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# Aid and agency in Africa: Explaining food disbursements across Ethiopian households, 1994–2004



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#### ABSTRACT

We use a principal-agent framework and data from the Ethiopian Rural Household Survey between 1994 and 2004 to understand biases in the distribution of food aid in Ethiopia. We show that even when aid is systematically misallocated, aid recipients may match official classifications of needy households if agents deviate from allocation rules in ways that are difficult to monitor. Agent behavior is therefore best understood by comparing aid along dimensions of need that are visible to the principal with those that are difficult to observe outside the village. We do this by using data on a panel of 943 households observed over six rounds of the Ethiopian Rural Household Survey. In support of our model, we find that while the demographics of aid recipients do match official criteria, disbursements are increasing in pre-aid consumption, self-reported power and involvement in village-level organizations. We conclude that the extent to which food aid insulates some of the world's poorest families from agricultural shocks depends on a nuanced interaction of policy constraints and informal structures of local power.

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#### 1. Introduction

Food aid to Africa is massive and controversial. During the 1990s, Sub-Saharan Africa received a third of all food aid delivered in the world. The Ethiopian share of this was one-fifth. Food aid also constituted half of all cereal imports into Ethiopia and up to 15% of annual cereal production. Heated debates center around the impact of such aid. Some view it as indispensable for alleviating hunger in the face of natural calamities while others claim that it builds dependency, fosters corruption and weakens the basis for efficient trade flows. A proper assessment of the role of food aid in Africa requires a better understanding of how existing allocations are distributed.

The regional and temporal distribution of food aid in Ethiopia has been extensively studied. Barrett (2001), Shapouri and Missiaen (1990) and Zahariadis et al. (2000) all highlight political considerations among donor countries rather than local need as determining historical aid flows. Jayne et al. (2002) find evidence of geographical inertia in that the historically vulnerable regions of northern Ethiopia received aid

irrespective of need. Clay et al. (1999) use cross-sectional data from a nationally representative survey of households and find that a disproportionate number of female-headed and elderly households receive aid and that there is no systematic relationship between receipts and direct measures of household food insecurity. This research points to important deficiencies in the ability of aid to insulate the Ethiopian economy from aggregate shocks but tell us relatively little about its distribution within villages. These intra-village allocations are the focus of this paper.

We model the allocation of aid within a village as the equilibrium response of a local agent to incentives created by a higher level monitoring organization. Aid agencies face a standard decentralization dilemma. They would like to exploit local information on household need as well as the capacity of village committees to distribute aid while avoiding capture by locally powerful families. We assume that the principal can impose high punishments on deviating agents, but only when they can be conclusively shown to misallocate aid. This is a reasonable abstraction of many bureaucracies where disciplinary action requires substantial evidence of misconduct.

We characterize an agent's optimal allocation given these monitoring constraints. Our model illustrates that a correlation between aid and selected measures of household need is not evidence of successful targeting because agents avoid detection by transferring to favored families that are also classified as needy by the principal. We test the model

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<sup>&</sup>lt;sup>1</sup> Based on statistics from the World Food Program cited in Jayne et al. (2002), Del Ninno et al. (2007) and Levinsohn and McMillan (2007).

by comparing allocations along easily observable dimensions of household need with those that are not visible to monitoring agencies but can be found in survey data.

Our data come from six rounds of the Ethiopian Rural Health Survey (ERHS) conducted between 1994 and 2004. We construct a panel of 943 households living in the eleven peasant associations that received some free food aid during this period. Since our focus is on the intra-village targeting of aid, we include a peasant association only in rounds in which it received some aid. Our first set of results is based on the pooled data and suggests adherence to official guidelines. Female-headed households were more likely to receive aid over this period while households with male adults, livestock and a household head with some education were less likely to receive aid. Consistent with other studies that use nationally representative cross-sections, we find no systematic relationship between aid transfers and pre-aid consumption.

To test for whether the agent diverted aid to powerful families within the village, we construct measures of local influence based on questions from two of the survey rounds. In Round 3, household heads reported all elected or appointed positions held by them in the peasant association or in any other local organization. In Round 6, they reported their perceived sense of power within the village scaled on a notional nine-step ladder. We find that aid allocations are increasing in both these measures of local power and that the richer households among the empowered receive the largest transfers.

When we use our panel structure to control for household fixed-effects, we find aid disbursements increasing in a household's pre-aid consumption, which is clearly against official guidelines. In other words, households received more aid in years in which they needed less. On average, a doubling of a household's per capita consumption is associated with a 15% increase in the allocation of aid. We extract the household fixed-effects from this model to estimate their relationship to the measures of local influence described above. We find that those households that systematically received more aid than predicted by their time-varying observable characteristics also reported themselves as more powerful within the village.

Apart from the obvious connection to the food aid literature, our paper is also related to studies on the capture of public resources by elites. Goldstein and Udry (2008) is especially relevant as it shows that locally powerful individuals in rural Ghana acquired more secure property rights which enabled increases in agricultural productivity and household incomes. Bardhan and Mookherjee (2005) and Galasso and Ravallion (2005) examine the conditions under which elite capture leads to lower social welfare under decentralization. Unlike some of this work, we do not make welfare comparisons between centralized and decentralized modes of targeting social assistance and focus instead on the implications of imperfect monitoring by central authorities on the behavior of local agents.

We proceed in the next section with a brief institutional history of organizations involved in the allocation of food aid in Ethiopia. Our model of agency in Section 3 is followed by a description of our data in Section 4 and results in Section 5. Section 6 concludes.

#### 2. The administrative structure

The official body responsible for overseeing the aid disbursements in Ethiopia is the Disaster Prevention and Preparedness Commission (DPPC). On the basis of its published guidelines for aid eligibility, it appears to be committed to serving those in need.<sup>3</sup> Aid is allocated to

districts or *weredas* and then transferred to peasant associations (PAs) which cover several villages and are the lowest administrative unit in Ethiopia. This type of community-level targeting is common in many African countries where community leaders have been historically important and information flows between villages and higher levels of government are limited (Conning and Kevane, 2002).<sup>5</sup>

The DPCC (formerly known as the Relief and Rehabilitation Commission), was established in response to the famine of 1973–74 in northern Ethiopia. Its mandate was to prevent disasters and reduce individual and household vulnerability to agricultural shocks. The effectiveness of food aid targeting is viewed as crucial to its success. With help from international donors and non-government organizations, the DPCC assesses weather conditions, crop production, livestock availability, wage labor opportunities, and market prices for chronically needy districts at least twice a year to capture the two agricultural seasons.<sup>6</sup> All other districts conduct their own assessments and report estimates of need to the commission. The National Policy on Disaster Prevention issued in 1993 emphasized the importance of local participation in the implementation of all relief projects, but also stated that relief "must be addressed to the most needy at all times and no free distribution of aid be allowed to able-bodied affected population."7

The DPPC periodically announces criteria for distributing aid. Groups explicitly targeted for assistance are the old, disabled, lactating and pregnant women, and those attending to young children. The original guidelines were formulated in 1979and the National Policy on Disaster Prevention and Management was passed in 1993 (TGE, 1993). The responsibility for identifying needy households has always remained with local leaders in village peasant associations who are, in turn, monitored by higher-level authorities. Monitoring occurs via random audits (Allingham and Sandmo, 1972) or through a village-level appeals system (TGE, 1993).

The sixth round of the ERHS, described in detail in Section 4, asks household heads and members of peasant associations for criteria that they believe are used in identifying aid recipients. Table 1 lists the top five responses for each of these groups. The elderly, poor and disabled figure prominently in both lists. Qualitative responses from interviews with local leaders confirm this pattern.<sup>8</sup>

Notes: Household heads were asked "How was free food allocated in this community?" Village representatives were asked "What are the criteria by which free food is allocated to members of this PA?" 1214 households responded to the question, 659 households from the villages used in our analysis. The percentage of our sample listing each criterion as one of their top four appears in brackets. Apart from the listed options, 13.2% and 8.19% of the sampled households reported land and cattle as important criteria.

In the next section we show that this pattern is consistent with weak targeting within villages. Rational agents responding to a monitoring technology which approximates what is observed in Ethiopia are likely to manipulate allocations within groups that are labeled needy by the principal.

<sup>&</sup>lt;sup>2</sup> Caeyers and Dercon (2005) use this round of data to study the role of social connections in the aftermath of a specific crisis, the drought in 2002–2003, during which more than 10 million people required food assistance.

<sup>&</sup>lt;sup>3</sup> See Jayne et al. (2002) and Clay et al. (1999) for a further discussion of district-level targeting.

<sup>&</sup>lt;sup>4</sup> Jayne et al. (2001) outline this process and emphasize that: The critical element of this two-stage process is that while the amount of food to be allocated to each wereda is determined at federal level (using input from regional and local levels), the actual beneficiaries are designated at the local community (PA) level (p. 890).

<sup>&</sup>lt;sup>5</sup> We focus here on the distribution of free food, which was the main form of aid in early rounds of the ERHS. Food-for-work is now the largest safety net program in Africa and covers up to 9 million people. It is administered as part of the Productive Safety Net Program (PSNP) which was established in the aftermath of the drought of 2002–03.

<sup>&</sup>lt;sup>6</sup> A chronically needy district is one that has required assistance for several consecutive years.

<sup>&</sup>lt;sup>7</sup> Quoted in (Sharp, 1998, p. 5.).

<sup>&</sup>lt;sup>8</sup> Kay Sharp interviewed a large number of local elders on targeting criteria, and quotes from an interview with a wereda chairman in the Hawzien area: If the quota is enough someone with five goats may be included, but if the quota is small someone with only one hen may be excluded in favor of someone with nothing (Sharp, 1998, p. 17).

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