Effect of 1972 Devaluation on Pakistan's Balance of Trade

A. R. KEMAL and ZAHIRA ALVIE*

Introduction

In most of the developing economies, a rapid growth of G.N.P. invariably implies a larger import bill. Capital goods necessary for development have to be imported and a higher level of income in turn implies an increase in the import of consumption goods. On the other hand, demand for primary goods, which are main exports of developing countries, is inelastic. Moreover, the developing countries face serious problems in selling their manufactured products in the world market, partly due to their relatively inefficient industrial structure and partly due to the restrictive import policies of the developed countries. This results in a deficit in the balance of payments of many developing countries. To meet the deficit, import restrictions and export encouragement policies are followed instead of devaluation, which is resisted on both economic and non-economic grounds.

This study has as its objective an analysis of the effects of the devaluation of Pakistani rupee in May 1972, which changed the par value of Pakistan's rupee from Rs. 4.76 to Rs. 11.00 per U.S. dollar. Prior to the 1972 devaluation, imports were restricted through tariffs and quotas. In addition, certain products could be imported only under bonus and cash-cum-bonus lists. On the other hand, exports were encouraged through Export Bonus Scheme, Pay-As-You-Earn Scheme, and similar other incentives. These measures led to a multiple exchange rate regime. These measures may have had some beneficial effects in the short run but as Soligo and Stern [26] have shown over the long run, they led to a misallocation of resources. Pakistan devalued her currency in May 1972, as stated by the then Minister of Finance in his speech, to end the flow of foreign exchange abroad, stop overinvoicing of imports and underinvoicing of exports, correct the misallocation of resources, curb uneconomic import

substitution, foster competitive production, check resource transfer from agriculture to industry, help imposition of monetary and financial discipline in the economy and improve the balance of trade. However, the analysis presented in this paper is restricted to the impact of devaluation on the balance of trade only.

The plan of the paper is as follows. The paper first discusses the problem of deficit in the balance of payments and gives a brief summary of the changes in the exchange rate in Pakistan. Later, trends in the imports over the period 1960-61 to 1972-73 are discussed. Import functions are presented in the next section to see if devaluation can be expected to have any effect on the import bill. The section following next is devoted to the effect of devaluation on exports. This is followed by a discussion of other benefits which might have been brought about by the devaluation. Major conclusions drawn from the analysis of the effects of the devaluation bring the paper to a close.

Review of Pakistan's Exchange Rate Policy

Pakistan did not devalue her currency in 1949 when all the member countries of the Sterling Area devalued their currencies in the wake of the Sterling devaluation. Pakistan's decision not to devalue her currency was based on the argument of inelastic demand for exports of Pakistan. India, the major trade partner of Pakistan, refused to accept the new par value of Pakistan's Rupee, which led to suspension of trade between the two countries. Because of Korean War boom, Pakistan did not face any immediate problems, but it became quite clear after the boom, that it was quite difficult to maintain the then-existing par value. Consequently, the Pakistani rupee was devalued in 1956 changing par value from Rs. 2.80 per U.S. dollar to Rs. 4.76 per U.S. dollar. By the end of the fifties it was realised that Pakistan's exports of manufactured goods were not competitive in the world market. This led to the introduction of various export boosting schemes, particularly the Export Bonus Scheme. On the other hand, tariffs and quotas were used to restrict imports. Of the two measures quota was the binding constraint [1, 24]. Later, the imports were liberalised giving market forces a larger part to play in determining the volume of imports. The liberalisation was brought about by allowing imports of certain products which were subjected to quantitative restriction, under bonus and cash-cum-bonus lists. The export bonus scheme, coupled with the imports allowed under bonus, can be viewed as a selective devaluation. As more and more products were included in this list, the base for selective devaluation was broadened. But the selective nature of these measures led to serious misallocation of resources. Devaluation was resisted until May 1972, when new par value was set at Rs. 11.0 per dollar. Following the devaluation of dollar itself in February, 1973, the par value of the Pakistani Rupee somewhat improved to Rs. 9.90 per dollar.

Devaluation of rupee from Rs. 4.76 per dollar to Rs. 11.0 per dollar means a 56% devaluation. However, a more meaningful concept to study the effect of devaluation is the effective devaluation, which is measured by comparing the effective exchange rates in pre- and post-devaluation periods. Effective exchange rates are calculated for both imports and exports. In the calculation of effective rate for imports in pre-devaluation period, tariffs and bonus payments to be made for specific products are taken into consideration.

The ratio of actual   payments for the imports, i.e. value of imports at official rates plus tariffs paid plus bonus payments made, to the value of imports at official exchange rate, provides us with the premium of foreign exchange. This ratio multiplied with official foreign exchange rate, gives the effective exchange rate.   For the post-devaluation period, only tariffs have to be consi- dered.   On the export side, in pre-devaluation period, bonus premium is taken into consideration, and in the post-devaluation period, the export duties are taken into account in the calculation of effective exchange rate.   Effective exchange rate for exports in pre-devaluation period has been taken from Ikram [11].   Effective exchange rate for imports have gone down from Rs. 8.80 per dollar to Rs. 13.30 per dollar, showing an effective devaluation of 34%.   On the exports side, effective exchange rate has declined from Rs. 7.72 per dollar to Rs. 9.94 per dollar, amounting to an effective devaluation of 22% on the exports side.

The intricate bureaucratic system of import controls and export-boosting measures came to an end with the devaluation.   The imports were put on free, tied and banned lists; and market forces were allowed to play a much bigger role.

The trade between East and West Pakistan was disrupted in December 1971, and thus the products imported from East Pakistan were to be acquired from the rest of the world.   This diversion of trade complicates the analysis of devaluation.   Moreover, around the same time, prices in the international market, especially of agricultural products, have gone up very sharply.   This complicates the analysis still further.   In our analysis, we have tried to net out the effect of these two events as much as possible.

Import Trends: 1960-61 to 1972-73

Pakistan's total imports at current prices went up from Rs. 2,173 million in 1960-61 to Rs. 3,495 million in 1971-72, at an average compound growth rate of 4 percent.   At constant prices of 1960-61, the imports went up from Rs. 2173 million to Rs. 3067 million over the same period at a compound growth rate of 3 percent.   However, if one breaks down the imports into different categories, viz. consumer goods, consumer goods except food products, capital goods and raw materials, the trends in the growth of the imports differ across the categories of imports.   Imports of consumer goods show an average compound growth rate of 2.4%.   If we deduct the import of foodgrains, the growth rate drops to almost zero.   The average compound growth rates for the imports of capital goods and raw materials are 5.8 and 4.7 percent respectively.

Besides looking at the absolute growth rates, it is interesting to look at the relative shares of these categories of imports in the total imports of Pakistan over the time.   The imports of consumer goods except food products amounted to Rs. 218 million in 1960-61, rose to reach a peak of Rs. 354 million in 1968-69, and then gradually declined to Rs. 221 million in the year 1971-72.   The per- centage share of these imports thus declined from 10 percent to 6.3 percent over the same period.

Imports of raw materials showed a constantly rising trend, though they dropped in the year 1971-72.   Raw material imports at current price rose from Rs. 645 million in 1960-61 to Rs. 1,331 million in 1970-71, and then declined to

Rs. 1,218 million in the following year. The relative share of raw materials in the total imports declined from 30 to 24 percent in the mid sixties, but then it started rising and reached 39.6 percent in 1970-71. However the share dropped to 35 percent in the following year.

Imports of capital goods showed an increasing trend till 1965-66. However the imports of this category dropped down in the year 1966-67, and stayed at the same level up to 1969-70. The imports of capital goods showed a big jump in the year 1970-71, i.e. from Rs. 1,655 million to Rs. 1,885 million, but in the next year, there was a visible drop to Rs. 1,482 million. In the earlier years, the relative share of the capital goods imports increased at the expense of the other imports. However, in the later years, the share of capital goods imports somewhat declined.

Table 1 shows the percentage share of different categories of imports in the total imports of Pakistan during the period 1960-61 to 1972-73.

Table 1

Percent Shares of Different Import Categories in Pakistan's Total Imports:
1960-61 *to* 1972-73

(at current market prices)

Year	Consumer goods	Consumer goods except food products	Raw materials	Capital goods
1960-61	28.1	10.0	29.7	40.6
1961-62	23.7	9.4	27.1	47.3
1962-63	19.2	7.8	27.0	53.8
1963-64	19.4	6.5	28.4	52.2
1964-65	29.2	9.5	23.5	47.1
1965-66	21.0	9.9	20.6	58.4
1966-67	24.1	6.6	23.6	52.3
1967-68	25.7	8.4	24.4	49.8
1968-69	16.8	11.6	24.0	54.9
1969-70	10.0	5.6	39.9	50.4
1970-71	10.7	5.7	39.6	52.3
1971-72	22.8	6.3	37.0	42.4
1972-73	29.6	5.2	40.6	29.8

Source: Based on Appendix Table I.
Note: For some years, percentage shares do not add up to 100, because of unclassified imports. See [12].

Imports of capital goods have been, on an average, one-half of the total imports. It is observed from Table 1 above as well as from the Appendix Table I, that whenever there is a decline in the imports the share of capital goods in the total imports has gone up. For example, in the years 1965-66 and 1968-69, the total imports declined but the share of capital goods imports increased considerably. The increase in the relative share, of the capital goods had been

partly at the expense of raw materials and partly at the expense of consumer goods. Reduction of raw material imports but resistance to reduction of imports of capital goods led to idle capacity. However, it is interesting to note the decline in the share of capital goods to 30 percent, and a rise in the share of raw materials to 41 percent in 1972-73—a year after the devaluation. This might have been due to higher capital cost at the new exchange rate, and free availability of raw materials. The changed cost pattern might have led to a preference of more intensive utilisation of capacity to installation of new plants, see [14]. The declining share of consumer goods may be attributed to import substitution of consumer goods, and fluctuations in the foodgrain imports are reflective of the changes in foodgrain production in Pakistan from year-to-year. In the years 1971-72 and 1972-73, food products imports except foodgrain went up because tea, which was formerly imported from East Pakistan, was imported from the world market.

Effect on Pakistan's Imports

Import Demand Function

Before we turn to the estimation of the import demand functions, let us have a look at the import requirements of a developing country like Pakistan. Most of the developing countries try to achieve a growth rate of G.N.P. which cannot be sustained by the saving capacity of the economy. This results in an investment saving gap, of which the imports-exports gap is the counterpart. Since productive capacity of capital goods industries in most of the developing economies is very small, investment implies imports of capital goods. Moreover, for some industries, imported raw material is necessary to run these industries. Ex-ante, the gap emanating from import requirements and export earnings, i.e. the trade gap, may not be equal to the saving—investment gap. However, in ex-post sense, the two gaps are always equal, but this equality is brought about by diverting some of the savings to consumption. An overvalued exchange rate discourages exports and encourages imports, thus widens the trade gap. Although devaluation cannot be expected to eliminate the trade deficit, it can, however, be very effective in reducing the trade gap.[1]

The choice of variables in the estimation of the import demand functions has been dictated by theory and availability of the data. Theoretically, it is expected that imports would move positively with the changes in the gross national product, and negatively with the changes in relative prices. However, in Pakistan, as in many other developing countries, commercial policies are pursued to restrict imports. Moreover, foreign aid enables the country to import more than the import capacity of the country. Since stringency of commercial policy is not quantifiably observable, we have used two alternative proxy variables, i.e. foreign exchange reserves and bonus premium. Since the imports are controlled by "foreign exchange budget" prepared by a committee on the basis of the availability of foreign exchange reserves, it is postulated that whenever the position of foreign reserves is tight import policy will be stringent. One of the variables is that of relative prices which should be unit

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[1]For a very good discussion of the problem of deficit in the balance of payments in developing countries, see Linder [16].

value of the imports relative to the prices of domestic goods. However, because of the paucity of data, relative prices used in this study are unit values of imports divided by wholesale price index. Since wholesale price index also includes prices of imports, this might give a biased measure of relative prices. However, looking at wholesale price index and per unit value of the imports, it seems that the bias is not very large.

Imports of consumer goods are taken to be the function of value added in manufacturing sector, relative prices and foreign exchange reserves. Value added in the consumer goods industries, instead of value added in the manufacturing sector, could not be used because the *Census of Manufacturing Industries* data suffer from undercoverage, and for some years, the data are even missing. Foodgrain imports are assumed to be related to relative prices, per capita income, and per capita foodgrain availability. Imports of raw materials are related to value added in the manufacturing sector and relative prices. Availability of foreign aid for the imports of raw materials, as another explanatory variable could not be used as data at such a disaggregated level is not available. Imports of capital goods are associated with the value added in the manufacturing sector and relative prices. Since the actual flow of imports in response to changes in prices and income take some time due to order placing, time involved in shipment, etc., we have lagged imports for a year.

Thus, import functions can be written as:

$$M = F(Y, R, A, P)$$
$$M = F(Y, B, A, P)$$
$$M^C = F(Y_m, R, P_c)$$
$$M^F = F(Y, FA, P_F)$$
$$M^R = F(Y_m, P_R)$$
$$M^K = F(Y_m, P_K)$$

where

M = Imports deflated by per unit value of general imports;

Y = G.D.P. at 1959-60 prices;

R = Foreign ecxhange reserves;

B = Bonus premium;

A = Foreign aid;

P = Relative prices defined as per unit value of the imports divided by wholesale price index of West Pakistan;

M^C = Imports of consumer goods deflated by per unit value of consumer goods imports;

M^F = Imports of foodgrains in tons;

M^R = Imports of raw materials deflated by per unit value index of imported raw materials;

M^K = Imports of capital goods deflated by per unit value index of imported capital goods;

P_C = Relative price of consumer goods defined as per unit value of consumer goods divided by consumer living index;

P_R = Relative price of raw materials, i.e. per unit value of raw material imports/index of manufactured goods prices;

P_K = Relative prices of capital imports, i.e. per unit value of capital goods import/wholesale price index;

Y_m = Gross value added in the manufacturing sector;

F_A = Domestic foodgrain availability per capita; and

t = Time

Estimates of Import Demand Function

We have estimated both linear and log-linear relations. Since log-linear relations give a better fit, we have reported only the log-linear relations. These estimates are based on the data for the time period 1960-61 to 1971-72. The results are given below:

$$L_N M_t^* = 9.27 - 0.40 L_N P_t - 0.47 L_N Y_t + 0.09 L_N R_t + 0.36 L_N A_t$$
$$(0.93) \qquad (1.55) \qquad (0.93) \qquad (2.51)$$

$$R^2 = 0.58, \quad F = 2.44, \quad D.W. = 1.89$$

$$L_N M_t = 10.14 - 0.51 L_N P_t - 0.50 L_N Y_t - 0.09 L_N B + 0.43 L_N A_t$$
$$(1.36) \qquad (1.33) \qquad (0.14) \qquad (3.64)$$

$$R^2 = 0.77, \quad F = 5.02, \quad D.W. = 2.53$$

$$L_N M_t^F = 6.70 + 2.23 L_N P_{F_{t-1}} + 3.48 L_N Y_{t-1} - 9.90 L_N FA_{t-1}$$
$$(0.51) \qquad (1.44) \qquad (2.79)$$
$$R^2 = 0.63, \quad F = 4.41, \quad D.W. = 1.80$$

$$L_N M_t^R = 2.41 + 0.50 L_N Y_{m_{t-1}} + 0.40 L_N P_{r_{t-1}}$$
$$(2.29) \qquad (0.42)$$

$$R^2 = 0.39, \quad F = 2.86, \quad D.W. = 1.84$$

$$L_N M_t^C = 6.87 - 0.20 L_N Y_{m_{t-1}} - 0.63 L_N P_{C_{t-1}} + 0.02 R_{t-1}$$
$$(.71) \qquad (1.33) \qquad (1.21)$$

$$R^2 = 0.26, \quad F = 1.03, \quad D.W. = 1.85$$

$$L_N M_t^K = -0.44 + 0.88 L_N Y_{M_{t-1}} + 0.26 L_N P_K$$
$$(3.60) \qquad (0.72)$$

$$R^2 = 0.73, \quad F = 12.37, \quad D.W. = 1.74$$

(*t statistic is reported in parantheses).

It may be observed that neither the G.D.P. nor the relative prices are significant explanatory variables in explaining variations in the total imports. Both the proxy variables, i.e. reserves and bonus premium, are insignificant. Foreign aid availability is the only significant explanatory variable. However, it is more interesting and instructive to look at disaggregated import demand functions.

In the case of the foodgrain imports, neither the relative prices nor income is a significant variable. Domestic foodgrain availability per capita is the only significant variable. It reflects the government policy to import foodgrains whenever there is a fall in the foodgrain production to meet the deficit.

As regards the imports of raw materials, industrial production is a significant variable. This is a reflection of the raw material imports being tied to the production capacity of the industrial sector.

Relative prices are insignificant in explaining variations in the import of capital goods. The proudction in the industrial sector is significant variable meaning that as the industrial sector expands, capital requirement increases. For consumer goods, neither income nor price is significant.

To check the sensitivity of the structural coefficients, another variable, time, has been introduced in the import demand functions. Foreign aid is the only significant variable even after the introduction of time as anoter explanatory variable, although the value of coefficient rises to 0.39. Similarly, domestic foodgrain availability remains the only significant variable in explaining variations in the imports of foodgrains. The same is true of consumer goods and capital goods. In the case of raw material imports only introduction of time as additional variable makes the existing variables insignificant. However, since R^2 is not very much improved, we have retained the original form of equation.

It is interesting to compare the results of this study with those of some studies done in developing countries. We compare our results with those of studies, one done for Bangladesh [2] and the other for Kenya [9]. In the Bangladesh study, imports have been divided into capital goods, consumer goods and raw materials. The study does not mention if relative prices were tried as an explanatory variable. The only independent variable is G.N.P. which is significant. In the Kenyan study [9], relative prices and a weighted average of value added in different sectors are used as explanatory variables. Relative prices turned out to be insignificant, and thus were dropped in the reported estimates.

In Pakistan, an attempt was made by Jarret [13] to estimate import functions. Imports are categorised into consumer goods, capital goods and raw materials. Relative prices are not included as an explanatory variable. The variables included are G.D.P. and availability of foreign aid. However, the study does not report the test of significance, and thus one is unable to infer any conclusion regarding the effect of certain variables on the imports.

Thus, it seems that devaluation may have no or negligible effect on the imports. As very rightly pointed out by Cooper [5, p. 13], "...price elasticity

of demand for imports is likely to be low, when imports are concentrated on raw materials, semi-febricated products and capital goods, a structure prevalent in less developed countries. With import substitution in an advanced stage, all the easy substitutions having already been made in the pursuit of industrialisation, imports depend largely on output rather than income, and not very sensitive to relative prices...".

Since investment implies import of capital goods in the absence of sizable capital goods producing sector, import of capital goods cannot be lowered for long, although, in the short run an acceleration of growth rate may not necessarily imply an increase in the imports of capital goods. In the presence of idle capacity. Imports of raw materials are tied to the productive capacity, and thus cannot be lowered without making capital idle. Foodgrains imports are tied to food deficits, and consumer goods imports are any way under severe controls. The imports figure in post-devaluation period also suggests that the devaluation did not lead to a reduction in imports. The imports data are shown in Table 2.

Table 2

Pakistan's Imports, 1969-70 to 1973-74: Table from East Pakistan and from the Rest of the World

(Value in millions of U.S. dollars)

Year	Total	East Pakistan	Rest of World
1969-70	830.8	140.6	690.2
1970-71	887.8	129.4	758.4
1971-72	794.0	58.1	735.9
		(July—November)	
1972-73	848.3	—	848.3
1973-74	883.9	—	883.9
(July—March)			

Sources: [17, 18, 19, 25].

Effect on Pakistan's Exports

Pakistan's exports consist mainly of raw cotton, cotton textiles, rice and leather. These commodities account for about 80 percent of the exports. The remaining 20 percent of exports are shared by a host of other manufactures. The share of Pakistan in the world exports for most of the products is not significant enough to affect the prices. For example, Pakistan's share in world's exports of raw cotton, cotton textiles and rice is, 5%, 10% and 4% respectively.[2] Assuming that Pakistan is not in a position to affect the prices, the main determinant of the exports of a certain product is the availability of exportable surplus,

[2] However, for certain specific products, the share of Pakistan in the world trade may not be negligible. As such small country assumption may not hold. For example for cotton yarn, the share of Pakistan in the world exports is around 30 percent. Results should be taken with this qualification in mind.

subject to the condition that domestic prices (adjusted for export subsidy, if any), do not exceed the world price, i.e.

$$X_i = Q_i - C_i \text{ for } P_{d_i} \leqslant (1 + m_i) P_{f_i}$$

$$= O \qquad \text{for } P_{d_i} > (1 + m_i) P_{f_i}$$

where

X_i = Export of commodity i;
Q_i = Production of ith commodity;
C_i = Consumption of ith commodity;
P_{d_i} = Domestic price of commodity i;

P_{f_i} = World market price of ith commodity; and

m_i = Export subsidy on ith commodity.

Devaluation is expected to influence exports in two ways. Firstly, it may change the sign of inequality from $P_{d_i} > (1+m_i)P_{f_i}$ to $P_{d_i} \leqslant (1+m_i)P_{f_i}$. This is especially true for the products which were not competitive in the world market at the old par value with or without a subsidy. Secondly, it can increase the price of exportable, thus affecting production and consumption in the domestic market.

The expected change in domestic prices vis-a-vis world prices from pre- to post-devaluation period can take four possible forms as given below:

Pre-Devaluation situation	*Post-devaluation situation*
(i) $P_{d_i} \leqslant P_{f_i}$	$P_{d_i}(1+k_i) \leqslant P_{f_i}$, $k_i \geqslant 0$
(ii) $P_{d_i} > P_{f_i}$ but	
$\quad P_{d_i} \leqslant (1+m_i) P_{f_i}$, $m_i \geqslant 0$	$P_{d_i}(1+k_i) \leqslant P_{f_i}$, $k_i \geqslant 0$
(iii) $P_{d_i} > (1+m_i) P_{f_i}$, $m_i \geqslant 0$	$P_{d_i} \leqslant P_{f_i}$
(iv) $P_{d_i} > P_{f_i}$	$P_{d_i} > P_{f_i}$

where k_i is export duty on ith commodity.

Commodities lumped in the first category are the products which were exported without any bonus premium, i.e. they were competitive in the world market at the old par value. After the devaluation, export duties have been imposed on some of the products, e.g. raw cotton and rice. The rationale of imposing these export duties has been that without the export duties inflationary tendencies would have been caused. Second group consists of the products, which were competitive in the world market with bonus only at the old par value. After devaluation, some of these products, e.g. cotton yarn, have been subjected to export duties. The commodities which were not competitive in the world market and thus were not exported in pre-devaluation period are included in the third group. Finally, the commodities in the fourth group are

uncompetitive in both the pre- and post-devaluation periods, and can be discarded for the purpose of this analysis.

Case I

$P_{d_i} \leqslant P_{f_i}$, in pre-devaluation period, and $P_{d_i} (1+k_i) \leqslant P_{f_i}$ in post-devaluation period.

Main products in this category are raw cotton and rice. Pakistan's share in total world exports of raw cotton and rice is around 5% and 4% respectively, and thus the small country assumption holds in the case of these two products. Since Pakistan does not have any control on world market prices, the prices of these products in domestic markets would rise by the full amount of the devaluation. Since supply and demand are elastic for these two products [7, 8, 15], exportable surplus will tend to rise. However, the imposition of export duties has not allowed prices to rise by the full amount of the devaluation. Prices paid to the farmer in pre- and post-devaluation period are presented in Table 3.

Table 3

Prices of Cotton, Rice and Sugarcane: 1970-71 to 1974-75.

(Rupees per Maund)

Year	Seed Cotton	Basmati Rice	Sugarcane
1970-71	—	32	2.4
1971-72	49.1	38	2.2
1972-73	54.7	46	4.0
1973-74	99.0	60	4.0
1974-75	79.0	—	—

Sources: [21 and 23].
Note: (a) The price given for Basmati Rice is procurement price that for sugarcane is the minimum farm gate price, and the one for seed cotton is the free market price.
  (b) One Maund equals 82.29 lbs.

It may be seen from Table 3 that the price of seed-cotton rose by 61 percent between 1971-72, and 1974-75. The price of seed cotton rose very sharply in the year 1973-74 due to an abnormal increase in the price in the world market. The price of rice increased by 58% over the period 1970-71 to 1973-74. This price increase may be compared with the 131 percent increase implied by devaluation. An increase in the prices of these exportables could have generated exportable surplus. However, the prices of agricultural inputs have risen very sharply. For example, the price of fertilizer has gone up from Rs. 45 to Rs. 75 per bag. This has checked the intensity of cultivation to some extent. Moreover, the area under different crops is determined by the relative prices of competing crops. Table 3 shows that the price of sugarcane has gone up by 78 percent against the 60 percent increase in the prices of exportables. Thus, as frequently suggested, socially beneficial reallocation of area from sugarcane to

other crops could not take place. In Table 4, the area under three crops, viz. cotton, rice and sugarcane, and their production is presented:

Table 4

Area and Production of Pakistan's Three Major Crops 1970-71 to 1973-74

Year	Area			Production		
	Cotton (000 Acres)	Rice (000 Acres)	Sugarcane (000 Acres)	Cotton (000 bales)	Rice (000 tons)	Sugarcane (000 tons)
1970-71	4,284	3,715	1,572	2,957	2,165	22,807
1971-72	4,837	3,599	1,365	3,979	2,226	19,648
1972-73	4,968	3,622	1,318	3,947	2,288	19,638
1973-74	4,559	3,720	1,530	3,704	2.405	22,709

Source: [18].

Although it is difficult to draw firm conclusions on the basis of such a short time series, (especially when floods have gloomed the picture), these figures suggest that neither the area nor the production of these two exportables shows any appreciable change. On the consumption side, the consumption of fine rice is restricted to 10% of the production in monopoly procurement scheme. Thus the effect if any, on the exportable surplus is not very appreciable. However, looking at the export figures of cotton and rice, one may be led to an illusory impression that devaluation has helped increase the exports of these products. The large increase in the exports of cotton and rice immediately after devaluation was rather due to a steep rise in the prices and stocks accumulated before the devaluation. Tables 5 and 6 provide information on stocks and prices of cotton.

Table 5

Pakistan: Average Spot Prices at Leverpool of AC/134/Sg. Raw Cotton

(U.S. Cents/Lb.)

Month	1971	1972	1973
January	31.00	38.65	38.15
June	33.17	32.40	52.00
August	—	—	75.27

Source: [21].

Table 6

Stocks of Raw Cotton in Pakistan: 1970-71 *to* 1973-74

Year	Stock (000 bales)
1970-71	216
1971-72	341
1972-73	252
1973-74	272

Source: [21].

Case II

$$P_{d_j} > P_{f_j} \text{ but } P_{d_j} \leqq (i+m_i) P_{f_j}, \ m_i \geq 0$$
in pre-devaluation period, and

$$P_{d_j} (1+k_i) \leqslant P_{f_j}, \ k_i \geqslant 0 \text{ in post-devaluation period.}$$

This consists of the products which were provided with export bonus subsidy to enable them to be competitive in the world market. Varying rates of bonus were accorded to different products depending upon the degree of competitiveness or uncompetitiveness in the world market. For example, exports of cotton yarn were accorded 30 percent bonus, while cotton fabrics were given 40 percent, bonus. The exchange rate applicable to some of the products was quite favourable even before the devaluation. However, for some products exchange rate has become more favourable, and thus an increase in exports is expected. Table 7 shows the value of exports for the products which were exported with bonus subsidy.

Table 7

Pakistan's Exports Under Bonus*, 1970-71 *to* 1973-74

(Million U.S. $)

Year	Total	20% Bonus	30% Bonus	40% Bonus
1970-71	288.4	40.0	51.0	197.4
1971-72	410.5	37.8	98.1	274.7
1972-73	610.6	79.4	142.8	284.4
1973-74 (July—Dec.)	335.5	24.3	15.3	295.9

Source: Based on data from C.S.O. [17].
*Commodities exported under different rates of bonuses are listed in Appendix II.

It is observed that the exports of this category in 1972-73 increased by 48.8% over those in 1971-72. The exports, which were provided 20 percent bonus subsidy have doubled, those with 30 percent subsidy rose by 46%, and those with 40 percent subsidy increased by 40 percent. This shows that the commodities which had the least favoured exchange rate recorded the highest growth. This leads to better allocation of resources and can have far-reaching effects on the structure of exports;

Case III

$P_{d_i} > (1+m_i) \ P_{f_i}$ in pre-devaluation period, $m_i \geqslant 0$

$P_{d_i} \leqslant P_{f_i}$ in post-devaluation period.

Whereas in the former two cases, exports could, rise by generation of more exportable surplus, in this case, change of the inequality sign from $P_{d_i} >$ P_{f_i} to $P_{d_i} \leqslant P_{f_i}$ is mainly responsible for the exports. This includes a host of products, e.g. live animals, poultry, fresh fruits, spices, non-essential vegetable oils, cotton textiles manufactured in small scale (such as *dhoties*), chinaware, electrical machinery and non-electrical machinery. It may be argued that this increase may be due to an abnormal rise in the international prices and diversion of trade from East Pakistan to the rest of the world. However, it seems improbable that these products would have been exported even with the increase in prices at the old exchange rate. Similarly main exports to East Pakistan, such as rice, have been excluded from this category. Thus, devaluation has been instrumental in bringing about these exports. These exports form about 2.2 percent of the total exports, and were responsible for 15 percent of the increase in exports. Since these products were not exported prior to devaluation, there was a demand constraint to the expansion of these industries. Exports have enlarged the markets, and thus it is expected that more resources will flow into these industries, and would increase the production and, therefore, the exports.

From the above analysis, it is obvious that where as devaluation is not expected to lower imports due to critical minimum import requirements, it has borne fruitful results on the exports side. Table 8 presents the exports figures.

Table 8

Exports of Pakistan: Table to East Pakistan and to the Rest of the World:
1969-70 to 1973-74

(Million U.S. dollars)

Year	Total	To East Pakistan	Rest of the World
1969-70	581.5	245.8	335.7
1970-71	630.8	210.1	420.7
1971-72	782.1	72.3	709.8
		(July—November)	
1972-73	863.6	—	863.8
1973-74	633.6	—	633.6
(July—Dec.)			

Source: [17, 18, 19, 25].

It may be noted that when imported inputs are used in the production of the exportables the cost of production of these products goes up, following devaluation. Thus devaluation may not lead to a reduction in the export prices by the full amount of the devaluation. Ikram [10] has studied this problem on the basis of two assumption, viz. (a) price increases by the amount of increase in total cost only, and (b) price increases by the same percentage as percentage increase in the raw material cost. Taking a hypothetical devaluation of 50 percent, the prices go up by 5 to 10 percent on the basis of the former assumption, and by 10 to 20 percent on the basis of the latter assumption. This shows that some of the price effects are drained out.

Effect on Pakistan's Balance of Trade

In Table 9, the balance of trade position is shown in pre- and post-devaluation periods.

Table 9

Pakistan's Balance of Trade: 1969-70 *to* 1973-74

(Million Dollars)

Year	Rest of the World			Total, Including East Pakistan		
	Imports	Exports	Balance	Imports	Exports	Balance
1969-70	690.2	335.7	—354.5	830.8	581.5	—249.3
1970-71	758.4	420.7	—337.7	887.8	630.8	—257.0
1971-72	735.9	709.8	— 26.1	794.0	782.1	— 12.1
1972-73	848.3	863.8	+ 15.5	848.3	863.6	+ 15.3
1973-74	883.9	633.6	—250.3	883.9	633.6	—250.3

Source: Tables 3 and 8.

Some Other Effects

In the preceding analysis, we have focussed our attention on the effects of devaluation on the balance of trade. However, as was noted in the introduction, an improvement in the balance of trade was not the only objective of devaluation, and as such devaluation should not be judged solely in respect of that criterion. Prior to devaluation, there was a multiple exchange rate regime, which led to an intricate system of foreign exchange control. Because exchange-rate was over-valued, license holders used to earn abnormal profits. Devaluation has simplified the procedure of imports, and the profits derived through the licenses, have been removed. As different categories of imports were accorded different exchange rates, there occurred waste of resources in certain cases, e.g. unutilised capital. Capital goods imports were allowed liberally at official exchange rate, but raw material imports were not allowed equally liberally thus, leading to idle capacity. As devaluation has made capital expensive, and raw material imports are allowed liberally, it is expected that capital will be utilised more intensively [see 14]. Because of idle capacity in the manufacturing sector in the pre-devaluation period, it will be very useful to study the effect of the devaluation on specific industries. However, although this is very important,

it falls ouside the scope of this paper. Further research should be done in this direction to establish the effect of the devaluation on specific industries.

The analysis in this study has been limited to a short run. However, it is suggested sometimes that the effect of devaluation crystallises after a lag of two to three years, because it takes some time to reallocate the resources into export-oriented industries.

Conclusion

The major conclusions which emerge from the study are as follows:

(a) Since imports are very largely influenced by factors other than prices, viz. level of investment, the desire to maintain full capacity utilization, fluctuations in availability of foodgrains, availability of foreign aid, and the stringency of commercial policies, devaluation is not expected to have very substantial effects on the imports bill. Both the import functions and the import data in the post-devaluation period reflect this.

(b) Due to the imposition of export duties and domestic pricing policies, the relative prices of rice, cotton and sugarcane have remained somewhat the same. The area under the three crops has not been reallocated. Although the prices of these crops have gone up by 60 percent (compared to 131 percent as implied by devaluation), the increase in the prices of agricultural inputs has checked the increase in production. It may be argued that floods and the recency of the devaluation are responsible for lack of increase in the production. However, the export duties and increase in prices of agricultural inputs have played a large part in checking an increase in production.

(c) Introduction of new products in exports has increased the exports substantially. These products have contributed 15 percent to the increase in the exports between 1972-73 and 1971-72. Since it is expected that exports will have enlarged the market for these products, more resources will flow to these industries, and an increase in production of these products, will further lead to an increase in the exports.

(d) The import and export policies have been simplified in the sense that there are only three lists, viz. free list, tied list and banned list.

Thus, one may conclude that although it cannot be expected that imports would decline there are other beneficial effects, and thus the devaluation is a step in the right direction. However, some of the effects have been nullified due to government pricing policies.

Appendix I

Appendix Table I

Value of Imports of Pakistan at Current Prices 1960-61 to 1972-73

Year	Total Imports	Consumer Goods except food products	Consumer Goods	Raw Material	Capital Goods	Foodgrain (Lakh tons)
1960-61	2173.2	218.0	609.9	645.49	881.49	10.62
1961-62	2236.2	210.4	530.11	606.96	1058.29	6.67
1962-63	2800.1	219.5	536.96	757.02	1506.09	7.11
1963-64	2981.6	194.5	578.46	845.79	1557.33	8.64
1964-65	3672.4	350.4	1071.69	863.65	1731.34	14.92
1965-66	2880.3	286.2	603.8	592.2	1668.2	7.44
1966-67	3625.7	238.6	874.1	856.6	1895.0	11.46
1967-68	3327.2	278.6	856.2	810.4	1656.3	14.19
1968-69	3046.6	354.4	512.7	731.1	1671.60	0.16
1969-70	3285.1	185.4	329.0	1301.0	1655.00	2.27
1970-71	3602.4	204.3	385.3	1331.7	1885.40	2.90
1971-72	3495.3	220.7	795.2	1218.1	1482.10	6.94
1972-73	8398.3	436.9	2484.7	3414.8	2498.8	15.27

Source: [12, 18, 22].

Appendix Table II

Per Unit Value Indices of Pakistan's Imports: 1960-61 *to* 1972-73
(1960-61 = 100)

Year	Total Imports	Consumer Goods	Raw Materials	Capital Goods	Food-grains
1960-61	100.0	100.0	100.0	100.0	100.0
1961-62	110.4	100.67	108.2	119.0	101.4
1962-63	114.1	112.01	112.2	123.8	105.1
1963-64	118.5	115.41	120.3	121.0	104.8
1964-65	116.1	116.03	124.4	109.0	106.4
1965-66	113.0	112.67	118.1	113.1	102.4
1966-67	117.0	112.46	124.2	115.1	103.9
1967-68	115.2	119.08	120.9	120.2	96.7
1968-69	114.5	111.81	120.8	113.9	95.2
1969-70	122.2	124.67	141.1	101.5	110.7
1970-71	129.7	126.11	148.8	92.2	98.4
1971-72	134.3	120.75	167.6	104.2	106.7
1972-73	273.9	287.8	287.3	257.4	253.2

Source: [22].

Appendix Table III

Data on Explanatory Variables

Year	1959-60 G.D.P. at Constant Prices (Mln. Rs.)	Per Capita Income (Rs.)	Foreign Aid in (Mln.Rs.)	Foreign Reserves (Mln. Rs.)	Bonus Premium (Average)	Industrial Production (Mln.Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1960-61	16,771	363	886.0	1225.0	125.2	2,276
1961-62	17,810	376	1,128.0	1,128.3	142.1	2,576
1962-63	19,118	393	1,436.2	1,436.2	156.8	2,863
1963-64	20,336	408	1,235.3	1,235.3	152.9	3,186
1964-65	22,007	430	951.7	951.7	152.1	3,501
1965-66	23,092	420	1,263.3	1,263.3	149.0	3,799
1966-67	24,068	446	793.2	793.2	158.7	4,012
1967-68	25,911	467	864.3	864.3	165.1	4,267
1968-69	27,576	484	1,422.5	1,422.5	181.1	4,634
1969-70	32,362	552	1,367.8	1,367.8	180.5	5,156
1970-71	32,392	537	948.6	948.6	185.4	5,234
1971-72	32,627	530	313.8	313.8	—	4,988
1972-73	34,997(P)	554	—	458.3	—	5,474(P)

—*Continued*

Appendix Table III—*Continued*

Year	Foodgrain (Lakh tons)	Wholesale Price Index 1959-60=100	Relative Prices of Imports				
			General	Consumer Goods	Raw Material	Capital Goods	Food Products
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1960-61	58.4	104.8	1.000	1.000	1.000	1.000	1.000
1961-62	62.7	104.7	1.106	1.002	1.083	1.191	1.015
1962-63	64.5	102.9	1.163	1.111	1.142	1.261	1.070
1963-64	64.8	106.4	1.167	1.103	1.185	1.192	1.032
1964-65	72.1	113.6	1.072	0.970	1.147	1.005	0.981
1965-66	63.9	112.0	1.057	1.004	1.104	1.057	0.957
1966-67	69.1	124.4	0.986	0.940	1.046	0.969	0.875
1967-68	93.7	125.5	0.960	0.953	1.007	1.002	0.806
1968-69	98.1	129.5	0.926	0.882	0.977	0.920	0.769
1969-70	108.8	132.2	0.969	0.948	1.118	0.804	0.877
1970-71	100.1	137.3	1.142	0.907	1.135	0.703	0.877
1971-72	104.3	150.3	0.936	0.973	1.168	0.726	0.750
1972-73	110.1	179.7	—	—	—	—	0.743

Sources: (a) For cloumns (2, 3, 6, 7, 8, & 9): [22].
(b) For columns (4) partly [2] and partly [22].
(c) Columns (10 & 14) based on data in [22].

Appendix II

CLASSIFICATION OF COMMODITIES EXPORTED UNDER DIFFERENT BONUS RATES

(a)   *Commodities exported under 20% bonus*

Pulses, Vegetable frozen, Molasses, Spices, Waste and used leather, Fur skins undressed, Groundnuts green, Oilseeds, Fine animal hair, Cotton waste, Jute cuttings, Waste material of textile fabrics, Gypsum, Clay, Materials of animal origin, Plants used in Dying and Tanning, Resins, Blankets, Travelling bags.

(b)   *Commodities exported under 30% bonus*

Tobacco unmanufactured, Cotton yarn, Lace embrodiered, Cotton blankets, Linen, Laces, Mosquito nets, and Towels.

(c)   *Commodities exported under 40% bonus*

Chemicals, Canned vegetables, Bakery, Confectionary, Fruit preserved, Sea Salts, Prawns and Shrimps canned, Non-alcoholic baverages, Sugar and Syrups, Tobacco manufactured, Wool tops, Plants, Cosmetics, Polishes, Paper products, Table ware, Woollen Fabrics, Carpets, Cement, Machinery, Cotton cloth etc.

Appendix III

Data Problems

Theoretically, we want to relate the changes in the imports to changes in prices and income. Data on physical quantity of imports is not available. Because value data is product of quantity and prices, changes in value over time misrepresent the chanes in quantity. Thus to remove the effect of price changes, value of imports is deflated by per unit value index of imports. Data on value of imports is obtained from [19], and of per unit value index from Economic Survey [22]. The import data available in Nurul Islam [12], and for the remaining years, data have been categorised on the basis of data in [18, 19, 22]. Time series of G.D.P. at constant prices of 1959-60 is obtained from [22]. Data on foreign reserves is also obtained from [2], and price indices are available in [19, 22]. Bonus premium series is obtained from Economic Surveys for different years [22].

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