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GOVERNMENT DISTRIBUTION AND PRICE POLICIES FOR MAJOR SUBSIDIZED FOOD COMMODITIES IN EGYPT: AN OVERVIEW

By

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WORKING PAPER

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INTRODUCTION

Egypt is faced with a serious food problem. The Egyptian agricultural sector is unable to feed the increasing and more affluent population. In 1980, agricultural output was estimated to be increasing by about 2.0% annually, whereas the country's annual population growth rate was estimated at about 2.3%. If the difference in these growth rates continues, Egypt must increase imports each year just to maintain per capita consumption at the present level (2).*

Egypt's dependence on outside suppliers to feed its people shows a dramatic upward trend. For example, by 2000, the wheat gap between consumption and domestic production will reach about 7.0 million tons (from about 3.2 million tons in 1975), and the meat deficit will be 13.0 times the 1975 level. The rice trade balance will change from a surplus of about 151,000 tons in 1975 to a deficit of about 1.0 million tons. Vegetable oil and legume imports will be almost double the 1975 level. These levels of projected imports could be unattainable because Egypt does not appear to have the production capacity to create the foreign exchange needed for the ever increasing cost of basic food importation. Also, considering resource availability and the potential of the agricultural sector, as well as developments in factors affecting the demand for food, indications are that the situation is unlikely to be self-correcting unless there are some radical changes in the policies that price and allocate agricultural products.

Since 1960, heavy government intervention in all aspects of the Egyptian economy occurred, especially in pricing and distributing basic foodstuffs, (4 & 5). A progressive rationing system for basic food staples was originally introduced in 1945 to deal with shortages growing out of World War II. Since then, several commodities and services have been heavily subsidized, creating a continuous burden on the government budget. Subsidizing basic services and commodities in societies with a rich productive base to finance such a burden may be quite a different thing than trying to do so in countries without an adequate productive base.

^{*}Numbers in parentheses refer to references listed at the end of this study.

The total commodity subsidies in Egypt are increasing sharply through time. They amounted to about L.E. 2.0 million in 1960 and reached L.E. 510.6 million in 1976. About 80.0% was for food commodities. By 1979, total government subsidies for commodities and services reached L.E. 1.2 billion. Total commodity subsidies amounted to L.E. 885.0 million in that year, of which 93.0% was for food commodities. From official government statistics, over L.E. 700.0 million were allocated for wheat and wheat flour alone (79 percent) with the rest allocated for other rationed food items such as tea, sugar, and cooking oils.

One of the major objectives of the government is to facilitate food distribution to low income people (7), and complex and expensive distribution systems exist for basic subsidized foodstuffs in Egypt, controlled by the Egyptian government. The major food items under government distribution include sugar, cooking oil, tea, rice, beans, lentils, imported frozen meat and poultry, flour, and bread.

The existing subsidy policy has become highly controversial. Defenders believe it is anti-inflationary and contributes to raising the standard of living of Egyptian consumers. They believe that it protects Egyptian consumers against great price and income fluctuations that may occur if domestic prices were left free to follow world price movements. These defenders believe that such policy is an important means to redistribute real income from high to low income consumers and conclude that such policy should continue.

Opponents of this policy argue that government intervention creates relative price distortions and prevents efficient resource allocation. The increasing subsidy payments create budget deficits which are inflationary, and the importance of the policy as an income distribution vehicle is exaggerated since the subsidy goes to rich as well as poor consumers. Actually, opponents tend to believe that it creates even more income disparity, favoring the relatively well-off urban consumers and discriminating against the poorer rural consumers whose food consumption depends heavily upon their own production. Some of these opponents would argue for complete elimination of such policy. Others would seek a modification of the existing policy in the direction of limiting the subsidies to consumers that most need them. Some would also reduce the budget burden by increasing consumption taxes. There is

also some sentiment for increasing the prices received by farmers in order to reduce the urban-rural real income differential.

OBJECTIVES

As indicated above, much of the structure of food subsidies, rationing, and fixed producer prices and production quotas has resulted from deliberate governmental policy to redistribute income and wealth, especially in favor of the low-income urban population. There are powerful incentives, particularly political incentives, to shape policy around these kinds of equity goals. When the distribution of income and wealth gets out of reasonble balance according to some equity criterion, governmental intervention is brought to bear to benefit disadvantaged groups. This is often countered by other policies to benefit still others now relatively disadvantaged. The end result is often massive interference with market forces and the distortion of market signals in the form of relative prices.

Economic efficiency is achieved when a country's resources are utilized so that the net value of national output is maximized. This is equivalent to maximization of per capita income, probably the most important component in the standard of living. Thus, economically efficient use of resources is also a tremendously important goal of national policy, particularly for a developing country such as Egypt where per capita incomes are relatively low. If an economy is predominantly market oriented, its markets must transmit signals (prices) accurately if it is to be economically efficient. That is, on the demand side prices should represent consumer valuations of traded commodities. On the supply side, prices should reflect relative costs.

The principal arguement of this paper is that the policies to achieve equity referred to above (food subsidies, rationing, etc.) are largely incompatible with economic efficiency and may be causing significant welfare losses to the economy as a whole. This is not to say that equity goals are unimportant. They are. But it should be known what the efficiency costs are of achieving equity goals. In addition, there may be alternative ways available for reaching equity goals that may not be so inefficient as those currently in use. The equity-efficiency tradeoff will be highlighted time

after time in this paper as the pros and cons of various policies are discussed.

Of all efforts to remodel the policies relating to governmental subsidies and commodity allocation, the restructuring of governmental distribution and pricing policies for the basic subsidized food items would seem to have the greatest priority. This restructuring may have significant political and economic impacts in many sectors of the economy. In order to appropriately specify alternatives and improvements needed, understanding the existing system is of crucial importance. Previous studies have estimated the cost of price disparities between Egypt and other countries (7, 12, & 19). However, these studies did not take into consideration the special institutional characteristics of the existing situation in Egypt introduced in the present paper. Most of the previous research in this field seems not to provide the needed diagnosis to correct existing inefficiencies.

Accordingly, the main objectives of this paper are to use a systems analysis approach to specify and explain the major framework of the existing distribution and pricing policy, to identify and analyze its linkages with other economic activities, and to identify and examine the direction of major impacts at the commodity, agricultural sector, and the macro-economic levels. This paper is both exploratory and diagnostic in nature. Specific measures of economic gains and losses from such distribution and pricing policies are outside the scope of this paper, but are estimated in other papers produced by this research activity.

FOOD DISTRIBUTION AND PRICING IN EGYPT

The existing food distribution system in Egypt is complex. It is a combination of private grocers and government food stores. Each neighborhood has one private grocer authorized to handle rationed commodities. Each family is registered with this designated grocer in the neighborhood, receives a ration book, and buys the rationed food from this store. Presently, quantities are guaranteed (per individual) at a low price for sugar, cooking oil, tea, and rice (for urban areas). The private grocer has other non-rationed items, which anyone can buy (as any other private grocer). Families can also buy extra quantities from government food stores through the ration

book but at higher prices, and the quantity available (per family) depends upon supply. Bread has a different distribution channel and is sold at private and government bakeries.

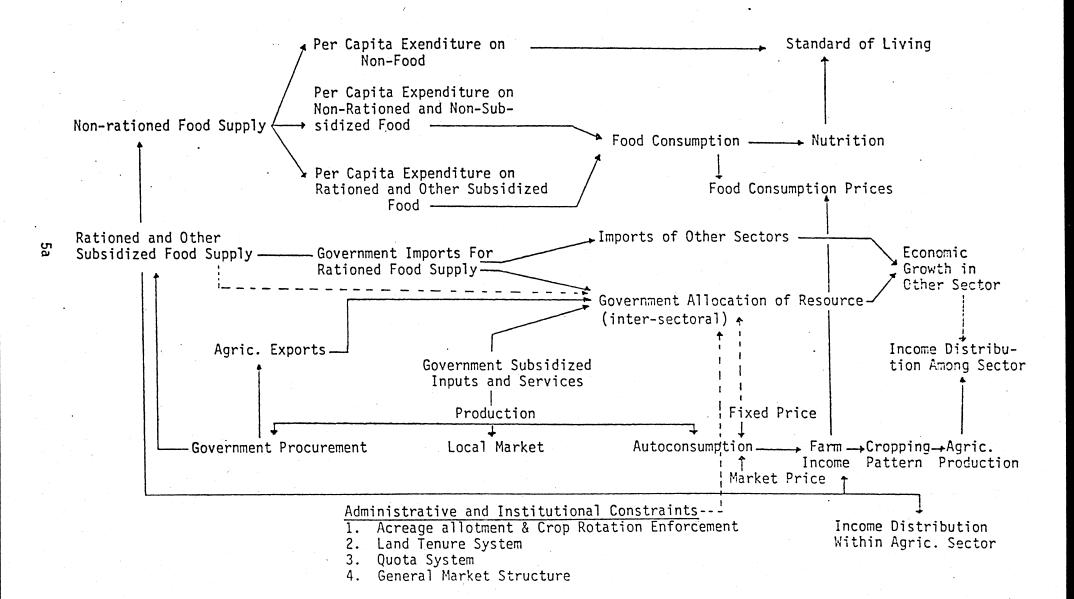
Currently, the rationed items are distributed as follows:

- Sugar is rationed at 750 grams per person per month at L.E. 0.10/kg. (unbagged). Additional sugar quantities can be bought at government and private food stores for L.E. 0.30 - 0.35 per kg. depending upon quality.
- 2. Cooking oil is rationed at 450 grams per person monthly at L.E. 0.10 per kg. Additional limited quantities (per family) can be bought at government stores at about L.E. 0.33 per kg. Imported oils are available in private stores at L.E. 1.55 per litre provided by private importers.
- 3. Low-quality rice is rationed at 1 kg./person/month at L.E. 0.05/kg. Additional quantities of generally better quality can be bought from government food stores or private grocers at L.E. 0.14/kg. when it is available.
- 4. Tea is rationed at 80 grams/person/month at L.E. 0.055/40 grams. Additional tea is sometimes available at government food stores, and prices depend upon quality.

Government food stores offer other less strictly rationed (semi-rationed) food items such as wheat flour, beans, lentils, imported frozen meat, and poultry. Prices of these items are fixed at low levels, but quantities per family depend upon the supply available. Government food stores also offer non-rationed items such as jams, cheese, canned fish, and eggs, and prices are generally free.

Wheat and wheat flour are heavily subsidized. Balady (common) bread made of 93 percent extraction rate flour is sold at 0.5 P.T. per 135 gram loaf, while shammy bread made of 72 percent extraction rate flour is sold at 1.0 P.T. per 148 gram loaf. Flour is made available to the bakeries at heavily

 $\underline{ \mbox{Figure 1}} \\ \mbox{General Impact of Food Distribution System and Price Policy of Subsidized Food} \\$



subsidized prices, and bread quantities are generally unlimited. Extraction rates have varied from one period to another according to administrative rules and decrees.

In sum, the existing distribution system covers three general types of commodities. The first is subsidized and rationed food commodities where quantities per individual are guaranteed. The major food commodities under this category are cooking oils, sugar, rice (especially in urban areas), and tea. The second is subsidized and semi-rationed (loosely rationed where quantities per family are guaranteed except in times of supply shortages). Commodities under this category are beans, lentils, frozen meat and poultry, and flour. The third category is subsidized but not rationed, where quantites bought are unrestricted. Bread is the major item under this category. Also, the government distribution system deals with non-subsidized food commodities such as some vegetables and fruits.

The existing distribution and pricing system is complex and has evolved over many decades. Figure 1 presents the linkages and impacts with other economic activities.

Domestic production is carried out under administrative and institutional constraints which are intended to organize and control the production and distribution of the major food commodities. Also, domestic production is greatly affected by government policies to distribute subsidized inputs and services. Generally local food production in Egypt has three outlets: government procurement, sales in local markets, and autoconsumption (consumption at home by the producing family). The distribution of production among these outlets depends mainly upon relative prices, of which some are fixed by government and others are freely determined in markets. Thus, on the production side government price policy tends to determine farm incomes by affecting cropping patterns and the delivery of specified quotas to the government at fixed prices. The result is that government price policy is an important determinant of the income distribution pattern within the agricultural sector. On the consumption side, price and rationing policy affects the distribution of real income among consumers and by influencing exports and imports, the realtive well-being of Egyptian and foreign consumers.

Government imports for rationed and subsidized food commodities represent an increasing fraction of total consumption. Such imports of food affect foreign exchange availability for imports to other sectors and hence intersectoral allocation of scarce foreign exchange reserves. Also, the administrative cost of the rationed and food subsidy tends to affect the intersectoral government allocation of investment resources. Thus, by taking more and more of the government budget for food subsidies, the economic growth of other sectors of the Egyptian economy is affected. It follows that income distribution among sectors is also affected.

Rationed food and other subsidized food supply policy affects per capita expenditure on non-food items and non-rationed or unsubsidized food items. Of course, food consumption affects the level of nutrition (7), one of the principal determinants of the standard of living itself.

GUIDELINES FOR THE ECONOMIC ASSESSMENT OF THE EXISTING DISTRIBUTION AND PRICING POLICIES

It must be stated at the outset that the existing system has favorable as well as unfavorable results. After all, the policies must have been implemented to meet some perceived social need. Thus, any assessment of the existing system must appraise its advantages as well as its disadvantages.

The major perceived benefits of the system stem from governmental policies which are designed to:

- 1. Guarantee a minimum level of food consumption for the vast bulk of the population.
- Eliminate extreme shortages in the basic foodstuffs.
- Control the spatial distribution of these basic foodstuffs in the different regions of the country.
- 4. Protect Egyptian consumers against large world price fluctuations.
- 5. Curb consumption growth for the rationed basic food items.

- 6. Ensure equity in the distribution of basic food commodities.
 - 7. Ensure social and political stability.

These objectives are not static and therefore change over time. Also, they may be inconsistent with the objective of pricing farm products such as to increase government income (10). Some of the government objectives are not achieved in practice and some seem to be achieved only at high economic cost. However, food is relatively cheap in Egypt, and no serious regional shortages occur. It is certainly widely believed that the existing policy helps in achieving social and political stability.

Any assessment of the government distribution and pricing policies should take these dimensions into consideration. Thus, the results of any econometric or mathematical model or methods attempting to measure the direct losses of the system should be interpreted with caution and care.

Some indications exist that the current food distribution and pricing system for basic subsidized foodstuffs may not be reaching all the goals desired for it. There are contradictory results on the government payments and trade accounts, utilization patterns, consumption levels, income distribution, saving and income transfers, and the general agricultural development of the country.

Let us now look more deeply into some of the possibly unfavorable consequences of the current policies.

1. The high growth rate in consumption of basic subsidized food items:

The government policy of subsidizing basic foodstuffs has caused dramatic increases in consumption of these staple food commodities. Consumption of bread, tea, rice, sugar, and cooking oil is estimated to have increased by 5% to 8% per year. This rate is 2 to 3 times faster than the population growth rate. Food distribution through the rationing system seems to be sufficient to cover most of the per capita consumption requirements. For example, data from the latest Family Budget Survey of 1974/1975 (8) indicate that sugar consumption per capita averages about 13.35 kg. to 12.98 kg. in rural and urban areas, respectively. Thus, the rationing quota seems to cover about 67.0% and 69.0% of sugar consumption in urban and rural areas, respectively.

Per capita rice consumption averages about 27.07 kg. in urban areas and 24.9 kg. in rural areas. The rationed rice quantity covers only 44% and 48% of these quantities, respectively. The per capita quantities of cooking oils distributed through rationing seem to cover all consumption in rural and urban areas with the exception of the coastal regions.

What is inefficient about this policy? If commodities must be subsidized, it means that the prices to consumers are lower than the real supply costs to the economy as a whole. At the margin, it is quite likely that consumers value resources going into the supply of subsidized commodities at a lower level than if they had been used for the supply of alternative commodities. The end result is to lower the standard of living.

2. Increasing dependency on imports:

The government policies favor consumers at the expense of producers. The availability of food at low prices to consumers and the lack of price incentives to producers lead to greater and greater dependency on foreign suppliers through time (Table 1).

The continuation of these distribution and pricing policies for the basic foodstuffs could lead to importation of over 7 million tons of wheat, 325,000 tons of sugar, 657,160 tons of oils, 586,260 tons of red meat, and 110,100 tons of poultry by 2000 in order to cover domestic consumption. (2) The country does not appear to have the production base to produce the foreign exchange needed for the future importation of these quantities of subsidized food.

Also, the inclusion of rice in the rationing system may lead to the elimination of this important crop from the list of Egypt's agricultural commodity exports. Rice exports decreased from 366,093 M.T. in 1960/1961 to about 94,878 M.T. in 1979. The total value of rice exports decreased correspondingly and fell to about L.E. 22.1 million in 1979. Indications are that Egypt might well soon become a net importer of rice and could require imports up to 1.0 million tons by year 2000 to cover domestic consumption of this subsidized grain (2).

3. Unintended consequences of price subsidies:

The partial distribution and pricing policy of controlling and subsidizing prices of specific commodities while the prices of the same

Table 1
Imported Quantities and Value of
Some Major Subsidized Food Items in Egypt

(Q = 000's M.T. ; V = Mill. L.E.)

	Wheat							Total Veg.	
	Wheat		Four		<u>Maize</u>		Cooking Oils		
	Q	<u> </u>	Q	V	Q	<u> </u>	Q	V	
1960/61	438.7	9.3	422.4	10.2	55.3	1.1	19.9	2.0	
1965/55	1220.3	37.0	510.3	18.3	187.8	5.5	5.6	42.4	
1973	1489.9	55.1	226.9	10.6	67.0	2.5	11.3	78.0	
1975	2686.6	213.0	551.4	46.5	417.6	27.1	113.1	324.8	
1977	2419.0	128.6	615.2	49.4	590.9	30.0	5.7	21.5	
1978	3001.4	169.6	959.7	74.8	730.1	38.0	28.8	74.4	
1979	2251.9	174.3	704.3	68.4	493.9	31.3	64.0	191.1	

Source: Central Agency for Public Mobilization and Statistics

commodity or close substitutes are determined in the free market has some unfavorable consequences. The utilization patterns of the subsidized food items are greatly affected by this partial policy. Some features of the unintended utilization are:

- a. A considerable outflow of subsidized low-priced bread and wheat flour from urban to rural areas where they are used in poultry and livestock feeding. The shortages and high prices of roughage and concentrates make it very profitable to use subsidized bread in feeding operations, which is obviously an unintended use.
- b. Because some food items, especially bread, are so cheap, there is little incentive to prevent consumption "waste".
- c. There is a continuous shifting from high priced non-subsidized substitutes to subsidized goods when the latter are available. This shifting increases government expenditures on subsidies and raises administrative costs.
- d. Some reselling of rationed and semi-rationed subsidized food items occurs, principally by low income groups and usually at a very low profit margin. They prefer cash over specific food items, particularly at certain times. Even though an unintended use, this trading may actually increase levels of well-being of all traders.

4. Eligibility to participate in the system not limited to the poor:

In practice, the distribution system is not exclusively for the low income segments of the population. In January 1979, the number of issued ration books was about 7.0 million serving about 37.0 million individuals. This encompasses over 95% of the resident population.

In addition, cheap bread can be bought by all, and quantities are generally unlimited. Also, the diversion of uses of subsidized foodstuff indicates government subsidization of other industries and activities in the economy that utilize these commodities. Even though the subsidy policy seems

to have been initiated as an anti-poverty device, its extension to encompass nearly the entire population may well have solidified political support for its perpetuation.

5. Costs of regulation enforcement:

Penalties for violations of the rationing production quota and price control policies were fixed back in 1945 and 1950. These penalties, usually in the form of fines, are low compared to the benefits derived from violating the rules. For example, the fine paid for every non-delivered ton in the compulsory rice quota is L.E. 50.0. The fine for onion is L.E. 20.0 per ton (with maximum of L.E. 500.0). Given the existence of open markets for these commodities, it may be profitable for producers to ignore the quota, sell in the open market, and pay the penalty. Also, the more isolated rural population may be unfamaliar with the government policy, especially as related to the availability of semirationed items. Local administrators and distributors of the supply may profit from redirecting available supplies. In any case, the very existence of quotas, rationing, and price fixing on such a large scale means that enforcement will be costly if the rules are to be obeyed, enforcement requiring resources that might have been utilized in other valuable ways.

6. Creation of uncertainty and irregular buying habits:

The distribution of basic (semi-rationed and non-rationed) subsidized food items depends upon available supply. Excess demand is a chronic condition, as economic theory predicts. Consumer uncertainty about the timing and availability of supply leads to the hoarding of stocks beyond actual and immediate needs. Long queues are always observed near government food stores, indicating temporary availability of one item or another. Consumers tend to buy as much as allowed, either to minimize the time lost in queues at the government food stores or to resell the purchased food items at some profit margin. This phenomenon prevents the intended equal distribution of some subsidized food items since those who value their time highly will not wait in queues. The existence of queues indicates either the need to increase the number of selling points for these basic food items, to restrict even more the quantities purchased or to stabilize the supply so that purchases can always be made. All of these remedies for the long queues will probably increase

government costs, but may be more than offset by reduced queuing and storage costs by individual consummer.

7. Creation of misallocation of resources within the agriculture sector:

As already suggested, fixing the consumer prices of the basic subsidized food items at a low level creates a heavy burden on the government budget. The government attempts to mitigate this burden by reducing procurement costs. It does this by paying low prices to farmers, especially for crops marketed through the cooperative system. This practice creates disincentives for producing these major food items domestically and forces the country to increase its imports to meet consumption requirements.

In an attempt to mitigate the impact of fixing farm prices at unprofitable levels, subsidized inputs and services are provided to producers to be used for the basic food and export crops. The quota quantities delivered to the government of the major subsidized food items are presented in Table 2. These quantities generally represent only a portion of the produced quantities. The rest is either consumed by the farm family or is sold in the local market when one exists.

It was generally profitable for the Egyptian farmers to produce non-subsidized commodities even if they had to pay the fines associated with violating the laws relating to quotas and areas planted specified by the government for the basic subsidized agricultural commodities. There is little doubt that the present system of administrative controls and low farm prices is seriously misallocating resources and is violating the principle of comparative advantage. It is easy to show that when commodities are both imported and grown domestically, the real cost to the economy of keeping domestic prices low is the price paid for imports. So long as domestic production costs are below border import prices, scarce resources could produce more value for Egyptian consumers if they were utilized in low-cost domestic production rather than utilized to buy more costly imports. This is a tremendously important point for policy makers to understand.

8. Creation of unbalanced sector growth:

It is argued here that farm prices are depressed by administrative decrees in order to provide urban consumers with food subsidies. Prices in other sectors of the economy are increasing in real terms relative to those in

agriculture, creating unfavorable terms of trade between agriculture and other sectors. This policy seriously retards growth in the agricultural sector and imposes unfair welfare losses on farm families compared to their urban counterparts. It is no accident that other non-subsidized sectors are growing while the penalized agricultural sector is stagnant.

The above discussion represents only the highlights of major economic impacts on the Egyptian economy of the subsidy and production control policy. Also, it implicitly defines areas of needed research as well as provides criteria for the assessment of the existing system. Clearly, the problems are complex, and many analytical tools are needed to understand the economic and social ramifications of policy changes at the commodity, agricultural sector, and macro-economic levels. The concepts of Pareto optimality, consumer surplus, and economic rent from modern welfare economics can serve as important analytical concepts in making such an assessment of existing policies.

Most previous studies of these problems depended heavily upon assumptions related to supply and demand price elasticities (10) and (19). Accurate estimation of these parameters is crucial to estimating net social losses and gains (7). However, the power of all available econometric methods to measure social losses and gains stems from the accuracy of the underlying specification and the assumed casual relationships, i.e., the specified structural relationships. The frame provided in this paper is the first step toward better specification and quantification of the major impacts of this system.

CONCLUSION

The major unfavorable effect of the current distribution and pricing policies for the basic subsidized foodstuffs seems to be on the development of the agricultural sector. The government fixes consumer prices at low levels and thus stimulates inefficient and wasteful consumption. It also fixes some farm prices at a low level and thus discourages efficient production. At the same time, other agricultural and non-agricultural commodity prices are

determined by market supply and demand forces, and these sectors can and do make efficient adjustments when demand and supply shift.

This partial price-fixing policy tends to create misallocation of resources within the agricultural sector and between agriculture and other sectors of the economy. The depression of farm prices at the same time that most non-farm prices tend to increase due to higher demand and general inflation causes unbalanced sectoral growth. It also produces a negative impact on the welfare and real income of farm families. In general, the existing price and distribution policies are one of the major causes for the "bad" performance and stagnation in the Egyptian agricultural sector.

Among all efforts to remodel government subsidies and control policy, the reformulation of the government distribution and pricing policies for the basic subsidized food items ought to have the greatest priority. They are critical to both consummers and farm producers, and efficiency gains produced by policy changes would be both significant and pervasive.

This paper calls for better specification of existing inter-relationships in order to reach appropriate and accurate measures of social gains and losses. The concepts of consumer surplus and economic rent should be used in assessing the existing and complex distribution and price system, but other analytical approaches need to be tried as well.

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