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STRENGTHENING FOOD ASSISTANCE AND FOOD POLICY RESEARCH

Nutrition and Food Aid—Different Modalities, Different Impacts

Lessons From Ethiopia

Both food for work and free distribution are reaching poor and vulnerable households and have a positive direct impact on weight-for-height. The benefits of the programmes vary depending on the sex of the child, and at times, the sex of the recipient.

Ethiopia's history of wars, droughts, and famines has taken its toll on the nutritional status of children. Close to half of children between 0 and 9 years of age are stunted, indicating long-term nutritional deprivation. Wasting, an indicator of acute energy deficiency, ranges from 9–22 percent for children between 0–3 years of age. Nutritional indicators are worse for boys, especially as they grow older and participate more intensively in farm activities. How effective is food aid in reducing malnutrition? Its effectiveness depends on the manner in which it is delivered, if it reaches the poor, if it is given to men or women, and whether the children in recipient households actually receive it. Because nutritional status is also inextricably linked to health and care of the vulnerable, food can only provide one critical piece of the nutrition solution. Food is the starting point where nutritional impact needs to be maximized.

Free distribution and food-for-work: Who benefits?

Between 1984 and 1998, food assistance to Ethiopia amounted to almost 10 million metric tons, most of it channelled through the WFP. Within Ethiopia, the two prevalent modalities of food aid are free distribution (FD) and food-for-work (FFW). FD programmes distribute cereals and oil directly to households without able-bodied workers, while participants in FFW programmes work in community development programmes such as erosion prevention and dam construction. At the time, the Ethiopian government devoted 80 percent of its food assistance resources to FFW.

Insights from IFPRI Research

This study investigates the determinants of participation in, and receipts of, food assistance through FD or FFW, and whether the two forms of food aid had different impacts on nutritional status, depending on the sex of the aid recipient and the child, respectively. These considerations are especially germane, as WFP, the major food aid donor in Ethiopia, has announced that it will require women to control the family entitlement in WFP-handled and subcontracted operations. IFPRI's analysis is based on four rounds of the Ethiopian Rural Household Survey (ERHS) conducted in 1994–95 and in 1997. The study covered 1,500 households in 15 villages across Ethiopia.

Who is participating? Who benefits?

FFW performed well with respect to targeting and shock mitigation. In Ethiopia, the self-targeting nature of FFW was effective, with wealthier households less likely to participate. Participation in FFW increased when shocks such as lack of rainfall and livestock disease occurred. Larger households with more females of working age had a higher probability of participating in FFW, but households with a higher proportion of dependents (especially females under 15 years of age) were less likely to do so. Contrary to what one might predict, female-headed households were not more likely to participate in FFW, nor did the share of assets held by women affect the probability of participation.

Consistent with the self-targeting nature of FFW, households adversely affected by rainfall shocks worked and received more from FFW. Given that only one member of the household was usually allowed to work, it is not surprising that household size did not significantly affect actual receipts. However, individuals worked more days and therefore earned more if there were more dependents in the household. Women's earnings were not significantly less than their male counterparts.

Unlike FFW, participation in FD does not appear to be targeted on the basis of household wealth. While larger households were less likely to receive FD, households with a larger

proportion of young members, both male and female, had a higher probability of receiving FD. Aggregate community rainfall and livestock disease shocks increased the probability of receiving FD. Conditional on participation, however, FD receipts were higher for poorer households. Individual FD receipts did not respond to individual shocks, suggesting that FD is probably targeted at the community level.

Impact of food aid on child nutritional status

Many factors need to be taken into account when assessing the impact of food aid on child nutrition. Because height-for-age is a measure of long-term nutritional status, and may be affected by conditions in utero, it is less likely to be responsive to food aid interventions in the short run than weight-for-height. Wealth of the household, age of the child, sex of the child, and sex of the transfer recipient or participant also may play a role. For example, regression analysis suggests that while food assistance in general has a negligible effect on height-for-age, FFW receipts tend to improve boys' long-run nutritional status relative to girls. The table summarizes the impact of food aid on children's weight-for-height based on regression analysis of the ERHS. The regressions include controls for food aid receipts, depending on modality, sex of the child, and sex of the recipient, and takes into account household consumption net of food assistance, community livestock and rainfall shocks, and the differential impact of these shocks depending on the sex of the child. Among poor households, FFW has a positive direct impact on weight-for-height for younger children, with weak evidence that boys are favoured. This effect does not appear to depend on the gender of the aid recipient. FD improves boys' weight-for-height relative to girls if the recipient is female, but does not seem to have a direct effect.

Wealthier households show some different results. While FFW receipts improve boys' weight-for-height relative to girls, the strongest direct effects come from FD. FD has both a positive direct effect on weight-for-height for both older and younger children and tends to benefit girls. The effects on girls of the sex of the FD recipient are not consistent.

However, the distribution of the benefits of food aid within the household is complex. Impacts differ depending on the household's asset position, the modality of food aid, the sex of the child and that of the transfer recipient not to mention the baseline nutrition, health, and care status of recipients and their individual caloric needs. Measuring the nutritional impact of food assistance is tricky business—nuanced and important. Programme designers need to carefully examine the impact of food assistance on individual outcomes, both for adults and for the next generation, to better assess its long-term impact.

Effect of food assistance on short-term nutrition (weight-for-height)

	Low-asset households		High-asset households	
	Children <5	**Children 5–9**	**Children <5**	**Children 5–9**
Value of FFW	Increases			
Effect of FFW on girls relative to boys	Increases less for girls relative to boys		Increases less for girls relative to boys	
Effect of FFW on girls if recipient is female				
Value of FD			Increases	Increases
Effect of FD on girls relative to boys		Increases more for girls relative to boys		Increases more for girls relative to boys
Effect of FD on girls if recipient is female		Increases less for girls relative to boys		Not consistent

Note: Shaded cells mean that effect is not significant.

Implications for Food Assistance Programming

The analysis of FD and FFW receipts shows that food assistance increases with rainfall and livestock shocks, allowing poor households to better maintain consumption without having to sell assets. Both programmes are reaching poorer and more vulnerable households and have a positive direct impact on weight-for-height.

Agnes Quisumbing (2003) "Food Aid and Child Nutrition in Rural Ethiopia," forthcoming in *World Development*. Contact author at a.quisumbing@cgiar.org.

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