

# Working Paper

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FISCAL AFFAIRS DEPARTMENT

Jordan: Restructuring Public Expenditures  
and Protecting the Poor

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Abstract

In Jordan, a system of general food subsidies became untenable in budgetary terms, with a sharp devaluation of the dinar in the late 1980s. A shift from a general subsidy system to limited rations would greatly reduce budgetary costs and minimize adverse effects on the poor. To reduce subsidies, the authorities had taken measures, during the course of 1990, consistent with the measures suggested. To complete the safety net, a system of self-targeting public works is suggested; a reform of the social security system might also be needed in view of the increased unemployment resulting from the recent Middle East crisis.

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### Summary

Jordan suffered from unsustainable macroeconomic imbalances, particularly those arising from fiscal and trade deficits, during the mid-1980s. These imbalances were exacerbated by a system of general subsidies on essential food items whose prices are administratively set. Moreover, the depreciation of the dinar in 1988-90 aggravated the burden of subsidies. Necessary adjustments have been difficult to make because of the need to protect the poor and those on relatively low fixed incomes from the effects of higher prices. During 1990, however, the Government introduced several measures (consistent with the recommendations in this paper), which have reduced budgetary expenditures on subsidies.

The paper suggests that subsidies can be reduced in a manner that both protects the poor and the lower-middle classes and eliminates production and consumption distortions. The proposed program encompasses short-term measures, compensatory mechanisms, and medium-term reform.

Given price changes, the introduction of rationing for a limited number of items and a degree of targeting would reduce food subsidies. The paper considers the impact of these short-term changes on budgetary expenditures, production incentives, and the incomes of various groups. Such measures, seen as temporary, permit the full pass-through of exchange rate adjustments to open-market prices obtaining for above-ration purchases.

To offset any negative impact of commodity price "corrections" on the poor, the compensatory mechanism of direct transfers to the vulnerable and wage adjustments might be needed. These transfers include self-targeted public works programs and measures to encourage enterprise.

The pension and social security system needs to be reassessed to pool risk across generations and to promote equity and efficiency. This would form the main safety net after the economy has assimilated adjustments to the price shock.

In addition to the problem of subsidies, unemployment has expanded in Jordan in recent years and has been further exacerbated by the influx of refugees from Iraq and Kuwait. While this study does not focus on such workers, it does discuss self-targeted means of addressing unemployment.

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## I. Introduction

Jordan suffered from unsustainable macroeconomic imbalances, particularly with respect to the fiscal and trade deficits, during the mid-1980s. Necessary adjustments have been constrained by the need to protect the poor and those on relatively low fixed incomes from the effects of relative price changes. Thus, while there has been a substantial depreciation of the Jordanian dinar, the less than proportional pass-through of price changes, particularly for imported food items and energy, has led to increased pressure on budgetary subsidies. In this paper we examine possibilities for reducing subsidies in a manner that protects the poor. We also examine other elements that would be necessary for an effective provision for the poor and vulnerable in Jordan.

Given the uncertainties caused by the disruption of economic activity in the Middle East, the solution to basic structural weaknesses in the realm of public expenditure becomes crucial. Many of the recommendations in connection with subsidy reduction and the protection of the poor have been put in place. It would be interesting to follow up with work on the implementation and its effects, as a guide to policy-makers not only in Jordan but also in other countries for which similar policies might be considered.

Section II provides information on the macroeconomic background to the adjustments that are needed. Section III discusses the evidence on characteristics of the poor in Jordan. This leads to the policy discussion in Section IV of subsidies and other measures to protect the poor. Section V assesses reform options with reference to policy measures introduced recently by the Jordanian Government to reduce expenditures, particularly subsidies, while protecting the poor.

## II. Macroeconomic Imbalance

Jordan experienced a GDP growth rate of 8 percent per annum during 1978-82. This rate was not sustainable. The relatively high levels of government expenditure, over 50 percent of GDP on average during 1978-82, had led to overall deficits in excess of 30 percent of GDP, two thirds of which (or around \$1 billion per annum on average) was financed by external grants. With a slowing of growth in the region in the mid-1980s, and a concomitant reduction in the level of grants (which declined to around \$550 million by 1988), the regional recession affected Jordan severely, with growth dropping to 1.2 percent by 1985, and becoming negative by 1988. There was also an increase in the "after-grants" budget deficit from around 12 percent of GDP in the early 1980s to over 15 percent in 1988; the budget deficit "before grants" remained high at about 25 percent of GDP in 1988.

Compounding the budgetary crisis was a critical external debt-servicing situation. Jordan's total debt (disbursed and undisbursed) outstanding by 1989 amounted to about 180 percent of GDP. Debt service

payments as a ratio to exports of goods and services rose to 28 percent in 1988 before declining to 18 percent in 1989 as a result of rescheduling. This has exacerbated a precarious balance of payments situation. In addition, with the delinking of the West Bank from Jordan in mid-1988 there was a substantial capital flight that created speculative pressures on the Jordanian Dinar (JD). Reserves fell to about two weeks of imports by end-1988.

The response to the reserve and balance of payments situation has been a depreciation in the value of the currency from JD 0.33 per U.S. dollar in mid-1988 to JD 0.673=\$1 in March 1990. Since virtually all of Jordan's food is imported, the effect of a limited pass-through of the effects of the depreciation of the JD on domestic consumer prices has led to an increase in expenditure on food budgetary subsidies from about 1 percent of total expenditures in 1985 to 7.3 percent for 1989 (preliminary estimates). There has been a reduction in total government expenditure as a proportion of GDP from 46 percent in 1985 to around 41 percent in 1989, and, correspondingly, there has been an absolute and a relative decline in capital expenditures both in relation to GDP (9.1 percent to 7.7 percent) and to total expenditures (20 percent to 19 percent) over the same period. To the extent that this jeopardizes future growth potential, the reduction in capital expenditures will make the process of recovery for Jordan more difficult.

Jordan has had a fairly unchanging revenue base, which has averaged around 25 percent of GDP. The revenue system is generally inelastic and the Government has had to resort to discretionary measures to keep the revenue/GDP ratio from falling. Structural measures on the tax side have been initiated, with Fund support. However, structural tax changes take time to yield revenues. Thus, in addition, some of the burden of adjustment is likely to bear on the expenditure side, particularly in the short run. Basic data on government finance are presented in the Appendix tables. The adjustment would be facilitated if it can be shown that the poor might be protected from or compensated for any adverse real income effects that might arise.

### III. The Poor and Their Characteristics

There are two sources of information on the characteristics of households in differing circumstances and on the incidence of poverty in Jordan: the first is the 1987 Household Income and Expenditure Survey conducted by the Department of Statistics, and the second is the Health, Nutrition, Manpower and Poverty Household Survey for 1987. Unfortunately, more recent information is not available. We shall use the quantities consumed by household groups from the earlier survey in assessing the incidence effects of price changes on particular groups. These should, in principle, be modified by the effects of the price changes on consumption patterns, but economywide demand derivatives (or estimates of aggregate changes in demand, given price adjustments) are not presently available for Jordan. The analysis, presented in a

disaggregated form ranked by various expenditure deciles, thus represents the first-round effects of the price changes.

We do not attempt to estimate caloric requirements or very precise poverty lines for Jordan but work rather with the poorest deciles, juxtaposed against the richest two deciles, to establish a relatively clear picture of how different household types might be affected by particular policy options. Note, however, that the Ministry of Planning has estimated minimum consumption requirements for 1987 to be equivalent to JD 15 per capita per month, and that this also corresponds to the mean expenditure levels of the poorest 20 percent of the population (of just over 3 million people). Thus, absolute poverty is not significantly different from that in countries as diverse as Pakistan or China (see Ahmad and Allison, 1990, and Ahmad and Wang, 1991). Since real incomes have fallen in the post-1987 period, relevant target groups, as far as the Government is concerned, would roughly correspond to those in the lowest two or three deciles of the population.

For policy purposes it is important to identify which broad groups the Government is likely to be concerned with, and in Jordan these include (i) low-wage employees, particularly in the public sector; (ii) the unemployed; and (iii) those unable to participate in the labor market. It is clear that low-income public employees, with earnings up to JD 170 per month are at or below "poverty thresholds," given relatively large family sizes (often up to ten members per household). Multiple earners would ease the problem, but, given the slack labor market conditions and considerable unemployment particularly among educated women, there is no guarantee that such employment would be available. Relative price changes, which adversely affect the minimum consumption expenditures of such groups, would only exacerbate the problem and result in a large number of households which would be classified as poor. Thus, a prime policy objective would be to tailor relative price changes in such a manner as to protect the minimum consumption patterns of low-income households, including the current poor and those who are at risk of being pushed deeper into poverty.

The 1987 Poverty Survey suggests that there are a number of distinct groups within the ranks of the unemployed which will require different policy responses. The first is a group of middle-aged or aging males (ages 45 or over) who are not likely to be educated beyond the preparatory level and who have worked in manual occupations. This group is at the greatest risk of poverty, as the unemployed workers tend to be heads of households without alternative means of livelihood or support. The second is a group of young, educated entrants to the work force, both male and female. While the export of educated manpower has been one of the mainstays of the Jordanian economy owing to the remittances generated (prior to the current upheavals in the Middle East), traditional values dictate that females are less likely than males to be part of this expatriate labor force. The rate of unemployment of females was 28 percent in 1987, as against 13 percent for males, and most of the unemployed females were educated and under 25 years of



age (see Appendix tables for further details). However, given the structure of family support, this group is less likely to be at risk of poverty than the ones described above.

Given the labor market conditions in Jordan, the areas of policy concern appear to be to protect the minimum living standards of the poor, and this is likely to involve the overall design of subsidies and consumer prices. It is also important to provide for groups unable to participate in retraining or the labor market, including the relatively elderly, nursing mothers, and poor children. Thus, old-age pensions and targeted transfers, often in kind, are likely to be important. Finally, the Government may wish to ensure minimum income maintenance for the currently unemployed, and for those who are likely to become unemployed, as a result of the restructuring of the public sector. Here measures to utilize effectively the Bank's Development and Employment Fund may well be crucial. 1/

#### IV. Food Subsidies and Protecting the Poor

Under the current system of consumer prices and subsidies, domestic prices for a range of food items have been left unchanged, despite the large depreciation of the Jordanian dinar since 1988. This has led to a growing subsidy for food items amounting to JD 73 million (or around 2 percent of GDP) for 1989, accounting for 12.6 percent of revenues 2/ and exacerbating the already serious overall budgetary deficit. Estimates for 1990 suggest that the subsidy bill, in the absence of policy reform, is likely to be around JD 100 million. The program presented below suggests that there is considerable scope for reducing this bill in a manner which protects the poor and the lower-middle classes and eliminates production and consumption distortions. The proposed program described below consists of:

- short-term measures which, given price changes, the introduction of rationing for limited items, and a degree of targeting, would reduce food subsidies. The impact of these changes on budgetary expenditures, production incentives, and the incomes of various groups is also considered;

- compensatory mechanisms to offset any negative impact of commodity price "corrections" through direct transfers to the vulnerable and wage adjustments; and

- a medium-term reform of the pension and social security system to promote the pooling of risk across generations and greater equity and efficiency.

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1/ This report was prepared before the crisis in the Middle East. See p. 15 for a discussion of some implications of the crisis.

2/ Consumer subsidies for water and electricity and production subsidies for agriculture are treated separately in the World Bank Report.

## 1. Current system

A consumer subsidy could be defined as the difference between the price the consumer actually pays and the total cost of delivering the commodity at the retail outlet. For an imported food item, the total cost would include the CIF import price, a margin for the cost of trade and transport, and a profit margin for the wholesalers and retailers. A budgetary subsidy, on the other hand, is the difference between the CIF cost of importing, plus the trade and transport cost of delivering to the wholesaler, and the price charged to the wholesaler.

Of the total budgetary subsidy of JD 98 million in 1990, <sup>1/</sup>76 percent is likely to be on wheat, sugar, and rice; the remaining 24 percent on milk, maize, sorghum and barley (Table 1). The largest subsidy, amounting to JD 39 million, or a little less than half the total outlay, is for 0.4 million tons of imported wheat, which is delivered to millers for JD 35/ton while costing JD 130/ton. Imported wheat also bears the highest consumer subsidy rate of 146 percent. Jordanians are able to buy flour at JD 75/ton while the cost of importing, transporting, and milling the wheat is estimated to be about JD 185/ton. Sugar is another essential consumption item which is heavily subsidized, with a consumer subsidy rate of 140 percent and a projected budgetary outlay of JD 25 million for 1990. Rice is the other major food item bearing a consumer subsidy rate in excess of 100 percent. The budgetary outlay on subsidizing meat products has been reduced over the recent past. There is no budgetary subsidy on imported lamb and only a small budgetary subsidy on imported beef. However, the price of domestically produced meat is substantially higher than that of imported meat. This price differential is partially offset by subsidized inputs, such as barley and maize, used as domestic animal feedstock.

## 2. Reforming the present system--a rationale for limited rationing

It is possible to reform the existing system of administered prices and bring about a substantial reduction of budgetary outlays. This involves limiting the use of general subsidies, introducing rationing for selected items, and taxing items consumed mainly by the rich.

### a. General subsidies

A general subsidy implies that the consumers could potentially purchase unlimited quantities of an item at the subsidized price. If budgetary outlays are limited through shortages, a system of ad hoc rationing operates through queues, which are either random or favor the rich and well connected. In principle, only inferior goods justify a general subsidy, since demand patterns limit the budgetary outlays and

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<sup>1/</sup> Estimated before the reform measures taken by the authorities during the course of the year.

Table 1. Jordan: The System of Subsidies in 1990 \*

Item Imported	Projected Consumption '000 tons	Cost of supplying wholesalers			Resale price to Wholesalers <u>3/</u> JD/ton	Retail Cost <u>4/</u> JD/ton	Consumer Price JD/ton	Consumer Subsidy Rate Percent	Budgetary <u>5/</u> Subsidies Million JD
		CIF Price JD/ton <u>1/</u>	Transport Cost JD	Total JD/ton					
A	B	C	D	E=C+D	F	G=E*1.09	H	$[(H-G/H)*100]$	$(F-E)*B$
Rice	70	278	8	286	125	310	140	-121	11
Wheat									
Imported	400	122	"	130	35	185	75	-14%	38
Domestic	25			125	80	179	140	-28	1.1
Sugar	140	300	8	308	128	336	140	-140	25
Milk <u>2/</u>	585	17	1	18	11.5	19.6	12	-63	3.8
Lamb									
Imported	11			1,586	1,690	3,286	1,800	...	
Domestic	9						2,500 to 4,000	Input subsidy	
Beef									
Imported	11	1,475	90	1,565	1,050	1,935	1,400	-38	5.6
Domestic	2						2,500		
Maize	155	61	8	103	75	103		-37	4.3
Sorghum	155	61	8	69	55	69		-25	2.2
Barley	160	95	8	104	60	104		-73	<u>7.0</u>
								Total subsidy	98

Source: Ministry of Supply; World Bank staff estimates.

\* Estimates of subsidies before the reform measures that were introduced during the course of 1990.

1/ The price is quoted in \$/ton and the exchange rate used is \$1 = JD 0.675.

2/ All quantities for milk are expressed in terms of '000 cartons of 12 kg each. Prices in JD/carton.

3/ Resale price to wholesaler is the price at which the Government sells the imported or domestically procured item to the wholesaler.

4/ The retail cost = cost of supplying the wholesaler + a profit margin of 9 percent. This formula is used most commodities. For wheat, milling costs of JD 35/ton and a profit margin of 12 percent are assumed. For maize, sorghum and barley, there is no retail margin because these items are not retailed.

5/ Budgetary subsidy = cost of supplying wholesalers - the price to the wholesaler.

most of the benefits are self-targeted to the poor. At present, the general subsidies on a range of commodities, as described above, make substantially greater income transfers to the rich and middle classes than to the poor, and also represent open-ended budgetary commitments. It is only for imported Zero No. 1 flour that a greater than proportionate benefit accrues to the bottom 10 or 20 percent of the population (Table 2). Such flour is the only potentially suitable item for a general subsidy. For a given budgetary outlay, there are substantially greater transfers to the richer, than to the poorest deciles, for commodities such as high-quality local flour, bread, sugar, and, in particular, rice and meat. However, political and administrative realities suggest that a general bread subsidy is likely to remain in Jordan in the medium term. This can, however, be targeted by increasing the bran and fiber content of the subsidized bread, leading to more cost-effective transfers in the longer run.

b. Rationing

Rationing would be more attractive than a general subsidy for "normal" goods since it can provide limited, although equal, benefits to all, and hence limit budgetary outlays. It also has useful "insurance" properties, since the availability of given quantities at predetermined prices assures that such goods are not priced beyond the capabilities of the poor. Nonetheless, in the case of a JD 1 subsidy outlay, in principle, only 200 fils would accrue to the bottom 20 percent; the remaining 800 fils may be viewed as a "cost" or leakage if the transfer objective is the most important consideration. In determining the choice of commodities to ration, the item should be important in the consumption baskets of the poor. In Jordan, rice and sugar, which involve large outlays and are normal goods, fall into this category. For rice, additional targeting may be achieved by restricting rationing to relatively low-quality varieties, with higher-quality rice being sold on the open market without subsidy, or by using a tax to achieve a degree of cross-subsidization.

To ensure the availability of essential food items at "reasonable prices," the Government has proposed a system of in-person registration for food stamps. Food stamps, purchased in advance, would be redeemable at retail outlets. An honor code or stigma could prevent the wealthy from taking advantage of the stamps. If the expectation is fulfilled, the subsidy would be reduced in principle by 60 percent. It would be interesting to monitor the effectiveness of this experiment, both in terms of take-up rates as well as administrative cost. Resale of rationed items is not, in principle, a disadvantage. This system improves on the current one, which involves either an open-ended commitment by the state to provide subsidized supplies to satisfy excess demands, or random rationing with shortages. Not too much should be expected of rationing, and unless the self-targeting works well (so as not to exclude the poor while preventing the rich from benefiting), rationing is still an inefficient means of transferring income on a permanent basis to the poor. More direct mechanisms would be preferable

Table 2. Jordan: Benefits Relating to JD 1 in General Subsidy by Commodity

Item	Deciles						Total
	1	2	3	4	9	10	
Flour							
Zero No.	0.145	0.101	0.128	0.121	0.090	0.100	1.000
European	0.149	0.088	0.089	0.141	0.088	0.074	1.000
Mixed	0.076	0.118	0.119	0.099	0.079	0.060	1.000
Local	0.062	0.087	0.079	0.101	0.103	0.078	1.000
Bread	0.075	0.087	0.089	0.096	0.111	0.133	1.000
Rice							
U.S.	0.032	0.050	0.028	0.041	0.187	0.362	1.000
Other	0.048	0.060	0.073	0.083	0.145	0.146	1.000
Mutton imports	0.010	0.023	0.028	0.048	0.178	0.342	1.000
Veal imports	0.035	0.049	0.065	0.075	0.167	0.185	1.000
Sugar	0.060	0.077	0.086	0.110	0.123	0.115	1.000

Source: 1987 Household Income and Expenditure Survey.

Note: In this analysis, it is assumed that a general subsidy of JD 1.000 is allocated to each of the above commodities. The resulting benefits are described for the lower four deciles and the highest two deciles. If the benefit exceeds JD 0.100, then the subsidy provides more than proportional benefits. A uniform ration would generate equal benefits to all deciles (if not targeted further). In the Jordanian case, only a general subsidy on flour (either Zero No. 1 or European varieties ) would be more progressive than a ration.

and more cost effective, in the longer run. The main advantage of rationing is as a "protective" short-term instrument for major relative price changes.

During periods of scarcity or adjustment, price and income stabilization objectives often involve assured supplies at stable prices but do not invariably imply extensive subsidies. Higher free market prices reflecting conditions of excess demand would make it easier to adjust prices upwards toward international prices (or social opportunity cost) for importables such as rice and sugar. The Government has agreed with the IMF that this process should take place in the medium term, at which point rationing would become redundant. Nonetheless, the need for price stability remains, and this can be achieved through a combination of stock and trading policies.

c. Taxable items

Poorer income groups consume little meat, and there is little justification to subsidize this set of commodities. At current prices there is considerable excess demand for meat by the middle classes, and limited quantities of imported meat are in fact subject to an informal process of rationing. This suggests that the retail price of meat could be raised, which would be desirable for a number of reasons. First, it would be possible to make a substantial profit, which in turn could be used to cross-subsidize food commodities that are more important in the consumption baskets of the poor. Second, raising domestic meat prices would curtail consumption, which is beneficial on nutritional grounds. Third, the present low prices have resulted in price differentials with neighboring countries and have led to extensive smuggling. Finally, raising the price of imported meat would also allow an increase in the present low price of domestically produced meat. This would also allow the Government to eliminate the subsidy on imported maize, sorghum and barley, which are used as animal feedstock.

3. Reforming food subsidies

Milk is particularly useful for nursing mothers and young children, and targeting by income status may not be desirable. It would be desirable, however, to target subsidized milk to primary schools and to clinics which cater to pregnant and nursing mothers and infants. This would increase the attractiveness of such clinics and assist in the dissemination of information on hygiene and preventive care. Neither a general subsidy nor the rationing of this commodity is needed. The targeted provision should be accompanied by unrestricted market clearing prices for all other types of milk. The overall subsidy could, thus, be reduced to JD 0.9 million, from a projected level of JD 3.8 million. 1/

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1/ This calculation is roughly based on the ratio of primary school children and nursing mothers to the total population.

Wheat and bread comprise the main food expenditure items for the poorest quintile in Jordan, but only around 6 percent of total expenditures. Much of the wheat is imported (400,000 tons out of the total consumption of 425,000 tons in 1989/90) and is sold to mills at a highly subsidized price. 1/ A 12 percent profit is permitted, and the bread that emerges from bakeries carries a price tag of JD 0.075/kg for "normal" loaves. This price may not be changed very easily. Notwithstanding short-run political constraints, the JD 40 million subsidy involved suggests that measures to target subsidized flour and bread consumption should be explored. One possibility is to shift the subsidy to high-bran "brown" bread. Increasing the percentage of extraction would reduce the subsidy per se 2/ and, in addition, may not be so attractive to better-off households. If the objective is to target transfers to the poor, subsidizing imported low-quality flour provided directly to consumers may be the more cost-effective alternative. This is likely to lead to a reduction in the aggregate consumption of flour, if flour is sold to bakers at cost, leading to a contraction in the demand for bread. This option may not be politically feasible. Also, if there is a shift in demand patterns, the general subsidy may continue to pose budgetary problems, and could also have negative balance of payments implications.

While rice is important in the consumption baskets of the poor, it is clearly a normal good (consumption rises from 16 kg per capita per annum for the lowest decile to 52 kg per capita per annum for the richest) and is an appropriate item for rationing. For example, a ration entitlement could be set at 18 kg per capita per annum for rice. Lower-quality cheaper supplies could be targeted rather than the high-quality California variety. 3/ On 54,000 tons (assuming full take-up by all Jordanians), the subsidy would amount to around JD 5 million (as against JD 11.27 million projected for 1990). The remaining demand for rice could consist of higher-quality rice at cost. Given that effective prices are higher than the controlled price, the true price of rice would be less than the nominal price differential of JD 0.160/kg 4/ between the present and proposed benchmark prices.

Sugar is also an appropriate item for rationing given that it is an "essential," albeit normal, commodity, reflecting current consumption patterns of the poor and the rich. A ration entitlement could be set at

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1/ Import prices range from JD 110-130/ton, whereas the wheat is released to the mills at JD 34.7/ton.

2/ It was estimated that there could be a JD 1 million reduction in the bread subsidy if the percentage of extraction were to be increased from 78 to 80 percent.

3/ The premium on higher-quality U.S. rice is evident from the household survey, which suggested that market prices were over 100 percent that of European or Egyptian varieties. Moreover, unit values suggest that prices paid by consumers were well above the controlled prices.

4/ This would be above the current controlled price of JD 0.140/kg.

18 kg per capita per annum at the current price of JD 0.140/kg. The subsidy on 54,000 tons of rationed sugar (again assuming full take-up) would amount to JD 10 million rather than the JD 25 million projected for 1990 under a general subsidy. If the remainder is sold at cost, it would necessitate a price rise of JD 0.200/kg. A degree of cross-subsidization is possible if open-market sales are subjected to the standard rate of sales tax above the cost price.

With respect to meat prices and input subsidies, it would be desirable to immediately eliminate all input subsidies, allowing mutton, beef and chicken prices to adjust to the new cost structure and changing patterns of domestic demand and trade. The price increases would not affect poorer consumers, since they do not consume large quantities of imported meat. Indeed, the poorest income groups purchase between one half and two thirds of their mutton requirements from the higher-priced domestic supplies. Low meat prices benefit mainly the rich. If the prices of imported meat were raised to the level of domestic prices (e.g., through appropriate import duties), not only would the disincentive for domestic production be removed, the measure would generate an additional revenue of JD 28 million. In addition, there could be a further saving of JD 13 million with the abolition of input subsidies on barley, sorghum and maize. 1/

Among the limited sets of options considered here, 2/ a rise in the price of commodities consumed primarily by the rich is used to finance the system of subsidies that are needed to protect the living standards of various target groups. This is a progressive alternative to financing subsidies through printing money and inflation.

#### 4. Consequences of reform

##### a. Effect on consumers

The effect of the reform program on consumers 3/ is taken as the money loss resulting from the price changes assumed. The poorest 10 percent of the population would suffer a loss of JD 5.5 per capita per annum (see Table 3). This is equivalent to around 3 percent of the

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1/ It was not possible to estimate the effects of input price changes on the price of domestically produced meat products, and consequently these effects have not been incorporated into the distributional impact in the next subsection.

2/ In principle, we would need to examine all commodity taxes and subsidies to determine the appropriate balance between commodity pricing options (see E. Ahmad and N. Stern, "Tax Reform and Development" in H.B. Chenery and T.N. Srinivasan, eds., Handbook of Development Economics, (Amsterdam: North Holland, 1989).

3/ Estimates of demand and supply response would be needed to incorporate behavioral effects, but to our knowledge these are not available.



Table 3. Jordan: Distributional Impact of Price Changes

	Deciles (by per capita expenditures)					
	1	2	3	4	9	10
Food prices and rationing package:						
per capita						
per annum (JD)	5.509	8.217	12.950	18.900	45.060	68.030
per household						
per month (JD)	4.660	6.622	9.173	13.140	22.490	26.870

Source: 1987 Household Income and Expenditure Survey.

Note:

1. This assumes quantities consumed remain unchanged at survey levels.
2. For the food price reform package, see previous tables.

gross expenditures of this group. For employees in public sector employment, salary adjustments of around 3 percent would compensate for the price changes. The richest decile would suffer a loss of around JD 68 per capita per annum, or about 15 times as much as the poor. <sup>1/</sup>

b. Effect on the budget

In the absence of reforms, the aggregate subsidy is likely to be about JD 98 million for the current year. If the program of price changes/food rationing discussed above is implemented as a package, the total budgetary subsidy could be brought down by about JD 66.5 million, or to a third, without adversely affecting the poor households (see Table 4). For political or administrative reasons, the Government may wish to phase in some of the options over a longer period.

Finally, the suggested program can be thought of as a core strategy, which could be logically extended as follows. The suggested rationing of sugar and rice is likely to halve the subsidy at the minimum. Further targeting, through coupons and quality differentials, is likely to reduce this subsidy even further. In addition, there may be some scope for cross-subsidization by taxing the free-market sales of both sugar and rice, and by using cheaper-quality supplies for rationing. Similarly, targeting the flour and bread subsidy is likely to generate further savings. These additional measures would increase the progressivity of the package. The elimination of input subsidies for the domestic production of meat would also lead to substantial budgetary savings while removing production distortions. Given the relative scarcity of meat products, and the excess demand by higher-income classes, there is a strong case for protecting relatively poor domestic producers through tariffs and sales taxes on imported meat, which would remove price differentials between imported and domestic produce.

5. Additional provision for the poor and direct transfers to the needy

Among the poorest groups in Jordan are widows, orphans, the disabled, and the elderly with no extended family support. A proposed zakat tax would be earmarked to provide for such individuals at the local level, where costs of identifying such individuals are minimal. Identification of the needy and direct provisioning are illustrations of cost-effective targeting. The tax base is on wealth, including gold hoards, cash, and fixed assets; the imposition of the tax is likely to increase the propensity to invest in productive assets and would have a positive overall effect on savings.

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<sup>1/</sup> These estimates are based on the quantities consumed, as is reported in the latest available Household Income and Expenditure Survey for 1987; the assumption is that the quantities consumed were unchanged in 1990.

Table 4. Jordan: The Revenue Impact of Possible Reforms 1/ for Food Items

Item	Suggested reforms	Quantity '000 tons A	Cost of supplying wholesalers JD/ton B	Price charged to wholesaler JD/ton C	Current consumer price JD/ton	Assumed consumer price JD/ton	Subsidy (-) tax (+) Million JD (C-B)*A
Rice							
Superior	Allow free market sale	16					0.0
Inferior	Ration as proposed	54	210	125	140	140	-4.6
Wheat	Continue with the present system				75	75	-39.1
Sugar	Ration	54	308	128	140	140	-9.7
	Allow free market sale	86					0.0
Milk	Provide free to target groups	52,800 cartons	18 JD/ carton	0			-0.9
Lamb	Sell imported lamb at a profit or place a tax on imports	11	1,586	3,286	1,900	3,500	+18.7
Beef	Sell imported beef at a profit or place a tax on imports	11	1,565	1,935	1,400	2,300	+4.1
Maize	Raise prices to eliminate subsidies						0.0
Sorghum							0.0
Barley							0.0
Total subsidy with reform							31.5

Source: Staff estimates.

1/ It is assumed that free market quantities will remain unchanged. In reality, higher prices will result in lower consumption, with lower import requirements. Furthermore, it is intended by the authorities that the system of ration registration will result in lower subsidy outlays. Additional targeting of general bread subsidy could also lead to lower subsidies on major wheat outlays.

The reform of public sector pensions and the extension of social security are of high priority, given a net amount of JD 65 million spent on the former in 1989, and the substantial projected rate of increase. As the amounts involved are of the same order of magnitude as the total subsidy bill, pension reform requires careful analysis and is extremely important for the medium-term fiscal and budgetary strategy, as well as for equity purposes. Given that social security funds generate huge surpluses because of the relatively young profile of covered workers, there may well be a case for extending coverage to include many workers presently in the public sector. This is likely to ease the transition from a productive structure dominated by the public sector to one more reliant on the private sector.

Wage adjustments are likely to be accompanied by a reduction in public sector employment, which accounts for about 50 percent of the work force. Measures to provide income maintenance through retraining and employment would be important as a means of ensuring a more effective transition to a higher level of private activity. However, additional employment provisions would have to be self-targeted through below-market wage rates. Care has to be taken not to increase the bureaucracy in this process of providing "targeted" unemployment support. The proposed Development and Employment Fund could be used to finance this activity. Apart from the purely "transfer" aspect of the program, it is desirable that the portfolio of projects chosen be justifiable in terms of economic criteria for longer-run sustainability and growth. As discussed above, unemployment among middle-aged and elderly illiterate or semi-literate (largely unskilled) workers with large numbers of dependents is a serious problem. Further, unemployment among educated entrants to the labor force, particularly females, is also a matter of concern. While the latter are likely to have some extended family support, employment provision for this group is likely to differ significantly from that for relatively elderly, illiterate agricultural or manual workers.

The facilitation of investment opportunities and schemes targeted toward females with some skills is likely to be of increasing importance. The experiences of countries in South and East Asia with comparable educational levels and infrastructure are likely to be of relevance. To ensure the protection of the poorest, investment measures would need to be supplemented by employment provision through public works at low wages (including possible in-kind payments) for the truly destitute, and with local transfers to those unable to participate in the labor market (as through the zakat schemes). The responsibility of the state should not extend beyond the provision of a minimum guarantee to those without assets or family support.

### V. Prospects for Reform

The Jordanian Government has introduced some of the measures discussed in this paper. A rationing scheme for sugar, rice, and milk, was made operational with effect from September 1, 1990. The quantities to be rationed are 1.5 kg/month per person for rice and sugar. The price schedules are similar to those shown in Table 1, with the subsidized price at current levels, and the nonration price set so as to realize small profits (JD 340/ton for sugar, and JD 280/ton for rice). Rather than targeting milk through schools and health clinics, a ration has been introduced. The Jordanian authorities estimate that rationing sugar, rice, and milk will lead to a reduction in subsidies of around JD 22 million on an annual basis. No attempts have been made to target the wheat or bread subsidies, although the overall outlays are reported to be lower on account of falling international prices of wheat. Prices of imported beef and mutton have also been set to cover retail costs, but no element of tax has so far been introduced. There has also been a reduction, which the Jordanians estimate will be of the order of JD 3 million on an annual basis, in the subsidy on barley and sorghum used as animal feed. The direction of reform is to be welcomed, although there is still some scope for further action. It would be useful to conduct an ex-post evaluation of these measures in due course.

The crisis in the Middle East during 1990/91 has affected Jordan severely in terms of disruption in exports and trading patterns, and, most seriously, the loss of remittance income and the return of Jordanians working in the neighboring countries. Given the extent of the impact of the disruption, and the compensation, inter alia, for refugees, there are likely to be substantial calls on domestic and international resources. Nonetheless, the structural measures discussed here will also be essential in addressing the underlying budgetary imbalances, and in minimizing the calls on resources while protecting the poor.

It is apparent that expenditures on subsidies can be reduced substantially without adversely affecting the poor. The principles involved in a restructuring of administered prices, with large implicit or explicit subsidies, are of general applicability in the context of transition to a more market-oriented system. As seen in Jordan, these measures have to be considered in the context of real income levels of the poorest, keeping in mind appropriate measures to protect those who are unable to participate in the labor market. Setting reforms in motion should improve the ability of the country to weather external shocks and crises.

Table 5. Jordan: Macroeconomic Trends (1978-89)

	1978-82 (Averages)	1983-89 (Averages)	1985	1986	1987	1988 (Preliminary)	1989 (Preliminary)
<u>Percent per annum</u>							
<u>National Accounts Real Growth Rates 1/</u>							
Gross Domestic Product	8.0	2.4	1.2	9.5	4.1	-0.8	-4.0
Agriculture	6.0	6.9	14.4	3.3	28.9	13.5	-9.8
Industry	11.3	0.4	-8.0	7.6	1.6	-5.9	-5.2
Manufacturing	12.8	0.6	-10.6	-4.1	4.0	6.4	4.4
Construction	22.6	-6.5	-19.7	10.5	-7.5	-5.3	-4.5
Services	7.3	2.4	5.0	3.0	4.2	-2.5	0.6
<u>(As percent of GDP at market prices)</u>							
<u>Balance of Payments</u>							
Current Account before Grants	...	-17.2	-20.9	-11.7	-15.5	-14.2	-15.9
Current Account after Grants	-2.5	-4.5	-5.3	-0.8	-5.7	-5.0	-1.9
<u>(Millions of U.S. dollars)</u>							
Remittances 2/	807	1,002	1,023	1,184	938	894	624
Official Grants	999	660	740	633	599	550	621
<u>As percentage of GDP at market prices)</u>							
<u>Public Finance</u>							
Total Revenue 3/	25.4	24.0	23.4	25.4	25.4	24.8	22.5
Total Expenditure 4/	56.2	42.8	46.1	39.7	47.9	48.9	41.0
Grants	18.7	10.0	14.0	9.6	8.2	8.9	11.9
Budget Deficit Before Grants	-30.5	-18.8	-22.7	-14.3	-22.4	-24.7	-18.6
Budget Deficit After Grants	-11.8	-8.8	-8.7	-4.7	-14.4	-15.4	-6.6
<u>(Millions of Jordanian Dinars)</u>							
Capital Expenditure	206	189	171	200	223	206	196
<u>Debt Indicators</u>							
External debt 5/ (percent of GDP)	...	...	...	...	...	...	178.8
Debt service payments (percent of exports of goods and services)	...	...	15.5	18.1	15.7	28.3	18.2

Source: Ministries of Finance, Planning, and Central Bank of Jordan, World Bank, Public Expenditure Review, 1991; and IMF staff estimates.

1/ GDP is at market prices; sectoral data are at factor cost.

2/ Includes remittances of short-term migrants.

3/ Revenue excluding grants.

4/ Including extrabudgetary expenditure.

5/ Disbursed and undisbursed public and publicly guaranteed medium- and long-term debt.

Table 5. Jordan: Central Government Expenditure and Net Lending, 1985-89

	1985		1986		1987		1988		Preliminary 1989	
	JD Mill.	%	JD Mill.	%	JD Mill.	%	JD Mill.	%	JD Mill.	%
Total expenditure and net lending	867.1	100.0	804.1	100.0	999.8	100.0	1075.0	100.0	1036.1	100.0
Current expenditure	571.4	65.9	602.2	74.9	628.4	62.9	727.7	67.7	841.7	81.2
Wages and salaries	110.4	12.7	122.3	15.2	131.5	13.2	146.3	13.6	153.7	14.8
Purchases of goods & services	50.6	5.8	49.8	6.2	50.2	5.0	54.2	5.0	47.6	4.6
Interest payments	80.3	9.3	89.7	11.2	101.0	10.1	154.3	14.4	177.4	17.2
Internal debt	18.1	2.1	20.0	2.5	30.2	3.0	35.3	3.3	45.5	4.4
External debt	62.2	7.2	69.7	8.7	70.8	7.1	119.0	11.1	132.4	12.8
Subsidies	33.5	3.9	6.3	0.8	6.4	0.6	18.9	1.8	74.7	7.2
Food	3.9	0.4	—	—	—	—	6.6	0.6	73.1	7.1
Fuel	24.3	2.8	—	—	—	—	—	—	—	—
Other	5.3	0.6	6.3	0.8	6.4	0.6	12.3	1.1	1.6	0.2
Other transfers	72.5	8.4	84.5	10.5	86.4	8.6	96.7	9.0	135.4	13.1
Pensions	42.5	4.9	47.2	5.9	50.0	5.0	59.9	5.6	74.9	7.2
Social security	2.4	0.3	3.1	0.4	4.0	0.4	4.2	0.4	4.1	0.4
Decentralized agencies	15.2	1.8	16.9	2.1	16.6	1.7	14.3	1.3	40.6	3.9
Relief operations	3.1	0.4	2.9	0.4	2.4	0.2	5.0	0.5	2.0	0.2
Other	9.3	1.1	14.4	1.8	13.4	1.3	13.3	1.2	13.8	1.3
Defense, public order and safety	224.1	25.8	249.6	31.0	252.9	25.3	257.3	23.9	252.4	24.4
Capital expenditure	170.9	19.7	199.7	24.8	223.1	22.3	206.2	19.2	196.4	19.0
Net lending	26.9	3.1	41.1	5.1	31.6	3.2	28.7	2.7	16.2	...
Gross lending	...	—	57.4	7.1	49.3	4.9	50.2	4.7	44.7	...
Repayments	...	—	-16.3	-2.0	-17.7	-1.8	-21.5	-2.0	-28.5	...
Extrabudgetary Expenditures <sup>1/</sup>	97.9	11.3	-38.9	-4.8	116.7	11.7	112.4	10.5	-18.2	...
Memorandum items:										
Revenue excluding Grants	440.8	...	514.4	...	531.5	...	543.6	...	565.2	...
Deficit excluding Grants	-426.3	...	-289.7	...	-468.3	...	-531.4	...	-470.9	...
Total Expenditure as percent of GDP	...	46.1	...	39.7	...	47.9	...	48.9	...	41.0

Source: World Bank: Jordan: Public Expenditure Review 1991; and IMF staff estimates.

<sup>1/</sup> Representing the difference between the recorded overall budget deficit and financing.

Table 7. Jordan: Unemployment Specific Rates, 1987

## 1. Unemployment Rate by Sex

Sex	Unemployment Rate (%)
- Males	13.5
- Females	28.4
Both	15.1

## 2. Unemployment Rate by Age Group

Age Group	Unemployment Rate %		
	Total	Males	Females
15 - 19	18.5	15.5	64.8
20 - 24	24.3	19.5	46.5
25 - 29	13.8	13.3	16.1
30 - 34	7.6	7.7	6.9
35 - 39	7.4	7.4	7.3
40 - 44	10.0	10.3	4.0
45 - 49	11.5	11.8	2.6
50 - 54	12.8	13.0	2.4
55 - 59	12.8	13.1	2.9
60 - 64	12.3	12.5	0.0
65 +	10.1	10.2	0.0

## 3. Unemployment Rates by Residence

	Unemployment Rate (%)		
	Total	Males	Females
- Urban	16.2	14.6	27.9
- Rural	12.3	10.9	30.6

Source: 1987 Employment Survey, data provided by the Jordanian authorities.



Table 8. Jordan: 1987/88 Unit Price Ranges  
(JD/kg)

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Flour	Zero No. 1	0.05 - 0.06
	European	0.05 - 0.07
	Local	0.09 - 0.10
Bread		0.08
Mutton	Imports	1.27
	Local	2.34 - 2.38
Veal	Imports	1.40
	Local	2.10 - 2.14
Sugar		0.16
Rice	Egyptian, Italian, and Spanish	0.15 - 0.17
	American	0.30 - 0.42
Milk	Powder	1.39 - 1.70
	Fresh	0.26 - 0.27
	Cans	0.16

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Source: 1987 Household Income and Expenditure Survey supplied by the Ministry of Planning.

Note: The unit prices are derived from quantities and values reported by households.

Table 9. Jordan: Budget Shares for Selected Items

Item	Deciles					
	1	2	3	4	9	10
Flour imports	.021	.014	.013	.010	.003	.001
local	.005	.005	.004	.006	.002	.0007
Bread	.032	.026	.023	.020	.009	.006
Rice U.S.	.0004	.0004	.0002	.0002	.0005	.0005
other	.016	.015	.015	.014	.009	.006
Mutton imports	.005	.011	.011	.015	.022	.023
other	.006	.023	.023	.018	.026	.018
Veal imports	.011	.015	.017	.016	.014	.009
local	.002	.004	.004	.007	.004	.002
Milk	.012	.010	.010	.011	.008	.007
Sugar	.031	.027	.026	.027	.012	.006
Electricity	.023	.023	.023	.021	.029	.016
Water	.011	.010	.010	.008	.008	.006
Gas	.015	.014	.014	.012	.007	.004
Kerosene	.017	.013	.013	.012	.008	.006
1987 Household Expenditure (JD)	1,609	2,132	2,262	2,672	8,857	7,058
1987 Per Capita Expenditure (JD)	158	220	266	320	1,478	1,488
Persons/ household	10.16	9.67	8.50	8.34	5.99	4.74

Source: 1987 Household Income and Expenditure Survey provided by Ministry of Planning.

Table 10. Jordan: Annual Expenditure Per Capita (Quantities),  
Subsidized Items

Item	Deciles					
	1	2	3	4	5	6
Flour						
Zero No.1 (kg)	23.10	15.01	19.04	17.55	12.93	14.56
European (kg)	16.60	9.48	10.06	14.59	8.87	6.48
Mixed (kg)	21.30	31.71	32.02	26.18	20.49	15.08
Local (kg)	9.70	11.76	11.84	24.26	14.85	10.46
Bread (kg)	<u>65.70</u>	<u>74.88</u>	<u>76.38</u>	<u>82.32</u>	<u>96.52</u>	<u>116.34</u>
Rice						
U.S. (kg)	0.22	0.30	0.06	0.21	0.38	1.83
Others (kg)	16.07	20.98	25.60	28.99	50.81	51.66
Mutton						
Imports (kg)	0.82	0.86	2.23	3.82	14.14	27.38
Local (kg)	0.99	2.16	2.59	2.44	9.46	10.81
Veal						
Imports (kg)	1.75	2.41	3.24	3.78	8.25	9.20
Local (kg)	0.27	0.44	0.53	1.01	2.22	1.36
Milk						
Fresh (kg)	2.38	3.90	3.25	3.30	4.82	4.67
Cans	1.07	2.16	2.10	2.32	2.45	5.95
Powder	0.77	0.96	1.22	1.65	3.36	4.69
Sugar (kg)	30.70	38.47	43.47	54.63	61.08	57.39
Electricity (kwh)	83.10	115.35	144.80	157.38	357.02	555.72
Water (m)	9.19	11.34	15.08	13.59	28.56	38.43
Gas	1.31	1.74	3.51	2.06	5.72	3.53
Kerosene (liter)	40.18	43.60	46.80	56.95	90.89	120.88

Source: Data from the 1987 Household Income and Expenditure Survey provided by the Ministry of Planning.

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