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# The State and the Market in the Delivery of Food Subsidy

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### Abstract and Keywords

This chapter is from the forthcoming *Oxford Handbook of Food, Politics, and Society* edited by Ronald Herring. This article begins by tracing the development of the Indian model of food distribution. Food subsidies in India are delivered through the public distribution system, consisting of a network of retail outlets through which the government sells grain. The discussions then turn to the outcomes and the performance of the distribution system, food security legislation, the rights approach to food security, debates over food security legislation, lessons from social assistance programs across the world, and political opposition to cash transfers.

Keywords: food subsidies, food distribution, India, public distribution system, food security, rights approach, cash transfers, social assistance programs

#### **Introduction**

For the 3 billion people in the world who live under \$2 a day, no question is more important than where their next meal will come from. Undoubtedly, over the long run it is difficult to address the problem of food security without eradicating poverty or, in other words, without economic development. However, development is a long and uncertain process, and leaving generations of the poor to an uncertain future is neither morally defensible nor politically acceptable. Moreover, there is growing awareness that a crucial determinant of economic progress is the development of human capital, which in turn implies availability of food for all. Developing countries therefore have no alternative but to act now by devising schemes of subsidizing food for the poor. Given the enormous number of competing claims on the meager fiscal resources that a developing country can command, the issues of food subsidy become inevitably contentious.

The debate is especially intense in a country where a sizable proportion of the population is poor enough to need food subsidy. On one hand, a vast majority needs the subsidy, and on the other hand, a subsidy to so many puts a big dent in the national budget of a poor country. It creates two camps: "Can we afford to let the poor starve?" versus "Can we afford the subsidy bill?" It matters how this question is answered—it will dictate whether the subsidy ought to be universal (with minimal exclusion of only the obviously affluent) or narrowly targeted.

In this context, the issues of waste and corruption become paramount. Any delivery system that is prone to a sustained leakage of the government resources through inefficiency, fraud, and corruption becomes a liability. In a country where a vast majority is poor, it becomes difficult to argue openly against food subsidy on the grounds of fiscal priorities. Those who rank other priorities ahead of food subsidy find it convenient to point at the waste and corruption of a delivery system and argue for limiting the coverage much below what is needed. There is thus pressure on those advocating food subsidies to come up with an effective delivery system—a system that would cover most of the needy at an affordable cost to the public.

In a statist model, the government puts in mechanisms to procure, store, and distribute food to defined target populations at prices below market cost. In some sense, this is a natural intervention. After all, in the absence of an intervention the market in free play leads to outcomes that are deemed undesirable. The response is to displace (and in some cases suppress) food markets by direct state interventions. However, this is not the only possible response. The alternative is to use markets to deliver subsidies. In this market model, subsidies are monetary or cash transfers, compared with in-kind transfers of the statist model.

Inevitably, a search for a more efficient system leads to a debate over whether a system that uses market for the delivery of the subsidy should be preferred over a system where all the activities from procurement to distribution are handled by the government. The purpose of this chapter is to examine various issues that invariably come up in a discussion over how to deliver food subsidy. While our focus is on the cash versus in-kind transfers debate, we also comment on the implications for the targeting debate.

Neither of these debates is unique to developing countries. The size of welfare programs and whether the targeting criteria expand or contract their reach is a live issue in rich countries. However, as argued in this chapter, the administration of targeting is a much bigger issue and therefore an important component of the debate in developing countries. Similarly, rich countries also debate the choice between cash and in-kind transfers. In fact, despite the ideological dominance of the market as an economic institution in these countries, in-kind transfers are much more important than cash transfers—thanks to the subsidies on health, education, and housing (Currie and Gahvari 2008). However, rich-country debates do not stress the corruption and poor governance that are commonly associated with statist models in poor countries.

As always, context matters, and this chapter is firmly anchored to the issues relevant in poor-country debates. The debate often has an ideological subtext, and no analysis of the political economy of food security policy would be satisfactory without taking stock of the ideological divide among those with a voice in policymaking. Economists typically attach value only to economic outcomes. The state and the market are economic institutions, and, a priori, neither is privileged. Other social scientists and civil society participants may, however, mark either of these institutions as special for their effect on democratic politics and community institutions.

Though many of the arguments discussed herein are not country specific, the focus is on India for several reasons—besides the fact that we know India the best. First, India has more than a quarter of the world's poor (i.e., those who live on less than \$2 a day). This means that it is home to more of the world's poor and to more malnourished people than any other country. One-third of the population and over 40% of the children under the age of three are underweight. More than half the women are anemic. In short, India is a test case for policies related to malnourishment. Second, India has one of the world's largest food subsidy programs. It is likely to become larger, too, because of a great deal of political activity related to the issues of food security, which will possibly lead to legislation called the National Food Security Act. The impending passage of such a law has led to a sizable public debate about the coverage and means of delivering food subsidies that are appropriate to a poor country. These arguments are relevant beyond the context (of India) in which they were made.

In this chapter, we first trace the evolution of the Indian model of food distribution. We then discuss the distribution system's outcomes and performance as well as the rights approach to food security and the move to bind the government legally toward food subsidies. The key issues introduced by this debate, which are generic to the design of food subsidies, are addressed in subsequent sections. The attempt is to evaluate the merits of various arguments in terms of their intrinsic logic as well as the available evidence from the experiments tried around the world. Last, we reflect on the ideological divide and the political economy of self-interest that together shape the course of food politics in a developing country such as India.

#### **Subsidy Transfers in Kind: The Indian Model**

Food subsidies in India are delivered through the public distribution system (PDS). This system consists of a network of retail outlets (popularly known as ration shops) through which the government sells grain (principally, rice and wheat). Grain sales occur at a fixed price called the issue price, which is typically lower than the market price. Two conditions govern the sale of subsidized grain: the buyer of grain must possess a ration card; and grain purchases are subject to a quota. The PDS is supported by a procurement operation that procures and funnels supplies to it. Through the Food Corporation of India (FCI), the government procures grain at the procurement price

and then stores and transports it to the various consuming locations.

The Indian model is not unique. Comprehensive rationing schemes, where the state is the single intermediary between consumers and producers and has monopoly over all domestic and foreign trade, was prevalent in the erstwhile socialist states. In developing countries, it is usual for subsidy transfers in kind to operate along with private food markets. Supplies may come from imports, foreign aid, or domestic procurement. Food subsidies may cover all or some consumers. Common institutional arrangements are a parastatal to procure the commodity and a retail network for distribution.

In India, the origins of government intervention lie in the Second World War when the colonial British government used its powers to promulgate orders on price control, movement, and requisition of foodgrains. The government decided that it would procure the basic staples and distribute them to select urban populations. However, there was still room for debate on the best means by which government should procure foodgrains. Should the government purchase grain at market prices, or should it enforce a monopoly of grain trade and obtain supplies at a low cost? After debating these alternatives, the government opted for a "compromise" middle path. There would be no monopoly, and a private trading structure would be allowed to function. However, the government would operate a parallel marketing chain from procurement to distribution. Thus, private markets would be excluded from the marketed surplus procured and distributed by the government. In addition, there would be curbs on market activity so that the government could obtain its supplies relatively cheaply. In effect, through market suppression farmers would be taxed to part finance the subsidy to urban consumers.

These policies continued even after the end of the colonial government in 1947. Ironically, though, till the mid-1960s, domestic procurement (compared with commercial imports and food aid) was neither an important nor reliable source of supply to the PDS. The lack of success of the procurement machinery is repeatedly acknowledged in government reports of the time and is ascribed to the existence of a free market where traders compete away supplies. The Foodgrains Policy Committee of 1966 stated the desired policy direction as follows:

In order to achieve the basic objectives of food policy, it is necessary for Government to acquire a large share of the foodgrains produced in the country. It is in the light of this requirement that systems of procurement and regulations affecting private trade have to be formulated and appraised. Government has to strengthen its own machinery for the procurement, transport and distribution for foodgrains for the surplus as well as deficit areas.

(quoted in Chopra 1981).

These views reached their logical end with the state takeover of wholesale wheat trade in 1974. However, the move was unsuccessful and the policy had to be rescinded.

The reshaping of food price policies began in 1965 when the government formed the Food Corporation of India, which became the principal central agency responsible for purchase and storage of foodgrains. The other important event in the same year was the formation of the Agricultural Prices Commission to advise on price policies for wheat, rice, sorghum, millet, and other field crops. The state would offer a support price to mitigate the uncertainties of the market. The intent was to provide incentives to producers to adopt the new high-yielding varieties of wheat and rice that reached India in the mid-1960s.

The success of the Green Revolution meant that the harsher aspects of the earlier food policy directed at maximizing procurement could be moderated. At the same time, the food surplus states now had clout in national politics that could be used to lobby for prices favorable to farmers. Even by 1970, B. M. Bhatia (p 125,127) noted:

The concern of the Government in the matter of agricultural prices for the first twenty years of independence was to keep down the prices of foodgrains through controls, imports and rationing. The beginning of the Green Revolution has coincided with a marked shift in the price policy of the State Governments, from the desire to protect the interests of the urban consumer to promoting the interests of the agricultural producer. The new policy solves the procurement problem of the State governments....

Such a policy is necessary to provide the much needed incentives to the farmer to use costly but highly productive inputs, thus increasing food production in the country. Behind these economic arguments, however, lie powerful political considerations. In most of the states, strong agricultural lobbies have

emerged.... In such a situation prices fixed are bound to be what are politically feasible and not what are economically fair, as determined by an expert body like the Agricultural Prices Commission. (PP. 125, 127)

However, not all elements of food price suppression were discarded. Anti-hoarding laws still remain on the books to restrain competition to government procurement from private trade. Further, till India reformed its trade policies to comply with treaty obligations at World Trade Organization, farmers' access to world markets were tightly regulated by the government. Indeed, the situation did not materially change even in the 2000s when the government was supposed to have given up on quantitative restrictions on trade. For instance, wheat and rice exports were banned in the latter half of the 2000s during the boom in world commodity prices.

Notwithstanding these qualifiers, the government achieved a greater balance between producer and consumer interests starting from the 1970s, when the food policy context changed because of the Green Revolution's technological breakthroughs. Earlier concerns about movements in intersectoral terms of trade adverse to industry faded away. With the decline of food aid, the growth of domestic food surpluses, declining real prices of foodgrains, and greater political clout of farmers, the emphasis of food distribution shifted to support of farmgate prices, stabilization, and subsidy for lower income groups. The policies of procurement and buffer stocks dovetailed neatly into the public distribution system (Mooij 1998; Varshney 1993).

#### **Targeting**

The public distribution system was converted from a general entitlement to a targeted scheme in 1997. Subsidies now depend on whether the household is classified as above poverty line (APL), below poverty line (BPL), or poorest of the poor (POP). APL households are charged the highest prices, whereas the POP households pay the least. The administration of targeting has brought into focus India's federal structure. While the federal government is largely responsible for funding, procurement, and transport of grain, the implementation and delivery of food subsidies is in the hands of the states.

A similar division of responsibilities underlies the implementation of targeting. On the basis of household expenditure sample surveys and other means, the federal government determines the aggregate number of BPL and POP households within a state that are deserving of subsidy. It uses this figure to allocate and distribute the grains (and subsidy) to the state governments. It is the job of the state government to identify deserving households and to distribute grain accordingly.

Identification is supposed to be done on the basis of some observable correlates of households (e.g., type of housing, type of employment, land holdings, caste characteristics). Even if done honestly, it cannot be expected that such a process would yield totals that match the figures determined by the federal government. When identified households exceed the estimate of the federal government, the state government either has to trim its list or must dig into its own resources to bridge the gap.

This has led to some discord between the federal and state governments. The federal government is accused of using targeting to limit its subsidy bill while burdening the state government with the unwelcome task of implementation. On the other hand, if the federal government were to offer subsidies to all households identified as deserving by state governments, the latter would have no incentive to observe discipline in the identification process.

One response of state governments has been to depart from the targeting parameters that govern federal policy. The federal government allocates subsidies to states on the basis of an entitlement of 35 kg of grain to BPL and POP households. By offering only 20 kg of grain, the southern state of Tamil Nadu has stretched the federal subsidy to operate a near-universal subsidy scheme (with some resources from its coffers as well). The willingness of some of the state governments to use the central subsidy together with its own resources has been increasingly seen in the 2000s.

### The Shadow of Procurement

Grain procurement has had several impacts on the wider agricultural economy of India (Landes and Gulati 2004; Saxena 2004). Land and other resources have shifted to the state-supported crops of rice and wheat. While this

was understandably the original intent of state policies formulated in the period of acute food shortage of the 1960s, it is not clear this is appropriate today when the demand for nonstaple foods such as dairy, fats, fruits, and vegetables are growing faster than the demand for grains. Second, the cost-effective strategy for procurement is for the buying agencies to focus attention on the "surplus" regions of North India, namely, Punjab, Haryana, and Uttar Pradesh. This has led to complaints of lack of price support operations in other parts of India, notably the eastern region. These are regions with conditions favorable to agricultural growth, yet it is claimed that they have not emerged as effective food exporters because of the concentration of resources in North India. More generally, because of the availability of subsidized grain, the "deficit" states have neglected price support to their own farmers and continue to have a food shortage. Third, procurement may be adverse to the long-term interests of even the favored regions. The summer rice—winter wheat rotation has environmentally degraded the lands in these regions. Fourth, procurement has nothing to offer to the farmers growing the so-called coarse cereals (principally sorghum and millet). These are hardy low-productivity crops typically grown in semi-arid regions with no irrigation. They have suffered from policy neglect because of the focus on rice and wheat.

The exigencies of procurement have also cast a shadow on policies elsewhere in the agricultural economy. In the early 2000s, the government (at the federal and state level) undertook several reforms to transform agricultural marketing—a sector that serves both producers and consumers poorly.<sup>2</sup> The goal was to lighten the regulation that deterred private-sector entry and investment in areas of marketing such as processing, transport, and storage.<sup>3</sup> Yet these reforms have not been irreversible. The contingent nature of these policy changes was illustrated in the commodity boom of 2006 to 2008. The run-up in world commodity prices till the first quarter of 2008 led the government to impose bans (official and unannounced) of various kinds—on procurement of grain by private players, on exports of rice and wheat, and on futures contracts in many agricultural commodities. The ban on private players and on grain exports bought the government some stability and enabled it to procure grain cheaper than what would have been possible otherwise.<sup>4</sup>

Thus, reforms in agricultural marketing do not sit well with the necessities of procurement. In flush periods with low prices and abundant supplies, the competition with private trade is not an issue. But when supplies are tight, procurement operations will not allow free activity by private trade. Such backtracking by the government is not without cost. Clearly, private players will be wary of investing in the marketing chain when their activities can be curtailed at will. For this reason, progress toward transforming the marketing sector will remain slow.

### **Outcomes: The Delivery of Food Subsidy**

In one of the first studies of its kind, Parikh (1994) showed that in 1986–87 the poor received negligible subsidies in all but two states of India. Despite this, however, the program itself was costly. A transfer of one rupee to the bottom 20% cost the government at least five times as much.

It turned out that most of the poor did not use the PDS. Even when they did, their PDS purchases were a small fraction of their total grain consumption. The early studies showed (1) that the PDS was not targeted toward the poor; in fact the nonpoor received a significant fraction of the income transfer; (2) the subsidy amounts itself were very small because of low subsidy rates as well as limited entitlements; and (3) there was considerable fraud in terms of illegal diversion of subsidized foodgrains to the open market (Ahluwalia 1993; Dev and Suryanarayana 1991; Dutta and Ramaswami 2001; Howes and Jha 1992; Radhakrishna et al. 1997; World Bank 2001).

Besides these quantitative assessments, some case studies also documented the difficulties of access to the PDS. Even when the poor possessed the ration cards, they faced problems with respect to the low quality of grain, cheating on weights by the PDS dealer, and irregular hours of operation of the PDS shops.

The timing, availability, and quantity of grain supplies at the PDS shops were not predictable, and often it took repeated trips to complete the purchase. Customers were not permitted to split their entitlement into multiple purchases. This discouraged the poor, who did not always have the cash when supplies were available.

On paper, the program was run with various safeguards including government inspectors and monitoring teams from the community. The aggregate evidence showed that these measures failed.<sup>5</sup> The studies also showed that legitimate commissions earned by PDS dealers were too low to offset costs. Illegal diversions and limiting store hours were ways by which the dealers compensated for the costs of legal operations.<sup>6</sup>

The major policy response to the problems of PDS was the introduction of targeting (described in the earlier section). But could a targeted program successfully reform the PDS? First, there are the difficulties of targeting. Most of India's workforce is either self-employed as farmers, traders, vendors, and craftsmen or are wage workers in the informal sector of trade and manufacturing. Such employment is characterized by the absence of formal contracts, salary records, and tax payments. Means testing as it is practiced in developed countries is impossible. Identification of poverty status depends on proxy indicators of land ownership, habitation, type of housing, and social characteristics. It cannot be expected that these would perfectly correlate with poverty status defined by the official poverty line. Second, even if adequate targeting mechanisms would be devised, it does not address the issues of illegal diversions and the unviability of PDS retail outlets.

More recent data from 2004–05 confirm these apprehensions and show that only about 40% of the poor (by the official definition) were correctly classified as either BPL or POP. Most of the poor do not receive the subsidies meant for them. Even among the poor that are correctly classified, only about 60% reported using the PDS in the reference period of a month. The difficulties of access mentioned earlier continue to be relevant.

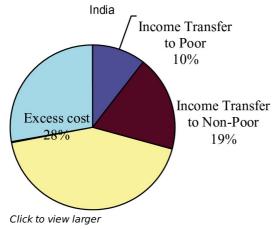


Figure 1: Decomposition of Food Subsidy Expenditures: India

Source: Jha and Ramaswami (2012)

Figure 1 displays a decomposition of food subsidy expenditures (in 2004–05) into various constituent elements. Only about 30% are accounted by income transfer to households whether poor or nonpoor. The remainder of expenditures are absorbed by the costs of illegal diversion (43%) and the excess costs of state agencies (28%). Illegal diversions happen as agents in the government marketing chain sell the subsidized grain in the open market and profit from the difference between the market price and the subsidy price. Jha and Ramaswami (2012) show that, in 2004–05, 55% of the subsidized grain was illegally diverted. Excess costs occur when the price of procuring and distributing grain is higher for the state agencies than for the private sector.

### The Rights Approach to Food Security

Agitated by the poor performance of the public distribution system and the lack of political interest, some civil society organizations have pushed to embed food security in the legal framework and secure some degree of state commitment. In 2001, the People's Union of Civil Liberties filed a public interest petition in the Supreme Court of India demanding judicial oversight of the state's food intervention. They argued that the right to food derives from the right to life that is guaranteed by the Constitution.

The case is still ongoing. However, the court has been sympathetic to the petition and has passed a wide range of "interim" orders. It has appointed commissioners to monitor the compliance of these orders, most of which relate to legal enforcement of existing government programs. Some court orders have also expanded the scope of government programs. A prominent instance of it is when the court made it mandatory for all government primary schools to have a school feeding program.

A network of individuals and organizations has organized around the public interest litigation to campaign for a right to food. The campaign has pressed for a range of interventions beyond just food programs such as public

works programs, public services of nutrition, health and education to young children, and securing equitable land and forest rights. The willingness of the judiciary to adjudicate on these issues has provided sustenance to this movement.

The rights approach received political validation with the promise of a "right to food" by the United Party Alliance that returned to power in India's general elections of 2009. This campaign promise has now seen the approval of a National Food Security Bill by the Parliament. Some of the individuals associated with the campaign of civil society organizations were also involved in the drafting of this legislation.<sup>7</sup>

The National Food Security Bill commits the government to reach food subsidies to 75% of the rural population and 50% of urban population. The coverage has been extended from existing levels to what has been called near-universal coverage. However, the near-universal coverage has not put an end to the debate about targeting as the government still has the task of excluding 25% of the rural population and 50% of the urban population..The PDS with its in-kind transfers is seen as the principal instrument of subsidy delivery in the bill. However, some of the clauses seem to also leave open the possibility of cash transfers. The run-up to this bill has been contentious as the government advisors, media, and the independent experts debated alternatives that can effectively deliver the right to food.

#### The Food Subsidy Debates

Two issues have been prominent in the debates about the food security legislation. The first issue is about the scale of the food subsidy program. Should it continue as a targeted program, or should it have universal access? The second issue is about the form of the subsidy program. Should the subsidy program be modeled on the public distribution system, or are there alternative and more efficient forms of delivery? In particular, should cash transfers replace in-kind transfers?

Neither of these issues is unique to the Indian context. Hence, the debate is of wider significance and has relevance to the delivery of welfare programs in low-income countries.

### Coverage

The massive exclusion errors of PDS targeting, noted in the previous section, question the continuance of targeted programs. Until a reliable way of identifying the poor is found, might near-universal coverage be necessary to avoid exclusion errors?

A great deal depends on the specific context of a country. Consider India, for example, with 92% of its labor force in the informal sector. Many are self-employed.

Some days they earn some income. Some days they don't. How do we even measure their incomes? How do we identify the poor? Any process that we use is likely to leave out many from the list. If we leave the job of identifying the poor to the local community—presumably because they have local knowledge—we would be leaving the job to the local elite, who cannot always be trusted to make an objective identification of the poor.<sup>8</sup>

Even if it were possible to identify the poor, clearly the poor are defined as those under an arbitrarily defined line. In India, the official poverty line is close to \$1.25 a day at PPP. In 2005, according to the World Bank calculations, about 41.6% of the population was estimated to be under this extremely low poverty line. These people are destitute, not just poor. The basic arguments invoked to provide food subsidies for the poor are valid even for the people with the level of consumption at twice the official poverty line. Over three-quarters of India's population has an expenditure level under \$2 a day. Moreover, it is difficult to claim that someone just under \$2 a day is in need of food subsidy and someone just above it is not. The harm done by excluding the truly needy far outweighs the gains of wasting the subsidy on those who do not need it. In addition, there is likely to be some self-selection due to the inconvenience of collecting the subsidy that would make the rich stay away. Clearly, there are few arguments against universal coverage in a country like India. Of course, in a rich country like the United States where the poor are a much smaller group and where they have well-developed formal institutions such as the Internal Revenue Service, it makes sense to have a targeted program. Even Latin America is a lot richer than South Asia or sub-Saharan Africa, and the poor that need subsidies constitute a minority. Also, the institutional development is further

along in Latin America, so identifying the poor through means testing or other methods is not an insurmountable problem. For all these reasons, it makes much more sense to have targeted programs in Latin America than in South Asia or sub-Saharan Africa.

The available evidence on the exclusion error in the present targeted public distribution system in India strengthens the theoretical arguments in favor of universal coverage. In fact, the clamor for universal coverage is growing is in part because of increasing awareness that more than half of the poor as defined by the Government of India's official criterion are left out of the official list of those classified as BPL (Jha and Ramaswami 2012).

While the logic of near-universal coverage in reducing targeting exclusion errors has not been challenged, some economists—and especially those in government—fear that it will lead to unaffordable subsidy expenditures. Another concern is that near-universal coverage with substantial entitlements will mean a substantial expansion of the PDS and hence of grain procurement by the government. The worry is that this will accentuate the adverse effects of procurement discussed earlier. The domination of grain trade by parastatals is not comforting either for those who worry about costs and efficiency in grain marketing.

The disquiet about what the food security bill implies for procurement and grain markets could be easily settled if the food subsidy is given in cash. Under such systems, the food subsidy is directly transferred to the beneficiaries. Households use this transfer to buy grain from designated retail outlets. As the grain would move through the usual market channels, procurement is not necessary.

The coverage question is therefore connected with the mechanism of subsidy delivery. Near-universal coverage with in-kind transfers is likely to be costly. The move would also increase the market price of food, for which reason the farm states would favor in-kind transfers. This is discussed later in the paper.

### Why Cash Transfer

Countries other than India have also had to face up to the corruption in in-kind food transfers. Olken (2006) estimates that minimum leakages in Indonesia are of the order of 18% of the supply of subsidized rice. More realistic assumptions lead to estimates of around 30%. For the Philippines, Mehta and Jha (2009) report a 54% gap between the NFA rice supply and reported consumption. While they acknowledge that some of the discrepancy could be because of timing issues in sample survey data, the gap is too large to be due to these errors alone. They conclude that the figure "indicates possibly significant pilferage."

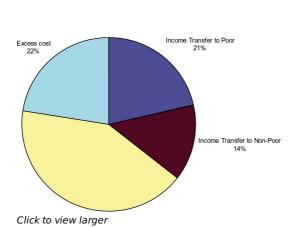


Figure 2: Decomposition of Subsidy—Philippines

Source: Jha and Ramaswami (2012)

Philippine

Similarly, Jha and Ramaswami (2012) show that excess costs comprise about 8% of the government costs in supplying rice in the Philippines. Figure 2 is a decomposition of food subsidy expenditures in the Philippines. The pie chart is not very different from the similar chart for India (Figure 1). Most of the subsidy is lost to illegal diversions and excess costs.

By their very design, a direct cash transfer eliminates the corruption and excess costs of the PDS. As the food subsidy is transferred as cash to households, there is no separate marketing channel for government grain. The dual price system of in-kind transfers that offers possibilities of illegal arbitrage and profit does not exist anymore. Grain moves through the usual market channels of the private sector, so subsidy is not lost to excess costs either.

Direct cash transfer has other advantages as well. Because of limited volumes, the viability of the government marketing channel (the PDS retailers) is an endemic issue. This is not a problem with direct transfers because it eliminates the dual marketing system (of private and government). Second, there would be greater economic access, as consumers are restricted not just to particular outlets. Further, poor consumers need not worry about timing their purchases with wage payments.

Third, direct transfers allow consumers to choose foods according to their needs and preferences. In parts of India, poor consume grains such as sorghum and pearl millet that are not subsidized by the current regime. Local grains and varieties are not supported by the PDS. Cash transfers could allow consumers to spend their budget on their preferred commodities and would therefore be less distortionary in consumption. This is the textbook economics case for the superiority of cash transfers over in-kind transfers. It also has implications for reducing regional inequalities.

In a system with in-kind transfers, the government needs to engage in procurement, storage and distribution. Naturally, it finds it logistically convenient to procure grain in two or three large surplus states and then distribute it. The farmers in these surplus states are generally well to do, and they receive the benefit of government-assured support prices. These benefits are not received by the poor growers of local grains. A local grain that is not included in the subsidized basket clearly suffers from the disadvantage of having to compete with a subsidized substitute. Growers of local grains like sorghum and millet are typically located in arid and semi-arid areas, and they do not have the option of switching cultivation to rice and wheat because of lack of complementary inputs (particularly water). The rationing system of in-kind transfers thus invariably generates inequality between the farmers of the surplus states and those in arid and semi-arid areas. It is easy to see that cash transfers would do the opposite, as the consumers in the poorer areas would choose to spend their cash on local grains and thus boost their demand and hence their prices.

Despite these potential advantages, cash transfers have been vigorously opposed by civil society organizations. A leading advisor to the Right to Food campaign referred to a proposal on cash transfers as "ill conceived, not thought through... fraught with grave risks" and as a result "is a solution that is worse than the problem it seeks to address" (Patnaik 2010). The Right to Food campaign has organized protest rallies in states that have wished to pilot programs of cash transfers. If the public distribution system is so dysfunctional, why is there so much resistance to replacing it with direct cash transfers?

### Challenges to Cash Transfers: Feasibility

An immediate objection is infeasibility. How can cash be transferred? Does a poor country have the systems to implement it? A cash transfer system is constructed on two pillars: a payments system to distribute the cash; and an authentication system to verify that the transaction is with the intended beneficiary. Conventional payment systems are brick-and-mortar banks and post offices. By definition, such infrastructure is not well developed in the poor remote areas of low-income countries. This has been a barrier to the use of cash transfers.

Computerization of financial systems and the use of the Internet and mobile devices have broken through this impasse. Africa leads the world in the use of mobile phones to transfer cash. It has allowed urban migrants to remit money to their families still living in urban areas. Effectively, any retailer is potentially a point for banking transactions.

In India, post offices have typically delivered cash payments in welfare programs (such as those arising from pension and public works), but this process is vulnerable to capture by the intermediaries, which results in both delay and loss. Policy now emphasizes the direct transfer to savings accounts of beneficiaries in banks and post offices. This is possibly only because of computerization of financial systems. This still does not address the issue of "last-mile" connectivity. An emerging model here is the use of intermediaries between the banks (situated in towns and larger habitations) and the beneficiaries (resident in villages). These intermediaries, called banking

correspondents, provide services of withdrawal and deposit with the help of Internet-enabled portable devices that record these transactions in real time. Internet connectivity is provided through the usual mobile phone networks.

Authentication systems require verification of the identity of the beneficiary. In a digital system, this can be done through a user-supplied numeric code or password. More secure systems rely on biometric identification. India has a nationwide project to store biometric data about its residents. In applications to the delivery of public services, the service provider can use it to verify the identity of the recipient. This does require biometric scanners. However, they are easily built into the portable Internet-enabled devices used for recording transactions.

Until a decade ago, cash transfer feasibility was restricted to areas with a high density of payments systems, such as the big cities. This is not so anymore.

### **Challenges to Cash Transfers: The Paternalism Argument**

The economics case for cash transfer is that it allows people to make their own spending decisions. However, this is exactly what bothers cash transfer opponents. To them, it is not self-evident that individual decisions are made wisely. The goal of food subsidy is to increase food intake and improve nutrition. This is furthered only by the supply of food and not cash, which can be dissipated in various ways.

Paternalistic arguments are particularly appealing when men receive cash transfers and use it for their own and not their families' self-interest. The argument is that men will use the cash for alcohol and cigarettes. There is anecdotal evidence that some money from cash transfers is diverted to undesirables such as alcohol. One of the problems in coming up with empirical evidence regarding this phenomenon is that in surveys people are very unlikely to report alcohol purchases from cash transfers. However, certain studies have tried to get indirect evidence. In Somalia, for example, a post-transfer monitoring team conducted interviews with qaat (a kind of drug) traders to see if there had been any increase in sales following the cash distribution. The team found that "there were no reports at the household level of cash use for qaat purchase. Focus group and key informant interviews showed that although there did appear to be a short-lived increase in business for qaat dealers, this reflected the circulation of cash among the business community rather than a usage among drought-affected vulnerable pastoralists" (Narbeth 2004).

The overwhelming evidence has been that cash transfer programs work and recipients do spend the cash received on necessary goods. Table 1 (reproduced from Harvey 2005) summarizes the findings for a range of cash transfers done in different countries. The observations do not give a great cause for alarm over the misuse of cash transfers. Note that the underreporting bias that applies to alcohol, cigarettes, and drugs does not apply to the surveys in Table 1, which look at the change in only expenditures on food and other essentials.

Table 1: Spending of the cash received in cash transfers	
Project	Spending
A 2003–2004 emergency cash grant in Sool/Sanaag, Somalia by Horn Relief and NPA	Debt, food, water, medicine, soap and transport
A cash-for-work project in Meket and Wallo, Ethiopia, by Save the Children (2001)	food, secondhand clothes, basic necessities, farm tools, seed, chickens, and repaying loans
Cash-for-work project by Ethiopian Red Cross Society/International Federation of Red Cross in Ethiopia in 2000–01	Cheap food grains, petty trade, and debt repayment
Cash payments as part of an agricultural rehabilitation package implemented by the Red Cross in Guatemala and Nicaragua after Hurricane Mitch in 1998	Mainly food, medicines, agricultural inputs, chickens, pigs and tools

Cash as part of a repatriation package in Cambodia in1992–93	Mainly building materials, land, or housing plots to establish small businesses, assist relatives in incomegenerating activities, and find family members.
Cash-for-work programs by Oxfam in Kitgum, Uganda, 2001	Food, livestock, basic household utensils, school fees
Oxfam, cash-for-work, Turkana, 2000–03	Food not in the relief ration, debts, school fees; lump- sum payments tended to be used to buy productive assets such as livestock, stock for shops, and donkey carting
Oxfam in Bangladesh, 2001	Food, debts, school expenses, clothes, livestock, and fertilizer
Cash grant program in response to the 1999–00 floods in Mozambique	Household goods, food, clothes, seeds, construction materials, and livestock
Cash grants following1999–00 floods in Mozambique	Household goods, clothes, livestock, food, seed, and construction materials
Cash-for-work in Zambia, 2002, by HODI (a Zambian nongovernmental organization)	Maize, grain grinding, basic essentials (salt, sugar, soap, matches), vegetable seeds, investment in small businesses
Save the Children cash-for-work in Democratic Republic of Congo	Women reported that men spent cash on gifts, debt repayments, and beer. Women spent the money on food,school fees and household items
Swiss Agency for Development and Cooperation cash grants in Mongolia, 2002	The money was spent mostly on animals (50%) and on food, clothes, housing repair, and debt repayment
Swiss Agency for Development and Cooperation cash grants in Moldova,2003	Food, medicine, clothing, heating, land tilling, seeds, paying land tax, and debt repayments

Source: Harvey (2005)

Most recently, Cunha (2010) used a randomized controlled trial in rural Mexico to compare the benefits of in-kind transfers with those of cash transfers and found that in-kind transfers did not result in better outcomes than cash transfers though they entailed 20% more administrative costs. Cunha concludes:

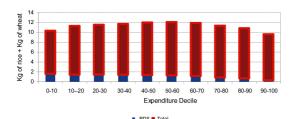
Importantly, households do not indulge in the consumption of vices when handed cash. Furthermore, there is little evidence that the in-kind food transfer induced more food to be consumed than did an equal-valued cash transfer.... There were few differences in child nutritional intakes, and no differences in child height, weight, sickness, or anemia prevalence. While other justifications for in-kind transfers may certainly apply, there is minimal evidence supporting the paternalistic one in this context.

#### The Fungibility of Transfers

Cunha's (2010) findings point to the fact that different ways of directly transferring food subsidy (in-kind of cash) have one thing in common—the subsidy transferred ends up becoming fungible. This contests the assumption of paternalistic arguments that in-kind transfers make people consume more food than they would with an equivalent value of cash transfer.

In economic theory, the paternalistic assumption is valid only if (1) the in-kind transfer cannot be resold and (2) the transfer (i.e., the provision of food) is larger than what the household would voluntarily consume in its absence. If either of these is violated, the in-kind transfer is equivalent to a cash transfer in terms of impacts on consumption choices. The first condition is obvious: without it, the in-kind transfer would be freely transacted and would be equivalent to a cash transfer.

To see the force of the second condition, consider Figure 3. It shows for India the monthly per capital consumption of rice and wheat for different expenditure deciles of the population. In this figure, 0–10 is the bottom-most decile of the population when ranked by expenditure. The average consumption of rice and wheat for every person in this decile is a about 10 kg per month, of which the PDS supplied a little less than 2 kg. Similar interpretation attaches to the other bars. It is clear that the second condition is violated.<sup>9</sup>

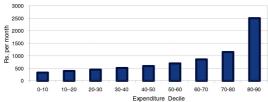


Click to view larger

Figure 3: Per capita grain consumption, PDS and total, 2004–05

Source: Roy Chaudhuri and Somanathan (2011)

Even if the subsidy transfer were to increase 5 kg per person (as proposed in the food security act), it would still fall short of what households purchase anyway. So even though it is an in-kind transfer, households save the money that would have been used to buy food to purchase other commodities. The point is not that in-kind transfers will not increase food intake but that the impact may well be no different from that of a cash transfer.



Click to view larger

Figure 4 : Per capita consumption expenditure by Expenditure Decile, 2004–05 Expenditure Decile

Source: Roy Chaudhuri and Somanathan (2011)

In fact, it is likely that whatever the form of subsidy, the effect on grain purchases will be small. Figure 4 shows the average total consumption expenditure per person within each of these deciles. From both these figures, it is clear that despite wide differences in total consumption expenditure the amounts of wheat and rice purchases do not differ that much between the rich and the poor. As the poor become better off, the major impact of their expenditures will be not on grain intake but on other foods and other commodities.

An example of the fungibility of food subsidies comes from the work of Jensen and Miller (2011). In two regions of China, they offered subsidies on the purchases of the basic staple (rice in Hunan and wheat flour in Gansu) to randomly selected poor households for a period of five months. Households were given vouchers that could be redeemed at local grain shops. Households were not permitted to resell the vouchers or the goods purchased with the vouchers. They found no evidence that subsidies increased the consumption of the subsidized staple.

The fungibility of transfers means that it is exceedingly difficult for society to make sure that the poor utilize the aid they receive for the intended purpose of nutrition. Every household has its own priorities, and if a particular household decides to buy a cell phone instead of improving their food basket it may very well be that they feel a stronger need for that phone than for more calories. In short, there is a limit to the control that a society can exercise over individual lives (Banerjee and Duflo 2007, 2011).

The implication is that both in-kind transfers and cash transfers are essentially means of income support. When

that is the case, the task of policy is to find the best mechanism for income support. Paternalism goals are irrelevant because they cannot be achieved anyway.

Between the extremes of in-kind transfers through government procurement and direct cash transfers are other intermediate models. A well-known model is the food stamps system of the United States. Here, beneficiaries are given stamps or coupons of fixed monetary value, which are then redeemed in stores.<sup>10</sup>

The stamps can be redeemed for only permitted foods. The resale of stamps and their use as general currency is prohibited. The supposed virtue of such "restricted" cash transfer systems is the paternalism goal of boosting food consumption. However, if such effects are negligible or absent, then the appeal of hybrid models is not clear. Compared with a cash transfer system, a food stamp/coupon model is more demanding. The additional requirements are systems of redemption at stores and the reimbursement of stamps by the government. In addition, it would also be necessary to audit and enforce the legitimate use of stamps.

### Challenges to Cash Transfers: The Absence of Self-Selection?

Another justification of in-kind transfers is that it leads to self-selection of only the truly needy. The effectiveness of self-selection unfortunately depends on the relative inconvenience of buying in a ration shop or even having a lower quality of food available in ration shops. The inconvenience of standing in a queue for buying something from a ration shop could be perhaps enough to deter the rich from taking advantage of it except for the fact that they can send their domestic help for such chores. A cash transfer with biometric identification would make the self-selection work more effectively, thus making even universal coverage affordable.

### **Challenges to Cash Transfers: Inflation**

An infusion of cash in a local area could give rise to a sudden increase in prices. In an environment where the markets are not well developed, the rise in prices may not trigger imports from other areas to bring down the prices in a short time. In-kind transfers of food may induce an increase in demand for nonfood items but will not cause food price inflation. Clearly, this is a real concern about cash transfers, and it suggests that cash transfers are more appropriate for the areas where the markets are well developed.

### **Challenges to Cash Transfers: Price Fluctuations**

The most serious objection to any sort of cash transfer is that food prices fluctuate and that a commitment to the poor in terms of a certain quantity of food per person cannot be maintained very easily. Consider the logistics of the problem. Suppose it is decided to give each household 25 kg of grain each month at a subsidized price and the subsidy amount required for a recipient to purchase that much grain is deposited into her account at the beginning of the month. If the market price has risen by 10% by the time the recipient goes to buy the grain, the subsidy amount would fall short of what is required. The subsidy amount should therefore be adjusted as the market price changes. It is, of course, expensive to adjust the subsidy amount too frequently, and the cost of not adjusting it frequently enough will be borne by the poor. <sup>11</sup> This can be an objection against any cash transfer scheme.

### In-Kind Transfers and the Market Price of Food

What happens to the market price of grain under cash and in-kind transfers, respectively? The question is important because, in practice, it is difficult to devise a perfect safety net. Some of the poor could be left out even if the coverage was meant to be universal. Moreover, if a policy intervention causes a rise in the market price of grain, the nonpoor who are not entitled to a food subsidy would be adversely affected, and this would make the scheme politically difficult to implement.

Grain markets have a well-defined seasonal pattern. Price levels are at their lowest at harvest time and then rise through the year to cover the costs of carrying stocks. Grain prices can be higher either because of a higher harvest price or because of greater margins of storage and distribution.

When governments procure, the initial harvest price is determined not by the forces of supply and demand but by the support price set by the government. For politicians, the demand for a higher support price affords an

opportunity to mobilize a constituency. In India most of the grain is procured from two states—Punjab and Haryana. These two surplus states have a powerful farmers' lobby that the local governments must placate. As a result, the support price, and hence the harvest price, is typically determined through bilateral bargaining between the central government and the state governments. Given the nature of parliamentary democracy in India, the ruling party cannot ignore the votes in these surplus states, and consequently the outcome of the bargaining game is a price that is higher than it would otherwise be (i.e., cash transfers). Hence, there could be a great deal of opposition to a cash transfer system from the procurement granaries of Punjab and Haryana. Though what we have described is specific to India, such a situation may occur wherever price is determined through the political process.

The power of the farm lobby to dictate prices does vary with circumstances. Shortage in the world market reduces the threat of imports and increases their power, but their power diminishes if government stocks are far in excess of need.

Government intervention could also impact storage and distribution margins. Near-universal food subsidies could leave the government as the overwhelming dominant player in grain trade. The monopoly of government agencies could leave their costs unchecked by competition.

## Lessons from Social Assistance Programs across the World

The accumulated record of social assistance programs across the world over the last four decades offers some clues on what works and what does not in developing countries. Some of these programs were designed explicitly to enhance the access of the poor to food. Others were designed broadly as social assistance programs for the poor but were assessed in terms of their impact on the access of the poor to food. It is safe to say that many of these programs did have a beneficial impact on the nutritional intake of the poor. What is missing is a careful comparative assessment of their effectiveness in terms of their costs, and this is what would give us a better idea of whether they are worth emulating. All the same, some of these programs earned a reputation as successful and others not so. In either case, we would like to probe why that might be so.

Some of the earlier programs that have been subjected to academic analysis date to the 1970s and 1980s. An interesting case study is Sri Lanka, a country that gained a reputation for being able to raise its human development index despite having a relatively low per capita income (Edirisinghe 1987). During Sri Lanka's post-Independence period through 1979, they had a system of ration shops through which subsidized rice was distributed to about half the population. The price subsidy to rice was extremely beneficial to the Sri Lankan poor. Sri Lanka had, however, maintained an overvalued exchange rate, and that, along with other macro policies, generated severe balance of payments difficulties, which brought on International Monetary Fund (IMF) intervention. The IMF sponsored structural adjustments, as was common under the circumstances, had as their first priority a severe cut in the government expenditure. The structural adjustment included a replacement of the rationing system with food stamps. The food subsidy share in total government expenditure fell from 15% during the mid-1970s to 3% in 1984. The benefits of food subsidy fell immediately to 83% of what they were before the structural adjustments. Food prices rose under the restructuring, and since the food stamps scheme was nonindexed real benefits were reduced to 43% by 1981-82 of what they were in 1979. Food price subsidies formed 18% of the budget of an average household; under the food stamp scheme it dropped to 9.6%. However, targeting improved under the food stamp scheme. Under the rationing system, only 50% of the total outlays in subsidy went to the bottom 40% of the households that included most of the households consuming less than the recommended energy allowance; under the food stamps scheme this number went up to 66%. But since there was a net reduction in the total real subsidy, the nutritional status of the poor worsened. Per capita calorie consumption of the bottom 20% declined about 8% from an already low 1490 calories during 1978-79 to 1368 calories during 1981-82.

It is clear from the previous account that the change from an in-kind transfer system to a restricted cash transfer system (food stamps) took place during a period when the overriding consideration of the government was budget cutting. The change in the system was undertaken with perhaps an explicit intention of reducing the net subsidy as evidenced by the issuance of nonindexed food stamps in an environment where price rises were inevitable. The Sri Lankan experience raises a red flag in the minds of skeptics that a proposal to change a food transfer system to a cash transfer system may be a Trojan horse to reduce the level of support to the poor.

Jamaica is another example of a country where a general price subsidy program was replaced by a food stamp program. In the aftermath of the worldwide financial turmoil in 1980, the Jamaican government was compelled to undertake austerity measures. One consequence was the total elimination of general price subsidy and its replacement by a targeted food stamp program and an expanded school-feeding program. Grosh (1992) gives an appraisal of the food stamps program. Food stamps were issued to 142,000 beneficiaries out of a population of 2.2 million within seven months of the announcements of the program. The administrative costs were just 9% of the total cost of the program. The gains in targeting were impressive. With food stamps, 57% of the benefits accrued to the bottom 40%, while only 8% accrued to the wealthiest quintile. With a general price subsidy, these numbers were 34% and 26%, respectively. What about the impact on nutrition? No systematic study that we know of exists that could quantify what part of the nutritional impact over the next few years could be attributed to the change from general price subsidy to the food stamps in Jamaica. All we have is circumstantial evidence. For example, according to Grosh, malnutrition among children below an age of five years declined from 14.6% in 1985 to 7.3% in 1989, and the food stamp program was launched in 1984.

A poster child for a cash transfer program of recent vintage is Mexico's PROGRESA program, launched in 1998. It provided cash transfers to families conditional on the regular attendance of their children in schools and health clinics. The idea was to provide a safety net while ensuring human capital formation. According to a study by Hoddinott and Skoufias (2003) of 24,000 households from 506 communities, the households receiving PROGRESA benefits had a caloric intake that was 7.1% higher than those that were not. More importantly, the quality of their nutrition, as measured by the caloric value coming from vegetables and animal products, was higher. The program now covers 25% of Mexican population. The success of the program in achieving the desirable impact at a reasonable cost has made 30 other countries emulate it.

Another very successful conditional (on regular school attendance by children) cash transfer program that is being copied everywhere is Brazil's Bolsa Familia. It is similar in structure to Mexico's PROGRESA. A debit card is issued preferably to a female head of a family whose income is below poverty level. The program has been found to be successful in many dimensions. It is well targeted: 80% of the benefits go to the poor. In 2006, it cost only 0.5 % of the Brazilian gross domestic product (GDP) and covered 11.2 million families. It is credited to have had significant impact on poverty as well as income inequality in one of the most unequal countries (Ravallion 2011).

We have discussed only a few country studies. Unfortunately, we have no systematic comparative studies that would allow us to pass a definitive verdict on the relative merit of cash and in-kind transfers of food subsidy. However, it would not be unfair to claim that cash transfers tried across the world are administratively cheaper to implement and are used by the recipients mostly for legitimate uses. Several countries have used them successfully, and more and more countries are following suit.

### Opposition to Cash Transfers: Interests and Ideology

Despite the available evidence and a persuasive case for cash transfers, there seems to be a strong reluctance among politicians as well as civil society activists to move away from in-kind transfers. Why? As far as the politicians are concerned, we cannot discount vested interests. In India, this is best illustrated by the power of the grain procurement lobby. 12 It also consists of the local politically connected interests that run the ration shops and make huge profits by diverting subsidized grain to the open market. Indeed, it is the prospect of such profit that leads the bulk of ration shops to be cornered by local politicians or their cronies.

We believe that there may also be subtler factors influencing the motivations of politicians. For example, subsidizing the essentials of subsistence is powerfully symbolic in keeping alive the conscience of an otherwise unjust society. After all, food subsidies were not constructed as technocratic solutions to malnutrition and hunger but as one of the important means to pacify the poor multitudes. Their historical origins explain why paternalism sits so well with food subsidies. It may also explain why politicians long accustomed to being arbiters of food prices may be reluctant to embrace the unknown political potential of cash transfers.

Civil society activists and especially those groups advocating and working to expand the rights of the poor—for food, health, education, and other public services—have opposed cash transfers for the most part. Their steadfast commitment to in-kind transfers is deeply ironical. A tool of social pacification is held up as a radical means of affirming the rights of the poor. Although they are deeply distrustful of the state, the enlargement of subsidies via

in-kind transfers expands state powers and intervention to unprecedented levels. Their preferred method for controlling the incentives for cheating and fraud built into the design of in-kind transfers is an elaborate policing system stretching upward from the community to the bureaucrats and to the judiciary. Although they live and work among the poor, activists are more reluctant to grant agency to the poor than the cash transfer advocates (often economists) who have little contact with the lives of the poor and analyze poverty only in terms of statistical aggregates.

The activists do not all speak with one voice, but many of them are driven by idealism of a sort that compels them to evaluate economic policies not just by the outcomes but also by the perceived purity of the means employed to attain those outcomes. Cash transfers are tinged with their association with markets, the World Bank, and neoliberal economics. Although the case for cash transfers is just that it gets rid of the incentives for corruption, it smacks of a market-based solution and therefore seems distasteful. Electronic transfers of cash and the use of biometric identification seem like technical fixes that rely too much on the profit-seeking banking and corporate sector.

But the government too is not to be trusted. It has also lost its credibility. It is corrupt and incompetent and does not really work for the poor. The role of keeping the governments accountable has therefore been taken up by the civil society activists. Indeed, this arrangement has worked to some extent in India, so far typically by getting progressive legislation passed by the parliament that requires government action. However, since the government is corrupt, the legislation is monitored using the muscle of collective action at the local level. For example, organize the local community to monitor, to make grievances, and to picket. A vigilant and alert local community is therefore the favored solution of the supporters of PDS to the corruption in the system.

While the notion of a local community has been criticized elsewhere, the concept of a village community capable of collective action toward a common goal has immense appeal to those who value democratic politics. <sup>13</sup> The mobilization of communities around their right to food and getting them to collectively police the distribution of government grain supplies builds local organizations and community solidarity that could be transferred to other causes as well: the right to health, education, and especially the right to their land and water resources (against depredation by the government and corporations). Therefore, in this narrative, the "democratic struggle" is a value in itself. In this larger conception of rights and politics, the "narrow" pragmatism of an economist does not stand a chance.

A hard-headed look at food subsidies might have, however, convinced some of the advocacy groups among the poor that subsidies (in-kind or cash) are primarily distributive measures, and hence no particular value ought to attach to the means of delivery. Only the outcomes ought to be valued. Such a statement would be dismissed, though, as deeply ideological by the advocates of in-kind transfers. In their conception, cash transfer marks the retreat of the state from its commitment to the inclusion of the poor and the deprived in the democratic process.

#### **Concluding Comments**

The only sorts of arguments that can become compelling against cash transfers are whether they are feasible and whether they will indeed reduce corruption. On feasibility, one can ask whether cash transfers are possible in the Indian setting where the banking network is not widespread in rural areas and most people do not have bank accounts. On corruption, one can ask whether cash cannot be siphoned off just as easily as grain. Indeed, these two questions are related, since for cash transfers to be able to reduce corruption they need to be a part of a well-functioning system.

As discussed earlier, new technologies that allow secure biometric identification and permit access to bank accounts through cell phone networks hold great promise. Any potential beneficiary will then be able to have a bank account in which the due amount can be directly deposited bypassing the local bureaucracy that is often responsible for siphoning off the money. Notice that new technologies also can be applied to reform in-kind transfers. Real-time policing of the supply chain and secure biometric id can reduce corruption losses. However, these reforms will not address the potential adverse impacts of expanded government involvement in procurement.

But is it conceivable that a system can create and maintain a databank for over 1.2 billion people and use it without significant errors? This is a reasonable doubt, and all we can hope for is that there will be many pilot projects and experiments so that we get to examine whether the system works. The best possible scenario is where states are

allowed to experiment with different systems including cash transfers, reformed in-kind transfers, or hybrid models (e.g., cash transfers in cities and in-kind transfers in financially underdeveloped regions). We will learn a lot about the strengths and weaknesses of various ways to deliver food subsidy, and the most effective ways will sought to be emulated across the country.

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#### Notes:

- (1) For accounts of India's early food policy, see Bhatia (1970) and Chopra (1981).
- (2) This is acknowledged officially. The latest such statement is from the Planning Commission (2011, p. 77), which stresses that unless the supply chain is modernized and private investment encouraged, "the intermediation process for farm products, especially perishable products, will remain antiquated with considerable wastage, low net realization to the farmers and high consumer prices."
- (3) There are many such regulations intended for the protection of either producers or consumers. For instance, private players can buy produce only from the so-called regulated markets. In particular, they are not permitted to directly buy from farmers or to set up their own markets. The reforms of the 2000s aimed to dilute the monopoly of these regulated markets.
- (4) The government did incur the displeasure of farmers and pressure by farm lobby states and threats of procurement boycott led to substantial hikes in procurement prices in the 2008 season.
- (5) As might be expected, the aggregate picture masks the variation across states. In general, the southern states have a better record in delivering food subsidies.

- (6) The local-level politics that accommodate and encourage rent seeking in the PDS is described by Mooij (1999, 2001).
- (7) Their formal involvement was restricted to the first draft.
- (8) This is not to say that identification by local bodies will always fail. Indeed, it could well be the preferred option in a set of none too promising alternatives.
- (9) That is, if the subsidy was discontinued, per capita grain consumption will not drop below 2 kg per month.
- (10) Paper stamps have now been replaced by debit cards.
- (11) Of course, the shortfall this month can be added to the amount sent to the consumer next month. In addition, the market prices can go down as frequently as they go up, so over a long time it can be a wash.
- (12) This includes the farm surplus states as well as the oversized government agencies in charge of procurement.
- $(^{13})$  Kotwal, Murugkar, and Ramaswami (2011) cast a critical eye on whether local communities can discipline the PDS.

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