2 The Effectiveness of Consumer-Oriented Food Subsidies in Reaching Rationing and Income Transfer Goals

PER PINSTRUP-ANDERSEN AND
HAROLD ALDERMAN

The goals of consumer food subsidies vary among countries and over time. Analyses of food subsidies in a number of countries reveal that one or both of two goals are commonly found. These are (1) to assure that all or certain groups of households—frequently urban ones—have access to a specified minimum quantity of staple foods at "reasonable" prices, and (2) to transfer incomes to certain population groups through lower food prices or food stamps. In this chapter these two goals will be referred to as rationing and income transfer.

Although the relative importance of the two goals varies among countries, one or both are clearly of great importance in virtually all past, current, and planned consumer food subsidy programs in the developing world. In order to assist policymakers in their efforts to assure cost effectiveness in subsidy programs—or alternative measures to reach rationing and transfer goals—this chapter synthesizes and interprets experiences and findings from analyses of subsidy programs in various countries and attempts to identify program elements and relations that influence cost effectiveness.

Food Subsidies and Rationing

Food subsidy programs currently found in many developing countries were initiated for the purpose of assuring consumers—usually but not always urban consumers—access to a specified amount of one or more food staples at prices fixed by the government. Many of these programs were introduced during wartime or following poor harvests or extreme foreign exchange crises. The rationale was frequently more in terms of quantity planning than of price policy. The ration-shop schemes in India, Pakistan, Bangladesh, and Sri Lanka (now discontinued) fall into this category, along with some of the food subsidies in Egypt. The principal purpose of these schemes was clearly to reduce uncertainty at the individual house-

hold level concerning ability to acquire a minimum amount of basic staples.

These programs frequently provide basic rations to households irrespective of income level and are important components of local marketing infrastructure. The ration size is usually based on household size and age composition. Food rations in Egypt have reached more than 90 percent of the population in urban as well as rural areas (Alderman and von Braun, 1984). The subsidized food distribution system in Kerala, India, was designed to provide a fixed allowance of rice to every individual, except foodgrain producers, at a subsidized price irrespective of income level (Kumar, 1979). Similarly, up until recently, sugar rations were available to virtually all households in Pakistan, while wheat rations are not available in areas where wheat is produced in surplus (Rogers, 1978).

Ration schemes have also been used as part of policies to stabilize prices and insulate the domestic economy from price fluctuations in the international market. Thus when international wheat and rice prices skyrocketed during 1973/74, the price of wheat and rice rations in Bangladesh increased much less. As a result, the ration price of rice fell to about 24 percent of the open-market price, compared to 37 percent the year before and more than 70 percent during the mid-1970s (R. Ahmed, 1979). Sugar prices in Egypt provide another illustration: domestic sugar prices to the Egyptian consumer, while constant in nominal terms, varied from 22 percent of the international prices in 1974, to approximately parity in 1977, to 144 percent in 1978, and down to 29 percent in 1980 (von Braun and de Haen, 1983).

There are many reasons why governments may wish to control prices and assure household access to certain quantities of basic staples. Periodic food shortages or rapidly increasing food prices create social and political instability and can cause severe hardships for poor consumers. A lack of government confidence in the private food marketing system, including a perceived risk of speculative and exploitative behavior of marketing agents, may lead to direct government intervention. Furthermore, governments may wish to keep prices low for commodities generally believed to be good indicators of inflation and purchasing power, such as rice in many Asian countries and meat in parts of Latin America.

Ration schemes need not involve large price subsidies. Their success depends on whether they are able to assure households access to a certain amount of staples on a regular basis at reasonable prices. Indeed, when quantity restrictions limit imports, the domestic price of the rationed good may exceed the import price. This was observed in Egypt and Sri Lanka in the 1970s. Even in such cases, however, the ration price will not exceed the price that the same import quota would command on the open, or black, market.

Ration systems are seldom flexible in the face of changing economic conditions. Programs to stabilize the price of a certain ration often become permanent subsidies. Whether or not governments wish to do so, it is often politically difficult to increase the price of the ration at the same rate as the increase in nominal prices in the open market. The results are falling real prices of the rations, increasing subsidy, and higher government costs. The risk of an increasing gap between ration and open-market prices is particularly high in cases of local currency devaluation and rapidly increasing international prices for the rationed commodity.

Rationed commodities in Egypt are a case in point. While the consumer price index tripled during the 1970s, the nominal price of sugar and rice rations stayed constant (Alderman, von Braun, and Sakr, 1982). Similarly, although the price of the rice ration in Bangladesh increased from the mid-1960s to the mid-1970s, the increase was considerably less than the increase in open-market rice prices (R. Ahmed, 1979). Some countries with large ration schemes—for example, Sri Lanka up to 1979—have, however, not experienced such increasing gaps between ration and open-market prices (Gavan and Chandrasekera, 1979).

How successful have consumer food subsidy programs been in reaching rationing goals and what are the key conditions for success? Two indicators of success may be applied: first, the proportion of the target population covered and the cost; second, the extent to which the households covered were actually assured a fixed quantity at a reasonable price.

In general, programs providing fixed-quantity rations, whether fixed per person or per household, have been successful in reaching the population groups they were directed toward and in providing these groups with a constant supply of the rationed food at low prices. In many cases, that is achieved by using the private sector as the final outlet in the distribution network, as exemplified by the Egyptian and Pakistani ration schemes. However, some programs did not reach the population groups most in need. For example, food subsidies in Bangladesh benefited primarily urban consumers, even though a large majority of the absolute poor is found in rural areas (chapter 15). In some cases (including rural Pakistan and Bangladesh), the poor do not always draw the full quota to which they are entitled, most likely reflecting cash constraints and the costs of visiting ration centers. On the other hand, some programs, such as wheat flour rations in Pakistan, appear to have been most beneficial to low-income households (Khan, 1982), while in others, such as rice subsidies in Kerala, the poorest appear to have benefited less than the better-off consumers (Kumar, 1979). The reasons for such differential benefit distribution will be discussed later.

Food Subsidies and Income Transfers

Consumer food subsidies may be important income transfer mechanisms, thus influencing absolute as well as relative income distribution among population groups. In some cases, such income transfers are an explicit goal of subsidy programs; in others, the transfers are an outcome of subsidy policies pursued for other reasons. Income transfers through low consumer prices of foods may be pursued to strengthen the purchasing power of low-income consumers or to keep wages low. In some countries, food subsidies cause transfers from agriculture to the nonagricultural private and public sectors through low producer and consumer prices and corresponding low wages both within and outside agriculture; in others, the costs of the subsidies are covered by government outlays.

The size of the income transfers and the distribution of benefits and costs among population groups vary among programs, depending on the nature of the subsidies. Furthermore, the amount of income transfer captured by a particular population group may change over time due to adjustments in the economy. For example, the net gains to wage-earning consumers from a new food price subsidy may decrease over time if wages adjust to the lower food prices. Most of the available evidence on the effects of consumer food subsidies on income distribution refers to the short term. Very little is known about net effects after adjustments in wages and employment and other relevant economic factors have taken place. This section is focused primarily on the short-term effects; the effect of food prices on wages is discussed in chapters 4 and 22.

Distribution of Transfers Among Income Groups

Consumer food subsidies may account for a large share of the purchasing power of consumers. Because poor consumers spend a large proportion of their incomes on food, low food prices are particularly beneficial to them. There is evidence from a number of countries that food subsidies have significantly increased incomes among the poor, particularly but not exclusively among the urban poor. Thus a study of an earlier Sri Lankan food ration-shop scheme "indicates that the scheme contributed to a better standard of living among low-income groups and a more even pattern of consumption and relative income distribution throughout the society" (Gavan and Chandrasekera, 1979). The subsidized ration scheme that existed in Sri Lanka until 1979 contributed 16 percent of total incomes of the poorest 10 percent of the population in 1978/79 but less than 2 percent of incomes of the richest half of the population. The food stamp program that replaced subsidized rations contributed a slightly smaller but still very sig-

nificant proportion (14 percent) of total incomes of the poorest 10 percent in 1981/82 (chapter 18).

Research on the food ration shops in Kerala, India, shows that about half of total incomes of low-income families was accounted for by ration income, and the author concludes that "the removal of rationing would have a very serious impact on these low-income consumers" (George, 1979). Kumar (1979) found that rations supplied the bulk of rice eaten by low-income groups in Kerala and that the subsidy scheme "greatly improved the distribution of income." She further concludes that the "subsidy program was effective in raising nutrition and consumption levels of the poorest households and was more effective than other forms of direct resource transfers." In a study of the ration shops in several Indian states, George concludes that, for India as a whole, about two-thirds of the subsidies are obtained by households with annual incomes below Rs 3,600, another 20 percent by households with incomes between Rs 3,600 and 4,800, and the rest by households with higher incomes (chapter 16). The relative share of the subsidies received by the poor varies considerably among states. Thus in Kerala, the poorest 59 percent of the population received 87 percent of the subsidized grain, while in Tamil Nadu, the poorest 65 percent received only half of the subsidy. In Gujarat, the share of the subsidy received by the poor was equal to their share of the population (chapter 16).

The distribution of the benefits of food price subsidies may vary among groups of poor households, as illustrated by Trairatvorakul (1984) for Thailand. Increases in rice prices by 50 percent through reductions in export taxes and associated consumer price subsidies would increase the percentage of urban households below the poverty line from 8 to 13, while reducing the percentage of rural household below the line from 28 to 27. However, certain rural poor would experience large losses, while others would gain.

In Pakistan, subsidized food rations had a very limited effect on incomes of the rural poor in general, while the urban poor gained more than 10 percent of their real incomes from these subsidies (chapter 17).

In a study of the food ration-shop scheme in Bangladesh, R. Ahmed (1979) concludes that "rationing has aided the urban poor quite successfully, since without it the consumption levels of the poorest 15 percent of the urban population would have been 15 to 25 percent lower in 1973–74 than they were." A strong urban bias was found in food subsidies in Bangladesh. Thus while most of the poor people reside in rural areas, two-thirds of the subsidized grain was distributed to urban areas. Yet the study concludes that expanding the rationing program in the rural areas would be extremely expensive and would, if based on external food aid, cause

strong downward pressures on domestic food prices and disincentives to domestic producers.

A strong urban bias was also found in food subsidies in China, where it is estimated that only 10 percent of the benefits were captured by the rural population (Lardy, 1983). Urban bias, however, is far from universal. For example, no urban bias was found in the previous ration-shop and the current food stamp programs in Sri Lanka, in the previous Colombian food stamp program, and in ration shops in Kerala.

Similarly, the distribution of benefits from the Egyptian food price and subsidy policies as a whole is not biased toward urban dwellers. Some of these policies, such as those involving public food distribution, do have an urban bias, while others, such as price policies for meat, have a strong rural bias.

Subsidies associated with public food distribution in Egypt account for 6 percent of household incomes in urban and 7 percent in rural areas (chapter 11). The transfer to urban households exceeds the transfer to rural households by about 50 percent. The absolute value of the subsidy is slightly higher for upper- than for lower-income households in both urban and rural areas. However, the poor receive a much larger percentage of total income from subsidies than do the rich. Thus food subsidies account for about 16 percent of the incomes of the poorest quartile of the population but only about 3 percent for the richest quartile. These findings illustrate a feature common to most untargeted food subsidy programs: the absolute value of consumer benefits from food subsidies is higher for the rich than for the poor, while the benefits account for a larger percentage of total incomes of the poor than of the rich.

Government intervention in food pricing outside public distribution channels in Egypt resulted in negative subsidies to urban households and positive subsidies to rural households. The negative subsidies to urban dwellers are due to policies that keep meat prices to producers and consumers above free-market prices. The net transfer from all food subsidies (public distribution and open-market price policies) to the poorest quartile of the urban population was estimated to be about 13 percent of their incomes, while the richest quartile experienced a small net loss. Urban households as a whole gained about 3 percent of their incomes from these price policies. The rural poor gained 17 percent of their incomes and the rural rich about 3 percent, with an overall average of 6.7 percent for all rural households. Landless labor and small farmers were the principal beneficiaries. Thus contrary to common beliefs prior to the study, a rural rather than an urban bias was found for the food price and subsidy policies as a whole (chapters 11 and 12).

The income transfer effects of consumer food subsidies depend on the type of subsidy scheme—whether the subsidy is given as a price discount or

as a direct income transfer such as food stamps. It also depends on which commodities are subsidized,[1] whether the scheme is targeted to specific population groups, and how the scheme is implemented.

The importance of the choice of commodity and commodity quality in price subsidies is illustrated by evidence from studies in Brazil, Egypt, Mexico, and Pakistan. In the Brazil study, it was found that a shift of explicit subsidies from wheat to rice would lower incomes to the rich, increase incomes of the middle-income group slightly, and slightly lower incomes of the poor. Shifting the subsidy to milk would result in a large decrease in incomes of the poor and a corresponding increase for the rich. The opposite would occur if the subsidy were shifted to cassava (Williamson-Gray, 1982). Thus if the goal is to transfer purchasing power to the poor through a fixed government outlay on food price subsidies, the choice of commodity is important. Similarly, commodity choice is important if nutritional improvements are a goal (chapter 3).

Findings from the Egypt study show that subsidies on bread are more beneficial to the urban poor than subsidies on wheat flour, while the opposite is the case for the rural poor (Alderman and von Braun, 1984). A study for Bangladesh concludes that distribution of sorghum at the ration shops would provide larger relative gains to the poor than currently distributed rice and wheat, because sorghum is acquired almost exclusively by the poor (Karim, Majid, and Levinson, 1980).

A study of maize subsidies in Mexico provides further insights into the importance of the choice of product to be subsidized (chapter 20). In Mexico, maize prices to producers are supported through a policy of government price guarantees, while consumer prices of tortillas—a commonly consumed processed maize product—are subsidized. The price of unprocessed maize for final consumption purposes, however, is not subsidized. Although maize is a basic staple for both urban and rural households, the former usually buy subsidized tortillas while the latter make tortillas at home and thus do not benefit from the subsidy.

Limiting price subsidies to products that are perceived to be inferior offers another possibility for altering the transfer patterns in favor of the poor. In Pakistan, distribution of subsidized wheat flour with a high extraction rate is a case in point (Rogers and Levinson, 1976). In a study of wheat flour consumption in Rawalpindi City, Khan (1982) found that, although subsidized wheat flour was available to all consumers, its purchase

1. Income elasticities for individual commodities provide a rule of thumb regarding the distribution of benefits from untargeted single-commodity subsidies. If the income elasticity of the subsidized good is negative, the subsidy to the poor will be higher in both relative and absolute terms. If it is positive and less than one, it will be relatively higher for the poor but absolutely higher for the rich. If it is greater than one, then greater shares and greater amounts will go to the rich.

decreased from more than thirty kilograms per month for poor households to about twenty kilograms per month for the highest income households, while purchases of nonsubsidized wheat flour from the open market increased from about sixteen kilograms per month for the poor to fifty-eight kilograms per month for the highest income group. Thus the perceived low quality of the subsidized commodity resulted in self-targeting to the poor.

In some countries—Egypt and Zambia, for example—subsidies on transport are used to keep prices of certain foods uniform within the country. Although such policies are allocatively inefficient, they are in effect geographically targeted subsidies that influence relative income distribution.

Distributional Effect of Sources of Financing

The net transfer effects of a subsidy program depend on the manner in which it is financed. In cases where subsidies are available to most or all the population irrespective of income level, the most important income distribution effects may occur as a consequence of the distribution of the subsidy financing burden. Unfortunately, there is little information on the marginal sources of public sector revenues for most countries. Few developing countries derive a significant share of their total revenue from progressive income or payroll taxes.

In the study by Binswanger and Quizon (chapter 22), the distributional effect of various subsidies is shown to differ according to the source of financing. However, financing for subsidies is seldom distinguished from overall budgetary concerns, and it is frequently difficult or impossible to determine which part of total government revenues covers the cost of explicit food subsidies or how savings associated with a reduced subsidy bill would be spent.

Some sources of revenue, such as profits from public sector enterprises and foreign aid, may have little direct effect on income distribution. However, when used for current consumption rather than investment, they influence intergenerational distribution of incomes. To the degree that subsidies improve health and nutrition, they may be considered productivity-increasing investments in human capital rather than consumption. Loans needed to cover subsidy costs also represent a claim on future generations. Furthermore, deficit financing may influence inflation (chapter 4). Inflation generally favors owners of assets and fixed debts and harms individuals with fixed salaries or pensions. However, if a larger percentage of the purchases of the poor are subsidized with fixed prices, subsidies may shift the burden of inflation toward middle-class consumers.

Some governments follow cheap food policies through implicit rather than explicit taxation. Such policies, which include various combinations

of exchange rate manipulations, domestic price fixing, export taxes, forced food procurement, and government monopolies in foreign or domestic food trade, also have distributional effects. Combined with similar measures for nonfood agricultural commodities, these policies have resulted in the extraction of economic surplus from agriculture for use in promoting growth in nonagricultural public and private sectors, with the simultaneous reduction of investment and production incentives in agriculture. Policies to extract economic surplus out of agriculture and policies to maintain low food prices to consumers are often closely linked. However, they need not be. In some countries, governments pursue consumer and producer subsidies simultaneously either for the same commodity—examples include rice in Sri Lanka (Gavan and Chandrasekera, 1979) and maize in Mexico (chapter 20)—or for different commodities—for example, taxing producers of basic staples and protecting producers of meat in Egypt (von Braun and de Haen, 1983). Some subsidy programs are financed solely by government revenues, such as the food stamp programs in Sri Lanka, Colombia, and the United States. Such programs would be expected to increase food demand, which, unless reflected in foreign trade adjustments, would tend to increase producer prices and thus have a favorable effect on producers.

In many cases, however, consumer food subsidies are financed partly or totally by producers. Losses to producers may be large, as illustrated by the price policy for rice in Egypt (chapter 12). In this example, low producer prices are enforced by a combination of forced procurement and export taxes. During the 1970s, the procurement price varied from 11 percent of international prices in 1974 to 50 percent in 1972 and 42 percent in 1980, thus reflecting a relatively constant and low procurement price in the face of price fluctuations in the international market (von Braun and de Haen, 1983). Large producer losses were also experienced by rice producers in Thailand because of high export taxes resulting in low domestic prices to producers and consumers (Trairatvorakul, 1984).

Distribution of Benefits between Urban and Rural Poor

As illustrated earlier, the design of consumer subsidy schemes has important implications for the distribution of costs between producers and governments, which in turn is an important determinant of the effect on income distribution. Moreover, commodity choice and other subsidy design considerations may influence the distribution of benefits and costs among farmers.

The effect of pricing policies on the rural poor depends upon the causes of rural poverty. Different groups of the poor may be affected differently, the most obvious distinction being whether or not they depend on

food production for their incomes. Furthermore, the immediate effect may be quite different from the effect in the intermediate and long run.

The effect of food price increases on those poor who derive their incomes from food production would be expected to be positive provided that the retail price increase is reflected in higher farmgate prices. Higher prices would add to revenues obtained from marketable surpluses, and labor demand in food production would be expected to increase. However, total demand for rural labor need not increase if the food price increases cause substitution of less labor-intensive for more labor-intensive commodities, for instance, the substitution of rice for jute in Bangladesh (R. Ahmed, 1981).

Findings from recent research indicate that food price increases may be much less favorable for the rural poor than might be expected. In some countries, many of the rural poor do not derive a large share of their incomes from either cultivation or wage labor in food production. Furthermore, a large proportion of cultivators are net purchasers of food. Mellor (1978) concludes that the poorest 20 percent of the rural population in India would lose from increasing foodgrain prices. Similar results have been reported by Binswanger and Quizon (chapter 22) and by de Janvry and Subbarao (1984). Sahn (1986) concludes that only 3 percent of the rural poor would be better off from an increase in the price of rice in the short run—that is, ignoring any long-term effects on wages and employment.

In Thailand, the rural poor would also not benefit greatly from rice price increases (Trairatvorakul, 1984). Even though many of them are rice producers, the marketable surplus is often small, and a large proportion are net buyers of rice. Such results, however, may be specific to the Asian context. The distribution of benefits from food price changes among rural Africans has not been studied in similar detail.

As mentioned, estimates of the long-run effect of food price changes on the poor—urban or rural—must include the effect on wages and labor demand, both direct employment in food production and stimulation through farm and nonfarm growth linkages.

When the long-run implications of reductions in food price subsidies are expected to benefit the poor, the poor may be compensated for short-run negative effects. The need for such compensation depends on the ability of a government to phase in the price rises in coordination with the growth in employment and incomes of the poor.

Targeted Food Price Subsidies

Because of the high fiscal costs of maintaining general food price subsidies, efforts have been and are currently being made to target food subsidies to groups of households expected to be particularly vulnerable to high

and increasing food prices. If the sole goal of food subsidies is to increase or sustain the purchasing power of the poor, targeting could greatly reduce the costs and still reach the goal, provided that targeting is politically and logistically feasible.

The cost effectiveness of explicit subsidies, in terms of the government's cost of improving the ability to acquire food among food-deficit households by a certain amount, is positively correlated with the degree of targeting up to a certain level. This is because targeting excludes some or all nondeficit households from sharing in the benefits from the subsidies. However, the administrative costs of operating a food price subsidy program increase as the degree of targeting increases. This is of particular concern in developing countries where both trained administrators and household income data are scarce (chapter 8). Thus there is a point beyond which increases in administrative costs exceed the cost savings from further reducing benefit leakages to nondeficit households. Furthermore, as a program becomes more narrowly targeted, the risk of omitting target households from the program increases. Targeting implies a restriction on eligibility or on participation. In addition, targeting may limit subsidies to particular periods of the year, for example, the lean months, in cases where seasonal fluctuations in food supplies or purchasing power are a major cause of malnutrition.

Eligibility may be based on a number of criteria, the most obvious being household income or a combination of household income, size, and composition. Although individual household incomes are used as criteria in certain programs, it is usually difficult to obtain an accurate estimate of these incomes. In Sri Lanka, initial targeting was based on self-reported incomes. Even if such initial targeting is possible, however, it is difficult to obtain information on changes in household incomes over time in order to make appropriate adjustments. Moreover, some households are in a better position to underreport incomes than others. For example, the Sri Lankan food stamp program excludes a large portion of the estate workers because their incomes are more easily documented than income in other sectors, although health and nutrition indicators show that many of these households are in need of food subsidies.

A second criterion that is used relates to the location of the outlets for subsidized foods (geographical targeting). The approach is to select neighborhoods with a high proportion of poor households and to place outlets for subsidized foods in those neighborhoods. This approach was the basis for the Philippine food price discount experiment (chapter 14; Garcia and Pinstrup-Andersen, 1987). In Bangladesh, however, the choice of neighborhoods had little relation to poverty (R. Ahmed, 1979). A third criterion may be that of selecting malnourished individuals at existing health clinics. This approach is used in a number of integrated health and nutrition

programs—for example, the rural health clinics in Costa Rica and the recently terminated food stamp program in Colombia. The latter is in fact a combination of geographic targeting and health clinics.

Target households may also be identified as those having malnourished children, as indicated by low weight for age. Such an approach is used in the food price discount experiment in the Philippines. Administratively, it may be easier to target programs to all households with nutritionally vulnerable individuals irrespective of nutritional status—for example, infants and pregnant and lactating women. However, such an approach would result in a larger number of households in the target group.

A certain degree of targeting may also occur where the customers desiring to purchase subsidized foods must wait in line a long time. Whether the long wait is intentional or merely a result of inefficient operation of the program, a higher opportunity cost of time may discourage participation by higher income groups. Of course, if the subsidy is sufficiently large, higher income groups may hire persons to wait in line for them. Furthermore, if the quantity purchased per visit is not restricted, the higher income groups may be more willing to participate than the poor, as their larger purchases justify the waiting time. This was observed in Egypt (Alderman and von Braun, 1984).

Targeting can also be accomplished by offering foods of lower quality or foods generally not desired by higher income groups and that occupy a large budget share among the poor. The earlier-mentioned distribution of subsidized wheat flour perceived to be of low quality in ration shops in Pakistan is an example.

The implementation of targeted food price subsidy programs may be difficult. Correctly identifying target groups and assuring that subsidized food is in fact obtained by these groups may be a much greater and more costly task than envisaged prior to initiating the program. As a result, a large proportion of the subsidized food may actually go to nontargeted households, while administrative costs run high.

The flexibility of a targeted system can influence how it is perceived by the general public. Although income-related targeting may carry the stigma of recipients being labeled as poor, a system that is flexible enough that families with temporary fluctuations in their incomes may enter and drop out of a subsidy program could be considered more as a safety net. Thus the number of families that have the potential to use the program—say, during a spell of illness, unemployment, or off season—may exceed the average number of beneficiaries. Such a program may have broader political support. This is a major concern because, as illustrated by the termination of the Colombian food stamp program, diminishing the number of recipients through targeting runs the risk of narrowing the pro-

gram's base of support so much that the program, without influential backers, may be eliminated.

Lessons Learned

In summarizing lessons learned from studies of consumer food subsidies in several countries, only those specifically related to rationing and income transfers are discussed here.

The fiscal costs of subsidies, as well as the economic costs stemming from the price distortions that accompany subsidy programs, contribute to pressures to eliminate such programs. This poses a dilemma for planners who also recognize the contributions of subsidies to the economic well-being of the poor.

Consumer food subsidies have significantly increased the purchasing power of the poor in a number of countries and have reduced the risk of food shortages and price fluctuations for households. Attempts to eliminate existing subsidies could result in severe hardships and are likely to be met with strong resistance. And not only the poor would resist, because most food subsidy programs have also provided significant benefits to better-off consumers. Furthermore, the economic costs of food subsidies and other price distortions are not necessarily perceived by the general population.

The net effect of food price subsidies on incomes of wage earners is likely to be considerably less than the income transfer embodied in the subsidies, because wages tend to adjust to changing food prices; thus at least part of the transfer is passed on to other sectors of the economy. This implies that consumers (wage earners) would be better off with a change from food subsidies to a wage increase equal to the real income embodied in the subsidy. It also implies that government savings from reduced food subsidies would be partly offset by increasing public sector wages. This occurred in Sri Lanka (chapter 18) and would be likely to occur in Bangladesh and Egypt. In some countries, food subsidies may in fact be viewed as partial wages to public sector employees, including military personnel, and may be designed with this in mind.

The sizes of benefits and costs, the way they are distributed, and the extent to which rationing goals are met vary among programs and are influenced by program design and implementation. Modifications of existing programs may improve their performance. However, for such modifications to be successful, program goals must be clearly specified. Pursuing rationing goals efficiently may require programs that are different from those needed to assure efficient targeted income transfers. Many existing programs and policies have changed over time from being primarily public

distribution schemes aimed at assuring households access to certain rations of basic staples at fixed prices to much more costly food-linked income transfer programs. In some cases, it appears that the transition has been by default and has been caused by an inability to increase the prices of food rations at the same rate as prices increase in the open market.

Household targeting is a key element in efforts to achieve transfer goals at reduced costs. However, targeting conflicts with rationing goals if the latter are interpreted to include all households. But targeting is compatible with efforts to pursue rationing goals for the poor. Modifications in current general subsidy programs toward such targeting would be likely to reduce fiscal and economic costs, but they would also result in economic losses for nontarget households and therefore would incur political opposition.

Ideally, household targeting would be based on incomes of households adjusted for size and composition. However, reliable estimates of the income of each household are usually not available, and efforts to obtain and periodically update such estimates would be extremely expensive and often impossible. Nevertheless, income level and asset holdings may be used to exclude the highest income groups.

A large number of other targeting mechanisms have been tried, some with success and others not. These include geographical targeting, targeting by the nutritional status of household members or by employment status, choice of inferior commodities or commodity qualities for subsidization, and targeting in certain periods of the year where seasonal fluctuations severely limit the ability to acquire sufficient food. The most appropriate choice among the various targeting approaches depends on the particular circumstances within which subsidies are introduced (chapter 8). As a general rule, however, targeting approaches that contradict household behavior the least are most likely to be successful. Lack of success in targeting or high costs of targeting are frequently due to the desire and ability of nontarget households to circumvent targeting efforts that do not correspond with household preferences.

The cost effectiveness of food subsidy programs may also be improved by choosing the right program for particular circumstances. The most common types are price subsidies for specific rations or unlimited quantities and food stamps. The transfer effects of price subsidies for inframarginal rations would not be expected to differ greatly from food stamps for a given household. However, the degree to which rationing goals are achieved may vary greatly between the two program types. The critical issue is whether the household is assured a certain physical quantity at a fixed price or a certain monetary transfer. In the former, recipient households are assured a constant transfer in real terms, whereas in the latter, price fluctuations and increases in open-market prices may erode the real

purchasing power of the transfer, as illustrated by the food stamp program in Sri Lanka (chapter 18). In theory, the difference between the two program types could be eliminated if the ration price was increased as fast as the open-market price or if the nominal value of food stamps was increased at the same rate as the open-market price. However, inaction by the government results in increasing fiscal costs and in constant or increasing benefits to the recipients in the former but in decreasing benefits and fiscal costs in the latter.

The issue of appropriate adjustments in subsidized food prices and the effect on rationing and income transfers is particularly important during periods of devaluation of the local currency or rapid food price increases in the international market. Maintaining fixed nominal prices for food staples in the face of devaluation and rapidly increasing domestic prices may result in large and unsustainable increases in the cost of food subsidies. On the other hand, if sharp increases in domestic prices are fully reflected in the price of basic staples, the poor may experience severe hardships that would be economically and politically unsustainable. Social unrest caused at least in part by increasing food prices in a number of countries during the recent past illustrates this point.

Recent efforts to solve foreign debt and deficit-spending problems have included devaluation, higher agricultural prices, and reductions in spending on food subsidies and social programs in a number of countries. In some cases, it appears that the poor have borne a disproportionately large share of the burden of economic adjustment (Pinstrup-Andersen 1988c). Although these measures may be necessary to solve immediate economic problems and may result in accelerated long-term economic growth and employment, short-term implications for the poor may be such that compensatory measures are needed. Before such measures are designed, it is important to clarify which consumer groups the government wishes to compensate and whether such compensation will meet the stated goals.

Subsidies are, of course, only one means of keeping food prices low to the consumer. Improvements in the efficiency of food production through technological change, improved rural infrastructure, and expanded input use, as well as improved marketing efficiency, offer great opportunities for reduced consumer prices without adverse effects on producers. The improved capacity of the poor to generate sufficient incomes to meet these requirements and other demands provides the long-term means to meet welfare goals. Consumer food subsidies should be viewed as temporary but important means to assure that the poor are able to acquire sufficient food to meet nutritional requirements in the interim.