

3. Economic controversies over food aid⁶

Although the moral imperative to provide assistance to people suffering from extreme hunger is undeniable, many thoughtful people question the effectiveness of food aid. Indeed, some ask whether such aid may in fact be counterproductive to longer-term sustainable reductions in hunger and poverty.

Much of the concern arises because the ultimate impacts of food aid programmes, like any other policy intervention, are not always as expected. The concept of unexpected consequences is a staple of economics. The basic idea is that the actions of one agent – firms, governments, NGOs, etc. – alter the incentives and constraints faced by others, inducing them to change their behaviour.

Unexpected consequences can be favourable, however, as with Adam Smith's "invisible hand", whereby individuals acting in their own self-interest (e.g. baking and selling bread to earn a living) create beneficial outcomes for society as a whole (e.g. making affordable bread available in the marketplace). More commonly, people think of unexpected consequences in negative terms, when anticipated benefits are reduced or negated because of some induced response to the original intervention.

Food aid may have a number of negative impacts at the household, community or national level, but the three most common issues are: (i) whether food aid creates "dependency"; (ii) whether it destabilizes local markets and agricultural growth; and (iii) whether it disrupts commercial trade patterns.

A critical point often overlooked in food aid debates is that not all food aid is equal. Empirical research finds that the impact of food aid depends crucially on: how it is managed (whether it is sold on local markets, distributed directly to

beneficiaries or given in exchange for work or school attendance); how effectively and promptly needy individuals and groups are identified and targeted; whether it is sourced locally, regionally or in the donor country; and whether it is accompanied by other, complementary resources.

Another point often overlooked is that food aid has changed substantially in recent years, as the previous chapter emphasized. Many of the reports documenting negative effects of food aid (e.g. Lappe and Collins, 1977; Jean-Baptiste, 1979; Jackson and Eade, 1982) date from an earlier era when food aid mainly consisted of programme aid, which was donated to recipient governments and resold on local markets with little or no targeting to needy people. Great progress has been made since in the timing and targeting of food aid, so negative consequences are probably less common and less severe now than in earlier decades. Nevertheless, about one-quarter of all food aid is still untargeted, and targeting and timing remain enormous challenges.

This chapter first lays out a conceptual framework for understanding the potential effects of food aid. It then examines the relevant economic literature on the three main controversies surrounding food aid, as well as a few related concerns. It concludes with some general guidelines for minimizing the risk of negative consequences.

Livelihoods and food aid

To trace how positive or negative effects can arise from food aid, it helps to have a conceptual framework in mind. One approach is to begin with the idea that households control a bundle of assets, which they deploy strategically and dynamically to achieve their livelihoods.

These assets or endowments include physical capital (agricultural tools, livestock), natural capital (owned or rented land,

⁶ This chapter is based largely on Barrett (FAO, 2006e) and Awokuse (FAO, 2006f).

access to common property resources), human capital (knowledge, skills and health), financial capital (cash-in-hand, bank accounts, remittances) and social capital (family and community networks, social norms and trust that facilitate coordination and cooperation). The most important asset of many poor households is their labour power – the physical ability of household members to work and generate income.

Households allocate their endowments across a number of activities including agricultural production, wage employment (both locally or elsewhere via migration and remittances) and non-farm activities. They base these allocations on their perceptions of the current and future returns of different activities, the variability of these returns and the extent to which they move together or diverge. All of these activities generate income either in kind or in cash, and together they constitute the household's livelihood. In addition, households may obtain income through transfers from other households, NGOs or from government. Food aid is one form in which households may receive income transfers.

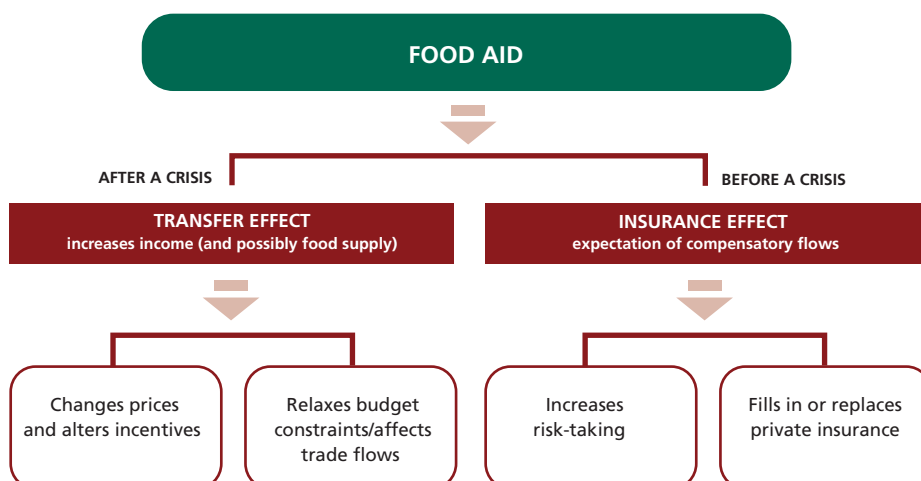
With this in mind, consider Figure 8 (adapted from Lentz, Barrett and Hoddinott, 2005), which represents the possible impacts of food aid at a very general level. It shows that food aid flows can have two broad classes of effects: an insurance effect before

the flow and a transfer effect after the flow. Both effects can alter household behaviour (e.g. by changing incentives) and can generate positive or negative outcomes for the household or for society as a whole.

If households expect that food aid or other emergency assistance will be forthcoming when a crisis occurs, this may provide a kind of insurance for them. It may replace other formal and informal insurance arrangements (e.g. private insurance, remittances, household labour exchange and government relief efforts), leaving individuals less able to cope without outside assistance when a crisis occurs. Expectations of assistance may induce excessive risk-taking, as when government-subsidized flood insurance or disaster relief induces people to build houses in low-lying, hurricane-prone coastal areas. This effect is called "moral hazard" (Box 7).

Moral hazard is typically thought to be a negative unintended effect of food aid, in that it may increase the vulnerability of people to adverse shocks. An emerging literature on poverty traps, however, emphasizes that the poor are often excessively risk-averse. Their overly cautious management of risk causes them to choose low-risk, low-return livelihood strategies that leave them chronically poor and vulnerable. Providing insurance to these households – in any form – may encourage greater risk-taking behaviour, which is desirable as

FIGURE 8
Economic effects of food aid



BOX 7

Community-level moral hazard

Do communities alter their collective behaviour in the presence of external assistance such as food aid? Some studies suggest that they do. For example, Groupe URD (2005) reports that in Afghanistan some communities stopped maintenance on public goods in anticipation of food aid payments for the same projects.

Lentz, Barrett and Hoddinott (2005) refer to this type of community-wide moral hazard as “opportunism”, defined as behaviour that makes full use of external services in unexpected ways but which does not necessarily result in long-term adverse consequences.

Participatory decision-making appears to alleviate this problem. Kibreab (1993), in an ethnography of Somali refugees during 1979–1989, found that

opportunistic behaviour was particularly prevalent in programmes that treated refugees as helpless victims and which, consequently, made no demands on them. Agencies running programmes through community participation did not report a lack of refugee motivation.

Participatory decision-making during the assessment phase of food-for-work projects may offer insights into which public works projects are suitable and whether a community desires the project even without the incentive of food aid. Communities’ knowledge of a well-defined time frame for funding may also mitigate opportunism (Harvey and Lind, 2005). To date, there has been little research on such community-level phenomena.

a longer-term strategy for self-reliance (Dercon, 2004; Carter and Barrett, 2006).

After a crisis, the provision of assistance in the form of food or cash constitutes an income transfer (in cash or in kind) to recipients. As a result, it increases local demand for food. When food aid is provided in kind, it also increases the supply of food. Food aid in kind typically leads to greater growth in supply than in demand because demand for food increases more slowly than income.⁷

This has two potential effects. First, it will exert some downward pressure on local food prices, especially if the local market is not well integrated into broader national and global markets. Second, food aid will typically displace some commercial purchases, whether from domestic or foreign suppliers. Typically, neither price reduction nor market displacement effects are intended, but it is effectively impossible to avoid one or both effects.

⁷ This is due to the basic logic of Engel’s law, which holds that the proportion of a person’s income spent on food decreases as incomes rise. In economic jargon, the marginal propensity to consume food is less than one and declines as incomes rise. The fact that households in poor countries often spend more than 50 percent of their income on food, whereas households in wealthier countries typically allocate less than 15 percent, is a manifestation of Engel’s law.

Food aid affects markets even when commodities are not brought in from abroad. When assistance is provided in the form of cash for the local purchase of food (see Box 10) or as direct cash transfers to recipients, it expands local food demand. This boosts commercial purchases, whether from domestic or foreign suppliers, and can increase local prices. This effect is sometimes expected, as local and regional purchases are often justified on the basis of helping to establish commercial marketing channels.

But the effects can also be unexpected, as when local purchases drive up food prices, thereby harming poor, net buyers who do not benefit from the food aid distribution. Changes in prices or in the volume of food traded locally may have both positive, intended effects and adverse, unintended effects. Indeed, it is practically impossible to have only positive effects from a food aid programme.

Does food aid cause “dependency”?

Many of the potentially negative effects of food aid are commonly lumped under the catch-all label “dependency”. Such effects can occur at the household, community

or national level. Dependency is said to occur when interventions aimed at meeting current needs reduce the capacity of recipients to meet their own needs in the future. This can happen when the provision of assistance creates disincentives for self-reliant behaviour (e.g., growing a crop or getting a job, maintaining community assets or enacting appropriate policy reforms).

It is important to recall from the discussion of insurance effects that food aid can alter people's behaviour only if they are reasonably sure that it will be available to them when they need it. Recent empirical studies suggest that most households in vulnerable countries neither understand who is targeted for food aid nor how the quantity of aid per household is determined, so food aid cannot provide reliable insurance against crises (Bennett, 2001; Harvey and Lind, 2005).

Furthermore, several studies find that the quantity of food aid received by households is usually too small to encourage their reliance on it (Barrett and Maxwell, 2005; Little, 2005; Lentz and Barrett, 2005). Little (2005) argues that the small amounts and the irregular timing of deliveries discourage Ethiopians from relying on food aid. As a result, they do not adjust their behaviour in the expectation of receiving food aid.

Does food aid make people lazy?

Perhaps the most pervasive criticism of food aid is that it may discourage people from working on their own farms or other employment, thus increasing their dependence on external assistance. Economic theory suggests that food aid transfers may have a negative effect on labour supply, because such transfers are a form of income. As incomes rise, people tend to work less simply because even hard-working people prefer more leisure to less (Kanbur, Keen and Tuomala, 1994). Any income transfer – whether in the form of food or not – discourages recipients from working, everything else being constant. The question is how severe is this effect.

The empirical evidence shows that labour supply becomes more responsive to changes in income as people get wealthier. In other words, wealthy people are more likely than poor people to work less in response to an income transfer. Food aid programmes that include wealthier beneficiaries magnify

the labour disincentive effect by providing benefits to those who are most able and willing to turn transfers into leisure instead of into increased food consumption.

In many cases, reports of food aid causing labour disincentives seem to be based on the simultaneous existence of food aid and poverty, rather than on a causal relationship. This distinction between causality and correlation is critical. As Hoddinott (2003, p. 2) argues:

Purported [labour] disincentive effects... 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... or villages receiving shocks that reduce the returns to labour, then the claimed disincentive effect is merely capturing the impact of these other characteristics.

A slightly different sort of labour distortion can arise when food-for-work (FFW) programmes are relatively more attractive than work on recipients' own farms and businesses, either because the FFW pays immediately, or because the household considers the payoffs to the FFW project to be higher than the returns to labour on its own plots. In this case, food aid-based programmes siphon productive inputs away from local private production.

In theory, poor timing and FFW wages that are above prevailing market rates can divert labour from local private uses, particularly if FFW obligations decrease labour on a household's own enterprises during a critical part of the production cycle (Jackson and Eade, 1982; Grassroots International, 1997; Lappe and Collins, 1977; Molla, 1990; Salisbury, 1992). For highly food-insecure recipients, FFW programme participation may provide essential food today while hindering labour investments in future productivity – a classic case of positive short-run interventions with negative long-run consequences.

The distorting effects of food aid on labour supply seem minimal when food aid is appropriately targeted to needy recipients. Put differently, when one encounters an apparent labour disincentive problem, this typically signals poor targeting as the root problem, not a poor work ethic among intended recipients.

Does food aid make people selfish?

Another way food aid may create dependency is through its effect on the other coping strategies available to households and communities. The concern here is that food aid and other forms of external public assistance may undermine informal social safety nets, making people less likely to help each other and thus more dependent on future flows of external aid.

Dercon and Krishnan (2003) point out that food aid may have conflicting impacts in the presence of informal insurance arrangements within a community. Food aid raises the income of recipient households, perhaps enabling them to help other households in the community through private transfers. On the other hand, food aid also serves as a public transfer, decreasing the need for private transfers. The authors find evidence that people in communities receiving food aid help each other less than in communities without food aid. They interpret this as evidence of food aid harming the mutual assistance arrangements on which informal social safety nets are based.

It is not clear, however, that food aid undermines such arrangements. Lentz and Barrett (2005) find that receiving food aid did not significantly affect the amount of remittances received by southern Ethiopian and northern Kenyan households during 1999–2001 (see also Abdulai, Barrett and Hoddinott, 2005). The empirical literature regarding the potentially negative impact of food aid on private remittances finds that this may be less of a concern than other considerations associated with food aid, such as price distortions for competing food commodities.

Does food aid foster bad government?

Some critics have argued that food aid can make national governments dependent on external budgetary and balance-of-payments support. Food aid may have a negative *policy effect* if the supply of inexpensive food allows recipient governments to ignore needed policy reforms and shift developmental resources away from the agriculture sector (Wallerstein, 1980). Food aid is sometimes considered a crutch for governments that practise policies that discriminate against domestic agriculture,

causing regular shortfalls in availability which have then to be plugged with food aid.

Programme food aid, which dominated global flows through the mid-1990s, can be understood as a form of balance of payments assistance from a donor country government to a recipient government. Indeed, programme food aid is intended to relieve balance of payments constraints by reducing current food import costs or the debt servicing costs associated with food imports (in the case of concessional food sales on credit), and thus may be considered a kind of national balance-of-payments insurance.

Food aid can provide budgetary or balance of payments insurance, however, only if it flows predictably and pro-cyclically in response to need (i.e. if food aid increases when foreign exchange becomes scarce, or when world food prices increase). The simple inverse relationship between food aid volumes and world cereal prices shown in Figure 2 in the previous chapter suggests the opposite correlation: food aid flows are counter-cyclical to need. Programme food aid now constitutes less than one-quarter of total food aid and is dwarfed by other external aid flows. Although some governments are undoubtedly dependent on external aid, food aid is too small in most cases and too unreliable to create dependency.

On the other hand, it is sometimes suggested that food aid may be used to influence the policies of recipient governments (Hopkins, 1984). If food aid provides the key resource necessary to maintain an ill-conceived policy, curtailing deliveries may hasten necessary reforms, notwithstanding the moral and ethical implications of such a strategy. Conditions tied to food aid distribution sometimes help provide an impetus to reform policies, but cases are rare, and the experience of using food aid for extracting useful policy reforms from recipient country governments has generally been a failure.

Can dependency be a good thing?

For households affected by a crisis or unable to support themselves, such as those without able-bodied adults, dependence on external assistance can be a positive thing. Indeed, a rights-based approach to food security implies that people ought to be able to rely

BOX 8

Dependency and humanitarian relief

P. Harvey and J. Lind¹

The focus of humanitarian action should be saving lives and alleviating suffering in situations where people's lives and livelihoods are under acute threat and local capacities to cope with crisis are being overwhelmed. In such situations, being able to depend on receiving assistance should be seen as a good thing. The focus should not be on avoiding dependence but on providing sufficiently reliable and transparent assistance so that those who most need it understand what they are entitled to, and can rely on it as part of their own efforts to survive and recover from crisis.

In situations of chronic food insecurity, where relief is required on a regular basis, agencies need to be concerned about the effects of that relief, and find ways in which assistance can strengthen

livelihoods, as well as providing immediate relief. But rations should never be cut or relief withheld without solid evidence that the needs that prompted relief in the first place have been met.

Dependency frequently represents a way of blaming relief as one of the most visible symptoms of crisis, rather than the cause. Tackling dependency involves tackling root causes, whether this is resolving conflicts, addressing underlying poverty or tackling corrupt or predatory governance. But this is often not the responsibility of humanitarian actors. The problem lies not with relief and its failings, but with the lack of other forms of international engagement with crises.

¹ Overseas Development Institute, London.

on appropriate forms of assistance when they are unable to meet their own needs. Unfortunately, as discussed above, food aid is rarely reliable enough to provide such an insurance effect.

To distinguish this welfare-enhancing dependency from the more common, pejorative use of the term, Lentz, Barrett and Hoddinott (2005) refer to "positive dependency". Thinking about dependency in a positive context is consistent with the FAO "Voluntary Guidelines to support the progressive realization of the right to adequate food in the context of national food security" (FAO, 2004b).

Given the weak empirical evidence regarding negative dependency on food aid, this concern seems exaggerated, especially seen against the humanitarian suffering that can arise from the premature termination of aid. Barrett and Maxwell (2005, p.180) argue:

...claims of dependency seem to have the direction of causality wrong. Shocks cause behavioural change that may necessitate various types of safety nets, including food aid. But food aid volumes transferred, in almost all cases, are simply too modest

to make people dependent upon them, although they can help keep them alive

Similarly, Harvey and Lind (2005) argue that concerns about dependency should not take priority over the more immediate goal of providing humanitarian support to people in need (Box 8).

Does food aid undermine local agriculture?

Much has been written about the possible disincentive effects of food aid on recipient countries' agriculture sectors since Schultz's (1960) widely influential analysis of the issue. There are several ways that food aid can undermine agricultural economies (Maxwell and Singer, 1979; Maxwell, 1991).

In addition to (but building on) the labour disincentive effects discussed above, food aid can affect household and national production if it reduces or destabilizes domestic food prices. Greater price volatility raises the uncertainty faced by producers, local traders and other market intermediaries and may

discourage investment in local market institutions. Finally, the availability of food aid, if it persists, may undermine the policy environment for agriculture by masking the need for policy reform.

Food aid depresses and destabilizes market prices

Among the most important consequences of food aid is the effect on food prices. The empirical evidence shows that food prices almost invariably fall in local markets immediately after a food aid distribution.

Food aid distributions can drive down local or national food prices in at least three ways. First, programme aid and monetized project aid are sold on the local market, directly increasing supply. Second, households receiving food aid will either decrease their purchases of the commodity received or of locally produced substitutes; or, if they also produce the commodity or substitutes themselves, they will sell more of their own production. Finally, recipients may sell food aid to purchase other necessities. Each of these actions increases supply or decreases demand for the food aid commodity and its substitutes, exerting downward pressure on food prices.

On the other hand, local or regional purchases of food aid increase the overall demand for food in the area and can cause food prices to rise, unless local markets are well integrated with regional and international markets. Less empirical evidence exists about the price impacts of local and regional acquisition, but as these transactions have become more common in recent years, the World Food Programme has begun monitoring their market impacts (Box 9).

Several researchers have found that food aid sold on local markets decreases prices (Faminow, 1995; Clay, Dhiri and Benson, 1996; Tschirley and Howard, 2003). Barrett and Maxwell (2005) argue that monetized project food aid has the largest negative effect on local market prices. Although United States law requires all operational agencies undertaking monetization to demonstrate that the monetized commodity will not result in substantial disincentives in either domestic agriculture or domestic marketing, the effectiveness of this system is a matter of debate (Ralyea, 1999).

Price decreases may be unavoidable with respect to in-kind food aid, but the magnitude of the price impact is affected by market conditions and management of the food aid operation. The extent of any food price reduction depends heavily on how well-integrated the local market is into broader regional, national and global food markets, and how well the food aid operation is targeted and timed.

Supply shocks associated with food aid deliveries and demand shocks associated with local purchases or cash transfers dissipate quickly in well-integrated markets, typically with only modest price effects. Colding and Pinstrup-Andersen (2000) argue that for small open economies⁸, the effect of food aid on prices will be limited. Lind and Jalleta (2005) found that most farmers experienced falling grain prices during distributions of food aid in Delanta Dawunt in Ethiopia, but prices stabilized within a few weeks.

In poorly functioning markets segmented from broader commercial channels, however, price movements can be dramatic and more persistent, decreasing producer profits, limiting producers' abilities to pay off debts and thereby diminishing both capacity and incentives to invest in improving agricultural productivity. Barrett and Maxwell (2005) describe a collapse in sorghum prices in southern Somalia in 2000, linking it, in part, to poorly timed food aid deliveries to Ethiopia that then moved across the border into southern Somalia. Tschirley, Donovan and Weber (1996) found that large amounts of maize food aid delivered to Mozambique caused both yellow and white maize market prices to fall. In each of these examples, the mis-timing of food aid deliveries – with food aid arriving late, as the next harvest was coming to market – is at least partly to blame for the adverse effects on market prices.

The targeting and timing of food aid deliveries matter fundamentally to the prospective impacts of food aid on local food prices. Households that receive food aid will either purchase less food in the market or sell more of their own production. This effect will be smaller for food-insecure households, whose capacity to purchase food is sharply constrained. It will be larger for better-off

⁸ Such economies are called "price-takers" because their market is too small to influence world prices.

BOX 9

Experiences with the World Food Programme's local procurements

The World Food Programme commissioned several country case studies to analyse local food aid procurement. The reports demonstrate that the effects on production, price stabilization and market development differ from country to country. The differences are largely results of the size and timing of local procurements relative to total production.

In Bolivia, Burkina Faso and South Africa, WFP purchases counted for less than one percent of total production, and thus made little impact on agricultural prices and production. In Nepal, greater transparency of procurement plans may help support prices (and thus farmers' incomes) immediately after the harvest, because rice millers would factor this demand into their purchasing decisions.

In Ethiopia, roughly 20 percent of total food aid has been purchased locally. But because the bulk of procurements were made several months after harvest, when prices started to rise rather than fall, the local procurements did not contribute to price stabilization. Late procurement mainly benefited traders with some storage capacity rather than farmers, who normally sell their produce just after harvest. As is often the case for emergency operations, late donor cash contributions or the necessity of responding to sudden needs limited WFP's ability to procure during the main harvest.

All but one country case study (South Africa, where trading activity is well-developed) reported that the WFP

bidding regulations ensured competitive procurement and contributed to local traders adopting higher business standards. These reports also reported, however, that the WFP bidding regulations benefited large traders who had the financial ability and physical facilities to keep stocks. Some reports suggested less centralized bidding procedures that would also benefit smaller traders and farmers' cooperatives situated outside the main terminal markets. One should, however, keep in mind that relaxed bidding procedures for these groups could lead to increased cost of procurement. Increased procurement costs would mean a transfer of WFP resources from the poorest of the poor to less poor farmers who produce a marketable surplus.

The Ethiopian, Nepalese and Ugandan studies emphasized that the private sector had benefited from the local purchases. They reported improved transport infrastructure and increased storage capacity. The Ethiopian case study also reported increased entry of private traders and increased competition, while the Nepalese study described improved milling and other processing facilities.

Sources: Salinas, Sagalovitch and Garnica, 2005; Institut du Sahel, CILSS, 2005; Agridev Consult, 2005; Narma Consultancy, 2005; Vink *et al.*, 2005; Serunkuuma and Associates Consult, 2005.

households that receive food aid due to poor targeting. Similarly, food aid provided during the lean season between harvests displaces relatively little in the way of commercial purchases by food-insecure households that, by definition, are unable to acquire sufficient food on their own. Poorly targeted or mistimed food aid has a greater likelihood of distorting market prices, with likely negative implications for food security.

In contrast, well-timed food aid provides direct benefits to recipients, and can provide

indirect benefits to non-recipients through its impact on market prices. Leach (1992), in her study of Liberian refugees in Sierra Leone during 1990–1991, found that food aid sold by recipients lowered the price of food during the lean season, a time of traditional food insecurity for the host community. Lower prices benefited both food-insecure households in the host community and refugee households, especially those who did not directly receive food aid. Traders of complements (e.g. soap, vegetables) also

faced increased demand from aid recipients (Leach, 1992).

Bezuneh, Deaton and Norton (1988) and Barrett, Bezuneh and Aboud (2001) found that food aid distributed directly or through FFW programmes to households in northern Kenya during the lean season likewise fostered increased purchases of agricultural inputs such as improved seeds, fertilizer and hired labour, thereby increasing agricultural productivity. Thus, the price effects of food aid deliveries are not necessarily harmful if operational agencies can properly manage the targeting and timing of distribution.

Production paradox

Does the price-depressing and destabilizing effect of food aid create a disincentive for local and national agricultural production? Despite theoretical expectations and many empirical investigations of the possible production disincentive effect of food aid, the results are rather mixed. Although several early food-aid studies found empirical evidence of production disincentive effects, the balance of recent evidence does not support the hypothesis that food aid has a substantial, negative impact on local and national agricultural production. This is due to the fact that production in many of these countries is influenced by a number of factors that may outweigh the impact of short-term commodity price fluctuations, including natural phenomena such as weather patterns and pest loads, and the lack of productivity-enhancing investments such as fertilizers, improved seeds and water control measures.

Mann (1967) found that food aid to India resulted in a significant decline in agricultural output. In a subsequent study in India, Isenman and Singer (1977) found that the disincentive effect had weakened considerably in the presence of improved government food-distribution policies and lower food-aid volumes.

Singer, Wood and Jennings (1987) found that EU food aid in the form of milk powder had a negative effect on the local dairy industries in several recipient countries. In a comparative study of three food aid recipients in sub-Saharan Africa, Maxwell (1991) found weak support for the disincentive effects of food aid and suggested that the effect of food aid on

local prices and production depended also on the prevailing institutions and policies. Fitzpatrick and Storey (1989) also found some evidence of the disincentive effect of food aid.

In contrast, several more recent empirical studies have found that food aid does not appear to depress local agricultural production, at least in the long run. For example, Lavy (1990) used time series modeling methods to investigate the dynamic effects of food aid and found no support for disincentive effects in sub-Saharan African countries. Rather, he found that food aid deliveries encouraged additional local food production in cases where food aid complemented domestically produced cereals.

Barrett, Mohapatra and Snyder (1999) studied the impact of United States food aid on domestic production and food imports for the 18 largest food aid recipient countries over the period 1961–1995. They found that domestic production declined slightly immediately following a food aid delivery but that this effect almost entirely disappeared over time.

Lowder (2004) analysed cross-country panel data and found no significant disincentive effect on domestic agricultural production in recipient economies, irrespective of whether untargeted programme or targeted project food aid was analysed. Her findings are consistent with results from previous studies (Maxwell, 1991; Arndt and Tarp, 2001). Other studies that investigated the impact of food aid on recipients markets include Hoffman *et al.* (1994) and Tschirley, Donovan and Weber (1996).

A recent study by Abdulai, Barrett and Hoddinott (2005) also failed to find significant production disincentive effects. Using repeated longitudinal observations of households, they were able directly to refute claims of production disincentives among Ethiopian farmers in their sample. They found that a seemingly negative correlation between food aid and production did not reflect a causal relationship. Rather, food aid goes to communities that are already suffering from low productivity and adverse shocks. They argue that it may be more accurate to say that these problems *cause* food aid than the reverse.

Recent research in Kenya suggests that producers choose their crops based on long-term price trends, not on short-term fluctuations. Therefore, production changes may be more likely to occur in areas with recurrent crises and long-term food aid rather than one-off events such as emergency response (Deloitte Consulting, 2005).

How can the consistent evidence of negative price effects be reconciled with the absence of any significant disincentive to production? Schultz's (1960) original proposition rested on several implicit assumptions that may not – or at least may no longer – hold in reality. First, it is assumed that the recipient country is a closed market economy where prices are determined domestically without outside influence from international trade. For an open economy, this is equivalent to assuming that food aid is wholly additional to commercial imports. Second, the food aid basket is considered to be identical to the domestically produced food basket. Finally, food aid is assumed to be completely untargeted to food-insecure and poor segments of the population. If all these assumptions hold, then food aid would be expected to depress domestic production.

On balance, however, these assumptions no longer reflect conditions in recipient countries or the nature of food aid. Most food aid recipient countries participate in international trade and experience significant government interventions in the food market. Food aid supplied, particularly in emergency situations, typically differs substantially from the locally produced foods, and therefore the two may be more complementary than competitive. Furthermore, as noted above, an increasing share of food aid is targeted to needy people in emergency situations and thus would have less price or production effects on local markets.

Barrett, Mohapatra and Snyder (1999) argue that when needy households receive food aid it allows them to invest more resources for production in the following year. The ambiguity of the existing evidence arises because this positive input effect cancels out the negative price effect of food aid. Any adverse producer disincentives that might be caused by food aid appear to be

offset by the benefits of increased liquidity for investment by smallholders.

Production disincentives are most likely to occur when food aid has what producers expect to be a relatively permanent negative effect on product prices, or when it interrupts regular investment or maintenance cycles that maintain or enhance local agricultural productivity. The key triggers to study are thus the medium- to long-term expected price effects and any disruptions in on-farm activities due to the method and timing of food distribution (Box 10). Both of these factors are largely driven by programming variables such as targeting methods and timing of deliveries.

Markets matter

The effects of food aid on local traders and other marketing intermediaries have not been well researched. Given the central importance of markets for food security, this gap in the literature is surprising. Market intermediaries serve a crucial role in smoothing fluctuations in food supplies and prices over time and space, buying and holding commodities when supplies are plentiful (such as right after harvest) and selling them when supplies dwindle (during the "lean season" between harvests). If food aid undermines their ability to serve this function, it could have long-term consequences that would be difficult to verify empirically.

As discussed above, economic theory and the empirical evidence suggest that injecting food aid into a market will dampen and destabilize prices unless local markets are well-integrated with regional and international markets. Those who sell similar products may suffer losses owing to decreased demand, falling prices or both, possibly driving some out of business.

On the other hand, food aid has sometimes been credited with supporting the development of local marketing channels by expanding the size of the commercial market (Box 11). Similarly, food aid frees up household resources for other purchases, so traders of other necessities may benefit. Theory also suggests that local or regional food-aid purchases can drive up prices, potentially benefiting net sellers and traders who accurately predict such trends.

BOX 10

Food-for-work and local agricultural production

Anecdotal evidence suggests that food aid, in the form of FFW programmes, may harm local production by encouraging households to reallocate their labour away from production towards FFW. The econometric or ethnographic evidence in support of this claim is thin, however, and there are examples where the opposite seems to occur. In the case of FFW for on-farm soil and water conservation in Tigray, northern Ethiopia, on-farm labour and private investments increased (Holden, Barrett and Hagos, 2006). This also happened in the case of lean season FFW projects enabling smallholders to purchase fertilizer and hire labour to increase on-farm labour effort on their own plots in Baringo District of central Kenya (Bezuneh, Deaton and Norton, 1988).

FFW programmes are often used to counter a perceived "dependency syndrome" associated with freely distributed food. Yet, evidence suggests that poorly designed FFW programmes may risk harming local production more than free food distribution. Ravallion (1991) argued that setting wages correctly will induce self-targeting of food-insecure

households whose time is less valuable than that of richer households. Barrett and Clay (2003) argue, however, that in structurally weak economies FFW programme design is not as simple as determining the appropriate wage rate. They find that in rural Ethiopia, higher-income households had excess labour and thus lower (not higher) value of time; therefore, these households allocated this labour to FFW schemes, in which poorer households could not afford to participate due to labour scarcity.

Bennett (2001) argues that FFW programmes in Cambodia are an additional, not alternative, source of employment and that the very poor rarely participate owing to labour constraints. Therefore, some targeting in addition to FFW may be necessary to reach the neediest households. Identifying who should be eligible for FFW, own-production labour requirements, expected duration of the distribution, structural factors (such as productive assets available to a household) and local wages can help determine the appropriateness of FFW and the risks of causing negative dependency.

The welfare impacts of any changes in food prices induced by food aid are likely to be mixed. This can be most easily understood by thinking about the people in an area that receives food aid in terms of two criteria: whether or not they receive food aid (recipients versus non-recipients) and whether they are net sellers or net buyers of food. Figure 9 depicts the simple two-by-two matrix that results.

In Figure 9, food aid in kind brings commodities into an area and drives down local prices. This unambiguously benefits food aid recipients and net food buyers through the direct transfer effect recipients enjoy, as well as through the indirect benefit that arises due to lower prices for the foods they buy. Even non-recipients benefit as long as they are net food buyers, because they can afford to buy more food when prices are lower.

Net sellers of food are unambiguously worse off because the price they receive for their output is lower. This negative effect could be offset, however, if they also receive food aid or some other form of compensatory transfer. The welfare effects on net sellers who also receive aid are ambiguous, depending on how the unintended, adverse price effects balance out against the intended, positive transfer effects. This simple diagram captures the longstanding concern about unintended adverse effects on net seller farmers as well as the intended benefits to net food buyers, who represent the majority of the poorest in virtually all communities.

Figure 9 also shows the welfare effects of local and regional purchase operations, i.e. food aid interventions in local markets. When the food is purchased in the local

BOX 11
Food aid for market development

Food aid has been credited with promoting local market development by helping to nurture competitive, efficient channels through which food can flow from producers to final consumers. Market-mediated food-aid operations – whether on the supply side through monetization of in-kind food aid, or on the demand side through local and regional purchases using donor cash resources – sometimes have an explicit goal of helping to develop food marketing channels in low-income areas where markets perform rather poorly. For example, food aid sold through small, village-based processors and traders may help to stimulate the emergence of a competitive food distribution channel (Abdulai, Barrett and Hazell, 2004; USDA, 2001).

The most commonly cited example of food aid being used to develop a local market is the Indian experience with Operation Flood, 1970–1995. This project was instrumental in helping establish milk producers’ cooperatives and promote adoption of modern dairy production and processing technologies in villages in rural India (Candler and Kumar, 1998; Doornbos *et al.*, 1990). Initially, the programme aimed at linking India’s 18 best milk sheds with the milk markets of the four main cities: Delhi, Mumbai, Calcutta and Madras. By 1985 it had expanded to 136 milk sheds linked to more than 290 urban markets and had created a self-sustaining system of 43 000 village cooperatives covering 4.25 million milk producers.

market it can generate upward pressure on local food prices. That unambiguously hurts non-recipient net food buyers because they face higher prices for basic staples but do not enjoy any new transfers. The big winners from local and regional purchases are recipients who are also net food sellers. Indeed, net food sellers benefit whether they receive food aid or not. Recipients who are net buyers may be better or worse off, depending on how the unintended negative effects of the price increase balance out against the intended positive effect of the food transfer.

Figure 9 necessarily abstracts from important differences in timeliness of delivery and efficiency of procurement associated with local and regional purchases, both of which can dramatically affect targeting efficacy, and thus a simple two-by-two matrix cannot offer a full summary of all the intended and unintended welfare effects of food aid. But it does offer a useful simplification of the direct effects due exclusively to unintended, induced food-price effects, as perhaps mitigated (or reinforced) by the direct transfer effects.

FIGURE 9
Welfare effects of food aid

	IN-KIND TRANSFERS		LOCAL OR REGIONAL PURCHASES	
	Net food buyers	Net food sellers	Net food buyers	Net food sellers
Food aid recipients	VERY POSITIVE	AMBIGUOUS	AMBIGUOUS	VERY POSITIVE
Food aid non-recipients	POSITIVE	NEGATIVE	NEGATIVE	POSITIVE

While quantitative studies of the impacts of food aid on market intermediaries are rare, a number of case studies have shown that commercial traders can respond quickly and effectively to food shortages, even in crisis situations. Conversely, unannounced or poorly timed food aid deliveries or government interventions can undermine the ability of traders to respond. Several of these studies are reported in more detail in the following chapter.

Does food aid disrupt commercial trade?

Food aid expands food supplies faster than food demand, as discussed above. The resulting demand–supply imbalance leads to some contemporaneous displacement of commercial sales of food in recipient economies, either from domestic suppliers or commercial imports. The evidence on domestic market displacement suggests that this effect is probably small, especially when food aid is targeted to needy populations in emergency situations. What does the evidence say about commercial trade displacement?

Several earlier studies found that non-emergency food aid could displace commercial food imports (von Braun and Huddleston, 1988; Saran and Konandreas, 1991; Clay, Pillai and Benson, 1998). Barrett, Mohapatra and Snyder (1999) found that food aid shipments from the United States reduced contemporaneous commercial exports to the 18 countries in the study by about 30 to 60 percent. In the longer run, the authors found that commercial trade actually increased in the wake of United States food aid shipments, with other exporters benefiting first and more strongly.

A study from the Swedish Institute of Food and Agricultural Economics (SLI, 2004) compared United States and EU food aid and found disparate effects on commercial imports. Whereas this study found that United States aid tended to replace commercial imports, EU aid appeared to cause a substantial increase in commercial food imports. The explanation for this seeming paradox is found in the details of EU programme aid, which permitted the re-export of aid and imposed trade-related

conditions on the receipt of food aid. In addition, EU programme aid was given simultaneously with other aid efforts aimed at stimulating demand (SLI, 2004).

Whether food aid adversely affects international food markets depends on the manner in which the food aid is obtained, how well-integrated the recipient economy market is with the global market and the recipient demand for variety (see Box 12). Moreover, the longer-term effects of food aid depend on the dynamic income effects of food aid and the extent to which these stimulate future food demand. Dorosh *et al.* (2002) argue that import disincentives will be strongest when domestic prices fall below import prices.

The OECD (2006) study finds that food aid and commercial imports are complementary responses to emergency food-security needs. However, they argue that the relative inflexibility of food aid compared to cash can hinder the recovery of local economies. If trade displacement is minimized by properly targeting food-insecure households, as research on programme versus targeted aid suggests, well-targeted emergency aid would seem to cause little lasting displacement of commercial trade (Lowder, 2004, Barrett and Maxwell, 2005). When domestic prices fall below import prices, however, traders may not be able to afford to import food, which can threaten their viability as intermediaries and possibly disrupt future trading patterns.

Conclusions

The effects of food aid are complex and multilayered. Concerns about the risk of negative consequences have long been recognized and have tended to revolve around the following questions:

- Does food aid create dependency on the part of recipients at the household, community and national government levels?
- Does food aid distort market prices, creating disincentives for agricultural production and market development, undermining local traders and eroding the resilience of local food systems?
- Does food aid displace commercial trade?

BOX 12

Impacts of food aid on consumption patterns

Part of the donor-oriented rationale for food aid has long been export promotion. Since the exports from temperate zone donors are commonly different from the staple crops grown in tropical recipient countries, the logic of export promotion necessarily entails some effort to change consumers' preferences, to introduce them to new foods and thereby endogenously stimulate demand for foods with which they were previously unfamiliar, or which had formerly represented only a minor share of their diet. As Barrett and Maxwell (2005) show, however, food aid has generally failed in its trade promotion objectives.

However, food aid that is relatively inappropriate to local uses certainly can

distort consumption patterns. Massive shipments of wheat and rice into the West African Sahel during the food crises of the mid-1970s and mid-1980s were widely believed to stimulate a shift in consumer demand from indigenous coarse grains (mainly millet and sorghum) to more Western crops, notably wheat. Similarly, grain-based food aid deliveries into pastoral areas in the Horn of Africa over the past decade have been criticized as inappropriate for people traditionally reliant on animal products (Barrett and Maxwell, 2005). Excessive shipments of unfamiliar foods can have adverse, unintended consequences.

The short answers to these questions are: no, maybe and yes. Despite the longstanding nature of these concerns and the strong views held by many observers, relatively little solid empirical evidence exists upon which to evaluate them. Given the substantial changes that have taken place in food aid programming over the past decade and the widespread calls for further reforms of food aid policy, this is surprising.

In theory, food aid can have two broad classes of economic effects: an insurance effect before the food aid flow and a transfer effect after the flow. These effects may have positive or negative consequences.

Insurance effects are particularly relevant to the debates over dependency and moral hazard. If food aid makes people lazy or crowds out existing informal safety nets, it may make communities less resilient to shocks and more dependent on external resources. If people expect food aid to "bail them out" of difficulties, they may engage in excessively risky behaviour. If governments receive large flows of external aid, they may be less responsive to the need for reforms. Although these concerns have some intuitive appeal, there is scant empirical evidence to verify them.

Indeed, one conclusion emerging from the work on dependency and social protection is

that people *ought* to be able to depend on receiving appropriate assistance when they need it. This perspective underpins the rights-based approach to food security embodied in the FAO "Voluntary Guidelines" on the right to food. Such positive dependence could help in breaking the cycle of poverty and food insecurity, as outlined in the FAO twin-track approach (FAO, 2003a) (see also Special Contribution, pp. 78–80).

Transfer effects occur because food aid provides additional resources to recipients that may be used to increase their consumption of food, other goods or leisure. The transfer effects of food aid may have unexpected negative consequences, by undermining the incentives for people to work on their own farms or other activities to achieve their own food security.

The empirical evidence shows that labour disincentive effects of food aid are small, especially when food aid is targeted at the poorest, most food-insecure people. These people are so needy that the relatively small transfers available through food aid are too little to cause them to work less. Targeting of food aid through food-for-work schemes has been used to avoid creating labour disincentives, but this may be problematic because the neediest often face a tighter labour constraint than better-off

households. Where labour disincentives have been observed, they have generally been associated with targeting errors.

Food aid transfers clearly depress and destabilize domestic market prices. These effects are larger when food aid is poorly targeted and poorly timed, because less of the aid goes into additional consumption. Markets that are not well integrated with regional and international markets are particularly vulnerable to the price effects associated with in-kind food aid. Unfortunately, these are precisely the areas where in-kind food aid may be most necessary and most appropriate because poorly integrated markets are less capable of responding to local shortages. This underscores the critical importance of accurate targeting and timing of food aid and careful monitoring and assessment of its market impacts.

Although the short-run price-depressing and destabilizing effect of food aid is well established in the literature, there is little recent evidence to suggest that domestic agricultural production is negatively affected in any substantial way. This is because production in many of the recipient countries depends more on climatic variability and other factors than on a response to short-term price fluctuations. It may also be because farmers take a longer-term view of prices or because consumers often prefer local products when food aid is available at similar prices. For subsistence households, who are not producing for the market, food aid may stimulate production by freeing up resources for investment in tools and seeds.

Food aid does appear to displace commercial imports in the short run by about 30 to 60 percent. A strong result from the empirical evidence is that different types of food aid have different impacts on trade. Untargeted aid that is sold on the local market (programme or monetized project aid) is found by studies to be more likely to disrupt normal market channels than targeted aid provided for emergencies or through well-designed projects.

Outside emergency operations, in-kind food aid may play a constructive role in specific well-targeted projects, but it should be evaluated against other types of social protection interventions. Food aid should not be used simply because it is readily available,

a point that later chapters will address in more depth. Because in-kind food aid can have consequences that are complex and far-reaching, it should be used only when it is clearly superior to cash or other interventions in achieving sustainable improvements in food security.

Local and regional purchases of food aid are often promoted as a solution to the commercial market disruptions caused by food aid sourced directly in donor countries. Local and regional purchases could overcome some of the transfer inefficiencies associated with tied aid, and could also stimulate local and regional markets while contributing to the immediate food needs of the hungry. But these transactions also have the risk of driving up local prices for poor consumers or stimulating unsustainable supply responses. Distributional issues also need to be considered, because larger producers and traders may be more likely to benefit than smaller operators. Given the very limited experience with these mechanisms, it is essential to proceed with care. Local and regional purchases should be explored, but they should not be required in all cases, and careful market monitoring, like that started by WFP, should continue.

The decline in untargeted programme food aid and the expansion of emergency food aid have reduced the likelihood of many of the negative consequences associated with food aid, although other problems may arise in crisis contexts. The following chapter takes up issues related to the use of food aid in crises, including complex emergencies where natural disasters are compounded by conflict.