Examining the Incentive Effects of Food Aid on Household Behaviour in Rural Ethiopia

In Ethiopia, while superficial examination suggests strong disincentive effects of food aid on labor supply and agricultural activities, these largely vanish under more careful statistical analysis.

While food aid is credited with saving millions of lives over the last several decades, it is surrounded by controversy. At the household level, it is claimed to create “dependency”: reducing labour supply, discouraging investment in agricultural production, and in crowding out private transfers and other means of informal responses to shocks. Yet closer examination of this debate indicates that these claims are largely based on case studies and anecdotes rather than a systematic assessment of the evidence.

This study draws on household-level data on food aid flows and several dimensions of household and interhousehold behaviour in selected areas of rural Ethiopia in the mid-1990s to ask whether access to food aid has disincentive effects on income generation. Specifically, it asks whether food aid is causally related to changes in labour supply, investments in a variety of agricultural activities, and provision of mutual support.

Insights from IFPRI Research Framework and data

To understand the causal links between food aid receipts and household behaviour, the research used a simple model to isolate the behaviour of interest, e.g., the amount of labour supplied to agriculture, from random factors that could also cause labour supply to vary. The purpose was to distinguish correlation from causation by taking into account village- and household-level characteristics at a particular time and estimate their impact on labour supply.

The data used to test this model come from three rounds of the Ethiopian Rural Household Survey (ERHS) collected in 1994 and 1995. This survey collected data on a wide variety of welfare dimensions and their evolution over time, including data on assets, income, consumption, schooling, health, access to public services, shocks, public and private interventions to offset shocks, processes of agricultural intensification and diversification, and entry into or exit from high-value activities in agriculture and other sectors. The sample consisted of 1,470 households in 15 villages. While not nationally representative, households and villages were representative of the principal agroecological zones found in rural Ethiopia. Just over 20 percent of households received food aid prior to Round 1. This figure rose to 40 percent prior to Round 2 and fell to 20 percent prior to Round 3. Nearly half of surveyed households reported not receiving any food aid, 28 percent received it once, and few reported receiving food aid at least once prior to all three survey rounds. Several villages reported no or little access to food aid, but there was no clear pattern over time.

Food aid, dependency, and disincentive effects

Results with no controls. Two sets of results were generated, using both strong and weak controls for confounding effects. The study began by considering whether access to food aid, observed contemporaneously with these behaviours, affected these activities. Simple descriptive statistics, such as comparisons of means or proportions, suggest strong disincentive effects across a variety of behaviours. Households that received food aid prior to Round 1 spent considerably less time supplying labour to permanent and semi-permanent crops. Less time was also spent on nonagricultural, own-business activities. On average, households not receiving food aid worked five times as many days in these activities than did households that received food aid. Conversely, children in households receiving food aid spent more time in wage work than children in households not receiving food aid.

The study also considered whether households grew coffee or enset, purchased fertilizers or pesticides, or made investments in livestock. Here, the results were unambiguous: apart from livestock purchases, households with access to

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food aid were less likely to undertake any of these investments. The magnitude of these effects seems large: receipts of food aid lower the likelihood that a household grows coffee by 11 to 20 percentage points, and the likelihood of using fertilizer by 11 to 18 percentage points.

The study then considered whether access to food aid displaced two measures of informal links between households: transfers (in-cash and in-kind) received from other households, and the number of days the household contributes to traditional labour-sharing parties. There was not evidence that receipt of food aid led to lower receipts of private transfers. However, there was evidence that past receipt of food aid reduced participation in labour-sharing groups.

Results with controls. Purported disincentive effects such as those described here are based on the assumption that receipt of food aid and other household characteristics are uncorrelated. This is a strong assumption. If food aid goes to poorer villages—for example, those where it is not possible to grow coffee—or villages receiving shocks that reduce the returns to labour, then the claimed disincentive effect is merely capturing the impact of these other characteristics.

To see whether this was the case, the analysis reestimated these models, but included controls for household characteristics—location, age, and sex of the household head; whether the head ever attended school; household size and households' holdings of arable land. The results are considerably different. All negative effects of food aid disappeared, with two exceptions. Food aid received a year ago reduced the likelihood of growing enset, but by a trivial amount. And while contemporaneous access to food aid reduced time spent on permanent and non-permanent crops, the magnitude of these effects was offset by the increased amount of labour on off-farm labour that food aid receipt induced.

Implications for Food Assistance Programming

In Ethiopia, there remains a perception that food aid fosters dependency and creates disincentive effects at the household level that are inimical to longer-term development. Research has shown that when household characteristics are considered (location, age, sex and education of head, and landholdings), the adverse effects of food aid vanish. In fact, there is some suggestion that food aid leads to increases in labour supply to agriculture, wage work, and own-business activities.

As with any empirical study, these results should be treated with care. There may be other dimensions of household behaviour not considered here that food aid adversely affects. There may be adverse market effects or adverse effects on government policies. And there may still be non-food aid transfers that generate larger positive incentive effects.

These results underline the importance of taking care not to assume negative incentive effects. The anecdotes and case studies upon which dependency and disincentive claims are frequently built are methodologically flawed. In this sense, the paper’s principal contribution is methodological, emphasizing how misleading statements regarding disincentive effects can be when confounding effects are not considered. Perhaps the World Food Programme (WFP) should consider building in more impact analyses of its development—perhaps even emergency—food aid.

No negative incentive effects of food aid on labor supply: Rural Ethiopia

![Graph showing labor supply effects](image-url)