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Chapter 3

The Effective Exchange Rate, 1948-1961: An Appraisal

At this point it may be useful to interrupt the narrative and attempt to appraise the foreign exchange regimes that were applied during the years from 1948 to 1961. It is difficult to get a clear idea of what it all amounted to from brief summaries of the regimes and their general economic setting. Since they all implied changes (partially or totally) in the effective exchange rate, it would seem natural to summarize them in terms of an average effective depreciation. The question is only how such an average should be defined and what it could tell us about the exchange regulations as a whole.

THE CONCEPTS OF AVERAGE DEPRECIATION AND PRICE DISTORTION

Consider a small country, in a competitive environment, in equilibrium, without foreign exchange regulations but with unified, pegged exchange rates. Assume now that a general 10 percent tax is imposed on all foreign trade for financing domestic government expenditure, which is equivalent to a 10 percent depreciation for all imports and a 10 percent appreciation for all exports. A simple average of the effective exchange rates for exports and imports would show that there has been no change in the exchange rate. In what sense, if any, is this regime equivalent to an unchanged exchange rate?

Looking at the impact on the economy, we find, of course, a tendency for both exports and imports to decrease, releasing factors of production from export industries to industries competing with imports. Under certain condi-

tions of demand and supply elasticities and factor price flexibility, export value and import value in terms of foreign currency will shrink by the same amount, so that current foreign payments will remain in balance and the factors released from export industries will be absorbed completely by industries competing with imports. Macroequilibrium is thus preserved, and the regime is equivalent to unchanged exchange rates. It will also be seen that the effects on the domestic price level will tend to cancel each other out; prices of exportables will fall and those of importables rise. In regard to resource allocation and productive efficiency, on the other hand, the regime is clearly not equivalent to unchanged, uniform exchange rates.

These considerations suggest that, if we calculate a simple average of the partial exchange rate changes, we may use this "average depreciation" as an expression of the aggregate effect on the balance of payments surplus and, perhaps, on domestic prices. But we cannot use such an average as an indicator of allocative effects. For the latter it is, rather, the distribution of the changes in effective exchange rates around the mean that matters. If we have only one effective rate for exports and one for imports, a simple indicator of the allocative effects would be the absolute value of the difference between the two, perhaps normalized by the average effective rate. In the example discussed here the average depreciation would become $\frac{1}{2} [10 + (-10)] = 0$, while the distortion index would become $|[10 - (-10)]| = 20$, or, normalized, 0.2. At 20 percent simultaneous appreciation and depreciation, the average depreciation would again become $\frac{1}{2} [20 + (-20)] = 0$ and the distortion index $|[20 - (-20)]| = 40$. While thus the aggregate effects on the balance of payments surplus would be the same in these two cases, the allocative effects would be accentuated—which, of course, is in line with standard theory.

Needless to say, quite a number of conditions have to be fulfilled for things to work out that neatly, and it is not difficult to imagine some weighted means as well as dispersion measures that might be more satisfactory, were the necessary information about demand and supply elasticities available.¹ This is not the case, however, and we shall therefore proceed in the manner described in the previous paragraph and take a simple average of the (average) effective depreciation for exports and imports, respectively, with the absolute difference as a distortion indicator. We do not need to emphasize that these are the crudest possible measures of the combined effects of the exchange regulations. Nonetheless, we hope that they may at least indicate orders of magnitudes and directions of effects.

The results of our calculations are set out in Tables 3-1 to 3-3. Since a depreciation, from the Egyptian point of view, means an increase in the dollar rate, we have indicated depreciation by a positive and appreciation by a negative sign.

THE STATISTICAL PICTURE

Table 3-1, column 1 shows, first, the average export tax calculated as export tax revenue over the value of total exports of commodities. The average rate of export taxation—levied mainly on cotton but occasionally also on rice and other exportables—rose from almost nothing in 1947 to a level of 9 to 11 percent during the years 1950 to 1954. In the following years the export taxes were gradually reduced and, by 1961, they had virtually disappeared.²

The calculated rates are probably on the high side. First, they are based on official customs statistics on exports, which for various reasons have always tended to show lower values than statistics on payments. Second, adjustment should be made for the fact that the export tax on cotton lint served as a subsidy for exports of cotton textiles (yarn and fabrics) by enabling the cotton textile industry to acquire its basic raw material at a price correspondingly lower than the world market price. Exports of cotton textiles developed from virtually nothing before 1948 to about 10 percent of total export value in 1961. But even in 1959, the last year in which the export taxes were of any importance, the volume of cotton lint exported in the form of textiles was little more than 6 percent of the volume of raw cotton lint exported. The adjustment of the average export tax rates needed for this reason is thus negligible. Other forms of export subsidies have been granted, in particular to cotton textiles; they have always been small relative to export tax revenues, but information about them is insufficient for the purpose of quantification.

Columns 2 to 5 of Table 3-1 quantify the depreciation involved in exports by triangular transactions (1948-1949), the export pound (1950-1955), import entitlements (1953-1955), and export premiums (1957-1961). The short-lived export performance scheme of 1956 is not included. The depreciation rates are calculated in all cases in relation to total export value.³ Special calculations of the rate of net depreciation for two major cotton varieties for the cotton years 1956-57 through 1960-61 are shown in the note to Table 3-1. They corroborate the overall results for these years.

The net depreciation for exports is set out in column 6 (recalling that an export tax implies an appreciation). It so happens, mainly as the result of the high export taxes, that, after a slight depreciation in 1948, the Egyptian pound was de facto appreciated for exports at varying degrees from 1949 to 1956. During the years 1951-1953, this appreciation amounted to about 8 to 9 percent. From 1957 to 1959, depreciation (as compared with 1947) was the dominant trend, reaching a maximum of 16 percent in 1959. Thereafter the rate of depreciation fell to about 10 percent in 1960, but rose to 20 percent at the end of the year.

TABLE 3-1
Average Net Effective Depreciation (+) or Appreciation (-) Compared with 1947: Exports
 (all figures expressed as percent of total export value)

Year	Export Tax Collections (change from percent for 1947) (1)	Triangular Transactions (2)	Depreciation through			Total (2)+(3)+(4) +(5)-(1) (6)
			Export Pounds (3)	Import Entitlements (4)	Premiums (5)	
1947	0	—	—	—	—	—
1948	3	7	—	—	—	0
1949	7	5	—	—	—	4
1950	10	—	1	—	—	-2
1951	9	—	1	—	—	-9
1952	9	—	1	—	—	-8
1953	11	—	1	2	—	-7
1954	10	—	+0	3	—	-7
1955	7	—	+0	4	—	-3
1956	6	—	—	—	—	-6
1957	4	—	—	—	10	6
1958	5	—	—	—	18	13
1959	4	—	—	—	20	16
1960	1	—	—	—	14	13
1961	+0	—	—	—	10	10
1962						
Pre- devaluation	+0	—	—	—	20	20
Post- devaluation	+0	—	—	—	24 ^a	24

TABLE 3-1 (concluded)

NOTE: The following calculations for two major varieties offer an interesting corroboration for the overall results.

Cotton, Net Depreciation: Premium minus Export Tax (percent of official par rate)			
Cotton Year (Sept. 1-Aug. 31)	Karnak	Ashmouni	
1956-57	-6.3	-2.1	
1957-58	-0.9	6.2	
1958-59	15.4	20.1	
1959-60	19.2	13.8	
1960-61	19.0	11.9	

SOURCE: Hansen and Marzouk, *Development and Economic Policy*, 1965, p. 204.

SOURCES: Col. (1): *Annuaire Statistique*, several issues; and D. Mead, *Growth and Structural Change*, 1967, Table VI-E-3.

Cols. (2)-(5): Our estimates.

Cols. (3) and (4): Tables 2-3 and 2-4.

a. Official par rate change.

Table 3-2 gives corresponding figures for commodity imports. Two series are calculated for the changes from 1947 in the tariff rates—with and without tobacco duties.⁴ The tobacco duties are formally customs duties, but are partly levied upon the production (sales) of tobacco products; cultivation of tobacco is forbidden in Egypt, and the import duties on raw tobacco are pure revenue duties. To the extent that they are levied on manufacture (sales) of tobacco products, they should not be included here, since we do not include any other production or excise taxes. However, lack of data does not permit a breakdown of the tobacco duty revenues between those collected on imports and those collected on production and sales. The development over time of these two series is, unfortunately, quite different. Tobacco duty revenues increased over the period, while other tariff revenues generally fell. Thus, including tobacco duties raised the level of duties (implying depreciation) until 1954, when a maximum of 11 percent was reached. This depreciation disappeared almost completely by 1958, after which a certain uptrend started once again, mainly through an increase in the so-called statistical tax. Excluding tobacco duties, however, we find an appreciation of about 3 percent during 1951-1953. It disappeared in 1955 but reappeared in 1956, reaching a maximum of 7 percent in 1958; thence it dropped and was down to about 2 percent by the time of the devaluation in 1962.

The decline in the level of import duties after 1957 seems surprising against the background of the exchange regimes described in Chapter 2 (pp. 44-46). However, although tariff and import tax rates were increased sharply in 1957 and 1959, exemptions were widespread; in addition, the composition of imports shifted strongly toward low-tariff commodities (food, capital goods, and raw materials and other inputs), while high-tariff commodities (in particular, nonfood consumer goods) fell both in relative and absolute value (see Table 1-5). Here we are up against a difficult problem of weighting import duties. For problems of allocation, of course, they should somehow be weighted by domestic production (value added). From a macro point of view, with interest centered upon the balance of payments deficit, it is much less obvious what the correct weighting is; weights based on trade as it would be without the regimes might be appropriate. It should also be emphasized that part of the shift in the composition of imports was brought about by the direct play of import controls, and we are not attempting to include these in our calculations of the average effective exchange rate. There is, unfortunately, nothing we can do about the problem beyond calling the reader's attention to it.

Taking into account the effective depreciation related to triangular trade, export pounds, import entitlements, and premiums (columns 3 to 6), we have two series for the net depreciation for imports in Table 3-2 (columns 7 and 8). According to the series that includes tobacco duties, the depreciation for imports progressed fairly steadily (with interruptions in 1952 and 1956) from

1948 to 1959, when a maximum of 23 percent was reached. The depreciation diminished substantially in 1960 and 1961, but then increased again to a predevaluation height of 26 percent. According to the other series (excluding tobacco duties), the effective exchange rate for imports vacillated between minor depreciation and appreciation until 1957, after which there were two years of relatively strong depreciation in the order of 13 to 14 percent. During 1960 and 1961 most of this depreciation disappeared, but shortly before the devaluation of 1962 a depreciation of 18 percent was reached.

In Table 3-3, column 3 we have calculated the average depreciation for the balance on current account. It is the simple average of the average depreciations for exports and invisibles shown in column 1 and for imports in column 2. The average depreciation for exports and invisibles was obtained from the figures for average depreciation for commodity exports in Table 3-1, column 6, reduced by the ratio of commodity exports to total exports plus the net of invisibles (to account for the fact that payments related to the three dominating items among the invisibles—British army expenditure, Suez Canal dues and government expenditure abroad—were effected at par throughout the period). The average depreciation for imports was taken directly from Table 3-2, column 8.

In interpreting the table it should be noted that the average depreciation set out in column 3 is calculated with 1947 as the base year. The average depreciation or appreciation from year to year is shown in column 4 as the change in the average depreciation from 1947. A decrease in the average depreciation implies, of course, an appreciation over the previous year (designated by a minus, as explained above).

In column 5, finally, we have calculated our index of distortion as the absolute value of the difference between columns 1 and 2, divided by 100.

Before average depreciation, the index of distortion, and their development are traced through the period, a brief discussion of some foreign exchange measures and regimes not included in the calculations is in order.

First, we have not taken into account the depreciation of 1949 against the dollar. Here Egypt followed the sterling pound, and thus her exchange rates remained unchanged except against the U.S. dollar and the few currencies that followed the dollar. Her direct trade with the dollar countries was still very small in 1949 and, using trade at that time as weights, the average depreciation on this occasion amounted to only 1 to 2 percent. The simplest way to take this into account would be to lower the figures in Table 3-3 (columns 1 to 3) by 1 or 2 percentage points for the years 1947, 1948, and 1949, but it would not really change the picture.

Second, and much more important, is the fact that we have not included the effects of import licensing, which began in 1948 and continued throughout the period. In principle, the effect of licensing could be translated, commodity

TABLE 3-2
Average Net Effective Depreciation (+) or Appreciation (-) Compared with 1947: Imports
(all figures expressed as percent of total import value)

Year	Customs Duty Collections (change from percent for 1947)			Depreciation through			Total	
	Incl. Tobacco Duties (1)	Excl. Tobacco Duties (2)	Triangular Trade (3)	Export Pounds (4)	Import Entitlements (5)	Premiums (6)	Incl. Tobacco Duties (3)+(4)+(5)+(6)+(1) (7)	Excl. Tobacco Duties (3)+(4)+(5)+(6)+(2) (8)
1947	0	0	—	—	—	—	0	0
1948	0	0	7	—	—	—	7	7
1949	0	0	5	—	—	—	5	5
1950	5	0	—	+0	—	—	5	0
1951	3	-3	—	1	—	—	4	-2
1952	-1	-3	—	1	—	—	0	-2
1954	5	-3	—	1	2	—	7	0
1953	11	-3	—	+0	3	—	14	2
1955	10	0	—	+0	4	—	14	4

1956	8	-2	—	—	—	—	8	-2
1957	7	-4	—	—	—	10	17	6
1958	1	-7	—	—	—	20	21	13
1959	3	-6	—	—	—	20	23	14
1960	5	-5	—	—	—	10	15	5
1961	6	-2	—	—	—	10	16	8
1962								
Pre- devaluation	6	-2	—	—	—	20	26	18
Post- devaluation	—	-2	—	—	—	24 ^a	30	22

SOURCES: Cols. (1) and (2): *Annuaire Statistique*, several issues; and D. Mead, *Growth and Structural Change, 1967*, Table VI-E-3. Cols. (3)-(6): Our estimates.

a. Official par rate change.

TABLE 3-3
Average Depreciation and Index of Distortion, 1947-1962

Year	Average Depreciation from 1947 (percent)		Balance on Current Account			Index of Distortion (2)-(1)
	Exports and Invisibles (1)	Imports (2)	Average Depreciation from 1947 (percent) $\frac{1}{2}[(1)+(2)]$ (3)	Year-to-Year Change in Average Depreciation (percent) (4)	100 (5)	
1947	0	0	0	—	0.00	
1948	4	7	5½	5½	0.03	
1949	-2	5	1½	-4	0.07	
1950	-8	0	-4	-5½	0.08	
1951	-7	-2	-4½	-½	0.05	
1952	-7	-2	-4½	0	0.05	
1953	-6	0	-3	1½	0.06	
1954	-6	2	-2	1	0.08	
1955	-2	4	1	3	0.06	
1956	-5	-2	-3½	-4½	0.03	
1957	5	6	5½	9	0.01	
1958	11	13	12	6½	0.02	
1959	13	14	13½	1½	0.01	
1960	11	5	13	-½	0.06	
1961	9	8	8½	-4½	0.01	
1962						
Pre-devaluation	16	18	17	8½	0.02	
Post-devaluation	24	22	23	6	0.02	

SOURCES: Col. (1): Table 3-1, col. (6), adjusted for net invisibles to which par rate applies.
Col. (2): Tables 3-2, col. (8).

by commodity, into an equivalent depreciation. From a practical point of view such calculations are not feasible, however. The necessary information about black market prices for durable consumer goods and other inessentials is not available; these goods were most effectively hit by licensing. In general, we can only say that licensing meant some further depreciation and distortion from 1953 on, accentuated after 1956.

Third, there is the trend to bilateral trade during the first half of the fifties, continued after the Suez War with a shift toward trade with communist countries. We argued in Chapter 2 (p. 44) that bilateral trade tends to imply a depreciation for the country which runs a deficit on bilateral account. The free-market quotations of Egyptian pounds on bilateral "B-accounts" with Belgium, the Netherlands, and Switzerland (see Chapter 2, p. 44) reveal the depreciation in relation to these three countries. Taking simple averages of the quotations in Brussels, Amsterdam, and Zurich (averaging end-of-year figures) we arrive at the depreciation of the Egyptian pound shown in Table 3-4.

TABLE 3-4
Depreciation of the Egyptian Pound
on "B-Accounts"
(percent)

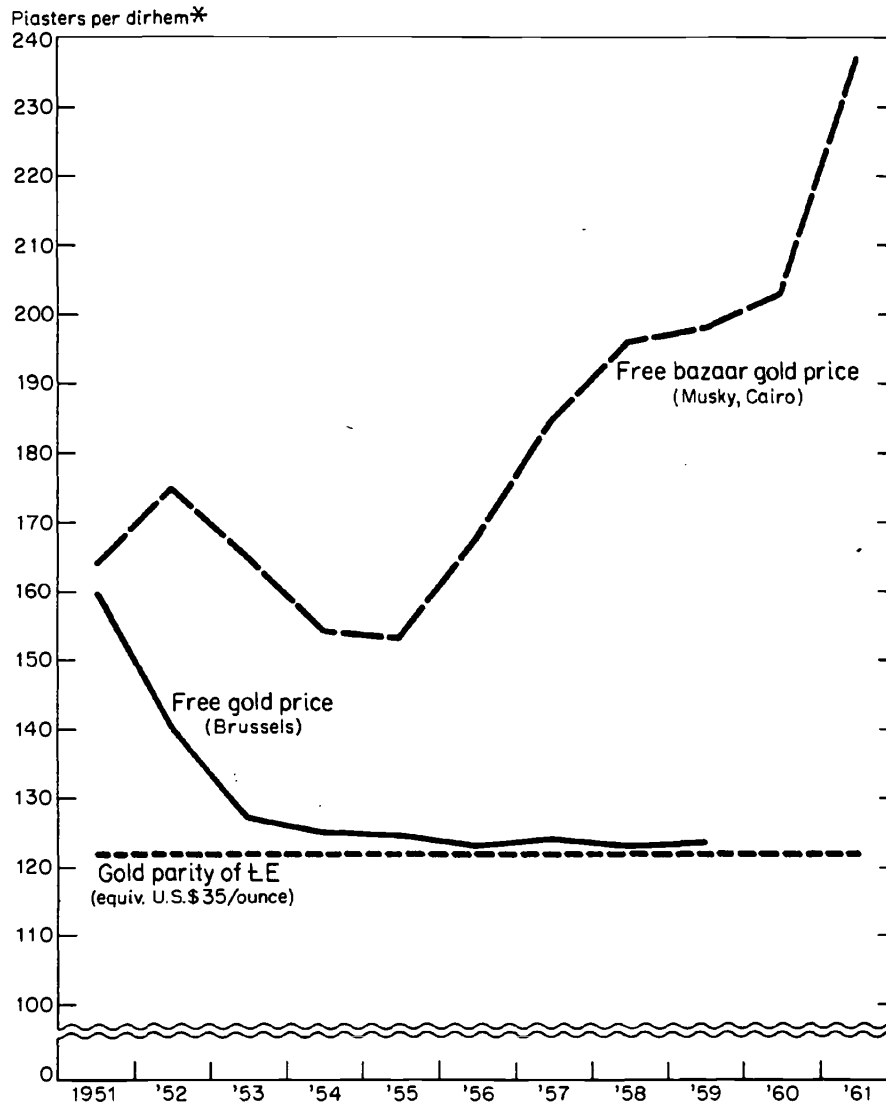
1953	5.1
1954	6.5
1955	5.7
1956	9.7
1957	20.8
1958	25.6
1959	24.4
1960	16.2
1961	13.5

SOURCE: Table 2-3.

The rate of depreciation varied widely among these three countries, and one should probably not generalize from their experience as to other countries, particularly not communist countries. There is no doubt, however, that there must have been some depreciation caused by bilateral trade in general, since Egypt has tended to be in the red on bilateral accounts everywhere. All we can say is that bilateral trade points to some further depreciation from about 1950 on, accentuated for a time after the Suez War.

Finally, it is worth noting that the free gold price in the Cairo bazaars at Musky also shows a significant depreciation of the Egyptian pound when compared with the free gold price on the world market. Chart 3-1 shows the gold parity of the Egyptian pound, the free gold price at Brussels (expressed

CHART 3-1
Gold Prices



in Egyptian currency at par), and the free Musky bazaar price. Private gold importation was subject to control beginning with 1951 and was soon thereafter stopped completely. Since gold has served to a large extent as a means of smuggling capital out of the country, the free gold price has tended to follow the black market price of foreign currency (dollars). Accordingly, the National Bank regularly reported the bazaar gold price in its quarterly *Bulletin*—until its nationalization. From 1953 to 1956 the bazaar price was about 25 percent higher than the free world market price, after having been at the same level in 1951 and 1952 when import was still possible; from 1957 on the premium in the bazaar increased steadily and reached about 100 percent in 1961. Once again the picture is one of increased depreciation after the Suez War, although, of course, trade in the bazaar gold market is too limited to permit generalizations about the general depreciation of the Egyptian pound.

WORLD BUSINESS CONDITIONS AND AVERAGE DEPRECIATION IN EGYPT

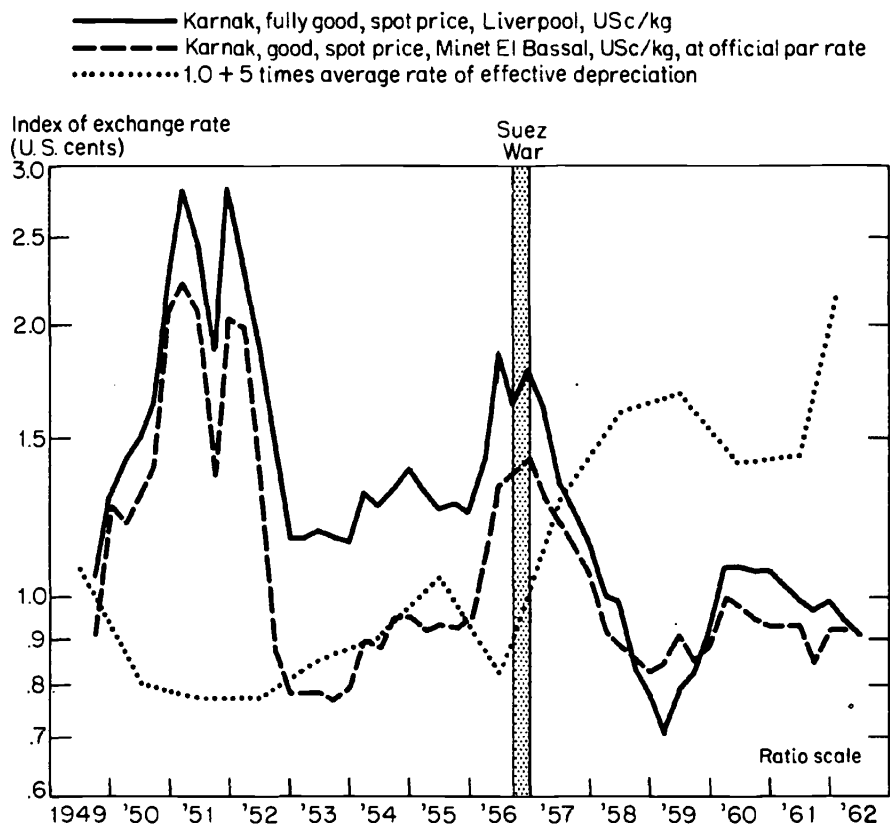
Egypt has traditionally been an open economy in which foreign trade plays a relatively large role. (See Chart 1-1.) For that reason the country tends to be strongly influenced by international business conditions. With cotton still accounting for about four fifths of her total export value after World War II and almost one-quarter of her total agricultural output value, the price of raw cotton has necessarily been a major link between the international and the domestic economy.

In Chart 3-2, covering the period 1949 to 1962, we have, therefore, first included the international price for a leading Egyptian cotton variety at that time (Karnak, Fully Good, Liverpool, spot price in U.S. cents per kilogram). A glance at this series shows immediately that, in the short term, Egyptian cotton prices have fluctuated heavily and depend directly upon the business cycles in Western Europe and the United States. Indeed, this series could almost be used as a business cycle indicator for the United States. It clearly reflects all American booms and recessions, upswings and downswings, with only minor deviations in regard to timing. The basic difference is that the general upward trend in production and prices in the Western World here is replaced by a downward trend, reflecting increasing competition from synthetics and changed technology in the cotton textiles industry in favor of short and medium staple cotton at the expense of long staple varieties. The cyclical fluctuations and the downward trend in cotton prices are fundamental facts behind Egyptian exchange policies during this period.

In considering these as exogenous forces imposed upon the Egyptian economy from the outside, we have taken sides on the issue whether Egyptian

CHART 3-2

Cotton Prices and Average Depreciation



policies themselves have determined the development of cotton prices in international markets: without denying that, to some extent, Egyptian policies may have influenced world market prices for long staple cotton, we feel that they have at most modified cyclical swings and the longer-run trend (see below, p. 83). All along Egyptian policies have been responding to and following—never leading—the changes in international cotton prices; and Egypt no longer dominates the international market as it did before World War II.

In addition to the international cotton price, Chart 3-2 presents a series showing domestic cotton prices (converted to U.S. cents per kilogram at par) to illustrate how far the Egyptian exchange regimes and export taxes have modified the relationship between the international price fluctuations and the domestic cotton prices—and, hence, the domestic economy. These two are the most comparable series we could unearth. Both are spot prices for the

variety Karnak; however, the Liverpool quotations are for a slightly better grade (Fully Good) than the Minet El Bassal (Alexandria) quotations (Good). Moreover the former are c.i.f. Liverpool, whereas the latter are prices at delivery from warehouse, unbaled, Alexandria. Together these two differences should account for a margin of 5 to 10 percent in the foreign over the domestic series. It should also be noted that Karnak is the variety that has carried the highest export taxes and has exhibited the strongest short-term price fluctuations as well as the strongest downward trend among all Egyptian varieties. Before March 1951, we had to use the variety Ashmouni for both price series in Chart 3-2. The British prices here were not free market prices, and represent averages for all grades of Ashmouni; hence, comparability is low between 1949, 1950, and the following years, and between foreign and domestic prices for 1949 and 1950.

The period started and ended with domestic prices (converted at the official par rate) at the same level as international prices. The picture is consistent with the fact that the cotton export taxes, although introduced already in 1948, did not become important until 1950 and were largely abolished at the end of the fifties, as explained earlier. In the interim—between 1950 and 1957—domestic prices ran at a much lower level than the corresponding international prices.

Finally, Chart 3-2 also includes our series from Table 3-3 for average depreciation, drawn to an exaggerated scale. It shows that average depreciation has tended to be both countercyclical and counter-to-trend in relation to the international cotton prices—until the fall of 1961, when other considerations gained the upper hand.

The price of cotton completely dominated the terms of trade,⁵ the balance of payments, and the economy as a whole over the period in question. High cotton prices tended to create a balance of payments surplus and produce a booming domestic economy; low cotton prices, on the other hand, tended to bring a balance of payments deficit and push the economy into a recession, *ceteris paribus*, and a long-term downward trend in cotton prices would depress the economy and keep the balance of payments in the red permanently. It cannot be emphasized strongly enough that during most of the period we are now discussing, 1949-1961, it was the balance of payments that disturbed the domestic economy rather than the other way around.

THE OVERVALUATION OF THE EGYPTIAN POUND

A full understanding of the balance of payments problem during the forties and the fifties also requires a comparison with the prewar situation. It has

been maintained that the Egyptian pound became overvalued already during World War II, and that this is the basic explanation of the persistent deficits after the war. According to this interpretation, the successive depreciations during the second half of the fifties, culminating in the devaluation of 1962, were the delayed response to this overvaluation, taken by the government when the exchange reserves finally began to be exhausted.

There is much to be said in favor of this interpretation, and it does not in any way contradict our observation that the average depreciation tended to be countercyclical until 1961 and that the tendency to depreciation was precipitated by the downward trend in cotton prices after the Korean boom. It is not possible, however, to produce unequivocal evidence that the Egyptian pound was already overvalued by the end of World War II. The terms of trade seem to have improved substantially from 1938-1939 to 1949,⁶ and the net of the exogenous invisibles (British army expenditure, Canal dues, and dividends) probably increased. Prices and costs, on the other hand, appear to have risen much more in Egypt than in the major developed countries. In 1949 both prices and industrial money wages were about three times higher in Egypt than before the war; in the United States and Britain prices had risen by only about 50 percent. The situation in 1953 and 1954, when the country was in a recession, with its current payments and receipts in balance (Table 1-3), certainly points toward overvaluation.

We accept the view that the currency was, in fact, overvalued already in the forties in the sense that, at a normal level of domestic economic activity, the balance of current payments would tend to be in the red. With the term "overvalued" thus defined, it may be perfectly rational for the government to keep the currency overvalued. For, if the country has too large an exchange reserve and wants to bring it down, it must run deficits for some time, and this means that it must have an overvalued currency until the reserves have reached their desired level.

DOMESTIC POLICIES AND BALANCE OF PAYMENTS DEFICITS

Although the pre-1961 balance of payments deficits can be seen as a hangover, partly at least, from the inflation of World War II, the period we are now discussing was not generally characterized by domestic inflation. Table 3-5 gives the data necessary for appraising the degree of inflation and the underlying fiscal and monetary policies.

Retail prices were quite stable for the period 1949-1961 as a whole; on the average they rose by less than 2 percent per year. Wholesale prices increased slightly more, about 3 percent per year. After an uptrend related to

the Korean boom, retail prices again fell back in 1952 and 1953. Apart from an increase by 6 percent around the time of the Suez War, retail prices then remained constant, practically speaking, until 1962. The relatively modest increase in prices was not primarily the outcome of price control. There was not much to control (apart from some prices of scarce import goods), because most of the period was characterized by deflationary tendencies. From 1949 through 1960, money supply increased year by year at a slower pace than real national income (including terms of trade gains). The only exceptions are the year 1956, when money supply increased by 12 percent, and the recession period 1952-1953, when money supply *fell* less than real national income. From the standpoint of a simplistic quantity theory of money, it would actually be hard to understand how—with retail prices increasing by about 10 percent from 1955 to 1960 and money supply, by about 20 percent—there could be, during the same period, an increase of real GNI by almost 30 percent. The obvious explanation would be that velocity must have increased, but when this kind of ad hoc explanation has to be added, money supply really ceases to tell us anything. All that we can safely say is, therefore, that money supply developments do not indicate the prevalence of inflationary tendencies until the beginning of the sixties.

From Table 3-5 it also appears, however, that a very substantial expansion of bank credit did, in fact, take place during most of the period. Is this not an indication that inflationary, or at least expansionary, domestic forces must have been at work? During the years of the Korean boom, government borrowing was on the order of 3 to 5 percent of GNI; it was used partly for covering ordinary budget deficits, partly for financing operations in the cotton market. Beginning with 1954, substantial credits were extended to either government or the private sector or both. The government borrowed heavily in 1955 and 1956, partly in connection with the Suez War, and from 1960 on government borrowing from the banking system dominated the picture completely. For the years 1954 and 1957-1959, however, the credit expansion took place largely in the private sector (either directly or through the specialized banks).

At the time of the Korean boom and the Suez War, the expansion of government borrowing from the banking system worked as one would usually expect: domestic expansion (inflation) was induced and money supply increased, with a positive effect on prices and a negative effect on the foreign exchange reserves through an increased balance of payments deficit. But in the years when the credit expansion occurred in the private sector, as well as in 1955 and 1960, two years when the government borrowed heavily, the money supply was not affected—the whole impact seems to have been directly upon the foreign exchange reserves. The obvious explanation of this phenomenon is that credit expansion in these years stemmed largely from purchases

TABLE 3-5
Prices and Money Supply, 1949-1962

Calendar Year	Retail Prices		Money Supply, M ₂ ^a			Counterpart of Change in Money Supply (mill. £E)				
	(1)	Increase (%) (2)	End of Year (mill. £E) (3)	Increase (mill. £E) (4)	Increase (%) (5)	Net Foreign Assets ^b (6)	Net Claims on		Claims on Specialized Banks (9)	
							Government ^c (7)	Private Sector (8)		
1949	93	1	402.7	-0.6	-0.1	-9.7	-18.4	23.9	3.6	
1950	101	5	418.9	16.2	4.2	2.6	-6.9	12.1	8.4	
1951	110	9	446.3	27.4	6.5	-7.4	37.5	2.9	-5.6	
1952	107	-3	428.8	-17.5	-3.9	-72.5	61.3	-11.9	5.6	
1953	100	-6	420.1	-8.7	-2.0	-9.4	-1.4	7.2	-5.0	
1954	101	1	425.3	5.2	1.2	-13.3	-11.6	35.1	-5.1	
1955	102	1	433.2	7.9	1.9	-33.8	33.0	5.5	3.2	
1956	104	2	482.9	49.7	11.5	-42.2	70.0	15.1	6.8	
1957	110	6	485.0	2.1	0.4	-57.3	16.5	14.5	28.4	
1958	110	0	489.7	4.7	1.0	-18.4	-12.9	27.6	8.4	
1959	111	1	513.4	23.7	4.8	-48.9	9.8	34.0	28.8	
1960	112	1	525.5	12.1	2.4	-44.9	46.8	4.4	5.8	
1961	113	1	584.7	59.2	11.3	-20.8	66.9	6.5	6.8	
1962	113	0	629.2	44.5	7.6	-75.6	82.1	28.8	9.0	

SOURCES: Col. (1): D. Mead, *Growth and Structural Change, 1967*, Table VI-F-1.

Cols. (3)-(9): *Ibid.*, Table VI-A-1.

a. Including P.O. savings bank deposits.

b. Including bilateral balances, IMF position, and U.S. counterpart funds.

c. Including capital and profits, and other items. These items were very constant and their inclusion in net claim on government does not significantly change the picture. As of 1956, most private banks did, in fact, belong to the government and in 1960 the last two private banks were brought under government ownership.

directly from abroad of capital goods and, in the case of the government, of weapons. It is precisely from 1955 on that weapons purchases for defense and capital goods purchases for development strongly increased their share of total imports.

Domestic credit expansion thus played an important role in the exhaustion of the exchange reserve during the period under consideration. But for most of this time it occurred through deliberate credit financing of purchases directly from abroad, not through domestic inflationary mechanisms.

It is a common practice in the analysis of exchange rates to adjust nominal exchange rates (official or estimated effective) for domestic and foreign price developments along the lines of purchasing power parity theory. Egyptian price increases for the period 1949-1961 were low by international standards. In America, retail prices increased slightly more than in Egypt from 1949 to 1960, and wholesale prices, slightly less, while in most European countries price increases were substantially higher than in Egypt.

Such comparisons are of dubious value, however, unless the difference in price developments is very striking (as was the case, for instance, during World War II). First, it is not obvious what domestic and foreign price indexes should be used in this kind of exercise, retail prices, wholesale prices, or implicit GNP deflators; which countries should be included; how they should be weighted together; and so on and so forth. Second, available price indexes for Egypt are not very good (their weighting is inadequate for almost any purpose), and some prices were controlled even during the years under review. Instead of deflating the effective exchange rate by some inadequate price index, therefore, we prefer to present some figures to show the development of competitiveness in manufacturing industry. As an expression of competitiveness we shall use unit labor costs in Egypt and in highly industrialized countries.

From 1952 to 1960, money wages (weekly earnings) in industry (establishments with more than ten employees) increased by 2.9 percent annually, while the corresponding increase of output per hour was 4.0 percent. Adding all fringe benefits, hourly wages increased by 4.7 percent. For the years before 1952 information is very shaky; existing data point to an annual rate of increase in wages from 1947 to 1960 of 4.4 percent (5.5 percent when all fringe benefits are included), whereas labor productivity for this period increased by 4.7 percent annually.⁷ Thus, for the period as a whole it would seem that wage increases in industry almost remained within the range of the increase in productivity.

It would also seem that wage cost movements in Egyptian industry compared favorably with those of the highly industrialized countries in Europe and America. Measured in the respective country's domestic currency, wage costs per unit of output (excluding fringe benefits) increased annually during the

period 1955 to 1961 by $\frac{3}{4}$ percent in the United States, by $3\frac{1}{2}$ percent in the United Kingdom, and by an average of 3 percent in the European Common Market countries. The corresponding figure for Egypt is $-\frac{3}{4}$ percent.⁸

Comparisons of prices and wage costs in Egypt and abroad thus indicate that there was no fall in the relative "intrinsic value" of the Egyptian pound from 1947 to 1960. If anything, there may even have been a slight improvement, and it is not a circumstance that helps to explain the persistent balance of payments deficits during these years.

Summarizing, we can state that the persistent external deficits of the postwar years until 1960 seem to have been the combined outcome of (1) a certain overvaluation of the currency created by the inflation of World War II; (2) credit expansion, in some years for financing domestic government expenditure but in most years for financing direct purchases abroad of capital goods and weapons; and, finally, (3) the downward trend in cotton prices.

FOREIGN EXCHANGE POLICY TARGETS

In appraising an exchange rate policy one should ascertain whether the policy was well designed from the point of view of the Egyptian government's targets. (Albeit a popular method, an appraisal of a government's policy measures from the viewpoint of somebody else's targets does not make sense.) The exchange rate policy should, of course, be coordinated with all other measures to fulfill all the government's policy targets.

The broad targets of the Nasser regime were already discussed in Chapter 1. In the present context it should be emphasized that price stability was always a major concern of the government. All governments favor price stability, of course, but it would appear that the successive Egyptian governments attached exceptional importance to this objective. It may have been partly an inheritance from the British colonial administrators,⁹ and thus simply represented prudence and conservatism; but after 1952 it was also closely related to the government's strong emphasis on equity in income distribution. Income stability in real terms for the peasants and the lower urban income brackets makes general price stability a natural concern, both in regard to agricultural inputs and outputs and in response to the cost of living. With cotton the major cash crop for agriculture and food the major expenditure item for urban low income groups, the government naturally concentrated on stabilizing cotton and food prices—that is, agricultural prices.

The balance of payments and the availability of foreign exchange were naturally another subject of concern. A glance at the level and development of the free gross reserves (Table 3-6) conveys the impression that Egypt could not possibly have had much to worry about in this regard. At the end

TABLE 3-6
Foreign Exchange Reserves, All Banks
(book values, mill. £E)

End of Year	Gold (1)	Pounds Sterling				U.S. Dollars (5)	Other Currencies (6)	Total Exchange Reserve		Free Gross Reserves as % of Yearly Import Payments (10)
		No. 1 (free) (2)	No. 2 (blocked) (3)	Total (4)	Gross			Net (9)		
					Total (7)				Free (8)	
1945	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	379	n.a.
1946	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1947	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1948	13	71	264	335	6	10	364	100	323	62
1949	19	63	247	309	21	8	357	111	321	70
1950	34	52	224	277	26	18	355	140	312	63
1951	61	24	196	220	37	12	330	134	292	55
1952	61	6	174	180	20	11	272	98	232	47
1953	61	19	164	183	12	10	266	102	224	62
1954	61	35	146	181	13	15	270	124	227	82
1955	61	21	125	146	21	10	237	113	195	59
1956	66	7	100	107	21	17	210	111	159	58
1957	66	27	61	87	16	19	188	128	101	58
1958	61	45	42	87	4	10	162	120	85	56
1959	61	63	—	63	7	19	150	150	62	64
1960	60	n.a.	—	n.a.	n.a.	n.a.	157	157	43	62
1961	61	n.a.	—	n.a.	n.a.	n.a.	136	136	16	57
1962	61	n.a.	—	n.a.	n.a.	n.a.	n.a.	-7	n.a.	n.a.

SOURCES: *Economic Bulletin*, National Bank of Egypt, various issues; *Economic Review*, Central Bank of Egypt, various issues. For details, see Hansen and Marzouk, op. cit., p. 190.

of the most troubled year, 1952, free gross reserves were about 47 percent of the same year's import payments, and in most years they corresponded to about 7 months' imports. It may be argued, of course, that until 1953-1954 the problem was one of dollar shortage and that free sterling reserves were not automatically convertible into dollars. It might also be argued that seasonal fluctuations of exports are relatively large in Egypt (at least, as compared with developed countries), and that the bad experience in 1947 with the breakdown of sterling convertibility, the uncertainty of future releases of No. 2 sterling, and the conflicts with Western powers gave Egypt some good reasons for keeping relatively large reserves. Even so, it is hard to understand the Egyptian exchange reserve policy. During the critical years of the dollar shortage, 1948-1951, when Egypt struggled with triangular trade arrangements and first introduced the export pound, the central bank increased its gold stocks from about £E19 million to £E61 million¹⁰ corresponding to two to three months' imports in those years. It would seem that, without the gold accumulation policy, the dollar problem for Egypt would have been a minor one. The increase in the gold reserve could have covered about two years of non-sterling deficit at the end of the forties. The official motivation for the gold policy was the need to keep gold as a note cover; but there may also have been an element of speculation in the free dollar price of gold—in fact, the IMF at that time encouraged member countries to sell "legal" gold in the free market. Be that as it may, once acquired, the gold reserve was considered sacrosanct. It was not touched until the mid-sixties, when the government was forced to pledge part of it as collateral for trade credits from European banks. In our appraisal of the exchange rate policies we thus have to acknowledge that we are dealing with a country with an unusually strong international liquidity preference. When things went wrong in 1961-62, it was out of miscalculation and the coincidence of unhappy circumstances rather than disregard for the reserve position.

The government's attitude to the exchange reserve seems to have been that, whereas the total reserve (including the blocked sterling balances) was considered to be unreasonably large and in need of reduction, the free reserves over and above the untouchable gold stock were considered to be too small. Given this attitude, it made sense to keep the currency overvalued and let the total exchange reserve fall to the desired level and, at the same time, to be concerned with the balance of payments to prevent reserves from falling faster than the blocked reserves were released and from being used for low priority purposes. At the end of the process a devaluation would then logically follow.

Summarizing, it is probably correct to say that during the whole period until 1962, both domestic price stabilization and balance of payments considerations were reflected in the policy of effective depreciation—but that the

foreign exchange position was so comfortable until 1961 that price stabilization could be given top priority, with the balance of payments only a secondary problem. From the summer or fall of 1961, the priorities were reversed. This interpretation is consistent with the development of the effective depreciation. From 1949 to 1960-61, the average effective depreciation, according to Table 3-3, was about 7 percent. The dominating cyclical fluctuations in average effective depreciation were superimposed upon a slow trend of effective depreciation. From the fall of 1961 to the formal devaluation in May 1962, a further 9 percent effective depreciation took place and the formal devaluation added another 6 percent.

It is true that the formal devaluation of May 1962 only added marginally to the effective depreciation already in existence at the time of the formal devaluation. But in appraising the effective exchange rate policy in relation to the underlying targets, it is preferable to consider the effective depreciation that took place from the fall of 1961 together with the formal devaluation of May 1962 as one single policy move designed to save the balance of payments. Looking at things in this way, the 1962 devaluation amounted effectively to about 15 percent in one year against an earlier creeping effective depreciation of about 7 percent over twelve years. When we turn to the 1962 devaluation in Chapter 4, we shall appraise it with this approach.

COUNTERCYCLICAL EXCHANGE RATE POLICY

In examining the rationale of countercyclical exchange rate policies, we start out from some simple assumptions and subsequently bring the discussion in line with the conditions actually confronting the Egyptian government during the 1940s and 1950s.

In the simplest possible case, the world business cycle may be assumed to develop through uniform expansions and contractions, with all prices uniformly rising during the upswing and falling during the downswing. A small country in competitive circumstances would experience no fluctuations in its terms of trade (relative prices), and the whole problem would be either (1) to protect the domestic economy from the uniform price fluctuations that would be inevitable under a pegged exchange rate policy combined with full employment, or (2) to protect it from the balance of payments deficits and surpluses and from the domestic booms and recessions in production that would follow if the country did not let its domestic price level adjust to that of the world market. Uniform countercyclical changes in exchange rates in inverse proportion to world market prices would then be the ideal policy. Domestic prices would remain constant, foreign payments would remain

balanced, and domestic production would be unaffected. Similarly, changes in the world price level could always be completely neutralized through appropriate changes in exchange rates. Indeed, this discretionary exchange rate policy would be tantamount to letting the exchange rates float.

Against the background of this simplified model there could be no doubt about the rationality of a policy like Egypt's appreciations and depreciations, although their timing may have been imperfect and the magnitude of the average appreciations and depreciations, inadequate.

It should also be emphasized that we are here talking about the *average* effective exchange rate changes implied by the exchange regimes. Even if this average rate were to move in a way that looks rational from a macroeconomic stabilization point of view, it does not follow, of course, that the exchange regimes and their manipulations would in any sense be the best possible policy. With uniform rates, and free trade, the average rate could be moved in the same way without the allocative drawbacks of the various exchange regimes. All we are saying is that—granted the existence and use of quantitative regulations—countercyclical tightening and relaxation of the regulations would appear rational from a stabilization point of view.

However, international price fluctuations were *not* uniform during the period considered here. Egypt's terms of trade exhibited clear and strong cyclical movements, as could be expected from a country whose exports largely depend upon one primary commodity and whose imports are quite diversified. The terms of trade fluctuated in the short term up and down with cotton prices; this was particularly true during the time of the Korean boom. Their long-term trend over the period has probably more or less followed that of cotton prices, too.¹⁰ We have to think, rather, in terms of a model with export (cotton) prices increasing faster than import prices during an upswing and increasing less fast (or decreasing faster) during a recession. The change in relative prices and the resulting terms-of-trade gain or loss must be taken into account in our analysis.

Appreciation (depreciation) equal to the average change in export and import prices is here a possible policy that would permit domestic prices to remain unchanged on the average. But in the short term it might not prevent domestic imbalances from arising. An upswing in the world business cycle, for example, with increasing export prices would produce a tendency to overheating in the export sectors and to recession in the sectors competing with imports, because the appreciation is simultaneously too small to prevent export prices in domestic currency from increasing yet big enough to cause import prices in domestic currency to fall. It is difficult to say generally whether the balance of payments would improve or deteriorate in the short run. In case there were a net improvement, that would also create a general tendency toward expansion (inflation) in the country. The appreciation could, of course, be made stronger to secure balance of payments equilibrium, but then

the domestic price level might decline and the domestic imbalance be reinforced insofar as the industries competing with imports would suffer a further setback.

For purposes of domestic macrostabilization, a multiple exchange rate policy with stronger appreciation for exports than for imports would seem more appropriate. If the appreciation for exports and imports were made proportional to the respective export and import price increases, domestic prices would be left unchanged, production and the allocation of resources would be unaffected, and the whole terms of trade gain would be skimmed off by the government and invested in larger foreign exchange reserves. During a world recession with a fall in the terms of trade, the opposite policy could be pursued, with more depreciation for exports than for imports; the terms-of-trade loss would be carried by the government sector and financed through a diminution of the exchange reserves.

From a macrostabilization point of view, this multiple exchange rate policy looks perfectly rational; it implies complete domestic stabilization and full employment of resources. But, in contrast to the case of uniform price movements, we are now up against problems of allocational efficiency. For, if export prices are relatively high during upswings and booms and low during recessions, allocative efficiency would "normally" require that the volume of trade, of exports as well as imports, should tend to be high during booms and low during recessions.¹¹ The cyclical multiple exchange rate policy suggested here to secure domestic stabilization in the face of cyclical fluctuation in foreign prices and terms of trade would prevent the cyclical adjustment of production and trade that efficiency requires.

If the possibility of stockpiling is included—and in cotton this is, of course, a very real one—our analysis changes again. In the extreme case where prices in the future are perfectly foreseen, the foreign markets are perfectly competitive, and carrying costs are negligible, the optimal policy would be simply to produce cotton constantly to the margin determined by the cyclical top prices, stockpile whenever prices are lower, and sell out when prices are at the top. Foreign exchange reserves would then have to fluctuate correspondingly. The conditions for the success of such a policy are not likely to be fulfilled, and under more realistic assumptions the problem of stockpiling as an optimal policy is much more complicated. Our discussion of the counter-cyclical exchange policy assumes only that sale prices are fully foreseen at the time of sowing, but nothing more than that. In real life, prices are never perfectly foreseen, but the policy discussed here seems to be the one that requires the least foresight; in this sense it is likely to be the optimal policy. But it has to be admitted that even the foresight required for this policy may exceed what can be expected from the authorities. Without going deeper into the important matter of uncertainty regarding future prices, we assume here that a priori it rules out stockpiling as the best policy. Looking at the actual

stock policy of the Egyptian government (see below), this assumption certainly seems to be justified.

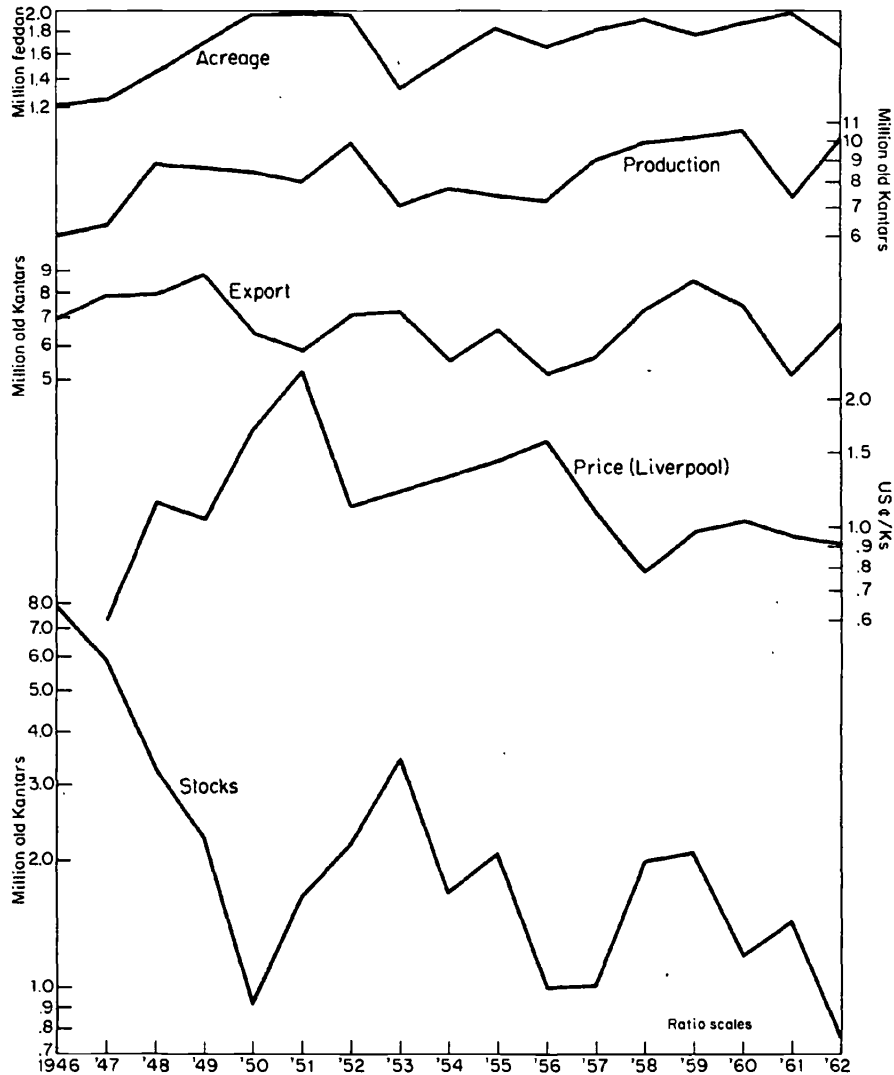
Note that the importance of this allocational problem depends, of course, upon the possibilities and costs of short-term reallocation of resources. Generally, one might be inclined to think that such reallocation possibilities are small, and that it might be preferable in the short term to let factors continue producing inefficient lines rather than leaving them unemployed. However, land and labor in agriculture may be reallocated easily among field crops. When reallocation takes place not only within the same industry but even within the same enterprises (farms), the short-term costs from reallocation must be negligible. If so, the short-term allocational losses may take on serious proportions.

For Egypt, therefore, the concrete problem relates to the extent to which the cotton acreage and export volume should respond procyclically to international cotton prices. We are here up against an old issue in Egyptian economic policy on which opinions have been divided. It concerns the alleged technical upper limit of about 2 million feddan to cotton cultivation.¹³ One argument has held that, even at relatively low prices, cotton cultivation is always so profitable that it should be close to the technical upper limit. If this were correct, there would be no cyclical allocation problem,¹⁴ and excessive cotton prices could simply be taxed away. The relatively low elasticities of acreage with respect to prices that we have found for cotton in Egypt (Table 6-3) support this view. Against this argument it has been contended that, although cotton is and always has been a very profitable crop and land is a relatively homogeneous factor of production in the Nile Valley and the Delta, there are, nonetheless, marginal cotton lands. Hence cotton acreage should indeed respond significantly to changes in relative cotton prices, and at very low prices even a large decrease in acreage might be justified on grounds of efficiency. The consensus has been, however, that the technical upper limit could not and should not be surpassed even at very high relative prices for cotton. Thus, the conclusion seems to be that at low prices export taxes would have allocative effects, but only income distributional effects once prices are so high that the upper limit to the acreage is reached. The latter case is clearly relevant to the Korean boom, when the acreage actually reached the upper limit (see Chart 3-3).

In the Egyptian setting we therefore have to distinguish between two cases:

First, relative cotton prices may be so high that, even at an international cyclical trough, cotton should be cultivated to the upper limit. In that case, the general exchange rate should be made to fluctuate with the average import price, and a cotton export tax or subsidy (depending upon the phase of the world business cycle) should be levied to absorb the relative change in international cotton prices. No allocational problems would arise, but the government would have to have a policy for the distribution of the terms-of-trade

CHART 3-3
Cotton: Output, Exports, Price, Stocks, 1946-1962



gains and losses that would be absorbed through the cotton export taxes or subsidies. Stabilization of real national income over time would require that export tax revenues during booms be sterilized and invested in a corresponding increase in foreign exchange reserves. During recessions the subsidies should then be deficit-financed and the exchange reserves correspondingly diminished.

The policy outlined in the last paragraph would apply to the years of the Korean boom (see Chapter 2, p. 32). Cotton export taxes were introduced in 1948 to dampen the rise in the domestic cotton price at that time. They were increased somewhat during the boom and temporarily abrogated when cotton prices collapsed. But the tax increase was small (£E3 per kantar as compared with a price increase of £E21 per kantar for Karnak, Good, from mid-1950 to mid-1951, to take a typical example). Considering the dominance of big landowners at that time, a larger increase in the cotton export tax would hardly have been politically feasible, but it would also seem that the government did not realize the temporary nature of the boom until it was too late. In all fairness, it should be noted that things happened very suddenly in those tumultuous years. It would have taken a very clever and alert government to foresee these events. On the other hand, both export taxes and exchange rates could be changed overnight and, once decided upon as policy instruments, needed little forecasting, since the government then only had to follow cotton prices very closely—as, in fact, it attempted to do later in 1958 and 1959.

Misinterpretation of the nature of the boom, combined with political expediency, was, however, to lead to an entirely insufficient use of export taxes. At the same time, inept fiscal policy followed a clear procyclical pattern. Monetary policy was largely passive, but here, too, the result showed a clear procyclical pattern, with money supply increasing during the boom and falling during the recession. Although the effective exchange rate for cotton was manipulated in a countercyclical manner during these years, the changes were too weak, and, on balance, short-term policies may have been procyclical rather than the opposite.

Second, relative cotton prices may be so low that cotton cultivation should be kept below the technical upper limit. In this case multiple effective rates would neutralize the macro effects of foreign price changes, but with allocational inefficiency as the consequence. Since the predominating reallocational problem is one of changing the crop composition rather than moving resources between sectors, the allocational loss speaks clearly against using multiple effective exchange rates. On the other hand, with a flexible uniform exchange rate policy where the rate of depreciation equals the average of the change in export and import prices, the balance of payments could be kept in equilibrium, allocation would be optimal (granted an ideal distribution of income), and a terms-of-trade gain would benefit consumers in general. Farmers would experience an increase in cotton prices and a proportionate fall in all other output prices, and their money income would tend to be unchanged.¹⁵ But with all other agricultural prices lowered, the cost of living would be lower and, since there would be no pressure on money wages, all real wages and profits would increase. This policy would imply that, though

private money income would be constant, private real income would fluctuate cyclically with the terms of trade.¹⁶ If that is not considered suitable, the government could theoretically keep private real income constant over the cycle by levying countercyclical food taxes (subsidies) and letting the terms-of-trade gains and losses be absorbed in fluctuating exchange reserves.

Our discussion thus leads up to the conclusion that domestic stabilization over the cycle without misallocation would require countercyclical, uniform exchange rate changes in inverse proportion to some kind of average of export and import prices, combined with export taxes when the upper limit for cotton cultivation is reached and with food taxes (subsidies) in all other situations, both changing procyclically. The timing and magnitude of such measures would be a problem even for the best of governments, but in principle we do not believe them to be beyond the administrative capabilities of the Egyptian government. Indeed, it worked deliberately with instruments of this kind in the late 1950s.

AN APPRAISAL OF THE EFFECTIVE EXCHANGE RATE POLICY

We are now in a position to assess analytically the effective exchange rate policy from 1948 to the devaluation of 1962. To this end, let us recall that the statistical picture drawn earlier in this chapter revealed a policy that, on balance, was countercyclical and counter-to-trend in relation to cotton prices and the terms of trade.

A first problem is whether this really was the result of a deliberately designed policy. For, in light of our discussion, so far, such a policy looks quite sophisticated, indeed, and the reader might wonder whether Egyptian foreign exchange policies were really all that sophisticated—if for no other reason, simply because governments usually are pretty unsophisticated in this regard and certainly were so at that time, when pegged rates had just been made the cornerstone of the international monetary system. Moreover, our description of the policy is based on overall averages of a bewildering array of exchange measures, and it would be natural to ask whether the authorities themselves really were able to see the wood for all the trees. Are our “policy cycles” perhaps nothing but the sum of a large number of erratic policy moves?

We do not think so. Were the whole thing nothing more than that, it is inexplicable why the Egyptian policy cycles should have been synchronized with the world business cycles—themselves perhaps nothing but the sum of another set of erratic events. (We shall show, however, that in at least one instance—1955-56—the countercyclical nature of the policy was, indeed, fortuitous.) It should also be recalled that what is considered in many quarters

an advanced and rational exchange policy today, i.e., floating rates, was at that time frowned upon as little more than a frivolous, primitive reaction to problems that should have been solved without (effective) exchange rate changes.

Granted now that the statistical picture we have drawn above (see p. 55) of the exchange policy is more than just a technical artifact, the question remains how well adapted it was to actual circumstances. From our discussion of countercyclical exchange rate policy it follows that an answer to this question requires careful consideration of the cotton situation. In Chart 3-3, therefore, we have brought together data for acreage, production, stocks, exports, and international prices of Egyptian cotton from 1946 to 1962. To prevent the chart from being too crowded we have abstained from showing domestic prices, too. However, the international price series in Chart 3-3 is identical with that in Chart 3-2 (except that the present one is on an annual basis), so that Chart 3-3 is directly comparable to Chart 3-2 (with due regard to the difference in scale).

Egypt came out of World War II with large stocks of cotton, roughly corresponding to one year's normal crop. Acreage restrictions (see Appendix A) had kept production at a low level during the war; yet production exceeded domestic consumption, and the government accumulated large stocks until 1946. After the reopening of trade with Europe and America and the rise in international cotton prices, acreage restrictions were relaxed; in 1947, they were abolished. Production increased rapidly, but demand was so brisk that stocks were drawn down rapidly at increasing prices. By the outbreak of the Korean War, they were practically exhausted. Despite record acreages, low yields in 1950 and 1951 led to a decline in production and, with stocks exhausted and domestic consumption rising, the export volume fell strongly—during a period of very high cotton prices. Private speculation and, later, the government's attempt to prevent the international price from falling (in 1952) led to a substantial increase of stocks (which reached their maximum level in 1953), but a good crop in 1952 made it nonetheless possible for exports to increase in 1952 and 1953. From 1953 on the government imposed restrictions on the cotton area which, although relaxed slightly in 1954, remained in force until 1960 (with increasing evasion). Export taxes were continued (see below). Production and stock developments together led to a fall in exports from 1953 to 1956, when prices reached a new peak. Thereafter, with prices in a downturn again, exports rose quickly.

The net result of acreage restrictions, stock policies, and domestic consumption, together with strong erratic fluctuations of yields, turned out to be a movement in the volume of cotton exported that was almost perfectly countercyclical to international prices—high in years of low prices and low in years of high prices. Thus, the cotton export policy for these years looks

like a complete failure, with results that were just the opposite of what an optimal exchange policy should bring about.

But here we face the problem of the elasticity of foreign demand for Egyptian cotton. In principle, these developments could, after all, be interpreted the other way around: Perhaps it was world market prices that responded to Egyptian exports along a downward sloping demand curve? In that case it would not be obvious that the Egyptian policies were a failure. To appraise this position we would first have to estimate optimal acreages and exports at shifting demand curves; the actual development could conceivably also be the optimal one.

We do not believe, however, that such an interpretation is realistic. Most probably the demand for Egyptian cotton was highly elastic. Before World War I Egypt held a dominating position as supplier of extra long staple cotton, difficult to replace with substitutes. Estimates of demand functions based on data for the pre-World War I and interwar periods point to a total price elasticity on the order of -1 to -2^{17} , with the long-term elasticity somewhat lower. Since then competition from new long staple producers (Sudan and Peru, among others), from medium staple cotton, and from synthetics has not only shifted the international demand curve for Egyptian cotton downwards but probably also increased the elasticity of demand significantly. We do not know of any attempt to estimate the demand elasticity for Egyptian cotton for the years after World War II, but the consensus is that Egypt has lost her old near-monopoly position for long staple cotton, and that the prices she now faces in the international markets are by and large only slightly influenced by Egyptian supply policies. Even if the Liverpool price of Egyptian cotton should show some reaction to the Egyptian supply policy, this would not justify the cotton policy, although it would imply that its countercyclical nature was somewhat exaggerated.

If that is so, we can only conclude that, to the extent that cotton exports between 1948 and 1956 were the outcome of deliberate government cotton policies, these were indeed a failure. However, the government should not be blamed for having sold the wartime stocks before the onset of the Korean boom, which it could not possibly have foreseen; also, it must be acknowledged that erratic yield fluctuations contributed much to the outcome. Nonetheless, this circumstance clearly deprives the average depreciation policy of much of its rationale. To the extent that it should have worked on the volume of exports, it was influenced by uncontrollable events and superseded by other policies that went awry. It was only on imports and the remaining exports other than cotton that it may have worked. The stabilizing effect on domestic prices is obvious, however.

Since the upper limit for the cotton area was reached in 1950 and prices continued increasing, it would have been perfectly rational in 1950 and 1951

to levy high export taxes for domestic stabilization purposes. Cotton prices by far exceeded the level necessary to bring the acreage to its maximum. It would seem (see Appendix A) that a producer price of £E15 per metric kantar would have been sufficient to keep the acreage at its maximum. Export taxes, therefore, could probably have been higher by at least £E10 per metric kantar in 1950 and by £E3 in 1951. When, on the other hand, international prices fell in 1952 and reached such low levels in 1953 that the optimal cotton acreage must have been below the upper limit, the export taxes should have been abolished altogether, according to our previous reasoning. The export taxes were, in fact, cut in 1953 (after a temporary suspension in 1952) to about half their size during the peak of the boom. The sharp price drop, however, meant that the rate of taxation remained about the same. In addition, acreage restrictions were imposed and the cotton acreage was most certainly below the optimum. The taxes continued at this level until 1955, when they slowly began to be phased out. If export taxes had been completely abolished as far back as 1952, and no cotton area restrictions had been adopted, the recession of 1953-1954 would have been mitigated, probably without detrimental effects on the balance of payments. The fall of the domestic price level in 1952 and 1953 would, of course, have been less pronounced, but since wages had risen more than prices during the Korean boom, there was no strong social motivation for a reversal of the price increase. The excessively low level of the cotton export taxes in 1950 and 1951, together with their continuation after 1952 and the introduction of the cotton area restrictions, added up to be the greatest mistake in the trade and exchange policies from 1948 to 1962.

In the statistical section of this chapter we saw that from 1948 through 1951 there was an average appreciation of 12 percent for commodity exports and of 9 percent for imports (Tables 3-1 and 3-2), with the possible deduction of 1 or 2 percent related to the devaluation against the dollar in 1949. Both on the export and the import side, about 6 percent of the appreciation was due to the disappearance of triangular trade with the introduction of the export pound. There is little to object to in this part of the policy. With the improvement of Egypt's dollar situation, the motivation for triangular trade became weaker, and, although the introduction of the export pound arrangements in 1950 shows continued government concern about the country's dollar earnings, general allocational arguments certainly speak for letting the appreciation as far as possible take the form of canceling the multiple exchange rate arrangements. On the export side, the rest of the appreciation was related to export taxes. From our discussion it follows that they should have been increased even more, and that the appreciation from the export side should have been correspondingly stronger. On the import side, the rest of the appreciation was related to lower customs duties. The appreciation policy for this period thus consisted in a move toward more unified exchange rates, with a

reduction of customs duties and raising of export duties that had no allocational effects in the given situation. Up to this point, the whole package seems well designed, with the important qualification that the export taxes could have been much higher.

As mentioned in Chapter 2, however, the boom was accompanied by recessionary tendencies in industrial production, with increased competition from abroad as a possible contributing cause. If that is so, the appreciation on the import side may have been too strong. Purely from a stabilization point of view, a larger increase in export taxes with a smaller decrease in import duties might then have been preferable.

From 1952 through 1955 the average effective depreciation was about the same for exports and imports—5 to 6 percent. About half was related to the import entitlement system introduced in 1953. The remainder was due to a drop in the average rate of export taxation (partly a consequence of the rise in cotton prices) and an increase in the import duties. Abolition of the export taxes together with a general depreciation would certainly have been preferable. The timing was not very appropriate, either; the depreciation should have reached its peak already in 1953.

The average appreciation from 1955 to 1956 was largely caused by the cancellation of the import entitlement system, which, in turn, was the result of British pressures; the need for an appreciation came afterwards (and completely unexpectedly, of course), with the speculative increase in cotton prices after the nationalization of the Suez Canal. It is at this point that the countercyclical nature of the policy was entirely fortuitous. To some extent, moreover, the appreciation was counteracted by a tightening of import licensing, which we have not been able to consider in our calculations of the average effective exchange rate.

After the Suez War, various premium systems dominated the picture completely, although the depreciation was enhanced by the abolition of the export taxes. The average rate of import duties fell, but this was largely related to the change in the composition of imports that took place with the rise in food imports and the decline in imports of other consumer goods. The premium system was closely geared to the international development of cotton prices with the effective exchange rate deliberately used as a means of domestic price stabilization for this period, but a unified exchange rate with a high degree of flexibility could probably have produced about the same result. It is another thing, of course, that overtly flexible exchange rates probably would have met stiff opposition from the international monetary authorities at that time.

The premium system implied a more definitive depreciation of the Egyptian pound than earlier measures. Nonetheless, the balance of payments deficit was large and persistent, and exchange reserves were rapidly falling. The release of blocked Sterling No. 2 balances, however, served to keep the

free reserves at a high level until 1961, and the government probably did not feel the need for further depreciation until the cotton crop's failure and the consequent fall in exports in 1961 suddenly created an acute payments crisis. Even without the failure of the cotton crop payments problems would have arisen sooner or later had the policies of 1957-1960 continued. It is very doubtful, however, whether the government would have devalued in 1962 without the payments crisis, which made it dependent upon credits from the International Monetary Fund.

ALLOCATIONAL EFFECTS OF EXCHANGE POLICIES

At the beginning of this chapter we suggested a crude indicator of the distortions created by the exchange regimes. Calculated in Table 3-3 (column 5), it shows increased distortion from 1947 to 1950 and then remains at a high level until 1955. After 1956, the distortion appears much smaller, except for a single year, 1960.

From the foregoing discussion of the effective exchange rate policy, however, it follows that for this purpose we should disregard the export taxes, at least for 1950 and 1951 and perhaps also for 1952. Once that is done, the index of distortion falls to a low level for these three years. It seems, then, that after some distortion in 1948 and 1949, misallocation almost disappeared during the years 1950-1952 (the years of liberalization); reappeared between 1953 and 1955, and tended to disappear again beginning with 1957, partly because the export taxes were lowered and abolished, partly because the premium systems implied relatively uniform exchange rates.

There are several reasons, however, why our index may not correctly describe the degree of distortion. First, the index is formed as the (absolute) difference between the averages of depreciation for exports and imports, respectively, so that some distortions may have been averaged out on both the export and the import side. Although we could probably improve the index by taking the (absolute) difference between the highest depreciation and the lowest appreciation for the individual regimes (Tables 3-1 and 3-2), we could easily exaggerate the distortion in this way (although the method actually applied tends to do the opposite), since the various regimes more often than not applied to the same commodities. (Cotton, for example, was, in 1953, simultaneously subject to export taxes, the export pound, and the entitlement system.)

Second, import licensing is not included in our calculations of the average rate of depreciation. We have seen that licensing was tightened in 1953 and again in 1957. It stands to reason that licensing by itself has created distortions. The licensing system was largely used for cutting down imports of non-

food consumer goods, partly to promote import substitution (footwear and apparel, for instance), and partly to save foreign exchange regardless of the consequences of the shortages created (in luxury goods and automobiles, in particular). In the first case there may be inefficiency in production, in the second case, inefficiency in consumption. We shall make an attempt to consider the inefficiency in production in agriculture and some major industries in Parts Two and Three of this volume. The possible inefficiencies in consumption are a much more tricky issue, closely related to the problem of equity in income distribution. Import licensing was clearly used as a means of cutting down the standard of living of the upper income brackets. If no other means of making income distribution more equitable were at hand, import licensing would not necessarily involve a loss from inefficiency in consumption. We see no possibilities of quantifying this aspect of licensing.

It seems clear, however, that we should allow for increased distortion both in 1953 and 1957. To some extent, import licensing has even served to keep down our distortion index. We noted above (p. 58) that the average rate of import duties was falling after 1956 despite increases in individual tariff rates; the explanation was that licensing served to change the composition of imports so as to increase the share of low-tariff goods in total imports. Without this effect of import licensing, our index of distortion would not show a diminution in distortion after 1956.

Most probably, therefore, distortions increased throughout the whole period, apart from a temporary interruption during the years of liberalization during the Korean boom.

NOTES

1. In defining "average depreciation" we might, for instance, proceed along the lines of the Bickerdike-Robinson partial analysis (see Joan Robinson, "The Foreign Exchanges," in *Essays in the Theory of Employment*, London 1937). We would then write $q_x p_x^{\$} - q_m p_m^{\$} = B^{\$}$ in easily understood notation and assume that the volume of exports depends on domestic price of exportables, $p_x = p_x^{\$} r_x$, and volume of imports on domestic price of importables, $p_m = p_m^{\$} r_m$, where r_x and r_m are the exchange rates for exports and imports, respectively. Differentiating, we find then directly $e_x^{\$} X^{\$} (dr_x/r_x) + e_m^{\$} M^{\$} (dr_m/r_m) = dB^{\$}$, where $e_x^{\$}$ and $e_m^{\$}$ are domestic export supply and import demand elasticities, respectively, defined with positive sign, and $X^{\$}$ and $M^{\$}$ are dollar values of exports and imports, respectively. Assuming the initial values of r_x and r_m to be equal to r , we find the uniform exchange rate change, dr , that is equivalent to dr_x and dr_m in the sense that it brings about the same $dB^{\$}$, as $dr/r = [e_x^{\$} X^{\$} (dr_x/r) + e_m^{\$} M^{\$} (dr_m/r)] / (e_x^{\$} X^{\$} + e_m^{\$} M^{\$})$.

With the balance of payments in equilibrium, the expression is reduced to (dividing r out) $dr = (e_x^{\$} dr_x + e_m^{\$} dr_m) / (e_x^{\$} + e_m^{\$})$, and, furthermore, if the two elasticities are equal in size, $dr = 1/2 (dr_x + dr_m)$, which is, indeed, the expression we shall use. This derivation serves to bring out both the rationale and the weaknesses of our definition of "average depreciation." The formula for dr can be extended to any number of multiple rates in export and import.

2. They reappeared later in the sixties as the margin between the Cotton Commission's buying prices and selling prices for exports.

3. This method of calculation, of course, amounts to weighting each regime according to the share of exports to which it applies (in line with the formulas developed in footnote 1).

4. Import values are based on customs statistics and tend to be underreported.

5. Figures for the terms of trade do exist for 1938-39 and 1945 through 1959 (see, for instance, B. Hansen and G. A. Marzouk, *Development and Economic Policy in the U.A.R. (Egypt)*, Amsterdam, 1965, p. 176). They were calculated by the National Bank of Egypt, but suffer, unfortunately, from very incomplete coverage and particularly from being based on export and import values expressed in domestic currency. They are, thus distorted by the premium system for later years. Until 1957 this series followed the international cotton prices series in Chart 3-2 very closely and we have omitted it from the chart. For the years 1957 to 1959 it points to an improvement in the terms of trade despite the weak international cotton prices. This improvement is probably an optical illusion created by the premium system; we believe that the terms of trade, measured in foreign currency values, tended to deteriorate further after 1957.

6. By 37 percent, according to the sources discussed in footnote 5 above.

7. Hansen and Marzouk, *op. cit.*, p. 143.

8. *Ibid.*, p. 158.

9. It is probably not without significance that the National Bank of Egypt (the central bank) continued as a private bank with a strong governor until 1960, when it was nationalized and divided into the Central Bank of Egypt, taking over the central banking functions of the old National Bank, and the new, purely commercial National Bank of Egypt. There is little doubt that the old bank served as a spokesman for cautious, not to say deflationary, policies and for old-fashioned British ideals of commercial banking (self-liquidating loans, prime trade bills, and all that).

10. These figures do not include any increase in the book value of the gold reserves in 1949 after the British depreciation.

11. See footnote 5, on the terms of trade statistics.

12. Exceptions can be constructed but they seem to assume that import goods are inferior.

13. The problem of this technical upper limit to cotton cultivation will be discussed in some detail in Chapter 6.

14. The argument carries over to rice, another export crop. Before the Aswan High Dam was built, rice cultivation was also considered to be subject to an upper limit imposed by the available water supply at the time of rice planting. And the argument applies, of course, to any export commodity with capacity limits.

15. If the composition of foreign trade and agricultural production differs this statement is not quite accurate, of course.

16. See Chapter 2, footnote 10.

17. B. Hansen (assisted by G. Duguay), "The Demand for American and Egyptian Cotton, 1889-1913 and 1920-1938," University of California at Berkeley, 1975. The unusual result—lower long-term than short-term elasticity—is perfectly possible when dealing with *total* elasticities and disregarding speculation over the long term.

See also C. Bresciani-Turroni, "Relations entre la récolte et le prix du coton Egyptien," *L'Egypte Contemporaine*, Vol. 19, 1930; and S. Soliman Nour El Din, "A Statistical Analysis of Some Aspects of Cotton Production and Marketing with Special Reference to U.S.A. and Egypt," Ph.D. dissertation, London University, 1958, pp. 146-147.