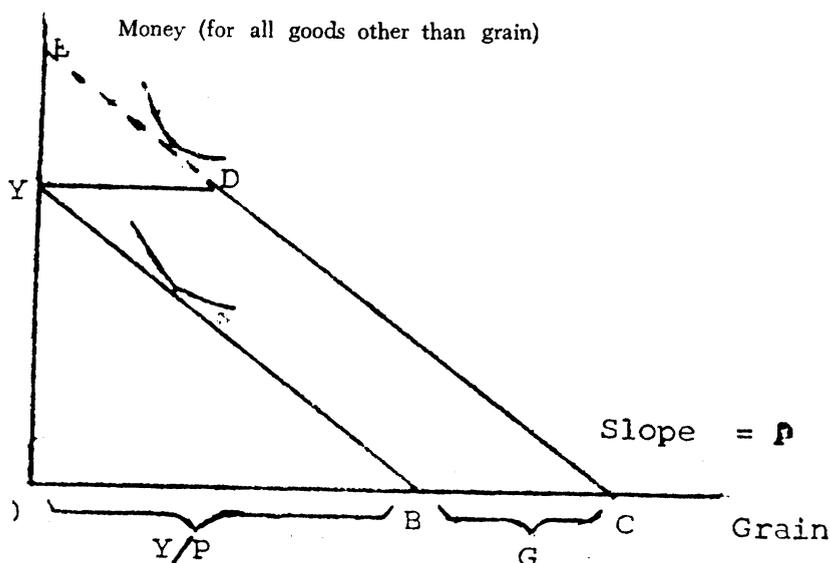
If this inequality does not hold, then the form of payment does not affect the quantity of grain consumption.

It is very difficult to get direct information on the quantities of grain that would be consumed under a CWP and a FWP. The above algebra is useful in that it suggests an indirect and simple method of getting this information. It entails collection of information on the standard variables Y, p, g and G. Some partial calculations are immediately possible from the data in the study. Statement (2) implies

$$\frac{pG}{Y} / \left(1 + \frac{pG}{Y} \right) > g.$$

Appendix VI in the study gives data on the increase in incomes caused by the FWP. This could be used as a surrogate — no doubt rather inaccurate — for pG/Y . The average value of this is 17.7 per cent. Consider an average family for illustration. Its consumption of grains would be higher with payment in kind if $0.177/1.177 = 0.15 > g$. This

DIAGRAM



is unlikely in a family poor enough to work at the FWP.

For a household i , payment in kind instead of cash causes an increase in grain consumption equal to $\max \{ 0, G_i - g_i (Y_i + p G_i) / p \} = N_i$ kilos. The aggregate effect on grain consumption of cash payment is calculated by summing the N_i s over the households.

From the above algebra, we may also evaluate the effect on grain consumption of a FWP when the alternative is the absence of any programme. It is easily checked and is intuitively obvious that the increase in grain consumption caused by the FWP will be less than the amount distributed by the FWP assuming that payment is in kind.

One standard objection to a CWP is that it is inflationary, because it pumps money into the economy in an obvious way. However, a scheme in which government buys grain in the open market in order to run a FWP, would have much the same effect as a CWP, because in this case also money is pumped into the economy, though through the grain rather than the labour market.

In the sort of EWP being run in India, the government's decision to purchase grain was taken independently of the FWP. Thus, in this case, the grain exists with the government anyway, whether or not the FWP is undertaken. In this case the FWP could be thought of as a mechanism for transforming the basket of inventories and capital goods with the government: changing foodstocks into community assets. This would typically exert a

downward pressure on the prices of foodgrains (as stocks are unloaded on the market *via* the FWP), and an upward pressure on the prices of other goods (since for them extra demand is generated by the FWP but there is no immediate extra supply).

It will be shown, later, that much of the effect on prices of a CWP or FWP could be avoided by properly balancing the outputs of these programmes. Thus a CWP is not necessarily inferior to a FWP.⁶ Of course, if there is piled up grain anyway with the government, FWP is a reasonable outlet. But grain should not be bought in order to run a FWP. It is better in such a situation to have a CWP.

In the case of India, there is need to expand the Programme. As such expansion takes place, a greater cash payment is likely to be necessary. What I have argued here is that that need not worry us unduly.

III

Measuring Employment Generated

While we generally think of the employment generated by a project as an unambiguous concept, it can have two very different interpretations:

The Direct Employment Generated (DEG). This measures the number of mandays employed at the projects of the FWP.

The Net Employment Generated (NEG). This measures the amount of mandays generated as a consequence of the FWP. Thus it includes the indirect consequences of the project as well.⁷

DEG is a naive concept which, as economists delight in repeating, is typi-

cally what one would expect accountants to use. Most empirical studies in this area do not distinguish between these two measures (despite the fact that research-hours spent on this is a part of NEG but *not* DEG of the FWP) and they estimate DEG. But in order to judge the success of a project, what we need to know is NEG. In fact, our main interest in DEG is as a surrogate for NEG. If we have good reason to believe that the number of people employed at the projects is roughly equal to the net additional employment in the economy (i.e., $NEG = DEG$), then we may use DEG to evaluate the Programme.

But, of course, in reality these two measures could diverge widely. In fact, situations exist where one could be positive and the other negative. An example of this is the Harris-Todaro model,⁸ in which a new project in the urban sector could cause the aggregate employment in the economy to fall. Actually, if we could at least show that NEG and DEG are positively related (this is presumed in the next section), we could make some prescriptions. For example, we could argue that for removing unemployment the FWP should be expanded and more people employed on it.

For those reasons a theoretical model is needed. It could suggest ways of measuring NEG and yield insights into the relation between NEG and DEG.

It would also be useful to have some theory of bureaucratic decision-making. For example, if it can be shown that the FWP implies a pruning by the state governments of other employment schemes, then the employment effect of the FWP is not as large as it appears. There is some evidence of this kind of 'project substitution' (Study, p 11).

An obvious point about employment is worth mentioning here: If employment generation is our sole objective, then its satisfaction is no problem. We could get people to build roads which would get washed away with the first rains. The Indian government has more than once in the past paid tribute to John Maynard Keynes by running employment programmes which did precisely this. To avoid this, it is important to emphasise output targets for the FWP and not just brandish the mandays created.

What should be the nature of output produced by the Programme? The answer in the government's *Guideline* is straightforward: The FWP should produce durable community assets and

develop rural infrastructure. But this objective has some serious problems.

IV Production Pattern

The main problem with the present objective of producing only durable community assets is that it is likely to exert an upward pressure on prices of goods other than foodgrains, particularly wheat. The FWP creates demand for these goods but no immediate supply to meet this. This does not necessarily result in an actual rise in prices, because this imbalance can be offset by having reverse imbalances elsewhere. Government can raise additional taxes or delete subsidies to curb demand. But the problem arises when we try to enlarge the FWP.

It has been argued effectively, by Dandekar and Sathe and also in the Study that we need to expand the Programme. In a nation where the labour force is larger than 250 million and underemployment is acute and widespread, we need to substantially enlarge the FWP if we want a noticeable dent in our poverty statistics.⁹ But, as the Programme is expanded, the offsetting imbalance necessary elsewhere in the economy will also increase. And it is likely that we shall be unable to cover the imbalance generated by the FWP. And that is when the problem of inflation could get very serious.

Thus it is not good enough to produce just assets. It is necessary that an employment programme produces some consumer goods to meet the new demand generated by itself. This point has been made repeatedly by Nurkse, and also Kalecki.¹⁰

Assume, for simplicity, that we have a CWP rather than a FWP. Let the total additional income generated by this Programme be E. The determination of E could pose serious problems, but that need not concern us here. The increase in demand for a good would be a proportion of E given by the aggregate propensity to consume that good. For the FWP to have minimal effects on prices, it should produce commodities to cover this new demand. The remaining capacity of the Programme could then be used to produce assets and infrastructural investment.

This is an idealised production pattern, and there will usually be good reason to diverge from this. First, the nation's need for better infrastructure may be such that it will be prepared to accept some inflation. In that case, it could produce less consumer goods and divert some of the capacity to develop infrastructure, and live with a mild inflation. Secondly, as already argued, it

could cover a part of the imbalance in the FWP by counteractive measures elsewhere. Thirdly, if a little roundabout method of production is considerably more technically efficient, then we may opt for certain short-gestation investments (e.g. small irrigation schemes) which would generate the required consumer goods with a short time-lag. This would tend to raise the prices of goods in the short run but hopefully they would quickly stabilise.

Thus there may be many grounds for not adopting a 'price-neutral' production pattern. But it should exist in the background in formulating a programme, so that we do not veer too far away from it.

V Conclusion

With the reasonably successful implementation of the Food for Work Programme, India has hopefully gone beyond employment schemes which built roads that got washed away. A lot of theoretical and empirical research is needed for expanding the FWP and making it more efficient. My analysis was piecemeal. It simply put together a series of analytical sketches and suggestions. It is hoped that some serious student will tie these up in one framework. And, if my inconsistencies prevent this, they may at least motivate more research in this area of immense practical importance.

Notes

[For useful discussions the author is much indebted to his colleagues, particularly, Suresh Tendulkar, K Sundaram and Pulin Nayak. The views expressed are, however, entirely his.]

- 1 Similar programmes have been in effect in many countries including Bangladesh, Pakistan, Egypt and Kenya.
- 2 If a year is treated as comprising 300 working days, as done in the Planning Commission's *Study* (detailed reference in footnote 3) then this amounts to 0.955 million manyears.
- 3 Most of the statistics and empirical information used in this paper are from two sources: 'A Quick Evaluation Study of the Food for Work Programme, An Interim Report' prepared by the Programme Evaluation Organisation of the Planning Commission, Government of India (referred to henceforth as the *Study*), and 'Food for Work Programme, A Guideline' by the Ministry of Agriculture and Irrigation, Government of India (referred to as the *Guideline*).
- 4 The assumption of payment in kind is not important for the above argument. If X represented the wage bill in rupees and w the wage rate in rupees, the same analysis would be valid.
- 5 I shall assume that in the absence

of the FWP the household will earn Rs Y, though in reality it is likely to be a bit more. Also, in the ensuring analysis we shall not consider the case of wages which have a cash and a grain component. Its consequences are easy to deduce from my analysis of polar cases.

- 6 Even if some economists have reservations on this, the government officials who bought crockery and furniture with foodgrains meant for the programme (see *Study*, p 36) will no doubt strongly endorse my view, since bartering grains for crockery is, I imagine, a rather difficult job.
- 7 One way of conceptualising NEG is to use what Eckstein calls the 'With or Without Principle'. According to this, we first conceive of the economy with a FWP and then the same economy over the same period without a FWP. The NEG of the FWP is given by subtracting the amount of employment in the latter economy from the amount in the former. This principle is not as uncomplicated as it appears at first sight. I have discussed some of its problems in Chapter 8 of my book, "Revealed Preference of Government", Cambridge University Press, 1980.
- 8 Harris, J R and M P Todaro, 'Migration, Unemployment and Development: A Two-sector Analysis', *American Economic Review*, 1970.
- 9 'The programme FWP is expected to be strengthened and expanded on a big scale as it has potential to become a focal programme for generation of rural employment in the coming years'. p 11, *Economic Survey, 1979-80*, Government of India, 1980.
- 10 Nurkse, R, "Problems of Capital Formation in Underdeveloped Countries", Oxford University Press, 1952. Kalecki, M, "Essays on Development", Harvester Press, 1976.

Kinetic Engineering

KINETIC ENGINEERING has received a COB licence whereby it is allowed to produce 24,000 mopeds per annum. It intends to apply for regularisation of installed capacity, of 72,000 units per annum on double shift basis, in accordance with the procedure prescribed by the Department of Industrial Development of the Government of India. During the year ended June 1980, the company sold 36,217 mopeds including 112 numbers exported, as compared to 24,019 sold during 1978-79. Sales brought in Rs 9.37 crore against Rs 5.27 crore, and yielded a gross profit of Rs 131 lakh against Rs 58 lakh. Net profit was Rs 49 lakh (Rs 18 lakh) out of which equity dividend of 12 per cent will require Rs 6.77 lakh (Rs 4.20 lakh). The company sold 12,026 vehicles during the first quarter of the current year, as against 7,395 for the same period last year.