

market. The government constituted a 'National Investment Fund' in January 2005 into which the realization from sale of minority shareholding of the government in profitable PSEs would be channelized. This fund would be maintained outside the Consolidated Fund of India and the income from this Fund would be used for the following purposes: (i) invest in social-sector projects that promote education, health care, and employment and (ii) capital investment in selected profitable and revivable PSEs that yield adequate returns, in order to enlarge their capital base to finance expansion or diversification.

The total quantum of receipts on account of privatization during 1991–2005 is Rs 49,214 crore. This is just a little above the half mark figure of the target receipts of Rs 96,800 crore for this period. Even though there is a strong reform lobby that calls for rapid mass privatization in India from time to time it would be well to remember that the experience in Russia and Eastern Europe alluded to in the earlier section is far from reassuring.

After the initial phase of enthusiasm in the 1980s and then the onrush during the 1990s, we are now at a stage where we can take a more measured approach to privatization. There is certainly no clear superiority of private vis-à-vis public ownership from the standpoint of economic theory. More than ownership it would seem that the degree of competition and the regulatory environment are more relevant to productive efficiency. The empirical evidence presents a mixed picture. As the world environment gets more competitive it would be necessary to put the sizable assets of the PSEs in countries like India to more productive use. Ultimately it is this consideration that should be of relevance rather than the simplistic presumption that the public sector is necessarily inefficient or that privatization is an all-purpose panacea.

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### ■ The Public Distribution System

The public distribution system (PDS) refers to a network of retail outlets (popularly known as 'ration shops') through which the government sells grain (principally, rice and wheat) and kerosene. The scope of this entry is restricted to the public distribution system for grain. Grain sales occur at a fixed price called the 'issue' price that is typically lower than the market price. Two conditions govern the sale of subsidized grain. First, the buyer of grain must possess a 'ration card'. Second, grain purchases are subject to a quota. PDS is supported by a procurement operation that procures and funnels supplies to the public distribution system. Through the Food Corporation of India (FCI), the government procures grain at the 'procurement' price and then stores and transports it to various consuming locations.

Till the late 1960s, the principal policy question was how food could be procured cheaply. Towards this end, the government imposed mandatory levies on rice mills, instituted zoning regulations on movement of grain from surplus to deficit areas (so that prices were lower in the surplus zones), prohibited external trade except on the government account, and severely curtailed large trading operations through 'anti-hoarding' controls on stocks.

The food policy context changed in the 1970s with the technological breakthroughs of the Green Revolution. Earlier concerns about movements in inter-sectoral terms of trade adverse to industry faded away. With large food surpluses, declining real prices of food grains, and greater political clout of farmers, the emphasis of food distribution shifted to support of farmgate prices, stabilization, and subsidy for lower income groups. Food subsidy as a major item of government expenditure made its appearance around this time. Over time, the principal policy issue became finding acceptable ways to cap the food subsidy. In this background, the idea that subsidies ought to be targeted to the poor gained support in the late 1990s.

With rapid economic growth, the policy environment shifted in the late 2000s. There is concern that the

income gains from growth have not been shared evenly. Ensuring that the poorest groups benefit from growth will require many things; one of them is using the expanding resources of the state to directly help the poor with basic goods and services, such as food, education, and health. The United Progressive Alliance (UPA) that came to power in 2009 promised a National Food Security Act that would create legal entitlements to subsidized food for the poor. The scope and form of such an Act is the subject of current debate.

### *Issues in Intervention*

In principle, food market interventions are supposed to enhance the efficiency of food markets as well as improve the equity of food market outcomes. The efficiency effect arises from price stabilization. As private storage of food grains is typically unprofitable across years, markets do not supply price stabilization even though it is socially desirable, as poor risk-averse food consumers cannot obtain credit or insurance against crop failures. The reduction in risk is beneficial for producers as well. Even with stabilization, the market outcome involves unacceptably low food consumption for the poor. The equity objective of food market intervention is to augment the food consumption of such target groups by offering subsidies.

Both these goals can be achieved by procurement, storage, and distribution. To meet the equity goal, the government offers limited quantities of food to poor consumers at subsidized prices. Suppose this requires an annual distribution of 15 million tonnes of grain. The supply of this grain is secured by procurement. However, annual procurement could vary depending on the size of the harvest and available stocks. In times of abundant supplies, the government will wish to procure more than 15 million tonnes (and build stocks) while the procurement target would be lower than the distribution target (drawing down stocks) in times of a shortfall. Such a scheme could smooth out the inter-temporal variability in crop harvests with the exception of very unusual circumstances, such as a sequence of record harvests or a series of disastrous crop failures.

In practice, food market interventions rarely approximate the ideal. The goal of stabilization is to stabilize prices around their mean. However, technological progress and Engel's law (that demand for food grows slower than income) typically tend to decrease the relative price of food. As a result, interventions that try to stabilize with reference to historical supply levels tend to carry too much stock. A greater difficulty is that price stabilization of food crops

leads producers to allocate resources away from non-food crops to food crops. Such a supply response also calls for adjusting interventions to higher supply levels. However, as market interventions develop political interests, price stabilization is eroded by the politics of supporting producer incomes.

On the distribution side, the issue is that while the poor can be counted (by means of surveys), it is not easy to identify them. The difficulty is that the criteria to identify the poor cannot be those that can be claimed or mimicked by the non-poor. Targeting schemes usually involve a trade-off between errors of exclusion (when some members of the target group are excluded from subsidies because of stringent targeting criteria) and errors of inclusion (when some members of non-target groups receive subsidies because of minimal targeting criteria). Subsidies with universal access (as was the case with the PDS prior to 1997) minimize exclusion errors but maximize inclusion errors.

### *The Food Subsidy*

The food subsidy arises from government procurement and distribution of two commodities: wheat and rice. Significantly, coarse cereals (bajra and jowar) do not receive subsidies even though in some states they are major components of food budgets of poor households. In the past subsidies have been offered on other commodities, such as edible oils and most notably sugar. These are now unimportant. The food subsidy consists of two components. The first component is the distribution subsidy that comes about from the fact that the difference between the issue price (at which the government sells) and the procurement price is not enough to cover the costs of distribution. The second component is the cost of carrying buffer stocks.

In the 1970s, the food subsidy averaged about 0.45 per cent of GDP. It rose to 0.54 per cent in the 1980s and was at about the same level (0.52 per cent) in the 1990s. In the 2000s (up to 2007–8), the food subsidy averaged 0.8 per cent of GDP and about 7.5 per cent of tax revenues of the central government. This indicates the pressure of the food subsidy on central government finances, as it is an expenditure of the central government alone.

The division of the food subsidy into the distribution and buffer stock subsidy varies from year to year. However, it is not uncommon for the buffer stock subsidy to exceed the distribution subsidy. Indeed, this was the typical pattern in the late 1990s. This happens whenever the government carries large stocks.

### *Stabilization*

In an economy where the government stabilizes annual supplies, procurement and public distribution sales should balance over the span of a crop cycle (typically about 5–6 years). This was the case over the two decades between 1972–3 and 1991–2. However, since 1992–3, procurement has been consistently larger than public distribution sales and the government has had to cope with higher than desired grain stocks. The late 1990s and the late 2000s are two periods when government stocks exceeded 50 million tonnes.

The failure of stabilization and the accumulation of stocks are commonly attributed to the political clout of the farm lobby. Grain surpluses are regionally concentrated—in Punjab, Haryana, Uttar Pradesh, and to a lesser extent in Andhra Pradesh. It is argued that in the 1990s these states were able to exercise greater influence over the procurement prices determined by the central government because of the formation of coalition governments at the Centre. While political interests have undoubtedly developed around the government's market intervention, there are other factors as well.

Once public stocks get large it can be hard to get back to sustainable levels because of price expectations. For a grain seller, the opportunity cost of sale to the government is the market price of grain but at a later point in time (as the procurement price is fixed at the same level throughout the year). Price expectations are in turn dependent on future government actions. When government stocks are large, it is natural to expect future sales from these stocks (open market sale is one of the ways by which the government brings down stocks from unwanted levels) which reduce private storage. Indeed, these stocks can be so large that private storage might be negligible, as happened in the wheat market in 2001. At that time, the wheat stocks with the government were equivalent to the annual market supplies. Grain stocks were brought down by a combination of special measures, including subsidized exports, expanded welfare programmes, and open market sales, as well as the fortuitous circumstance of a drought in 2002–3.

### *Targeted PDS*

Prior to 1997, entitlement to the PDS was not contingent on household characteristics. The most significant policy initiative in reforming food policy was the introduction of the targeted PDS (TPDS) in 1997. Subsidies depend on whether the household is classified as above poverty line (APL), below poverty line (BPL), or poorest of the poor (POP) identified by the Antayodaya Anna Yojana programme.

Presently, all households are entitled to a monthly quota of 35 kg of rice or wheat per month. In principle, the prices of subsidized grain are supposed to be fixed with reference to the government's 'economic cost', that is, the cost incurred by government agencies in procuring, storing, transporting, and distributing grain. BPL households are supposed to receive 50 per cent subsidy (that is, 50 per cent of the economic cost) while APL households are not supposed to be eligible for any subsidy. The prices for POP households are fixed below that of BPL households and not with reference to economic cost.

In practice, the subsidized prices fixed in 2002 have not been revised despite increases in economic cost. As a result even APL households received a subsidy in excess of 50 per cent of economic cost in 2008–9. The qualification to this is that the central government does not guarantee full grain supply to state governments for their APL requirements. The actual allocation depends on past purchases and ad-hoc considerations. As a result, the grain quota for BPL households ranges between 10–35 kg per month across different states. The total number of households within a state that are eligible to be classified as BPL is made through an expenditure sample survey administered by the central government.

The list of BPL beneficiaries is prepared through a separate BPL census. In the latest census of 2002, households received scores based on 13 criteria. BPL households were identified as those which fell below a cut-off score (which was decided by the respective state governments). If the total identified BPL households exceeds that which is estimated by the central government, the subsidy on the excess households has to be borne by the state government.

### *Failure of Targeting*

The National Sample Survey (NSS) of consumption expenditures of households in 2004–5 showed that only 40 per cent of rural poor households and 27 per cent of the urban poor households (that is, households with expenditures less than the official poverty line) possessed either a BPL or a POP entitlement. This is the exclusion error of targeting. The remaining poor households either had no entitlement or an APL entitlement.

The inclusion error of targeting is the proportion of BPL and POP beneficiaries that are non-poor—68 per cent in rural areas and 51 per cent in urban areas. High inclusion errors are to be expected. First, since there are benefits from being categorized as BPL or POP, the process of identification of poor is vulnerable to manipulation and capture by non-poor groups. Second, it

is hard in practice to distinguish households who are just above the poverty line from those just below it. India's official poverty line measures bare subsistence and so households above this threshold may also exhibit signs of income stress. Indeed, 70 per cent of BPL and POP beneficiaries in rural areas and 78 per cent in urban areas are households with expenditures less than 1.5 times the poverty line.

### *Efficiency of the Public Distribution System*

Among the poor that have BPL or POP entitlement, only 61 per cent use PDS. This suggests that many poor households do not find PDS convenient. Case studies have thrown up a variety of reasons, such as the limited liquidity of poor households (as ration entitlements can be accessed only once every fortnight rather than continuously), uncertain ration supplies, inferior quality of PDS grain, irregular hours of PDS shops, and their inconvenient location as the reasons. Ramaswami and Balakrishnan (2002) show that consumers perceive PDS grain to be of lower quality even though the government does not set out to procure such grain. This is a deadweight loss that occurs due to inefficiencies in the government marketing chain.

PDS has also been criticized for illegal diversions and for excess costs of state agencies. 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. Excess costs occur when the cost of procuring and distributing grain is higher for state agencies than for the private sector. Jha and Ramaswami (2010) show that in 2004–5, 55 per cent of the subsidized grain was illegally diverted. They also show that only 29 per cent of the total food subsidy expenditures by the government reached the households. The remaining 71 per cent was absorbed by excess costs (28 per cent) and illegal diversions (43 per cent).

### *Future Directions of Food Policy*

The coalition of political parties, the United Progressive Alliance (UPA), that came to power in 2009 is committed to a food security safety net. It is proposed that the poor have legal entitlements to subsidized grain. The debate is about the content of this legislation. Essentially, there are two issues. The first issue is about the scale of the food subsidy programme. Should it continue as a targeted programme or should it have universal access? The second issue is about the form of the subsidy programme. Should the subsidy programme be modeled on the public distribution system or are there alternative forms of delivery?

The massive exclusion errors of PDS targeting question the continuance of targeted programmes. Till a reliable way of identifying the poor is found, near-universal coverage will be necessary to avoid exclusion errors.

The staggering inefficiency of PDS means that alternatives to it will have to be tried. Chhattisgarh has claimed significant reduction in corruption by computerizing the supply chain from paddy procurement to the distribution of rice and making public the movement of grain from warehouses to retail outlets. It is suggested that this has improved transparency and governance.

Food coupons or food stamps are an alternative way to deliver food subsidies. Smart card technologies can also be employed for this purpose. Under such systems, the food subsidy is directly transferred to the beneficiaries. Households use this transfer to buy grain from designated retail outlets. Incentives for illegal diversions are eliminated because the dual price (market and subsidized price) system is abolished. Excess costs are reduced because of greater competition.

A food coupon alternative has other advantages as well. Because of limited volumes, the viability of PDS retailers is an endemic issue. This is not a problem with the food coupon system because it eliminates the dual marketing system (of private and government). Second, a food coupon system could easily accommodate additional food staples without the need for physical and institutional infrastructure (procurement and distribution) that is specially set up for that purpose. In parts of India, the poor consume 'inferior' coarse grains, such as sorghum and pearl millet which are not subsidized by the current regime. Food coupons could allow consumers to spend their budget on their preferred commodities and would therefore be less distortionary in consumption. Third, there would be greater economic access as consumers would be able to use these coupons at more convenient retail outlets. Poor consumers will be able to readily use food coupons without worrying about timing their purchases with wage payments. While there are potential issues of fraud in food coupons as well in terms of counterfeiting and improper use, it seems far easier to track and audit numerically coded coupons than to do so for physical stocks of grain. Governments sometimes balk at the costs of investing in technologies such as smart cards. The payoffs must, however, be seen in relation to the resources lost in diversions and excess costs.

The future of effective food subsidy programmes is unlikely to lie in a centralized PDS. A regionally differentiated safety net of food subsidies (but financed primarily by central government funds) is likely to offer more opportunities for designing and delivering

subsidies appropriate to local consumption patterns and capabilities.

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### ■ Public Goods

For a country that calls itself both socialist and democratic, India has historically been remarkably comfortable with dramatic inequalities in access to public goods. In 1991, after, as discussed later, considerable narrowing of the gaps, rural populations in the southern state of Kerala had more than ten times as many hospital beds per head as those in the eastern states of Orissa and Assam. The fraction of people in rural Orissa with access to medical facilities in their village in 1981 was less than 11 per cent compared to 96 per cent in Kerala. In 1991, 93 per cent of villages in Kerala had a middle school but the corresponding figure in Orissa and Assam was less than 25 per cent, and in Uttar Pradesh, the largest northern state, it was less than 15 per cent. Disparities within most of these states are equally striking: according to the 1991 Census, less than 7 per cent of the villages in Vishakhapatnam district in Andhra Pradesh had middle schools and just over 46 per cent had some educational facility, as against 55 per cent and 100 per cent in Guntur. In the district of Rangareddy, in the same state, only 6 per cent of villages had primary health sub-centres as against almost 40 per cent in Anantapur. Less than 1 per cent of villages in Vishakhapatnam had tapped water as compared to 59 per cent in West Godavari.

In part this reflects our colonial legacy: in British India, it was almost a rule that public goods were only to be built where there was some commercial benefit to be had. This, not surprisingly, led to almost complete neglect of most villages.

Village India also did not have much of a place in the Nehruvian vision of development through heavy industry. Moreover, the Gandhians in the Congress were uncomfortable with bringing change too rapidly to rural

India. As a result, villages were, for the most part, left to their own devices.

The obvious result of this was that by the end of the 1960s the villages that had relatively decent access to public goods tended to be either places that could afford to fund them out of their own resources or those that had enough political clout to extract them from a recalcitrant state.

This is clearly borne out by data from the 1971 Census on the correlates of access to public goods (Banerjee and Somanathan 2006). We use data on fifteen of the facilities that are classified as public goods in the census, which include various types of health and education facilities, water sources, and other types of infrastructure such as electricity, post offices and paved roads. Since the census does not distinguish between private and community government-owned facilities, it is not clear that all of these deserve to be called *public* goods. Our best guess is that until the 1990s there were very few private education facilities in rural areas, while the power, transportation, and communication infrastructure continues to be in public hands. We are on weaker ground when we talk about hospitals and water tanks, and, especially, wells and dispensaries. The measure of access we use is the fraction of villages in a parliamentary constituency that have the particular public good.

We obviously need to be careful about possible sources of spurious correlation: We therefore only compare constituencies within the same state and include a range of geographical controls (rainfall, climate, whether on the coast, whether mountainous, sandy, or rocky, etc.) as well as controls for population density (it is easier to serve a denser population).

Our regression results are depressingly consistent with the conventional wisdom about who has power and influence in rural India. Among the fifteen goods for which we have 1971 data, scheduled tribe-dominated areas have significantly less of ten (and more of none) while scheduled castes have less of eight and more of two. As is well known, these are the groups that are at the bottom of the Hindu caste hierarchy. We also see that the largest religious minority, the Muslims, have less of seven public goods and more of none. And, strikingly, areas dominated by Brahmins, the group that is at least nominally at the top of the caste hierarchy, have more of all the goods we would expect them to especially value given their traditional role as the repositories of written knowledge—all kinds of schools and post offices.

We also see some evidence that could be interpreted to mean that social capital matters. Areas where the population is more fragmented along caste and religious lines do worse, raising the possibility that these areas are