13 Food Subsidies in Egypt: Macroeconomic and Trade Implications

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The principal theme of this chapter is the implications of the Egyptian food subsidies for such macroeconomic measures as nonfarm output, the government's budget, inflation, the exchange rate, and the balance of payments. There is, however, an important secondary theme—namely, the extent to which the policies in the food sector are themselves molded by the macroeconomic setting. For example, it is hard to imagine that the level of Egypt's food subsidies is unrelated to the country's capacity to import. So while exploring the implications of the food subsidy scheme, these reverse linkages will also be examined.

A complete analysis of the macroeconomic consequences of food subsidies would demand a general equilibrium framework. Although small, computationally manageable general equilibrium models are emerging, they still require significant abstraction. The benefits from a partial approach to testing some specific hypotheses about the effect of food subsidies at least partly outweigh the costs of forgoing "completeness," because fewer strong and sometimes questionable assumptions have to be made to substitute for data needed but not available. Perhaps the insights gained from these partial efforts will form building blocks for subsequent and more complete syntheses.

The approach in the studies summarized here has been to draw on standard economic models, to apply them in a positive manner to testing hypotheses, but to enrich their structures with key elements of the policy environment, as distinct from the political environment. However, the evolution of food policies and their macroeconomic effects should not be considered in isolation from the historical setting and the political environment. For this reason, a brief glimpse of the Egyptian background is provided. After setting out the general analytical framework, the budgetary consequences are reviewed and the consequences for the foreign sector, both real and monetary, are presented. Finally, conclusions are drawn and implications for policy formulation are noted.

Historical Perspective

With the possible exception of military endeavors, food policy has been the single most dominant theme of state involvement in Egyptian society for all of recorded history. To simply lump Egypt's current food subsidies into the general category of basic needs strategies would be to completely overlook their deep and important historical roots. Policies influencing the production, consumption, and external trade in wheat are tightly interwoven into the country's entire historical fabric.

State granaries have existed in Egypt since Pharaonic times. Foreign trade controls; retail price fixing; subsidized sales from state granaries; state *muhtasibs* (market inspectors—in effect a wheat police); heavy taxes (often in the form of compulsory deliveries) on merchants and brokers; controls on milling rates, the weight of the loaf, and the extent of substitute grains; public distribution to the indigent—all these are the hallmarks of Egyptian food policy in Pharaonic times, through eras of the Fatimids and the Mamluk sultans and emirs, and moderating only perhaps in the middle of the last century with the demise of the archetype interventionist, Mohamed Ali.

Food subsidies have been pursued in various forms for at least ten centuries. Fatimid caliphs sold wheat below ruling market prices in times of shortage and ordered the baking of bread and its distribution to Cairo's poor. The public distribution of grain at subsidized prices was seen as part of the moral responsibility of the rulers and was an important element in the preservation of social stability (Scobie, 1981). Food riots were as real in the fourteenth and fifteenth centuries as they were in 1975, with the Helwan steelworkers' strike, and in January 1977.

Historically, crises arose from shortfalls in domestic production, rises in external prices, the need to finance military endeavors, and disruptions to foreign trade. It is significant that the same sources of instability characterize modern Egyptian wheat policy (although the uncertainty of foreign aid would have to be added to today's list). Even more striking is that the instruments of policy are the same today as they have been for centuries. The forces that mold and constrain those policies are essentially independent of the political structure of the moment. Whether the rule is unified Pharaonic, dispersed caliphate, despotic invader, or socialist military, the overriding lesson of history is that the sources of instability and the policy responses to them are amazingly consistent. This predictability lessens if not obviates the need to reflect structural changes in the political environment in models of food policy. Furthermore, it reinforces the contention that a common set of economic tools can be used to gain insights into policy action and reactions in diverse institutional settings.

Political Setting

Since 1973 Egypt has undergone a series of important economic and political changes. At that time, the economy had been sustaining a major military effort for eight years. Real personal incomes had been static or declining. Per capita consumption of wheat, the major staple, had fallen. Since the Suez War of 1956, the economic and political orientation of Egypt had been increasingly dominated by its relation with the Eastern bloc countries. Emphasis had been given to the material planning approach and the use of centralized controls. There were severe restrictions on foreign exchange, and the import of investment goods had been neglected in order to acquire war materials. As a consequence, the immediate postwar outlook was bleak—a large and inefficient bureaucracy, a depleted capital stock, shortages of parts and raw materials, and foreign debt repayments beyond the capacity of the country to generate foreign exchange. Anwar Sadat reported that the country had reached the "zero stage" economically in 1973 and could not have met debt repayments or purchased foreign wheat in 1974 unless changes were made.

The economic policy that evolved after 1973 placed new reliance on restoring trade and investment with Western countries and with encouraging private economic activity. These strategies were formally cast in Law 43 of 1974, and have become known as *al-infitah,* or the opening.

At first glance, there is an irony in the fact that the new economic order with its greater reliance on market signals and private economic activity has been accompanied by burgeoning public sector expenditures, especially for subsidies. Some have attributed this increase to the rise in commodity prices in 1973/74. Certainly subsidy expenditures rose in these years; but importantly, they did not decline subsequently. The development since 1973 fails to support the hypothesis that the large rise in subsidy expenditures was simply a transitory phenomenon associated with a temporary rise in world-market prices.

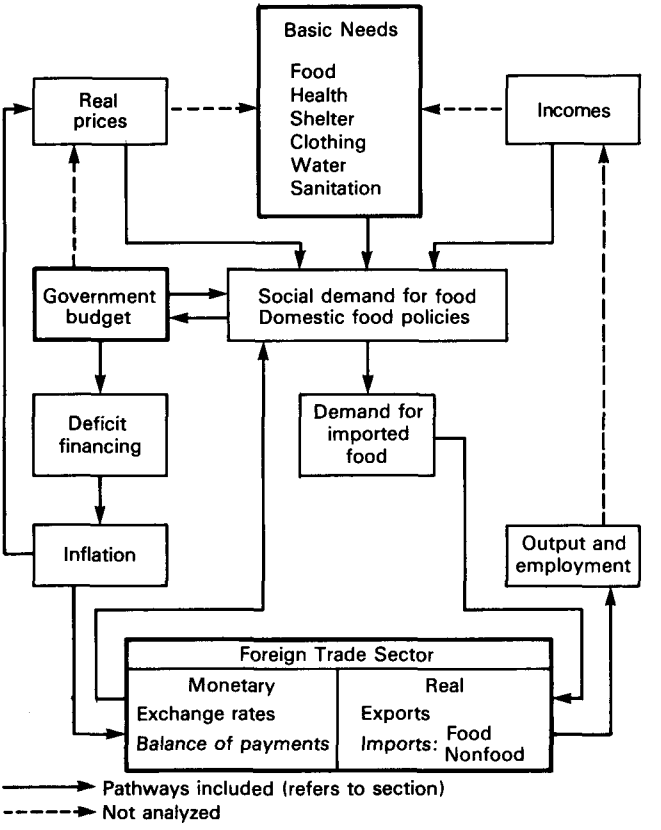
An alternative view is suggested by the model of government expenditures developed by Peltzman (1980). The economic changes both engendered and were accompanied by changes in the nature of the country's politics. Access to new economic resources led to intense debate about their allocation (Choucri and Eckaus, 1979). The economic opening has been coupled with a political opening, in which an increasingly powerful vox populi has strengthened the government's commitments to social policies whose origins lay in the 1952 revolution. Their expression had been quelled by long periods of hardships imposed by military endeavors. The strength of those forces has been demonstrated in the reaction to attempts to limit their access to economic and political power; for instance, in the food riots of January 1977.

Since 1973 the country's ability to give concrete expression to its stated policies has improved dramatically. This shows up vividly in food imports. Imports of staples were about 50 kilograms per capita in the 1960s. By 1970, these had fallen to 20 kilograms per capita, while by 1980 they had risen to 150 kilograms. Imports represented a significant change in per capita disappearance, with an associated rise in expenditures for subsidies that has had widespread ramifications, both real and monetary.

Analytical Scheme

The framework for the research reported here is sketched in figure 13.1 (Scobie, 1983, 1984). It should not be interpreted as a flow chart with causality implied between the elements. Rather it highlights the key issues

FIGURE 13.1 The analytical scheme



and variables, indicates the linkages between them, and provides a reader's guide.

The starting point is the question of basic needs. For whatever reason, the Egyptian government attempts to augment the consumption of some key goods and services beyond the level that would occur in the absence of interventions. This can be captured by a social welfare function and the corrresponding social demand curves (Scandizzo and Knudsen, 1980; Harberger, 1978). At any given price of food, the social quantity will exceed the private quantity demanded. A principal device to raise consumption to the socially desirable level has been the sale of subsidized foods (Alderman, von Braun, and Sakr, 1982). These have involved various attempts at targeting and rationing (see chapter 12), the notable exception being wheat and flour, which, while neither targeted nor rationed, account for half the total subsidies. The wheat price to consumers has been held down to between 20 and 30 percent of the cost, insurance, freight (c.i.f.) border price. Furthermore, the real price of wheat to consumers has varied substantially. Between the revolution in 1952 and the buildup to the 1967 war, the real price doubled. It remained relatively high until 1973. By 1980 it had fallen to less than half the real price in 1973.

Naturally, this has led to a marked rise in imports and, more particularly, in food's share of total imports. This share rose from about 10 percent in 1971 to almost 40 percent by 1981. As discussed later, this development was of great importance for the growth and stability of nonfood imports and, therefore, for output and employment. Clearly, changes in output and employment are closely linked with changes in real income. The models presented in this chapter do not incorporate the formal linkage, however, and conceivably it is here that the contribution of a more general equilibrium approach would lie.

On the monetary side of the economy, the analysis has traced the implications of the government budget and its deficit financing for inflation, exchange rates, and the balance of payments. These elements also condition the setting of domestic food policies.

Budgetary Consequences

Total resources available to the economy have grown, albeit erratically, since 1950. With increased military expenditures and changing foreign and economic policies, there was virtually no change in private real consumption for a decade, from 1965 to 1975.

Since the mid-1970s a marked recovery has occurred. A more open economy, greater investment, resumed flows of aid, and substantial foreign exchange earnings (from petroleum, the Suez Canal, tourism, and remittances) have all contributed to doubling the real per capita command

over resources. Real investment and private consumption have risen more rapidly than public consumption. In real per capita terms, the expenditures on subsidies have also risen substantially although less than private consumption. Thus subsidies were 19 percent of private consumption in 1975 but fell to about 10 percent in the early 1980s.

Between 1970 and 1981 subsidy expenditures rose rapidly in nominal terms. However, real available resources grew by 140 Egyptian pounds (£E) per capita in this period; the real increase in subsidies was about £E 20 per capita. From 1975 to 1981, growth in resources was about £E 120 per capita, while real subsidies grew by £E 7 per capita. Thus during the period of rapidly expanding subsidy expenditures, only 6 percent of the increase in total available resources was dedicated to increased subsidies.

On the other hand, it is true that subsidies have increased their share of government expenditures. Total government expenditures rose as a proportion of gross national product from 30 percent in 1970 to 45 percent in 1980. However, the even more rapid rise in subsidy expenditures has meant that the structure of government spending has had to change, with less emphasis placed on defense. In contrast, investment and subsidies account for nearly 80 percent of the budget now, compared with about 30 percent in 1970.

It does not appear that greater subsidies have come at the expense of investment (von Braun and de Haen, 1983). If public investment is taken to include expenditures on health and education (investment in human capital), then the recent trends toward higher subsidies have not outstripped investment. Of course, if all the increase in subsidy expenditures had been invested, then future growth and incomes might possibly be higher. But the same argument would apply to any other element of government expenditure (Scobie and Valdés, 1982).

The proportion of total resource use in the public domain rose from less than 20 percent in the 1950s to 35 percent at the end of the 1970s. The public sector now controls a greater proportion of total resources than at the time of the revolution. As the relative political strength of claimant groups has varied over the last decade, so has both the mix of public activity and the ratio of public to private activity. The state has become more concerned with transfers and less with production and investment relative to the private sector.

Foreign loans and grants, together with a significant rise in net factor income (largely remittances), export receipts from the Suez Canal, petroleum, and tourism, have made this change of emphasis possible. Even if all the subsidy expenditures had been financed from foreign grants and borrowing and from net factor income from abroad, they would have required less than half the increase in the last decade. These resources have naturally given the government greater freedom to respond to the political pres-

sures for claims on resources; but it would be a gross overstatement to claim that Egypt has simply consumed the additional resources. Substantial rises in investment have occurred simultaneously. In fact, the rise in expenditures on subsidies, though dramatic, has not been out of keeping with the growth of investment and consumption expenditures.

Real Consequences

The decline in the real price of wheat has been a major feature of Egypt's food subsidies. In order to hold down the price without creating excess demand, imports have expanded from about 2 million to 7 million tons in the last decade.

There are a number of important characteristics of this import demand. First, it has been a large and growing share of total imports and results in the need to consider the total allocation of import expenditures. Second, import demand is clearly a reflection of domestic policies for production and consumption. Third, all foreign trade in wheat is undertaken by a state agency, so that government policies impinge directly on the amount of imports. Fourth, a large part of the imports are concessional, and it is important to recognize this explicitly. Finally, the substitution effects in both production and consumption are important, and will enter the decision about internal pricing.

These characteristics formed the basis for the development of a wheat import demand model. The economy was seen to face a foreign exchange constraint as the result of driving wedges between domestic and world prices. This created an excess demand for foreign currency, the repercussions of which were reflected in the allocation of import expenditures, the size of the price wedges themselves, and the policy toward the cotton sector. The latter is important because it supplies foreign exchange and competes with wheat for resources.

As a consequence of the very low price paid by consumers for wheat, the domestic demand is highly inelastic, with an elasticity of probably less than -0.1. Similarly, the import demand is relatively inelastic with respect to the world price (elasticity about -0.2). Although some of the changes in the world price are transmitted to domestic prices, the effect on domestic consumption is minimal; as a consequence, international price changes are reflected more in import expenditures on wheat than in quantity of wheat imported. With no direct market mechanism to ration scarce foreign exchange through a higher price, the Economic Committee on the cabinet must make decisions about the allocation of a given quantity of foreign exchange to imports and reserve holdings. While changes in net foreign assets are one mechanism for cushioning the adjustment, a major

part of exogenous shocks in world food markets is transmitted to the import of nonfood items.

Similarly, changes in the supply of foreign exchange have relatively little effect on wheat imports. A fall of one dollar in the supply of foreign exchange results in a cut in wheat expenditures of five cents; over 90 percent of the reduction falls on the imports of nonfood items. In the long run, for a given growth in the supply of foreign exchange, a policy of expanding food imports means a lower share for other classes of goods, resulting in a slower growth of the capital stock. The short-run effect will be the destabilization of imports of raw materials and capital goods. If raw material imports decline, then the rate of capacity utilization of the existing capital stock will fall.[1]

A complete system of import demand equations was used to estimate the direct and cross-price elasticities for seven categories of imports, in addition to the marginal budget shares (Ez Elarab, 1982). The marginal budget shares were estimated to be about 5 percent for food, 15 percent for raw materials, and 30 percent for imported machinery. These findings are consistent with the hypothesis that priority is given to food in the allocation of foreign exchange. The provision of raw materials to maintain current output is then accorded priority over the import of capital goods, which are presumably viewed as postponable. Both industrial output and gross fixed investment in industry and manufacturing were found to be sensitive to the imports of raw materials and capital goods.

Monetary Consequences

This section briefly reviews the implications of a rapid rise in government expenditure. A monetary approach to the balance of payments is used to develop an econometric model with four endogenous variables: the black market exchange rate, the inflation rate, the balance of payments, and the demand for real money balances.

Clearly, the cost of the subsidy schemes has been substantial. In 1981, budgeted subsidy expenditures were equal to about two-thirds of the deficit of the central government. These costs have been met by tax revenues, foreign aid and concessional loans, and external borrowing. However, a significant part of the government deficit has been met by the creation of liabilities held as assets of the central bank. This expansion in the net domestic credit component of the monetary base has been especially marked

1. Bhagwati (1978) notes that there is a tendency for chronic overcapacity under foreign exchange allocation schemes. This arises partly because the issue of import licenses is related to installed capacity and partly because excess capacity is an insurance against delays in getting crucial parts.

since 1973. Such an increase in high-powered money and the concomitant rise in the money supply have had far-reaching effects.

The role of these monetary variables in the determination of exchange rates and the balance of payments has received increased attention, both theoretical (Fraenkel and Johnson, 1978) and empirical (Blejer, 1979; Putnam and Wilford, 1979). The fundamental proposition is that the process of adjustment involves disequilibria in the stocks of assets rather than in the flows of commodities.[2] Although a majority of the existing studies have been based on a single exchange rate, the long history of rather complex intervention in the Egyptian foreign currency market makes it imperative to include both official rates (for food and nonfood) and the black market rate. The excess demand at the persistently overvalued official rates has been transmitted to a well-organized (and intermittently sanctioned) black market.

The results of this model were used to estimate the effect of a 10 percent rise in food subsidies, with other government expenditures held constant. This would result in an increase of 5 percent in the inflation rate; a decline of 2 percent in the balance of payments (the stock of net foreign assets); and a devaluation of 3 percent in the black market exchange rate. The pressure generated in the foreign exchange market by the deficit financing of food subsidies can be relieved in two ways. The stock of net foreign assets can decline or the Egyptian pound can be devalued. A simplified form of the model used here is equivalent to an exchange market pressure model, which expresses the sum of the changes in the exchange rate and net foreign assets as a function of the foreign price, the rate of domestic credit expansion, and the demand for real balances (Girton and Roper, 1977; Connally and da Silveira, 1979). It explained 62 percent of the variation in the exchange market pressure in Egypt.

Summary and Conclusions

Controls and subsidies on food have been part of Egypt's social policy for centuries. The growth in the last decade has reflected a deliberately chosen set of economic and social policies. These have found greater expression in view of a rapid rise in the country's total command over resources.

In relation to this growth in total available resources, the rise in subsidy costs has been more modest than often depicted. Furthermore, they do not appear to have been at the expense of investment. It is not clear that the much discussed trade-off between growth and equity has occurred. Some would undoubtedly conclude that, despite the move to greater eco-

2. Burton (1981) highlights the importance of the Eurodollar market in determining the asset holding of Egypt's remittance earners and the implications for the black market exchange rate.

nomic freedom, the Egyptian economy is still sufficiently shackled that there would be considerable scope for more of both. What is evident is that, in the foreign sector, the food subsidy scheme has had consequences, both real and monetary. This study has made some attempts to identify and quantify those consequences.

The effect of deficit government financing on both the exchange rate and the inflation rate is a significant factor for policymakers to consider in setting subsidies. To the extent that food subsidies induce inflation, they may erode the ability of low-income groups to acquire a basic bundle of goods and services—that is, bread may become cheaper but housing more expensive. Food subsidies are only one instrument in meeting the basic needs of the poorest; furthermore, it is their net contribution that must be the focus of attention.

The highly inelastic demand for food engendered by the subsidy scheme means that any instability in world prices or in the supply of foreign exchange is transmitted to other parts of the economy. Instability is never costless and cannot be willed way. But to the extent that fluctuations in output and investment affect incomes and the growth of employment among poorer groups, then a legitimate question arises about the incidence of those costs. Is maintaining food consumption at the expense of destabilizing employment an appropriate strategy? Would the holding of greater foreign exchange reserves, for example, be a more or less costly strategy? And what would be the incidence of costs under such a scheme? These questions must surely appear on the research agenda of analysts interested in the broad ramifications of food policies.

Clearly, compensatory finance schemes have an important role in this context. With a low marginal propensity to import food, however, access to a special fund such as the International Monetary Fund's Food Facility would lead to few additional food imports in a country such as Egypt. Rather, it would contribute more to stabilizing nonfood import expenditures. It is not clear, however, that the optimal strategy is to provide full compensation for deviations in the food import bill if a parallel scheme is operating for export earnings (Green, 1983). The level of compensation to minimize the variance of food consumption will vary with the extent to which shortfalls in domestic production are compensated for by imports and with the marginal propensity to import.

Furthermore, it is possible that nonfood consumption could actually be destabilized further in the presence of a food facility. The problem here is that two targets, minimizing the variance of food and nonfood consumption, will generally require two instruments. It is clear that the transmission of instability is an important issue arising from the implementation of large-scale food subsidy schemes. Policies, both national and international, for minimizing the costs of instability and their incidence are still evolving and urgently needed.