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Does Food Aid Reach the Poor? New Evidence from Northern Ethiopia

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Abstract

The paper examines the degree to which food aid (food-for-work) is targeted to the poorest and most vulnerable groups according to household income and asset ownership using cross section data of 149 households in Northern Ethiopia. By doing so, it is examined whether resource related indicators played an overriding role in the targeting process or whether there is a significant leakage to asset rich households. Food-for-work participation did not appear to be self-targeted with relatively wealthier households less likely to participate. The probability of participation was found to be mainly related to household demography like age and marital status of household head. Households with higher farm income and oxen holding were more likely to take part in food-for-work programmes pointing to leakage in targeting. However, off-farm income was negatively related corroborating our hypothesis. The findings did not support the commonly held notion that female-headed households are more food insecure and should be targeted for food-for-work. The findings also revealed that participation in food-for-work did not significantly changed farm operations.

Keywords: *food aid, food-for-work (FFW), targeting,*

1. Introduction

In Ethiopia, a drought-stricken economy with one of the lowest per capita incomes in the world, food aid has amounted to almost 10 million metric tons from 1984 to 1998, almost 10 percent of annual cereal production. The 1984-85 drought was extensively profiled in the western media, and elicited unprecedented humanitarian response. According to data from the World Food Programme (Barrett and Clay, 2002), Ethiopia lagged only Bangladesh in volume of food aid received between 1994-98, averaging about 600,000 metric tons of shipments per year.

Food aid in Ethiopia has historically taken two major forms: free food distribution (FD), which falls under the category “emergency” or “relief” distribution, and food-for-work (FFW). A third form, cash-for-work, has been used only sparingly in Ethiopia and is not addressed here. Also programme food aid, where food is sold in local markets (not directly given to households) to support the public budget, has not been much used in Ethiopia. Most food-for-work activities are categorized as “development” food aid programmes since they focus on developing assets such as roads, terraces, and dams. However, some food-for-work programmes in Ethiopia are defined as emergency programmes (e.g., Employment Generation Scheme) that are designed to target the neediest able-bodied people. The policy objectives and implementation of these two food aid types are described below.

One may be tempted to argue that since poverty and food insecurity are pervasive in Ethiopia, there is no need for targeting. However, there are wide variations in per capita income across districts and across households within districts, even though most rural households in Ethiopia would be considered poor by world standards (Dercon and Krishnan, 1988). The findings of Jayne et al. (2002) also show very large disparities in incomes and assets across rural households in Ethiopia. Moreover the availability of food aid has always been short of perceived need, strengthening the argument for targeting the neediest households (Sharp, 1977; Maxwell et al., 1994; Barrett, 1998; Clay et al., 1999). Nevertheless, targeting is not without information cost (Van de Walle, 1998).

In spite of this, there are growing concerns that food aid flows as frequently to the richest, most food secure districts and households as it does to the poorest, most food insecure ones. In a qualitative review of food aid programmes in recipient districts Sharp (1997) found widespread food aid leakage to unintended beneficiaries. In most recent studies of food aid targeting, Clay et al. (1999), Gebermedhin and Swinton (2001) and Jayne et al. (2002) found little correlation between food needs and food aid receipts either at the district or household levels. Surveying a range of studies from rural Africa, von Braun et al. (1998) similarly find frequent targeting errors at community and household level.

The main objective of this paper is, hence, to examine the degree to which food-for-work is targeted to the poorest and most vulnerable groups according to household income and asset ownership. This study tries to confirm whether resource related indicators played a overriding role in the targeting process or whether there is a significant leakage to asset rich households. Besides it tries to examine the possible effect of FFW participation on farm operations.

2. Method and Data

The study was carried out during 2003 in Tenta district, Northern Ethiopia. Tenta district is one of the districts in South Wollo, which is one of the 11 zones of Amara Regional State in Ethiopia. It is situated at a distance of 122 kms from the zonal town Dessie, in the northwest direction and 522 km from the capital city, Addis Ababa. With little periods of respite, this district was repeatedly hit by recurring drought and concomitant food crises since 1974. Massive and extensive drought had occurred in 1974-75, 1985-86 and recently in 1999-2000. Severe environmental degradation problems, mainly soil erosion and nutrient depletion, constrain agricultural production in the region. As a result there has been a huge flow of food aid since the early 1970s.

Household data collection was undertaken by employing standardized questionnaire to collect data on various social, institutional and economic variables from the sample respondents. Agro-ecology, human population density and food aid history formed the bases for sampling. The selection of respondent farmers involved a two-stage selection procedure. In the first stage, the Peasant Associations (PAs) in the district were categorized into three homogeneous strata based on the above stated variables, and one PA was selected from each stratum. The second stage involved random selection of sample farmers from the selected strata based on probability proportion to population size. Given the limited resources and time at disposal, only 149 households could be interviewed. Information was collected on the characteristics of household members, such as age, sex, marital status, family size and level of education. Data were also collected on household income (both farm and off-farm), access to public safety nets (food-for-work and free food distribution) alongside a host of other information related to household asset holdings. The respondents were also asked whether they had participated in free food distribution or food-for-work programme in the past year, as well as the number of years they have participated in either of the food aid types in the four years prior to 2002.

3. Results and Discussion

3.1 Determinants of participation in food-for-work

The logit regression results explaining factors influencing households to participate in food-for-work programme are reported in Table 1 below.

The analysis was based on the hypothesis of a negative correlation between asset rich households and participation in food-for-work programme. Thus, resource related regressors such as farm size, livestock holding, oxen holding, farm income, family labour and off-farm income were expected to lower the probability of participation in food-for-work programme. Out of fourteen proposed regressors likely to influence participation in food-for-work programme, a series of household related factors were found to be significant in explaining the household's participation in food-for-work programme.

Age of the head of household seemed to affect of participation in food-for-work negatively, i.e. participation was found to be a decreasing function of the household head's age. Food-for-work programme are normally used to build community assets such as roads, bunds, dams, terraces, and local infrastructure construction, which demand heavy manual work. Therefore, the older household head has less advantage to take part in such projects and may have a better chance to be targeted in free food distribution programme.

Households with higher farm income were more likely to take part in such programme, which contradict our expectations pointing to leakage in targeting. Perhaps this is attributable to a biased household selection procedure whereby the poverty level of households was judged subjectively by the PA leaders. In their countrywide study, Clay et al. (1998) also present similar results with the same assumption. Households with more oxen holdings, an important measure of wealth in Ethiopia, were more likely to take part in the programme again pointing to inefficiency of programme targeting. In line, with our expectations, households with better off-farm income are less likely to participate in the programme perhaps due to the availability of alternative off-farm employment opportunity. Furthermore, the payment from food-for-work may not be attractive enough for these households in relation to the amount of work to be performed. Compared to married household heads, widowed headed households were more likely to take part in the programme perhaps because they are seen as less food secure and more vulnerable groups. Households residing close to the market are less likely to participate in food-for-work programme may be due the availability of other employment opportunity as compared to households living in remote areas. It is commonly expected that the probability of participation in food-for-work is higher for female-headed households, since they are also regarded as more food-insecure. However, the findings do not support this notion. In the literature household size has been also hypothesised to affect participation in food-for-work (Quisumbing, 2003), but the study did not confirm this significantly, most probably due to the regulation that only one household member was allowed to work in such projects (Jayne et al., 2002).

Table 1. Logit estimates of the determinants of participation in food-for-work

Variables	Expected sign	Coefficients
Age of household head	(-)	-0.046*
Gender of household head dummy	(+/-)	-0.028
Widowed household head	(+)	0.004**
Education of household head	(+)	0.069
Household size (adult equivalent)	(+/-)	0.073**
Land size	(-)	-0.069
Farm income	(-)	0.001**
Livestock size (in TLU)	(-)	0.074
Oxen holding	(-)	0.089**
FFW history	(+)	0.099
Off-farm income	(-)	-0.002**
Distance to market	(+)	0.845***
- 2 log-likelihood	145.812	
Prob. > Chi ²	< 0.0001	
% of correct prediction	81.3	
Observation - with zero	50	
- with one	99	

***, ** and * means significant at 1%, 5% and 10% probability level, respectively

3.2. Food-for-work effect on farm operations

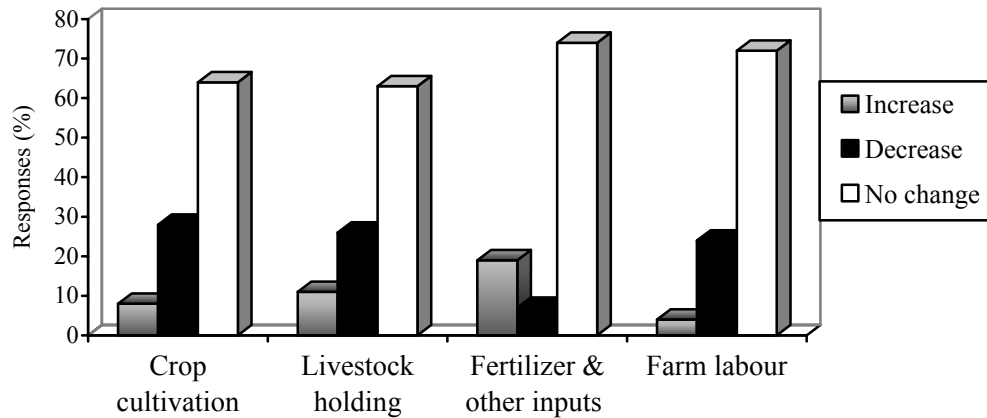
As reported in Figure 1 farmers' responses confirmed that the regular farm operations have not been significantly changed as a result of participation in food-for-work. In the reference period, nearly 64% of the farmers reported that there was no increase or decrease in the size of cultivated land after participation in food-for-work programme, whereas 28% reported a decline in cultivated land. Only 8% of the respondents indicated an increase in cultivated land after participation in *food-for-work*.

Group discussion with food-for-work participants showed similar results. Most of them stated that their landholding was too small and hardly absorbed their household's labour capacity fully, that only one family member was allowed to participate in food-for-work programme, and that their own production could barely support their family for more than one quarter of a year. In the absence of food-for-work the only alternative was to migrate and to look for an urban job. On the other hand, it was reported that some farmers tended not to till their land anymore in order to fulfil the targeting criteria for free food distribution and food-for-work programme, which is an indication for development of dependency syndrome on food aid.

As shown in Figure 1, food-for-work also affects livestock holdings, fertilizer and other input uses in a similar way. The decrease in livestock holding after participation in *food-for-work* has been observed for 26% of the respondents while 11% reported an increase. Nearly 63% of the respondents stated that there was no change in livestock holding after participation in food-for-work programmes. Though the frequency is low, peasants tend to reduce their livestock size in order to meet the selection criteria and to make themselves eligible for food aid. In some cases one positive aspect of food aid distribution is the increased use of fertilizer and other inputs. More than 19% of the respondents increased their use of fertilizer and other inputs by allocating

part of their additional income on farm input purchases. Labour input was also not changed in 72% of the food-for-work cases while in 24% it was decreased.

Figure 1: Effects of participation in food-for-work on production operation



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