Appraising Workfare Programs

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Foreword

One of the central themes that the Poverty and Inequality Advisory Unit wishes to analyze and explore is the strategies and policies used to attenuate the impact of adverse shocks on the poor. Emergency employment programs are among the common instruments used to reach this objective. These programs need to meet certain minimum requirements in order to ensure that they are effective and efficient, and do not yield perverse incentives. This study discusses those requirements and explains the conditions and information requirements that should be taken into account when designing and implementing such programs. *Appraising Workfare Programs* can prove useful to IDB project teams as well as to governments throughout the region interested in establishing or evaluating employment programs.

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Abstract

Workfare programs aim to reduce poverty by providing low-wage work to those who need it. They are often turned to in a crisis when there is no time for a rigorous evaluation. This paper offers some simple analytic tools for a rapid ex-ante appraisal of an existing workfare program. For pedagogic purposes, the two programs studied are stylized versions of a range of actual programs found in practice. One is for a middle-income country, the other a low-income country. The cost of a $1 gain to the poor is about $2.50 in both cases, though the same gain in current earnings would cost 50 percent to 100 percent more. The rapid appraisal also suggests how design changes might enhance the benefits to the poor.

Contents

INTRODUCTION

Workfare programs, whereby participants must work to obtain benefits, have been widely used for fighting poverty.[1] They are often turned to in crises such as those resulting from macroeconomic or agro-climatic shocks, in which a large number of poor able-bodied people have become unemployed.[2] They are also relatively complex programs and, as a result, difficult to evaluate. Other things being equal, one would prefer the appraisal and design of such schemes to be well informed and rigorous. However, time is short in a crisis, and data are often far less than ideal. What can be done to obtain a reasonably credible and yet rapid assessment of the likely gains to the poor from a given outlay on such a workfare program?

This paper offers a Amini-manual@ for the rapid appraisal of an existing workfare program. "Rapid" appraisal means that the work can be done in the field in about two person weeks with the sort of data normally (though not invariably) available on short notice. Box 1 summarizes the data requirements. It is assumed that the government and/or aid donor wants the rapid appraisal to address two main questions: How much impact on poverty can be expected if the existing scheme were expanded? How might the existing scheme be modified to enhance its impact on poverty?

To make the discussion more concrete, two specific programs are considered, each stylized versions of those found in practice. One of them is in a middle-income country in which unemployment has risen sharply in the wake of a macroeconomic stabilization and reform program, while the other is a low-income country hit by a severe drought. The former country is labeled MINC (for Amiddle-income@) and the latter LINC (Alow-income@). The program is called ATrabajar@.[3] It is not normally feasible for a rapid appraisal to quantify the distribution of benefits among the poor, and so only the aggregate transfer to the poor from the budget is estimated here. However, there will be a discussion on some of the qualitative ways in which sensitivity to distribution among the poor (such as putting higher weight on gains to the poorest) can have bearing on the appraisal and design of the program. The implications of a high discount rate, such that a low value is attached to reducing poverty in terms of future incomes, will also be discussed.

The available budget is taken to be predetermined. The issues are then how cost-effective the workfare program is in raising incomes of the poor, and how performance might be improved. Such Acost-effectiveness@ calculations can be deceptive if the budget is not exogenous. This can happen if program design also influences the resources available, such as by influencing how generous the non-poor are in supporting the Program.

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[1] On the arguments for this type of intervention see Ravallion (1991a), Besley and Coate (1992), Lipton and Ravallion (1995, section 6), Mukherjee (1997), and Subbarao (1997).

[2] Transfers to the non-able bodied poor will also be needed for a comprehensive safety net. On the potential complementarities between workfare programs and other safety net interventions see Drèze and Sen (1989).

[3] This is also the name of a program in Argentina, and I will draw on data from that country to illustrate some points. However, I have deliberately altered some features of the Argentine scheme to build in some features of schemes found elsewhere. The LINC scheme is modeled on the schemes commonly found in South Asia including the Employment Guarantee Scheme in the state of Maharashtra in India.

> **BOX 1**
> **Data Needs for a Rapid Appraisal**
>
> The rapid appraisal method proposed here requires information on the poverty rate in the relevant country or region, the wage rate of unskilled (informal sector) labor, the unemployment rate among the poor (preferably on a time basis, rather than usual status), the labor intensity of the current workfare projects, their (financial) benefit-cost-ratio, their cost-recovery rate, and the extent to which the projects are targeted to poor areas. The likely sources of this information are household or labor force surveys, the project=s administrators (both central and local), and interviews with participants in the program.

For example, external benefits to non-poor from the assets created could help mobilize public support for the program, and so boost overall funding; a lower share of the public spending may still mean a higher total transfer to the poor once these effects are factored in.[4] Such effects can be difficult to predict, and may well be of little importance in a crisis, though they may be important to the longer-term sustainability of safety net policies.[5] In common with other estimates of cost-effectiveness, risk benefits will be ignored. This could well be the most serious limitation of the calculations reported here, since insurance against income losses is thought to be a significant benefit from workfare programs in practice (Ravallion, 1991a). There will be a discussion as to what biases this might impart.

Any public program must be assessed relative to the best alternative use of the same resources. This will vary with country circumstances, including administrative capabilities. One option which would probably be feasible everywhere is a uniform allocation of the same budget, in which every household (whether poor or not) gets the same amount. Assuming that this is feasible, a workfare scheme aiming to reduce poverty should not be supported if the total gain to the poor as a proportion of the budget is less than the percentage of households who are poor. Of course, a workfare scheme which passed this test may still be inferior to some other option; in more developed economies and some transition economies, for example, a well-designed unemployment insurance scheme may well be a more cost-effective option to workfare (Wilson and Fretwell, 1996).

The paper begins with a description of the stylized programs. It then discusses how their cost-effectiveness might be assessed. This discussion will also suggest ways in which benefits to the poor might be increased.

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[4]For example, insurance benefits to non-poor participants were a factor in mobilizing public support in rural areas for workfare schemes in South Asia; see Ravallion (1991a).

[5] An example is the Sri Lankan food stamp scheme in which a better targeted program (with the poor getting a higher share of the budget) was introduced, but this subsequently undermined political support from the middle class, such that the poor ended up with less than before the reforms. For further discussion of these and other issues of targeting see Besley and Kanbur (1993) and van de Walle (1997).

AN OVERVIEW OF THE PROGRAMS

There are two ways in which a workfare program might reduce poverty: the first is by providing paid work for the unemployed from poor households, and the second is by producing things of value to poor families. Workfare will naturally be more labor intensive than a program which simply maximized the present value of the assets created, because the workfare program attaches positive value to employment of poor people, independently of the gains to society as a whole from the outputs obtained from that employment. So a workfare program will tend to operate at a point where there is a trade-off between the value of the assets created and employment.

Figure 1 illustrates this trade-off. The program will operate to the right of the point that maximizes the present value of the assets created. One can think of the latter as the "unweighted optimum," recognizing that there will be some distribution-weighted measure of social benefits from the assets created, allowing for a shadow wage rate below the market wage (reflecting the existence of unemployment), which will lead to the same design choices as a poverty-focused workfare program.

This trade-off poses one of the more difficult design issues for a workfare program: How much emphasis should be given to immediate employment versus creating durable assets? The program in MINC puts relatively more emphasis on the assets created than does the LINC scheme. Municipal governments in MINC appear to use the scheme as an extra source of funds for maintaining or upgrading minor roads, sanitation facilities and so on, using roughly the same technology (combination of labor and nonlabor inputs) as would be done otherwise. For example, a number of sub-projects in MINC entailed connecting new dwellings under construction (clearly for well-to-do households) to the sewerage system. In others, pavements were being repaired in well-to-do neighborhoods. In LINC, the projects are mainly minor roads, soil conservation, reforestation and irrigation. Technology tends to be highly labor intensive – somewhat more so than for similar projects outside the workfare program.

FIGURE 1: THE TRADE-OFF IN A WORKFARE PROGRAM
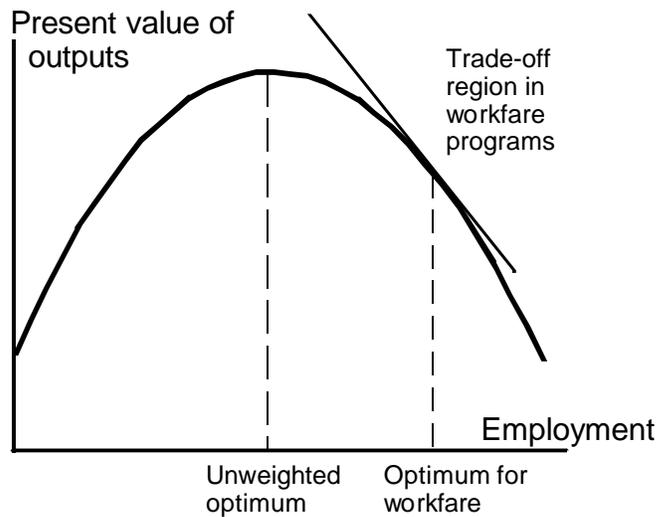
In neither country are poor communities per se the present target group for selecting projects. In MINC the projects are just as likely to be in non-poor neighborhoods, and in LINC rural development project beneficiaries are often relatively well-off local landowners. In both cases, the work done clearly has some value to the community at large, though it would seem unlikely that the projects in LINC would pass a conventional cost-benefit test. Co-financing to cover the non-wage cost is usually provided by the municipal or provincial government; it is unusual for local residents or nongovernmental organizations to provide it. Cost recovery from the assets created is rare, even from well-off beneficiaries.

THE ARITHMETIC OF COST-EFFECTIVENESS

To estimate the share of the government=s outlay which benefits the poor – the Acost-effectiveness ratio@ – it can help to dissaggregate the ratio into various components which can either be estimated from the data available, or can be calibrated from seemingly plausible assumptions. One possible decomposition is suggested here, though there are other possibilities; the aim is only to provide an example of the method which might easily be adapted to specific circumstances.

The proportion of total public expenditure on the program (by both the MOL and co-financing by local government) which is accountable to the net income gain to poor workers can be dissaggregated into the following five variables:

(i) The budget leverage. The government can require co-financing for sub-projects from benefiting neighborhoods in which there are very few poor people. Let governmental (central plus local) spending be G, and let this be leveraged up to result in a total budget of $G+C$, including the private co-financing (C).

(ii) <u>The labor intensity</u>. Some of the participants may not be poor; so let the share of all wages paid in total operating cost be $(W+L)/(G+C)$, where W is the wage received by the poor and L denotes leakage to the non-poor.

(iii) <u>The targeting performance</u>. This is given by the proportion of the wages paid out which goes to poor workers, $W/(W+L)$.

(iv) <u>The net wage gain</u>. This is the share of the gross wage received by the poor which is left after subtracting all costs to them of participating, including any forgone income; it is NW/W where NW stands for net wage.

(v) <u>The indirect benefit</u>. IB/NW where IB are indirect benefits to the poor, such as occurs when the assets created are in poor neighborhoods.

The net gain to poor workers as a proportion of public spending on the program, namely B/G, is then given by:

$$\frac{B}{G} = \frac{G+C}{G} \cdot \frac{W+L}{G+C} \cdot \frac{W}{W+L} \cdot \frac{NW}{W} \cdot (1 + \frac{IB}{NW})$$

(1)

$$(i) \quad (ii) \quad (iii) \quad (iv) \qquad (v)$$

It is useful to also dissagregate the last ratio as:

$$\frac{IB}{NW} = \frac{IB}{SB} \cdot \frac{SB}{G+C} \cdot \frac{G+C}{NW}$$

(2)

$$(vi) \quad (vii) \quad (viii)$$

which gives IB/NW as the product of a further three ratios:

(vi) <u>Poor peoples= share of the social benefits</u> from the assets created by the project; this is given by the ratio of the indirect benefits to the poor (IB) to the social benefits (SB), where the latter are assessed without distributional weights.

(vii) <u>The benefit-to-cost ratio</u> for the project; the ratio of SB to cost, $G+C$.

(viii) The inverse of the <u>share of net wage gains to total cost</u>. This can also be written in terms of three of the ratios in equation (1) above, namely:

$$\frac{NW}{G+C} = \frac{NW}{W} \cdot \frac{W}{W+L} \cdot \frac{W+L}{G+C}$$

(3)

$$(iv) \quad (iii) \quad (ii)$$

in which the labels (iv, iii, and ii) correspond to the ratios from equation (1).

Some of these benefits accrue in the future; this is likely to be true of the bulk of the indirect benefits from the assets created. One can also define the ratio of current benefits (CB) to government

spending by replacing all values in these formulas by current values, or values within some specified period. This is to be the period in which Trabajar wage earnings are received and it will be assumed that *IB*=0 for that period in order to estimate *CB*.

In the above formulation, cost recovery from the non-poor will increase the budget leverage ratio, (*G+C*)/*G*, but not change other variables. We can explicitly introduce the <u>cost recovery rate</u>, *k* = *C*/(*SB-IB*) i.e., the ratio of the privately financed component of the total cost to the amount of the total benefit which does not accrue to the poor. One can then readily obtain the following formula for the budget leverage ratio:

$$\frac{G+C}{G} = [\, 1 \ - \ k.(1 - \frac{IB}{SB}).\frac{SB}{G+C}\,]^{-1}$$

$$(4)$$

$$(vi) \quad (vii)$$

in which the labels (*vi* and *vii*) correspond to the ratios from equation (2).

The following sections will discuss data and a priori reasoning which can help in determining seemingly plausible values for these ratios.

IMPACT ON LABOR EARNINGS

In discussing how plausible values for the cost-effectiveness ratio might be estimated, the initial focus will be on the workfare scheme in MINC. Once the basic ideas are in place, the application to LINC will be straightforward.

There is a strong association between poverty and unemployment in MINC. Tabulations were provided by the MINC Statistical Bureau (MSB), from a national sample survey done six months earlier. The results indicated an unemployment rate of 40% in the poorest decile of households ranked by income per person, as compared to 20% for all households. Unemployment rates in MINC fall steadily as income per person rises; for example, for households living at 1.25 times the poverty line the unemployment rate is 10% – high, but well below the rate for the poor.

The Wage Rate

As is typically the case in workfare programs, no means test is applied in MINC=s scheme. Provided the wage rate is low enough it will self-select poor participants while not undermining their incentive to take up other jobs when available. A low wage rate will also help assure a good distribution of benefits among the poor (Ravallion, 1991b). (It should not be forgotten that the scheme has a budget constraint; one would like to increase the wage rate of poor workers, but this will mean that fewer poor people benefit from the program.) By reducing the need for rationing of Trabajar jobs, a relatively low wage rate will also enhance the risk benefits from the program, by providing a reliable

fall back at times of need.[6]

 It is, therefore, important that the appraisal determine if the current wage rate under the program is likely to be attractive to people who are <u>not</u> in the target group, or discourage participating workers from taking up regular jobs when available. If the scheme is to avoid attracting people out of other full-time employment, then the wage rate should not be higher than the prevailing wage for similar work.

The current statutory minimum wage rate in MINC is $250 per month, above the current wage rate on the program of $200. (The program is given an exemption from the statutory minimum wage rate because it is an emergency employment program targeted to the poor.) However, the statutory minimum wage rate may also be above the market wage rate, given that enforcement of the minimum wage rate is difficult in MINC, as in most developing countries. So, how does the Trabajar wage rate compare to market wages received by the poor?

Let us focus on the poorest 10% of households (ranked by total income per person). The MSB provided data on this group, based on a recent survey. The average monthly earnings for the principal job (when this entails at least 35 hours of work per week) were calculated to be $330. This is well above the wage rate under the Trabajar program. The poorest decile received the lowest average wage. Figure 2 gives average monthly wages for full-time work by decile. (These are data for Argentina, from a household survey done in May 1996 by the government=s statistics office.)

On the basis of these data, it is reasonable to assume that the prevailing wage rate under the program is unlikely to be attractive to anyone who is not considered poor in MINC, and they are unlikely to attract poor <u>employed</u> workers out of their current job.

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[6] For further discussion and references see Ravallion (1991a). For an example of the rationing that can result from too high a wage rate see Ravallion et al. (1993).

FIGURE 2: WAGES IN MINC
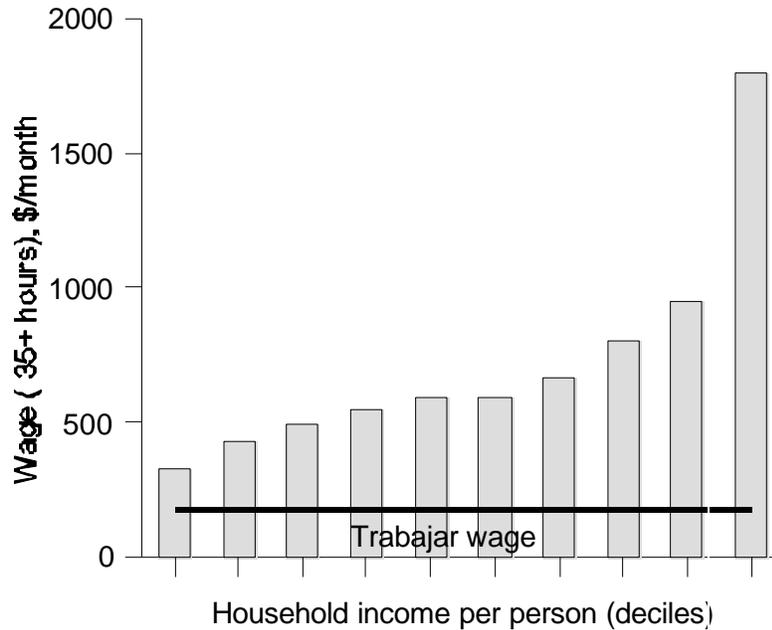
Net Wage Gain

The net wage ratio (*NW/W*) is probably the most difficult component to estimate in equation (1) and (possibly for this reason) it is often set to unity. This would be justified if labor supply to a workfare scheme comes only from unemployment and no other participation costs are incurred by the poor. But this assumption is difficult to accept. Even if all workers were unemployed at the time they joined the scheme, that does not mean that they would have remained unemployed had the scheme not existed. Even a worker who has been unemployed for some time will typically face a positive probability of finding extra work during any period of search, including (of course) self-employment or some informal sector activity. Joining the program will leave less time for search. So the net income gain will be lower than the gross wage rate paid. How much lower?

Consider a typical unemployed poor worker who is searching for work at the beginning of the period of time in which the Trabajar program will be open. Without the program, the worker faces a probability P^* of finding extra work of some sort in that period, at a wage W^*. So expected earnings without Trabajar are P^*W^*. (One can interpret P^* as the proportion of time in which work is found during the period.)

Now, introduce the workfare program. Let the probability of finding extra non-Trabajar work while working on the program be *P* (which may not be the same as P^*). The Trabajar wage is *W*. The expected income gain when Trabajar becomes available is then $PW^* + (1-P)W$. So the expected net wage gain (*NW*) to workers from introducing the scheme is:

$$NW = (1-P)W - (P^* - P)W^* \qquad (5)$$

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Suppose, for example, that joining the scheme means that the worker can no longer search for a regular job, and hence has zero chance of getting one (P=0). Then the expected gain is $W - P^* W^*$ (i.e. the Trabajar wage minus expected earnings from searching for a regular job). However, this example does not seem plausible in this setting. The worker can still search in non-work hours and working on Trabajar may help in getting a regular job (since the worker is acquiring additional experience, and possibly additional knowledge of work opportunities), thus compensating for the lost search time. So suppose instead that joining the scheme has no effect one way or the other; $P^* = P$. Then the expected gain is the proportion of the worker=s time that would otherwise be unemployed, times the wage rate.

There is one special case in which the calculation of the net wage gain is greatly simplified. This is, when no extra non-Trabajar employment is available to the poor with or without the program (i.e. $P^* = P = 0$). Then any income forgone by a Trabajar participant will be made up by an equal gain to a poor non-participant. Employment for the poor is then a zero-sum game. Since there will be no income forgone to poor workers as a whole, we then have NW/W=1. This special case of zero foregone income is often (at least implicitly) assumed in discussions of workfare schemes. But it is hard to see how it could be considered plausible on a priori grounds, as discussed above.

What are seemingly plausible assumptions for MINC? As noted above, there is a high rate of unemployment among the poor in MINC (the MSB survey indicated that 40% of those in the poorest decile were unemployed). Consider a worker in the poorest decile who is choosing between the Trabajar Program and the labor market. If he does not accept a Trabajar job, then some work will no doubt be found. Suppose that he has the average probability of being employed at the average wage received by workers in that decile. Then he will be employed 60% of the time at a rate of $330. His expected wage if he does not accept employment on the scheme is then about $200. So the average Trabajar wage rate is the minimum expected wage needed to attract the average worker in the poorest decile out of unemployment.

This calculation is based on averages. There will be a distribution around these averages; some workers will face relatively low chances of finding a full-time job, and probably also of finding even casual part-time work while searching for a full-time job. Such workers will, of course, find the Trabajar wage rate more attractive. There are also regional differences; the same wage will be relatively more (less) attractive in low- (high-) cost regions, and there will be regional differences in unemployment rates. The gains will be found among those who face below average prospects of other employment, and/or below average wage rates, or who live in areas where the cost of living is relatively low.

With such a high average unemployment rate in the poorest deciles, it is not unreasonable to presume that participants face unusually low prospects of finding full-time work during their spell of Trabajar employment. How much lower is hard to say. Let us assume that Trabajar participants face a 50% higher rate of unemployment than that found among the poorest decile, implying a high unemployment rate, so P=0.4. Also assume that joining Trabajar has no effect on the probability of finding a regular job. Thus, the expected net benefit for those joining the MINC scheme will be 60% of the Trabajar wage rate.

COST-EFFECTIVENESS OF MINC=S PROGRAM

Since there is negligible private co-financing, $C=0$. MOL=s accounts for the project indicate that their own contributions (entirely for Trabajar workers) accounted for one third of total cost, so $(W+L)/(G+C)=1/3$. Given the above assessment of the wage rate in the MINC scheme, it is unlikely that it would be attractive to people who are not poor, so $L=0$. From the data and assumptions previously discussed, it is assumed that $NW/W = 0.6$. Then $NW/(G+C) = 0.2$.

My assumption that there is no leakage to the non-poor in the MINC scheme deserves comment. Survey evidence on these schemes invariably indicates that there are beneficiaries who do not have an income or expenditure below the poverty line (see, for example, the estimates quoted in Subbarao et al., 1997). In part, this may be reflect a relatively high wage rate on the scheme. However, it must also be acknowledged that the welfare indicator being used is rather crude for that purpose. It is typically based on a household income or expenditure aggregate which is measured with error, is normalized by equivalence scales and cost-of-living indices also measured with error, and is averaged over a period of time which might vary from a month to a year or longer and may well be longer than the period over which poverty is experienced. For all these reasons, it will be a noisy indicator of current living standards. Compared to such data (though possibly fine for other purposes, including aggregate poverty measurement), one might interpret willingness to work at a low wage rate, such as the Trabajar wage in MINC, as a better poverty indicator.

Turning to the indirect benefits, since there is no explicit attempt to target poor areas in MINC, I assume that the poor are equally likely to benefit from the projects; so $IB/SB=0.2$. The projects in MINC produce benefits sufficient to cover their cost; $SB/(G+C)=1$. (This reflects the fact that the labor intensity is about the average for similar public works projects.) Combining these assumptions, we find that $B/NW=2$. Later, alternative assumptions will be considered.

Combining these numbers, the value of B/G implied by equation (1) is 0.40. Equivalently, it takes $2.50 to increase incomes of the poor by $1. Assuming that all of the indirect benefit is in the future, the CB/G ratio is 0.20, so it takes $5 to transfer $1 to the poor today.

So the B/G estimate turns out to be about double MINC=s overall poverty rate of 20%. The latter number is also the share that poor people would obtain from a uniform, untargeted, allocation of the same budget across the whole population (such that everyone gets about the same amount, whether poor or not). So the present workfare scheme in MINC would do better than this alternative policy, though there may still be some alternative targeting scheme which could make up this difference. However, in terms of its impact on the current incomes of the poor, the workfare scheme does no better or worse than a uniform lump-sum transfer to all households, whether poor or not.

LINC=S WORKFARE PROGRAM

The LINC scheme operates primarily in rural areas. Unlike the case in MINC, poverty and unemployment (at least as conventionally measured) are not strongly correlated in LINC. Indeed, data from the LINC Statistical Bureau (LSB) indicate that unemployment rates rise as income rises

starting from the poorest, then peaking at about the middle of the distribution, and falling thereafter. However, there is also thought to be substantial underemployment among the poorest families in LINC; a worker might not be classified as unemployed, yet only find work for half the week.

As in MINC, there is no private cost-recovery (C=0) in the LINC scheme. The wage rate in the LINC scheme is tied to a statutory minimum wage rate for agricultural labor. This wage is unenforceable in LINC, and it is above the prevailing wage rate for casual, unskilled, agricultural labor. The Trabajar wage rate in LINC thus attracts participants who are not poor or unemployed. Jobs are rationed, and anecdotal evidence from field trips suggests that it is not always the case that the poor are favored by local scheme administrators when deciding who gets work. One form of rationing is by only opening the project sites in lean seasons. This helps reduce the displacement of other work, and hence forgone income. So, unlike MINC, there definitely is leakage to the non-poor in LINC, although the forgone income is probably lower than in MINC. The figure 0.75 is assumed for both the targeting performance ($W/(W+L)$) and the net wage gain (NW/W).[7]

There are smaller indirect benefits to the poor than in MINC, with non-poor landowners capturing the benefits from the assets created. However, there are some indirect benefits to the poor, notably through second-round effects on employment from higher farm productivity. It is assumed that the poor obtain one quarter of the benefits from the project. However, the high labor intensity means that the social benefits are only sufficient to cover one half of the cost (so B/NW=1.33 in LINC).

On plugging these numbers into equation (1), LINC=s value of B/G is almost identical to that for MINC, and the cost of transferring $1 to the poor is also about $2.50 under LINC=s program. As in MINC, it is unlikely that any of the indirect benefits will entail higher current incomes (within a few months, say). The current benefit ratio is 0.28 (this is CB/G, as given by the value of B/G when IB=0). So it costs $3.55 to increase the current earnings of the poor by $1 with LINC=s scheme.

Recall that the poverty rate in LINC is 50%. So the absolute gain to the poor from an untargeted allocation of the same gross budget is <u>higher</u> than the gain from the Trabajar program. Table 1 summarizes the cost-effectiveness calculations for these two programs under the base-case assumptions discussed above. (Costs are rounded off to the nearest $0.10.)

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[7] This is consistent with an estimate of forgone income in an Indian workfare scheme; see Datt and Ravallion (1995).

Table 1: Cost-Effectiveness of the Two Workfare Programs Under Base-Case Assumptions

	Middle-Income Country (poverty rate=20%)	Low-Income Country (poverty rate=50%)
Budget leverage: $(G+C)/G$	1.0	1.0
Labor intensity:$(W+L)/(G+C)$	0.33	0.50
Targeting: $W/(W+L)$	1.0	0.75
Net wage gain: NW/W	0.60	0.75
Poor peoples=share of total benefits: IB/SB	0.20	0.25
Benefit/cost ratio: $SB/(G+C)$	1.0	0.50
Current + future gains to the poor per $ of spending: B/G	0.40	0.41
Cost of $1 gain to the poor	$2.50	$2.50
Current earnings gain per $ of program spending: CB/G	0.20	0.28
Cost of $1 extra current earnings	$5.00	$3.60

COMPARISONS WITH OTHER SAFETY NET OPERATIONS

One must be cautious in comparing the above estimates with cost-effectiveness ratios for other schemes. Often, these numbers are not strictly comparable with the estimates in Table 1; for example, the latter include deadweight losses from labor supply effects (which is why *NW/W* is less than unity), but these are invariably ignored in other estimates of cost-effectiveness ratios. There are also systematic differences in the target group; for example, workfare reaches able-bodied adults while child nutrition programs do not directly do so; rather than choosing between them, both may be called for.

For cash transfer programs in Eastern Europe, Subbarao et al., (1997, Table 3.5) present estimates of the proportion of the public transfer going to the poor that range from 19% to 58%. The same source (Table 4.2) also gives estimates of the leakage to the non-poor from targeted food programs for a number of developing countries. The proportion of the total transfer which goes to the poor ranges from 19% to 93%. The latter figure is an outlier; excluding it, the range is 19% to 69%. For food subsidy programs in India, Radhakrishna et al., (1997) estimate that the share of expenditure reaching the poor is 16% to 19%. For housing subsidies, Subbarao et al., (1997, Table 4.5) quote estimates of the share going to households below median income that ranges from 10% to 50%.

It is difficult to generalize from this wide range of experience. But it seems likely that, in terms of the impact on <u>current</u> incomes from these stylized workfare programs, one could do worse with other instruments, particularly subsidies to non-inferior goods; but one could probably do better (or at least no worse) with even an untargeted lump-sum transfer. Factoring in the estimated future income gains to the poor, the workfare schemes start to look better than many other safety net operations including untargeted lump-sum transfers in MINC, but not LINC.

RISK BENEFITS

Risk benefits are rarely factored into such cost-effectiveness calculations. How would their inclusion affect these comparisons? The risk benefits from a good workfare program can be large, as has often been demonstrated in famines (Ravallion, 1997a, reviews the literature). Even in Anormal@ times, existing (market and non-market) arrangements for insurance leave poor people exposed to uninsured risk.[8] The risk benefits depend on the degree of risk aversion and the effect of the safety net on the riskiness of incomes, which will depend in turn on how flexibly the program responds to changing household circumstances. In this respect, some Asafety net@ programs are quite unresponsive and, therefore, as ineffective as insurance; ration cards for subsidized foods, for example, are often held for long periods, and are hard to get quickly. Workfare schemes are more responsive to income risk provided the work is easily obtained when needed, something that will depend on wage rate and the scheme=s budget. If the wage is set so high (given the available budget) that jobs are heavily rationed, then the scheme will not provide reliable insurance for the poor.
This is more of a concern for LINC=s scheme than MINC=s. Yet LINC=s risk-prone rural economy is a setting in which one would want the scheme to provide insurance, which is otherwise difficult for the poor to obtain without high cost (including lost opportunities for escaping poverty in the longer term through potentially risky investments in human and physical capital).

A full accounting of risk benefits would probably make the MINC scheme look better, but have less effect on the calculations for LINC.

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[8] For evidence on this point, and references to other literature, see Jalan and Ravallion (1998).

OPTIONS FOR ENHANCING PROGRAM PERFORMANCE

These rapid appraisals also indicate ways in which program performance, in terms of impact on poverty for a given budget outlay, might be improved. Box 2 provides a checklist of recommendations for a cost-effective workfare scheme.

BOX 2
What Makes a Good Workfare Program?

To realize the potential for this class of anti-poverty intervention it is recommended that:

* The wage rate should be set at a level which is no higher than the prevailing market wage for unskilled manual labor in the setting in which the scheme is introduced.

* Restrictions on eligibility should be avoided; the fact that one wants work at this wage rate should ideally be the only requirement for eligibility.

* If rationing is required (because demand for work exceeds the budget available at the wage set), then the program should be targeted to poor areas, as indicated by a credible Apoverty map.@However, flexibility should be allowed in future budget allocations across areas, to reflect differences in demand for the scheme.

* The labor intensity (share of wage bill in total cost) should be higher than normal for similar projects in the same setting. How much higher will depend on the relative importance attached to immediate income gains versus (income and other) gains to the poor from the assets created. This will vary from setting to setting.

* The projects should be targeted to poor areas, and try to assure that the assets created are of maximum value to poor people in those areas. Any exceptions – in which the assets largely benefit the non-poor – should require co-financing from the beneficiaries, and this money should go back into the budget of the scheme.

* Performance in reducing poverty should be monitored using careful evaluations.

The Wage Rate

The wage rate for the MINC scheme seems about right, but the LINC wage is too high. A wage rate no higher than the prevailing market wage rate for unskilled agricultural labor will, no doubt, reduce leakage and provide wider coverage of the poor with the current budget, and better insurance. It is implausible that anyone who is willing to do unskilled manual labor for that wage in LINC is not poor. So (assuming that the other ratios are unchanged), this change in the LINC program would bring the benefit ratio up to 0.50, and reduce the cost of a $1 gain to the poor to $2; LINC=s workfare program would then do as well as a uniform lump-sum transfer. The current benefit ratio (CB/G) would rise to 0.375–still less than a lump-sum transfer.

There is likely to be resistance to this reform in LINC, where organized labor will argue that the government cannot undercut its own statutory minimum wage rate (even though this is not enforceable for the poor). This was also argued by labor unions in MINC, but the counter argument–that an exception should be made for anti-poverty programs–won the day there.

Cost-Recovery

Another way to enhance the scheme=s impact on poverty is to introduce cost-recovery for the benefits accruing to the non-poor. At a cost-recovery rate of 25%, the value of B/G in MINC (retaining all other assumptions of the base case in Table 1) rises to 0.50, bringing the cost of transferring $1 to the poor down to $2. For LINC we get $B/G = 0.45$. At a cost-recovery rate of 50%, the value of B/G in MINC reaches 0.67, bringing the cost of an extra $1 to the poor down to $1.50. In LINC, a cost-recovery rate of 50% is enough for B/G to reach 0.50. At cost recovery rates of 75% in MINC and LINC, the cost of transferring $1 to the poor falls to $1 in the former and about $1.75 in the latter. Clearly, cost recovery from non-poor beneficiaries could greatly improve program performance in both countries.

Labor Intensity

A high labor share in outlays can greatly enhance impact on current poverty. Some Trabajar projects in MINC have very low labor shares; about one fifth are electricity and gas projects which have an average labor share of 10%. The low labor share of total cost would not be a concern if co-financing were entirely private. More typically, however, such projects would have to yield large indirect benefits to the poor to be justified under the scheme. This seems unlikely. Estimates by the MINC Ministry of Labor indicate that by dropping these projects, the overall labor share would be 0.40, implying that B/G=0.44; this alone would mean that it would cost $2.27 (instead of $2.50) to transfer $1 to the poor through the scheme.

Raising the labor share in the MINC program seems an attractive option for improving cost-effectiveness in transferring money to the poor. Indeed, if the MINC program had the labor intensity of the LINC program, and all else about the MINC program was the same as in Table 1, then the value of B/G would rise to 0.50, again bringing the cost of transferring $1 to the poor down to $2.

Recall, however, that there is a trade-off between higher labor intensity and the indirect benefits from the program in both countries. As illustrated in Figure 1, a workfare scheme will operate at labor intensities which entail a trade-off between $W+L$ and SB. So raising the labor intensity will lower social benefits. For the sake of argument, suppose that a labor share of two thirds in MINC was enough to drive the social benefits from the projects down to zero. Then, B/NW=1. With the other ratios unchanged, the value of B/G would be 0.40, exactly what it is in the current scheme. So as long as it is possible to cover at least some of the cost of the scheme from the outputs generated with a labor intensity as high as in LINC, it would be better to switch to a high labor intensity in the MINC scheme.

Even with a seemingly steep trade-off with indirect benefits, a higher labor intensity in the MINC program could improve its cost-effectiveness in poverty reduction. Pushing for high labor intensity in MINC is defensible even when there is a fairly steep trade-off with indirect benefits. The case is

even stronger when aiming for high current transfer benefits to the poor.

Restrictions on Eligibility

The program in MINC imposes various restrictions on the eligibility of participants. While some of these may help, others could well diminish the impact on poverty for a given public outlay on the program. One way that this happens is by adding to the administrative cost. But there are other ways which may well be important. The best way to raise the net transfer benefit is to let poor households rearrange their own activities optimally, so as to take advantage of access to the scheme. By adding constraints to the family=s own adjustment, the use of extra criteria for eligibility–beyond the desire to work for this wage–may actually diminish the net benefits to the poor.

To illustrate, suppose the household head is not unemployed, but is working half time in an informal sector activity earning half the Trabajar wage. The spouse has no economic activity, and could register as unemployed. If one insists that only the head of the household can join the scheme, and that the head must be unemployed, then this household will be excluded and the net benefit will be zero. If one relaxes this restriction entirely then either the spouse will join the scheme, or the head will do so, leaving the spouse to do the informal sector work if feasible. If one only partially relaxes the eligibility restriction, by still insisting that the participant is the household head (whether unemployed or not), then the outcome will depend on whether the spouse is able to do the informal sector work; if this is so then the forgone income will be zero. But if the spouse is unable to take up that work then the forgone income will be half the Trabajar wage.

Some targeting criteria are less problematic from this point of view. Insisting that in order to participate the family must have young dependents is unlikely to increase forgone income, and will probably improve targeting performance (on the assumption that larger and younger households tend to be poorer, ceteris paribus.) To the extent feasible, insisting that only one worker comes from each family should not be a problem, and is certain to be a better way of rationing Trabajar jobs than insisting that only the household head can join.

However, one should be careful about applying eligibility criteria. Some may help improve the scheme=s performance but others can be counterproductive. The key design feature which assures that the scheme reaches the poor is setting the wage rate at a level that will assure that only the poor will want to participate and that there is wide coverage among them. Extra restrictions on participant eligibility should only be applied if they help assure better targeting performance but do not at the same time add to the forgone income of participants.

Design Features Influencing the Indirect Benefits to the Poor

There are a number of indirect benefits. One is the work experience itself. The long-term unemployed may become so inexperienced that their chances of ever finding work again are slim. Another indirect benefit is from the assets created.

Field trips to a number of poor areas in both MINC and LINC, and discussions with local residents, indicated that there was plenty of scope for worthwhile community infrastructure projects in poor areas. Quantitative estimates of the potential economic benefits from such projects would be difficult to establish within a short time horizon. However, I do not think it unreasonable to expect larger net

(pecuniary and nonpecuniary) benefits to poor people from such projects than the current schemes are achieving.

To illustrate the implications for the cost-effectiveness calculations, suppose that the value of the indirect benefits to poor communities from the projects in MINC rose to one half of the total benefits. Keeping all other assumptions the same, *B/NW* would rise to 2.25, and the overall *B/G* ratio would rise to 0.70. Thus the cost of transferring $1 to the poor would fall by over 40% – from $2.50 to about $1.40. Under the same assumption, the cost of transferring $1 of to the poor in LINC would fall to $1.90. If at the same time, the social benefits could be increased to cover three-quarters of the cost (still a benefit-to-cost ratio under one) then the cost of a $1 gain to the poor in LINC would fall to about $1.50.

Borrowing an idea that has been popular in a number of Social Funds, a points system can be used in project selection to assure that the projects are of value to poor people. The points system should give a large premium to projects located in poor areas. Care should be taken to assure that the selected areas are, in fact, poor by verifiable criteria. Imperfect census-based poverty indicators are available at the local level in both countries. When good additional evidence can be provided (on an ad hoc basis) that a specific community is usually poor relative to others in its municipality or department, then this should also be rewarded by extra points. Objective criteria for such ad hoc information should be established with clear responsibility for verification. The points system can also be used to give an incentive to municipal governments in non-poor areas who are willing to co-finance projects in bona fide poor areas. Extra points could be given when co-financing is offered by private residents of non-poor areas. The points system can also reward technical corroboration of the project=s viability (is it likely to work on purely technical, engineering, grounds?). One can give extra points for a letter of recommendation from an engineer qualified to assess the technical merit.

A high premium should be attached to any proposal which is likely to yield sizable external benefits within poor communities. Here direct local (community) level involvement in the proposed project should be used, both as an indicator of longer-term sustainability and as a source of information on possible external benefits within the local area, or beyond. If a bona fide local

community group (such as the local women=s association) says that it would be a valuable project (aside from the direct employment benefits), then extra points should be allocated.

Any technically viable project in a community which is poor by national standards, and in which local community groups back the project, should qualify for the minimum points needed for selection, subject to the availability of funds. Among all projects which also qualify, the ranking can be by the number of points.

There are other design features which can enhance the value of the assets created. Relying as far as possible on workers from the same community will probably enhance the quality of the work done, by giving them a personal longer-term interest. Making final payment (or a bonus) contingent on successful completion to a standard which can be verified ex post would also help.

In both MINC and LINC, the center must also rely on the existing fiscal federalism. There are likely to be systematic factors influencing how well some provinces can reach their poor areas For example, it is not implausible that provinces which are poorer on average will have a harder time targeting their poor areas (Ravallion, 1997b). Central incentives to improve performance, and targeted technical assistance in proposing viable sub-projects at the local level, could no doubt help. Progress in reaching poor areas with the projects is not difficult to monitor, though this will be easier in MINC where the statistical system is better developed with much more extensive computerization than in LINC. When a points system is used and both project selection and the budget allocation are geographically decentralized, a check should be made for horizontal inequality between areas in the number of points received by the last project accepted. Reallocations of the budget may then be called for. A good information system for project monitoring can help greatly in all respects.

CONCLUSIONS

This paper has offered rapid appraisals of two workfare programs, one in a middle-income country, the other in a low-income country. The programs are stylized versions of those found in practice. The cost of a $1 gain to the poor using the program is reckoned to be about $2.50 in both cases, though the components of that cost are quite different, with higher gains in current earnings of the poor from the scheme in the low-income country, reflecting its higher labor intensity. The costs of a $1 gain in current earnings are $5 and $3.50 for the middle and low-income countries respectively. The amount received by the poor from a given public outlay under the program is double what they would expect from a uniform (untargeted) transfer in the middle-income county. However, such a lump-sum transfer would do better than workfare in the low-income country. Comparisons with cost-effectiveness ratios for other types of safety net operations suggest that workfare schemes would dominate some options, notably poorly targeted food and housing subsidies, but not others. These comparisons may, however, be deceptive; the same costs are not always considered, and the same options are not always feasible.

In both countries, reforms to the scheme could enhance performance in reaching the poor. It should be possible to improve cost effectiveness by switching to more labor intensive production methods for the sub-projects in the middle-income country. There is also scope in both countries for enhancing indirect benefits to poor communities from the assets created. Redistributive co-financing – whereby cost recovery is only applied to asset creation in non-poor areas – could also greatly improve cost-effectiveness, even with only partial cost recovery.

There are likely to be tradeoffs between some of these options for improving the scheme=s impact on poverty. In particular, too high labor intensity will mean that the projects yield negligible indirect benefits. Circumstances will no doubt influence the choices made with respect to such a tradeoff. In a crisis situation in which rapid current gains are called for, it is understandable that the program will opt for high labor intensity. In more normal times, where the political sustainability of the safety net is also an issue, indirect benefits will tend to get greater weight.

The present calculations suggest that by any one of these route – greater cost-recovery from the non-poor, higher labor intensity, or greater indirect benefits to the poor – or some combination, design changes should make it possible to appreciably enhance the poverty impact for a given outlay.

It cannot be denied that these calculations are rough. Naturally, the more rapid the appraisal, the more assumptions will be needed to make up for missing data. The type of appraisal described above is no substitute for rigorous evaluations. But it can still help inform public choice and program design. It can also help identify key areas where further data and analysis would have a high return.

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