Volume Title: Foreign Trade Regimes and Economic Development: Turkey

Volume Author/Editor: Krueger, Anne O.

Volume Publisher: UMI

Volume ISBN: 0-87014-501-0

Volume URL: http://www.nber.org/books/krue74-1

Publication Date: 1974

Chapter Title: Chapter VII: The Determinants of Turkish Exports

Chapter Author: Anne O. Krueger

Chapter URL: http://www.nber.org/chapters/c4112

Chapter pages in book: (p. 179 - 211)

CHAPTER VII

The Determinants of Turkish Exports

It has already been seen that there were strong differential incentives in favor of import-substituting production in both the 1950's and the 1960's. In the 1950's the disincentives to export were the consequences of currency overvaluation and the resulting premia arising from import stringency. In the 1960's these differential incentives were partly the result of deliberate government policy, although that policy itself was based to a considerable extent upon pessimism about the potential for export growth. Even in the 1960's, however, part of the differential incentive against exports was unintended, in the sense that import stringency was greater than had been planned; and the premia on imports were therefore higher than had been anticipated or intended by the planners. The resource-allocational effects of the differential incentive to export are examined in this chapter. First, an overview of the behavior of exports over the period 1950 to 1971 is presented, and the structure of export earnings is examined. Next, government domestic policies, which are very important for understanding the determinants of both the production and the volume of exports of certain commodities, are discussed. Thereafter the behavior of individual export commodities is analyzed. Finally, estimates of the effects of exchange-rate policy on export earnings are presented.

I. Behavior and structure of exports, 1950 to 1971

Export earnings

Table VII-1 presents annual data on the dollar value of Turkish exports, Turkey's share of world exports, and the share of Turkish exports in Turkish GNP over the 1950-to-1971 period. Turkey's exports rose to $396 million in 1953, representing 0.54 per cent of world exports. Turkey's exports had declined to $247 million by 1958, and Turkey's share of the world market had fallen by more than half, to 0.26 per cent. Turkey did not reattain her 1953 export earnings until 1964, when exports reached $411 million, although her share of world exports in that year was barely above the 1958 level. Turkey's exports then grew at almost the same rate as world exports from 1964 to 1967; thereafter, Turkey's share fell to 0.21 per cent in 1970, although exports had risen in absolute value to $588 million.

Table VII-1
Turkey's exports and share of world exports, 1950 to 1971

	Turkish Exports	World Exports	Turkish Exports as a Share of:		
			World Exports	GNP	
	(millions of U.S. dollars)	(millions of U.S. dollars)	(%)	Official (%)	EER-adjusted (%)
1950	263	55,200	0.47	7.1	7.1
1951	314	74,800	0.42	7.2	7.2
1952	363	72,400	0.50	7.1	7.1
1953	396	73,400	0.54	6.6	6.7
1954	335	76,400	0.44	5.5	5.7
1955	313	83,220	0.38	4.2	4.4
1956	305	92,600	0.33	3.5	4.0
1957	345	99,300	0.35	3.2	3.6
1958	247	94,800	0.26	1.8	2.8
1959	354	100,600	0.35	2.1	5.6
1960	321	112,600	0.29	3.4	5.7
1961	347	117,800	0.29	5.8	5.8
1962	381	124,100	0.31	5.7	5.7
1963	368	136,100	0.27	4.8	4.8
1964	411	152,700	0.27	5.0	5.0
1965	464	165,400	0.28	5.2	5.2
1966	490	181,300	0.27	4.7	4.7
1967	523	190,600	0.27	4.5	4.6
1968	496	212,900	0.23	3.9	3.9
1969	537	243,500	0.22	3.8	4.2
1970	588	280,300	0.21	3.3	4.5
1971	677	312,600	0.22	3.7	4.7

Notes: a) EER-adjusted exports as a share of GNP were calculated by multiplying dollar export values by the weighted average EER for exports. The adjustment is made to reflect the actual earnings of exporters as a proportion of GNP.
b) Export data do not entirely agree with the data in Table I-6. The source of the discrepancies is not known.

Sources: Turkish and world exports from *International Financial Statistics*, various issues. Turkish exports in TL from *Statistical Yearbook*, SIS 1968; and *Yıllı Programı*, State Planning Organization, 1971.

Accompanying the Turkish loss of share in world markets, the TL value of exports as a percentage of GNP declined from 7.1 per cent in 1952 to 3.7 per cent in 1969, according to official Turkish figures on the TL value of exports. But these official figures are misleading, especially for the period 1956 through 1960, as dollar receipts were converted into TL at the official *de jure*

exchange rate. To adjust for this, dollar export earnings were multiplied by the weighted export EERs to obtain a more meaningful estimate of income accruing to exporters in Turkey. The next-to-last column gives the official figures, and the last column of Table VII-1 gives the export share of current GNP when the TL value of exports is based upon EERs rather than the official exchange rate. As can be seen, even with that adjustment exports fell from 7 per cent of GNP in the early 1950's to 3.8 per cent of GNP in 1958, rose to 5.8 per cent of GNP in 1961, and declined thereafter to 3.9 per cent of GNP in 1968.

In keeping with the delineation of Phases in Chapter I, several subperiods can be distinguished. (1) From 1953 to 1958, exports declined precipitously in dollar value, in volume, and as a percentage of GNP. The true magnitude of the decline during the 1950's was probably even greater than the data in Table VII-1 suggest, as the bilateral debt-payment trading agreements (see Chapter II) undoubtedly led to an overstatement of the value of export earnings.[1] (2) Exports rose and the Turkish share of world trade rose after the devaluation in 1958, as did exports as a percentage of GNP. The relative levels of the early 1950's were by no means reattained, however. (3) The rate of expansion of export earnings decreased after 1965, and the share of Turkish exports in world trade and in Turkish GNP once again resumed its decline, which continued until 1968–1969. Thus, even using the export EERs to value export earnings in TL, 1968 exports were 3.9 per cent of GNP, contrasted with 5.6 per cent and more in the early 1960's. Turkey's share of world trade had declined yet more sharply, from 0.35 per cent in 1959 to 0.21 per cent in 1970.

Composition of exports

Table VII-2 gives data on the structure of Turkish exports. Tobacco and cotton have been the largest foreign-exchange earning commodities. They jointly accounted for about 40 per cent of total foreign-exchange earnings from exports. Cotton exports increased markedly both in relative and in absolute importance, whereas tobacco exports declined relatively as a source of foreign exchange. Four additional commodity groups are important in Turkish exports: hazelnuts (filberts); dried fruit (raisins and figs); and two minerals, chrome and copper. The relative importance of the minerals has declined over time, whereas that of the fresh and dried fruit and nuts has increased. Turkish exports of fresh fruit began increasing rapidly in the late 1960's.

1. It will be recalled that the bilateral debt repayment agreements enabled Turkey to export at above-world prices.

Table VII-2
Structure of Turkish exports, 1952 to 1970, selected years (millions of U.S. dollars)

	1952	1956	1960	1964	1967	1970
Commodity group						
Cereals	93.4	28.2	6.6	6.0	1.6	1.5
Fresh fruit	1.4	2.3	2.2	3.6	8.3	10.3
Dried fruit	15.7	19.9	29.8	30.5	31.6	30.8
Hazelnuts	18.4	29.8	39.2	50.2	84.3	87.0
Livestock products	5.7	5.7	13.5	20.5	17.6	27.7
Lumber	2.9	1.2	1.2	1.3	1.9	3.8
Animal feed	6.5	12.3	10.6	17.4	n.a.	n.a.
Mohair	5.7	9.5	9.5	5.9	8.9	3.8
Cotton	69.1	26.4	46.1	92.3	131.5	171.3
Tobacco	62.1	93.6	65.5	90.1	118.0	78.5
Olive oil	0.0	0.0	0.0	3.8	6.8	0.0
Sugar	0.2	0.8	16.5	19.9	n.a.	n.a.
Minerals	46.5	48.0	31.4	26.8	37.9	54.4
Other	35.3	27.3	48.6	42.5	74.3	119.4
Total	362.9	305.0	320.7	410.8	522.7	588.5

Note: Sugar and animal feed are included in other exports for 1967 and 1970.
Sources: 1952 to 1964, *Economic and Social Indicators – Turkey*, USAID, April 1965. 1967 and 1970, *Economic and Social Indicators – Turkey*, USAID, August 1972.

Although Turkey has a wide variety of export products, most of them are agricultural commodities. Thus 87 per cent of Turkish exports originated in agriculture, 8.1 per cent in minerals, and 4.9 per cent in manufactures in 1968. Although some agricultural commodities, e.g., citrus fruits, represent "non-traditional" exports, the bulk are traditional.

Table VII-3 gives data on Turkey's share of the world export markets for her major exports. Turkey was at one time the world's leading exporter of chrome, but her share has declined sharply over the years. Turkish exports of copper constitute a very small fraction of world exports, and the Turkish share has decreased over time. Of all Turkey's exports, there are only three for which Turkey's share exceeds 15 per cent: raisins, figs and hazelnuts. Thus it is doubtful whether Turkey has any significant monopoly power for more than 85 per cent of her export earnings. The structure of Turkish exports in this regard is decidedly more favorable than that of many developing countries. Although the share of Turkey's three top export commodities in Turkish exports (about 55 per cent) is about average for the developing countries, Turkey's share of her markets is generally low,[2] and most Turkish

2. Michaely computed a coefficient of export concentration of 0.397 for Turkey in

Table VII-3
Turkey's share of world markets, various years (percentage of world exports)

	1953	1957	1960	1963	1966	1969
Chrome	18.0	20.0	11.0	9.9	10.5	12.3
Copper	1.0	0.7	0.6	0.5	0.6	0.5
Cotton	n.a.	2.0	2.1	3.6	6.0	5.5
Figs	n.a.	n.a.	n.a.	n.a.	65.9	69.7
Hazelnuts	n.a.	n.a.	n.a.	n.a.	47.1	66.7
Mohair	0.0	–	0.4	0.3	0.1	0.1
Olive oil	1.1	n.a.	0.1	8.9	2.2	9.1
Citrus fruit	n.a.	0.1	0.3	0.4	0.6	1.0
Raisins	n.a.	16.7	23.6	16.4	16.5	18.2
Tobacco	n.a.	12.0	7.5	5.1	9.2	7.1

Note: Data for chrome, copper and figs represent Turkey's share of world production, not of world exports.

Sources: Minerals: *Statistical Summary of the Mineral Industry*, Great Britain, Directorate of Colonial Geological Surveys, various issues. Agricultural Commodities: *Trade Yearbook*, FAO, various issues. Shares for figs and hazelnuts from *World Agriculture Production and Trade*, USDA, Foreign Agricultural Service, February and September 1971.

exports are commodities for which there is reason to believe that the income and price elasticities of demand are reasonably high.

Geographic distribution of exports

Table VII-4 gives data on the share of exports going to various trade blocs: the EEC countries, the EFTA countries, the United States, the CMEA countries, and others. About one-third of Turkey's exports are destined for the EEC, which Turkey plans to join. As indicated in Chapter I, Turkey signed the initial protocol in 1963 but received little more than tariff-quota preferences until 1970. Thus the preferences extended by the EEC countries through 1970 did not affect the volume of Turkey's exports to the EEC, since tariff quotas simply allowed for reduced duties on a given quantity of exports.

The EEC and other Western European countries are Turkey's natural major trading partners, as Table VII-4 indicates. They jointly account for over half of Turkey's exports. The United States has been a sizeable market for

1954, compared to coefficients of 3.11 for developed countries and 0.558 for underdeveloped countries. Michael Michaely, *Concentration in International Trade*, North-Holland (Amsterdam), 1962, pp. 11–12 and 16.

Table VII-4
Geographic distribution of Turkish exports, 1950 to 1971 (percentage of total exports)

	EEC Countries	EFTA Countries	U.S.	CMEA Countries	Other
1950	34.7	24.5	16.9	6.8	17.0
1951	40.3	14.5	21.3	7.9	16.0
1952	47.4	13.3	16.0	5.6	17.8
1953	35.8	12.3	20.5	7.3	24.1
1954	28.9	14.1	17.4	16.5	23.2
1955	34.1	14.4	15.5	21.9	14.1
1956	34.0	15.1	19.6	19.6	11.6
1957	31.3	15.4	26.0	18.4	8.9
1958	34.7	13.8	19.5	22.6	9.4
1959	39.5	14.9	18.0	11.6	16.0
1960	33.5	17.4	18.3	12.2	18.6
1961	37.1	17.7	18.8	8.6	17.8
1962	40.5	9.9	19.6	7.0	23.0
1963	38.0	24.5	13.5	9.6	14.4
1964	33.5	23.6	17.8	9.2	15.9
1965	33.9	18.0	17.7	14.7	15.7
1966	35.0	18.8	16.4	15.2	14.6
1967	33.7	16.9	17.8	16.7	14.9
1968	33.1	17.1	14.6	18.1	17.1
1969	40.1	15.0	11.0	17.0	16.8
1970	39.5	17.7	9.6	13.8	19.4
1971	39.3	19.5	10.1	12.0	19.0

Note: Totals do not always add to 100.0 due to rounding.
Sources: *Yearbook of International Trade Statistics*, United Nations, various issues; and *Economic and Social Indicators – Turkey*, USAID, 1965 and 1972.

Turkish exports, although in recent years the U.S. share has declined substantially.

Perhaps the most striking feature of Table VII-4 is the marked fluctuations in the share of the CMEA countries in Turkey's exports. The changes in shares accord closely with the delineation of Phases indicated above. In Phases II and III bilateral agreements have increased in absolute and relative importance for Turkey's exports. The share of CMEA countries has been considerably smaller during Phases I and IV.

Turkey has used bilateral trade agreements to sell her exports when they have not sold well on the free international market. Thus the dollar and physical volume figures for exports of given commodities do not accurately reflect the true "competitiveness" of the Turkish export position in any given

Table VII-5
Average prices received for exports under bilateral agreements, 1964 to 1968

Commodity	Unit Price (dollars per ton)		Percentage of Exports under Bilateral Agreements	
	Bilateral	Other	Quantity	Value
Chrome	23.56	20.86	32.29	35.01
Cotton	614.36	567.43	11.03	11.83
Hazelnuts	1149.61	1098.37	17.46	18.13
Hides and skins	1293.23	886.22	35.37	44.40
Mohair	1970.39	1959.76	56.54	56.67
Oilcakes	78.72	76.62	12.70	13.00
Raisins	319.44	317.37	25.24	25.37
Tobacco	1470.11	1314.87	14.80	16.27

Source: Can, *op. cit.* (Note 3), p. 18.

commodity, since a frequently used mechanism was to sell the "surplus" under bilateral trading agreements.

In addition to bilateral agreements made with CMEA countries, Turkey has had bilateral agreements with Egypt, Israel and Yugoslavia. Exports under those agreements (included in "other" in Table VII-4) accounted for 8.1 per cent of exports in 1955, 3.9 per cent in 1960, and declined in relative importance during the 1960's.[3]

Thus bilateral agreements were more important quantitatively in the 1950's, and there are no data available on prices and quantities under the agreements for that period. Some idea of the quantitative effects of bilateral agreements upon the export statistics for individual commodities in the 1960's can be gleaned from the data in Table VII-5. The first two columns give the average unit price of exports over the period 1964 to 1968, under bilateral agreements and for free foreign exchange. As can be seen, average prices received under bilateral agreements ranged from 45 per cent above world market prices for hides and skins to virtual parity with international prices for mohair. These five-year averages obscure a great deal of year-to-year variation. For example, prices for chrome sold under bilateral agreements averaged 13 per cent above prices for sales in convertible currencies. From 1964 to 1968, however, the annual percentage differences were −2, 2, 17 and 6 and 18 per cent, respectively.[4] Similarly, the percentage by value of chrome

3. Tevfik Can, *Anlaşmali Memleketler ile Olan Diş Ticaret İlişkileremiz*, Ek. 1-A, DPT 936-IPD 298, August 1970.

4. Obtaining meaningful unit value comparisons on the import side is far more difficult than it is for the export commodities. Can did, however, obtain some data. The prices (dollars per ton) of Turkish imports under bilateral agreements and from

exported under bilateral agreements was 26, 29, 24, 42, and 54 per cent, respectively, of total chrome exports in each of the five years. Other commodities show similar fluctuations.

There is every reason to believe that the bilateral agreements of the 1950's resulted in even larger discrepancies in unit values than in the 1960's. The prevalence of "switch deals," the general uncompetitiveness of Turkish exports, and the larger percentage of total exports taking place under bilateral agreements in the 1950's (not to mention the debt-repayment arrangements discussed in Chapter II) all indicate that the data on individual commodities were significantly affected by the extent of trade under bilaterals. This should be borne in mind when interpreting the data on individual commodities presented in Section III.

II. Government policies affecting exports

Government policies affecting a wide range of exports are examined in this section. First, attention is given to exchange-rate policy and its interaction with domestic price policies. Second, the practice of "price registration" and "price inspection" is discussed. Third, export licensing procedures are examined. Finally, government policies affecting non-traditional exports are analyzed.

In addition to policies affecting a wide range of exports, there were many domestic policies affecting specific export commodities. Those policies are examined below, when the behavior of individual export commodities is discussed.

Exchange rate policy

Table VII-6 summarizes the exchange rates applicable to different categories of export transactions in the 1953-to-1971 period. As can be seen, the

convertible currency countries were:

	Bilateral	*Convertible*
Iron bars (Thomas)	73	67
Iron bars (SM)	79.5	73
Steel sections	99–108	91
Sodium bicarbonate	51–53	49
Polyethylene	385–405	363–374
Zinc chromate	570	530–550

Data are from *ibid.*, p. 9. Thus the evidence suggests that import and export prices have probably been inflated by about the same proportions.

Table VII-6
Export EERs, PLD-EERs, and export–import EER differentials, 1953 to 1971

	Export EERs		PLD-EERs (1958 prices) Ratio		
	Traditional	Non-Traditional	Traditional	Non-Traditional	Export-to-Import EER
1953	2.80	3.92	5.83	8.17	–
1954	2.85	4.48	5.28	8.33	0.57
1955	2.89	4.50	4.82	7.50	0.56
1956	2.91	5.00	3.93	6.76	0.58
1957	2.94	5.00	3.27	5.56	0.47
1958	5.14	9.00	5.14	9.00	0.33
1959	6.77	9.00	5.69	7.56	0.47
1960	9.00	9.00	7.69	7.69	0.55
1961	9.00	9.00	7.56	7.56	0.55
1962	9.00	9.00	7.20	7.20	0.60
1963	9.00	9.00	6.82	6.82	0.58
1964	9.00	9.62	7.03	7.51	0.58
1965	9.00	9.69	6.67	7.18	0.51
1966	9.00	10.09	6.16	6.19	0.51
1967	9.02	9.72	5.71	6.15	0.50
1968	9.02	10.28	5.53	6.31	0.53
1969	9.37	10.31	5.45	6.00	0.55
1970	12.15	15.12	6.66	8.29	0.57
1971	13.20	16.50	6.19	7.10	0.58

Note: PLD-EERs were computed by dividing nominal EERs by home-goods prices until 1968. Thereafter the percentage increase in the wholesale price index was linked to the home-goods price index.
Sources: Appendix A for 1953 to 1969. Appendix C for 1970 and 1971.

weighted PLD-EER for traditional exports declined by 44 per cent between 1953 and 1957, and then rose 32 per cent above the 1953 level by 1960. It gradually declined during the 1960's, reaching 93 per cent of its 1953 level in 1969. For traditional exports, the 1970 devaluation brought the real exchange rate back only to its 1965 level. Non-traditional exports have fared somewhat better: except during the early 1960's, the EER has been above that for traditional exports; the PLD-EER declined somewhat less for non-traditional exports before 1958 and again during the 1960's; and the 1970 devaluation resulted in a greater increase in the PLD-EER for non-traditional exports[5] than for traditional exports.

The last column of Table VII-6 gives the ratio of the weighted export EER

5. See Appendix C, below, for details.

to the import EER over the period. Except for the 1957 to 1959 period, the relationship between the TL receipts for exports and the TL cost of imports has been remarkably constant, ranging between 0.5 and 0.6. Although the import EER does not measure the full differential incentive toward import-substituting production – because quantitative restrictions meant that the domestic price could be above landed cost and because new import-substituting production was protected by removing the commodity from the list of eligible imports – the fact is that the structure of taxes and duties on imports resulted in a substantial disparity between incentives for export and those for import-competing production, even without regard to the effects of quotas and import prohibitions. Despite the 1958 devaluation, there was little change in the ratio of export and import EERs between the 1950's and the 1960's. There was if anything a greater differential in the 1960's than in the 1950's.

Under optimal resource allocation, the incentive for import-substituting and export production would be equal at the margin.[6] Even if one interprets the non-traditional export EER as the marginal rate, it is evident that exchange-rate policy has led to a wide and persistent differential in incentives over the entire twenty-year period. Despite the fact that economic policy was much more closely coordinated with development goals in the 1960's than in the 1950's, discrimination against exports has been about the same throughout the two decades.

In subsequent efforts to trace the resource-allocational effects of the trade policies, the fact of the relative constancy of incentives should be borne in mind. There has been no time during the period under review when there have not been substantially greater rewards for home market production than for exports. As such, the export response examined below is one that occurred when disincentives were reduced or increased: there are no observations of what would have happened under equal incentives, or for that matter, under greater incentive for export than for import-substitution.

Price inspection and price registration

The practice of price registration during the 1950's was discussed in Chapter II. In essence, registered prices for various exports during the 1950's became minimum prices at which exports were permitted. It has already been seen that these prices, although designed to "protect exporters" and to prevent capital flight, undoubtedly led to the preclusion of some exports and the diversion of others to "switch deals" with Eastern Europe.

6. This statement holds even with monopoly power in trade, since optimal export "taxes" would appropriately equalize marginal incentives.

Price registration continued in the 1960's although it appears that the actual administration of the system was less onerous than the "minimum export prices" of the 1950's. For some commodities, e.g., chrome, price registration and related price policies continued to be unrealistic, with a continued loss of markets for Turkey.

The intent of price registration in the 1960's was:

> ...for the purpose of obtaining information in advance with a view to the conditions of exportation, facilitating the pursuance of commodity and price policy, avoiding artificial fluctuations, warning the exporters in regard to differences noticed in the prices of the same export commodities at the same time, as well as furnishing the persons concerned with information when and if required.
>
> During the process of registration, the authorities provide standardization of prices registered, making allowance for qualitative differences, of any commodity to be exported to any monetary area... [7]

The list of commodities for which registration was required prior to exportation was: [8]

Tobacco
Dried figs (processed and natural–scrap-paste)
Live animals
Pistachio nuts
Bran
Any and all kinds of oil-seed cakes
Fresh fruits, preserves and products
Wine
Shrimp and other marine products
Fresh fish, preserves and other products
Black and green olives (brine included)
Carpets
Souvenir items
Handicrafts
Woolen and cotton textiles
Clothing and wearing apparel, ready made
Colognes
Turkish delights and sugar candies
Meat and meat products

For most of the commodities on the list registered prices appear to have been set at reasonable levels, in contrast to the 1950's. While the practice of price registration was by no means a dead letter, the deleterious effects upon exports were undoubtedly much less than before, which was due both to the reduced scope of the requirement and to its more benevolent administration.

7. "Regulation Concerning Foreign Trade Affairs," Part I, Article 5, *Official Gazette, No. 12040*, July 5, 1965.
8. *Ibid.*, lists I and II.

Those commodities not subject to price registration requirements were still subject to a price declaration by the exporter at the time of shipment. The declarations submitted by exporters were subject, in principle, to *ex-post* inspection, and the authorities were empowered to require the exporter to surrender additional foreign exchange if the selling price was deemed unrealistically low. In practice, exporters were rarely confronted ex-shipment about their export prices in the 1960's, and interviews with exporters did not yield complaints about price inspections. However, such a set of administrative procedures undoubtedly created some uncertainty at the margin and could not have encouraged Turkish producers to be overly zealous in attempting to invade new export markets.

Export licensing

Export licenses were required for a variety of commodities throughout the 1953-to-1970 period. Ministerial permission was needed to obtain an export license in those cases, and licenses were not necessarily granted automatically. The relevant ministries were charged with: "...regulating offers and demands within domestic and foreign markets, avoiding speculation, and giving consideration to the conditions of local and foreign markets and to the requirements of this country."[9] Thus virtually all cereals required export licenses prior to exportation. Nuts, raisins, several metal ores, all articles containing precious metals and stones, and margarine were subject to export licensing, as were various other commodities from time to time.[10]

Export promotion policies

As seen above, import EERs were considerably above export EERs throughout the 1950-to-1970 period. This occurred despite the fact that premia were accorded to exports during the 1950's and export rebates were employed after 1963. The operation of the premium system was examined in Chapter II and therefore need not be dealt with here. In a sense, the premia as well as the rebates constituted a measure reducing the differential against exports rather than an export promotion measure. Rebate rates are given in Appendix A, and their net effect on EERs is included in Table VII-6.

The export premia of the 1950's and the rebates of the 1960's were the most significant export incentives, or partial offsets to disincentives, in the Turkish foreign trade regime. Here we focus upon those miscellaneous government policies that affected exports.

9. *Ibid.*, Article 6.

10. Meat exports rose sharply after the 1970 devaluation, and the domestic price of meat increased drastically. Meat exports were then banned.

On the books, there were a few export incentives in addition to the rebate system operative during most of the 1960's. By and large, those incentives began in the mid-1960's and like rebates assumed somewhat greater importance toward the end of the decade. Even then they were generally quantitatively unimportant, both in their effect upon EERs and in the total receipts of exporters, and hence deserve only brief mention here. These measures included: (1) export credits at subsidized rates of interest; (2) attempts at export promotion; (3) an increased probability of receiving favorable treatment when dealing with government officials if one were exporting; and (4) an import replenishment scheme.

Export credits. Turkish interest rates have been regulated by legal ceilings imposed upon the banks. Since these ceilings have been below market-clearing interest rates, credit rationing has resulted. The statutory interest rate ceilings remained constant from 1961 to 1968. Loans for financing agriculture and exports were set at a 9.0 per cent nominal rate of interest, which with taxes and other charges was actually a 13.5 per cent nominal interest rate. Loans for other purposes were made at the nominal rate of 10.5 per cent, which was 15 per cent including taxes. Thus exporters were provided with a subsidy of about 1.5 per cent on the interest cost of their loans. Several features of the banking system, however, prevented the lower interest rate from having much effect. Most important was that the banks had little incentive to lend at these rates, given the excess demand for loans. Consequently, there were generally hidden charges which absorbed the difference in interest rates and perhaps even raised the actual rate of interest above the legal maximum when loans were made at subsidized rates.[11] Given the fact of credit rationing, moreover, additional exports did not automatically entitle exporters to additional credit at the subsidized rate. Thus it is doubtful whether the 1.5 per cent interest rate differential, even when it existed, did more than channel some funds to firms which were, at any event, exporting.

The government abolished the transaction tax and stamp duties on export financing operations in the fall of 1968, and reduced the nominal interest rate on export credits from 9 to 6 per cent. This constituted a reduction in the effective nominal rate of interest from 13.5 per cent to about 9 per cent. The export credit scheme was not quantitatively important even in its amended form. Central Bank credits extended for export financing purposes rose from TL 30 million in 1961 to TL 120 million in 1965 and TL 388 million in 1969, representing 1.4, 1.2, and 2.0 per cent, respectively, of all Central Bank credits,[12] and 0.8, 2.9 and 8 per cent of exports in those years. Given the

11. See Fry, *op. cit.* (Note 30, Chap. II), pp. 142 ff. for a fuller discussion.
12. *Monthly Bulletin,* Central Bank, October-December 1971, pp. 18–21.

small amount of Central Bank credit extended for export financing, it is unlikely that export credit subsidization constituted more than a very small incentive to exports at the margin.

Export promotion. The second export measure was directed toward promoting Turkish exports abroad, but this promotion was done on a very small scale. Individual businessmen found it difficult to obtain foreign exchange (except by paying the 50 per cent foreign travel tax) for purposes of foreign promotion of their products, and little was done at the government level. Although an Export Promotion Agency was established in the mid-1960's, its budget was very small and its primary function until 1967 was to administer export rebates. Despite expert recommendations and pleas from private exporters, efforts at export promotion were very limited. For example, the annual budget for promotion of hazelnut exports was $40,000, all of which was spent in the United States.[13] Thus government provisions for export promotion efforts in the 1960's would have to be judged relatively insignificant compared with the incentives for import-substitution.

One indication of the failure to adopt serious export promotion measures was inaction with regard to export standards. It was widely recognized that Turkish exports could be aided considerably if grading and quality standards were adopted and enforced by the government. But despite repeated technical advice to establish such standards, the government took little action. Many exporters claimed that their markets were spoiled by competitors with inferior or low quality products. Complaints about low quality were heard frequently in interviews both with Turkish exporters and with foreign importers of Turkish goods. The failure of the government to take positive action was symptomatic of its general policy toward exports.

Favored treatment to exporters. The next export incentive, a heightened probability of favorable government treatment in connection with administration of government regulations, is difficult to evaluate. Except that exports were deemed a "priority" sector and investments in industries that planned to export were accorded the same treatment as "priority" import-substituting investments, there was no legal provision for favored treatment of exporting firms. In interviews, however, some exporters claimed that if they could cover marginal costs in exporting it was worth their while to do so because they would receive slightly preferential treatment on other matters. This was undoubtedly more important for non-traditional exporters than it was for the exporters of traditional commodities, but even then preferential treatment was generally a relatively small incentive.

13. *Turkish Exports: Problems and Opportunities,* USAID (Ankara), 1967, p. 12.

Import replenishment. There was no scheme under which exporters could replace imports used in the production of goods for export before 1968. When import shortages limited production, the absence of an import replenishment scheme constituted a sizeable deterrent to exports.

In 1968 an import replenishment scheme was adopted under which a special quota of $2 million was set aside for import replenishment.[14] The amount allocated remained at $2 million even in 1970, and was under the control of the State Planning Organization.[15] Immediately after the introduction of the scheme, exporters of non-traditional goods declared the scheme to be inadequate on the grounds that paperwork, delays, and the relatively small amount of the quota meant that the scheme would not serve its purpose. They requested, through the Union of Chambers, an automatic 30 per cent retention of their export earnings instead.[16] The request was not acted upon, and the $2 million quota remained the only source of replenishment.

Either because it was too new or because of paperwork and other factors, exporting firms generally regarded the import replenishment scheme as being of little value. As with other export incentives the scheme was probably of use only to a few firms and did not constitute an across-the-board incentive for exports.

The picture that emerges in general is that little was done by the government to encourage exports during the 1960's. Although measures such as the reduced export interest rate were taken, they were generally far less strong than comparable measures to encourage import-substitution industries. By and large, government policies designed to encourage import-substitution provided far more powerful incentives than those aimed at increased export earnings. This general impression is reinforced when consideration is given to measures surrounding individual export commodities, to which we now turn.

III. Behavior of individual export commodities

In addition to the generally greater incentives for import-substitution than for exporting, a number of government policies specific to individual commodities further affected the relative attractiveness of exporting. In this section the features of the foreign trade regime as they influenced export commodities and the domestic policies with which those features interacted are examined, along with other institutional factors relevant to the analysis. The major export commodities – tobacco, cotton, hazelnuts, chrome, and copper

14. Decree No. 6/10649, September 13, 1968.
15. Decree No. 6/12856, January 5, 1970.
16. EIU, *op. cit.* (Note 1, Chap. II), *No. 4*, November 1968, p. 7.

– are considered first. Thereafter, some minor export commodities are discussed.

Tobacco

Table VII-7 gives basic data on Turkish production, exports and position in the world tobacco market. Taking the averages of 1950 to 1952 and comparing them with the 1967-to-1969 period, Turkish production increased by 72 per cent over the 17-year interval, while exports increased by 47 per cent in volume. Foreign exchange earnings from tobacco thus grew at an average annual rate of 1.39 per cent.[17] Since world trade in unmanufactured tobacco grew by 70 per cent over the same time period, Turkey's share of the world tobacco market declined somewhat, falling from 9.6 per cent in the 1950-to-1952 period to 8.3 per cent in 1967 to 1969.

Although Turkish tobacco is not a perfect substitute for other tobaccos, Bulgarian and Greek tobaccos are major competitors, averaging almost twice the volume of Turkish exports. The last two columns of Table VII-7 give the ratios of Turkish export prices to the Greek and American export prices, respectively, as given by the IMF.

The very high ratios of the Turkish prices to the Greek and American prices in the 1953-to-1959 period reflect several factors: (1) the mechanism for debt repayment under bilateral trading arrangements with the Western European countries (discussed in Chapter II) under which foreign importers had to accept high Turkish prices if they wished to receive even partial repayment for their loans; (2) the large share of trade with Eastern European countries whose average prices paid were higher than prices in Western countries during those years; and (3) the relatively high prices charged by Turkey in the 1953-to-1959 period.

Domestic agricultural price policies are an important determinant of Turkish tobacco exports.[18] For domestic production of manufactured tobacco products, there is a State Monopoly. The State Monopoly inspects the tobacco crop each year and makes each farmer an offer of a price for his crop, taking into account the quality and condition of the harvest. The offer is open and there is no time limit upon its acceptance.

Meanwhile private merchants who buy tobacco only for the export trade

17. The irregular growth of tobacco export earnings can be seen by the poor fit of the regression equation:

$$ET_t = 66.2(1.0139)^t$$

where ET are millions of dollars of tobacco exports, and $t = 1$ in 1950. $R^2 = 0.167$ and the standard error of the time trend is 0.004.

18. This section draws on Forker, *op. cit.* (Note 24, Chap. II).

Table VII-7
Tobacco production and exports, and Turkish share of world market

	Production (thousands of metric tons)	Exports (thousands of metric tons)	Exports/ Production (%)	World Exports (thousands of metric tons)	Turkish Share of World Exports (%)	Ratio: Turkish Price to Price in Greece	Ratio: Turkish Price to Price in U.S.
1950	93	51	55	570	8.9	0.81	1.04
1951	89	58	65	620	9.4	0.92	0.85
1952	92	57	62	550	10.4	0.87	0.81
1953	118	72	61	610	11.8	1.14	0.83
1954	102	64	63	634	10.1	1.16	0.89
1955	120	60	50	679	8.8	1.08	1.03
1956	117	61	52	689	8.9	1.19	1.09
1957	123	88	72	733	12.0	1.18	1.01
1958	115	56	49	707	7.9	1.16	0.97
1959	129	67	52	723	9.8	1.14	0.87
1960	139	58	42	775	7.5	0.97	0.70
1961	101	88	87	846	10.4	0.87	0.60
1962	90	91	101	821	11.1	0.72	0.69
1963	132	45	34	895	5.0	0.81	0.90
1964	194	57	29	1008	5.7	0.96	0.96
1965	132	68	52	969	7.0	0.89	0.80
1966	164	85	52	921	9.2	0.86	0.72
1967	182	92	50	992	9.3	0.83	0.71
1968	163	81	50	968	8.4	0.82	0.64
1969	147	71	48	1000	7.1	0.86	0.65
1970	138	74	54	n.a.	n.a.	0.68	0.53

Source: Production and exports from SIS. World exports from *Trade Yearbook*, FAO, various issues; price data from *International Financial Statistics*. Data for 1970 and 1971 from *Economic and Social Indicators – Turkey*, USAID, 1972.

can also bid for the crop, and do so after the State Monopoly offers have been made. Thus the State Monopoly's offer in effect sets a floor under the export price. When the State Monopoly ends up purchasing more of the crop than it uses it can either add to inventories or sell at a loss. When the latter has occurred, "the merchants complained bitterly."[19] Forker concludes that, "Essentially the State Monopoly acts as a benevolent price leader that does not retaliate, but ... has adequate resources to cover its mistakes."[20]

The Monopoly has exported over the years, although the magnitude of its exports is not known. Forker obtained data for the period 1961 to 1965:

19. Forker, *op. cit.* (Note 24, Chap. II), p. 25.
20. *Ibid.*

over that five-year interval exports were 20,000 metric tons greater than merchants' purchases had been over the period. Most striking in this regard was 1962, when the monopoly price of TL 11.75 per kilogram exceeded the export price of TL 9.72 per kilogram. The price paid by merchants was TL 11.52. However, merchants purchased 39.1,000 metric tons, whereas exports were 91,000 metric tons. Thus the very low relative price of Turkish tobacco in 1962 (Table VII-7) may reflect the State Monopoly's distress sales of the commodity rather than other factors.

Data are not available to indicate the fraction of the crop sold under bilateral trading arrangements, nor the inventory holdings of either merchants or the State Monopoly over the entire period. Given the State Monopoly's price policies, there must have been sizeable fluctuations from year to year in both inventories and distress sales to Eastern Europe. For the period 1964 to 1968, for which Can's data are available, exports to bilateral-agreement countries ranged from 12 to 18 per cent of the value of Turkish exports.[21]

Forker points out that tobacco production has increased more rapidly than domestic consumption plus exports. He further notes that "the monopoly practice of pricing the high-quality high-cost tobacco at a higher level than the world market will bear, and the low quality at a lower price than the market will bear is encouraging the exportation of lower quality Turkish (oriental) tobacco."[22] His calculations indicate that the Tobacco Monopoly's intervention in the domestic market represented an annual subsidy of almost 8 per cent of the value of the crop for the 1962-to-1966 period.[23]

These considerations taken together suggest that domestic price support for tobacco and the behavior of the State Monopoly have been the key determinants of the quantity and value of Turkish tobacco exports. Given the ability of the State Monopoly to sustain losses, it is hardly surprising that tobacco exports appear to have been little affected (except perhaps by short-term speculative behavior) by fluctuations in the real exchange rate or by the 1958 devaluation. As will be seen below, there is no statistical evidence that tobacco exports have been influenced by changes in the real exchange rate, nor by changes in the domestic-export price relationship.

Cotton

Table VII-8 presents data on Turkish production and exports of cotton, as well as the domestic and export prices of cotton. As can be seen, cotton production has increased rapidly over the period since 1950. Turkey has

21. Can, *op. cit.* (Note 3), Ek. II-A.
22. Forker, *op. cit.* (Note 24, Chap.II), p. 48.
23. *Ibid.*, p. 52.

Table VII-8
Cotton production, exports, and prices, 1950 to 1971

	Production (thousands of metric tons)	Exports (thousands of metric tons)	Export Price (TL/kg)	Domestic Price (TL/kg)
1950	118	76	2.56	2.85
1951	150	56	3.86	3.74
1952	165	70	2.77	2.41
1953	139	101	2.19	2.00
1954	142	60	2.44	2.41
1955	157	52	2.45	3.00
1956	165	35	2.13	3.02
1957	135	61	1.92	4.30
1958	180	35	1.82	4.32
1959	195	97	1.52	4.60
1960	175	80	5.41	5.04
1961	212	89	5.61	5.08
1962	245	105	5.02	4.87
1963	257	146	5.23	4.88
1964	326	168	5.23	4.76
1965	326	190	5.08	4.73
1966	382	259	4.83	4.58
1967	396	248	5.18	5.05
1968	435	252	5.47	4.95
1969	387	235	4.92	4.59
1970	400	202	6.71	8.60
1971	n.a.	313	9.52	9.28

Note: Export data from the UN and those from SPO do not agree. For 1963, the UN gives cotton exports as 134,000 metric tons. SPO data were used for the 1960's to obtain data for recent years.

Sources: Production data 1960-to-1969, *Indices of Agricultural Production 1960-to-1969,* USDA, ERS-Foreign 265, April 1970. 1950-to-1959 data provided to the author by USDA. 1970, *Economic and Social Indicators–Turkey,* USAID, 1972. Exports 1950-to-1962, *Yearbook of International Trade Statistics,* UN, various issues. 1963-to-1970, *Yıllık İhracat* 1961-to-1966 and 1967-to-1970. Export Prices, *Monthly Bulletin,* Central Bank, various issues. Domestic Prices, *Statistical Yearbook,* SIS, various issues.

almost tripled the volume of cotton exports and dollar earnings of cotton over the period, increasing her share of world cotton exports from 2 per cent in 1957 to 6 per cent in 1967–1969. Thus earnings from cotton exports grew at an average annual rate of 4.5 per cent.[24]

24. The regression equation is $EC_t = 6.0\ (1.045)^t$, with $R^2 = 0.27$ and the standard error of the trend, 0.017.

Whereas tobacco was Turkey's largest single export in the 1950's, cotton was the biggest foreign-exchange-earning commodity in the 1960's. Unlike tobacco, the volume of cotton exports declined markedly in the middle 1950's, and cotton exports appear to be quite sensitive to changes in the real exchange rate.[25] Domestic consumption of cotton products has increased markedly, and there is no evidence of any accumulation of stocks. Thus in contrast to tobacco, increases in cotton exports require increases in domestic production or diversion of production from domestic to foreign consumption.

There appears to have been considerably less price intervention in the domestic cotton market than has been true for other major Turkish exports. A Union of Sales Cooperatives, essentially a government organization with voluntary producer membership, is the vehicle by which price intervention could occur, but Forker estimates that prices set by the Union have either been below market clearing prices or there has been no intervention price set during most of the years in the period under review.[26] Thus conditions in the cotton market have been primarily determined by market forces rather than government intervention.

Hazelnuts

Table VII-9 provides data on the performance of hazelnut exports in the period since 1950. Hazelnut exports have doubled in volume, and export earnings have tripled as the international price of the nuts has risen. The average annual growth of export value was thus 8.0 per cent.[27] As can be seen, there are sharp year-to-year fluctuations in production which have been smoothed on the export side by government intervention.

The hazelnut sales cooperative, Fiskobirlik, is similar to the cotton sales cooperative in its organization. About half the growers belong to it, although purchases are also made from non-members. The government determines the support price for the crop and lends the cooperative sufficient funds to purchase all hazelnuts offered at that price. A minimum export price is also set at the same time. Losses on export sales are not financed by the government. Forker estimates that price intervention for the first half of the 1960's amounted to a 7 per cent subsidy to hazelnut growers.[28]

Although Turkey's share in the hazelnut market is large, there is considerable evidence that the demand for hazelnuts is price-elastic. They are a close

25. See below, Section IV.
26. Forker, *op. cit.* (Note 24, Chap. II), p. 34.
27. The regression equation is $EH_t = 5.16(1.0798)^t$, with $R^2 = 0.89$ and the standard error of the trend, 0.0065.
28. Forker, *op. cit.* (Note 24, Chap. II), p. 52.

Table VII-9
Hazelnut production, exports, and prices, 1950 to 1971

	Production (thousands of metric tons)	Exports (thousands of metric tons)	Exports (millions of dollars)	Prices		
				Domestic (TL/kg)	Export (TL/kg)	Ratio
1950	23	27	18.6	n.a.	n.a.	n.a.
1951	91	22	18.0	2.26	2.42	0.93
1952	73	26	18.4	2.19	2.00	1.09
1953	40	29	22.3	2.32	2.16	1.07
1954	115	31	25.0	2.75	2.48	1.11
1955	26	44	43.9	3.83	2.82	1.36
1956	65	24	29.5	3.91	3.54	1.10
1957	73	40	44.4	2.82	3.07	0.92
1958	100	32	27.6	4.33	2.63	1.65
1959	90	52	43.1	6.62	2.34	2.83
1960	59	42	39.2	8.76	9.06	0.97
1961	70	36	43.4	10.87	10.53	1.03
1962	90	44	56.0	12.30	11.56	1.06
1963	91	42	42.4	11.58	11.71	0.99
1964	16	49	50.2	9.54	9.25	1.03
1965	68	60	61.7	9.57	9.52	1.01
1966	190	56	53.2	9.58	9.46	1.01
1967	70	74	84.2	10.24	10.43	0.98
1968	132	65	75.9	10.95	10.82	1.01
1969	170	83	107.7	12.17	11.80	1.03
1970	225	46	87.0	12.84	15.97	0.80
1971	n.a.	65	81.3	14.53	17.17	0.85

Note: Export data are for shelled nuts; production data are for unshelled. Forker estimates that about 90 per cent of the crop is exported.

Sources: Production and export data: same as Table VII-8. Price data from Forker, *op. cit.* (Note 24, Chap. II); and *Monthly Bulletin,* Central Bank, various issues.

substitute for other nuts and are purchased primarily for baked goods, where substitution possibilities as well as changes in ingredient proportions are sensitive to relative changes in input prices. Forker points out that hazelnut export earnings have been positively correlated with the volume exported, as is evident from Table VII-9. Demand for hazelnuts, moreover, has apparently become more price elastic in the 1960's than it was in the 1950's.[29]

Given this, the government's policy of withholding supplies from the export market in good crop years is open to question. There have been years in

29. *Ibid.*, p. 32.

which the minimum export price has been set well above international levels. Thus in the fall of 1966, with a record crop, a high minimum export price apparently adversely affected sales.[30] Despite Turkey's share of the market there is evidently no reason why other countries cannot develop hazelnut production should Turkey over-use her short-term monopoly position. With price-elastic demand, it is difficult to understand the need for active government intervention to smooth year-to-year fluctuations in exports to the degree that has been undertaken.

As with tobacco exports, government intervention policies have been the major determinant of export volume and value, and market forces have not been permitted to operate freely in the hazelnut market. As such, it has not been exchange rate policy *per se* but rather domestic price policy and minimum export prices that have determined the behavior of hazelnut exports.

Raisins and figs

Raisins and figs constitute the bulk of Turkey's dried fruit exports. As indicated in Table VII-3 the Turkish share of the raisin market is sizeable, and Turkey has more than half the world's exports of figs.

Table VII-10 gives the basic data on production and exports of raisins and figs. Export earnings from raisins have increased at an average annual rate of 4 per cent.[31] As can be seen, raisins are approximately three times as important a source of foreign exchange earnings as are figs. Data on export value and volume for figs are unavailable prior to 1954; the average annual rate of growth of export earnings over the 16-year period was 4.9 per cent.

Since 1964, export prices for raisins – effected through the relevant sales cooperative – have been set on the basis of a trade agreement between Turkey, Greece and Australia, with cooperation from Californian growers. Price intervention by the cooperative in the domestic market has amounted to an annual average subsidy of 8 per cent to growers, according to Forker's estimates. Forker estimates that production is responsive to price increases and that the intervention program has resulted in "more production and more burdensome and costly stocks..."[32] Thus domestic production has not limited exports, which have been determined primarily by government policies with respect to export prices.

Fig exports are a relatively small fraction of total production, which has tripled since the early 1950's. Although there has been subsidization of fig

30. *Turkish Exports: Prospects and Problems,* USAID (Ankara), 1967, pp. 12 and 25.
31. The regression equation estimated for the time trend of the value of raisin exports is: $ER_t = 4.6(1.0398)^t$, with $t = 0$ in 1950, $R^2 = 0.46$ and the standard error of the time trend, 0.010.
32. Forker, *op. cit.* (Note 24, Chap. II), p. 52.

Table VII-10
Production and exports of dried fruit, 1950 to 1971

	Raisins			Figs		
	Production (thousands of metric tons)	Exports (thousands of metric tons)	Exports (millions of dollars)	Production (thousands of metric tons)	Exports (thousands of metric tons)	Exports (millions of dollars)
1950	69	80	21	86	n.a.	n.a.
1951	52	35	11	107	n.a.	n.a.
1952	68	44	11	118	n.a.	n.a.
1953	64	33	7	105	n.a.	n.a.
1954	65	53	11	107	12	3.3
1955	40	33	8	100	16	3.6
1956	100	48	15	121	16	3.6
1957	53	59	19	137	17	4.2
1958	65	49	18	155	17	3.6
1959	100	61	18	156	15	2.0
1960	67	82	23	145	35	6.9
1961	85	64	16	204	24	4.9
1962	90	69	16	210	30	5.7
1963	60	66	17	208	27	5.9
1964	73	52	17	206	25	6.1
1965	120	66	21	210	29	7.0
1966	75	68	22	215	28	6.7
1967	93	72	23	232	32	7.2
1968	103	75	23	215	32	7.0
1969	80	77	23	215	28	6.8
1970	n.a.	70	21	214	29	7.2
1971	n.a.	89	22	n.a.	32	8.6

Sources: Physical exports and production from *Trade Yearbook*, FAO, various issues; export values from *International Financial Statistics*, International Monetary Fund (Washington); *Annual Foreign Trade Statistics*, SIS; and *Yearbook of International Trade Statistics*, United Nations.

production, Forker estimates that the intervention levels have generally been below market levels since 1961, and hence that intervention has not significantly affected the fig market.[33] Evidently little attempt has been made to develop fig exports into a year-round activity: fig exports have as yet been realized only during the processing season. This has led to a loss of a fraction of the crop due to labor shortages and to a poorer export performance than could have been realized had attempts been made to smooth out export sales

33. *Ibid.*, pp. 48 ff.

during the year. Also, given Turkey's high share of world exports, it is significant that little by way of promotional work has been done. Expert opinion seems to be that had greater attention been paid to quality standardization, marketing and smoothing out the seasonal pattern of exports, Turkish exports of figs could have been much greater than their actual levels.[34]

Chrome

Of all Turkey's major exports, chrome has had the worst performance. Earnings from chrome exports decreased at an average annual rate of 4.4 per cent over the period 1950 to 1969.[35] As indicated in Table VII-3, the Turkish share of the world chrome market was 18 to 20 per cent during the 1950's, declined to a low of 9.9 per cent in 1963, and rose thereafter to 12.3 per cent in 1969.

Table VII-11 gives data on the production and exports of chrome. Many factors, both domestic and international, have contributed to its poor performance. During the late 1950's the minimum export price for chrome was substantially above world market levels. Moreover, as seen in Chapter II, lack of transport equipment and failure to obtain imports even for replacement of machinery and equipment led to high costs at the mines, so that production and exports declined. On the international front, new low-cost sources of chrome were developed in other countries, and aluminum and stainless steel were substituted for chrome in many of its uses.

In the early 1960's the Turkish export prices were again set above international levels, with further losses in Turkey's share of the world market. Chrome was one commodity for which price registration practices did adversely affect exports in the 1960's. Internal rail charges for exportable chrome became a major problem, as the price of shipping a ton to port was $13 per ton compared with production costs of $10 a ton at high-cost mines and a unit export price of $20 (see Table VII-11).[36]

By the late 1960's there were some increases in investment in the mining sector. The first signs of revival in chrome output came in 1969. Output even then was still only 651 thousand long tons, contrasted with an average annual production of 785 thousand long tons in the 1957-to-1958 period. There is no evidence that the decline in production was associated with a decrease in economic reserves. On the contrary, Turkish reserves continue to be among the richest and largest in the world.

34. *Turkish Exports*, USAID, *op. cit.* (Note 30), pp. 13–14.

35. The estimated regression equation for the time trend was:

$$ECH_t = 21.2\ (0.955)^t, \text{ with } t = 0 \text{ in } 1950.\ R^2 = 0.26; \text{ standard error} = 0.018.$$

36. *Turkish Exports*, USAID, *op. cit.* (Note 30), p. 23.

Table VII-11
Chrome production and exports

	Production (thousands of tons)	Exports (thousands of tons)	Exports (millions of dollars)	Unit Price (dollars per ton)
1950	415	348	10.7	30.7
1951	588	497	16.5	33.3
1952	763	617	22.9	37.1
1953	637	668	28.2	42.2
1954	531	351	15.4	43.9
1955	634	551	19.8	35.9
1956	820	632	23.3	36.8
1957	900	562	21.4	38.1
1958	512	508	15.5	30.5
1959	382	301	8.9	29.6
1960	471	380	11.5	30.3
1961	396	383	9.9	25.8
1962	461	344	8.5	24.7
1963	397	209	3.7	17.7
1964	406	346	7.0	20.2
1965	588	450	8.7	19.3
1966	503	501	10.3	20.6
1967	365	309	7.1	23.0
1968	400	381	9.6	25.2
1969	651	389	12.8	32.9

Note: Tons are long tons.
Sources: *Statistical Summary of the Mineral Industry, op. cit.* (Table VII-3); and *International Financial Statistics*, various issues.

Although it is difficult to document, it appears that the entire range of governmental policies has contributed to the failure of chrome exports to expand. It is perhaps suggestive of this that neither the FFYP nor the SFYP contained any discussion of the decline in chrome exports. In the FFYP, it was projected that chrome exports would increase from the estimated level of 400,000 metric tons in 1962 to 500,000 metric tons in 1967. In the SFYP chrome exports were projected to remain constant at 500,000 metric tons per annum throughout the Second Plan period. Domestic production was expected to increase at an average annual rate of 3.1 per cent but (without explanation) the entire increment was expected to be absorbed by domestic demand. Given the perceived foreign exchange stringency at the time the SFYP was formulated, it is remarkable that little consideration was given to increasing chrome exports.

Copper

Although copper export earnings have grown at an average annual rate of 4.3 per cent, overall export performance has been relatively poor, especially in view of world market conditions.[37] As seen in Table VII-3 the Turkish share of the world copper market has fallen from 1 per cent to 0.5 per cent since the mid-1950's. Table VII-12 gives the basic data.

Most of the growth in export earnings can be seen to have originated from

Table VII-12
Copper production, exports, and prices, 1950 to 1970

	Production (thousands of tons)	Exports		International Price (dollars per 100 pounds)
		(thousands of tons)	(millions of dollars)	
1950	11.5	6.2	2.5	22.38
1951	17.3	7.4	8.1	27.58
1952	23.0	16.4	14.9	32.68
1953	26.9	22.2	11.9	31.55
1954	24.8	15.5	7.2	31.34
1955	23.4	15.5	8.8	44.53
1956	24.3	18.9	17.0	40.52
1957	24.0	14.4	8.6	27.02
1958	22.2	12.5	6.5	24.72
1959	23.5	26.8	6.9	29.68
1960	25.8	18.5	12.7	30.70
1961	19.7	8.1	4.8	28.69
1962	25.4	14.2	8.9	29.23
1963	24.4	9.9	5.9	29.26
1964	27.7	21.1	10.2	43.84
1965	28.3	28.0	17.2	58.72
1966	28.5	19.6	24.8	69.22
1967	28.7	15.5	16.6	51.10
1968	31.5	14.9	13.7	56.09
1969	29.5	7.0	5.9	66.51
1970	29.0	5.0	4.9	64.17

Note: Tons are long tons.

Sources: Production and export data from *Statistical Summary of Mineral Industries, op. cit.* (Table VII-3). International price is the U.K. wholesale price, *International Financial Statistics.*

37. The fitted time trend is $ECO_t = 6.4(1.043)^t$, with $t = 0$ in 1950, $R^2 = 0.20$, and the standard error of the trend, 0.021.

a more favorable international price rather than significant increases in export volume. As with chrome, high freight charges have been a problem for copper exports. Similarly, production stagnated in the late 1950's and early 1960's due to high domestic costs relative to international prices.

Part of the decline in copper exports in the late 1960's was offset by increased domestic refining of copper and exports of manufactured copper. As of 1970, however, the increase in manufactured copper exports was not sufficient to offset the decline in copper exports. Considerable emphasis was placed on the development of a domestic refining industry in the SFYP, and some observers believe this will result in sizeable expansion of manufactured copper exports in the 1970's. Despite that, the diagnosis as of 1971 must be that the performance of copper exports was as poor, relative to international market conditions, as that of chrome.

Minor exports

In addition to the commodities discussed above, Turkey has a variety of minor exports, many of which have considerable export potential. Among these products are lumber, wool, olive oil, minerals other than those discussed, fresh fruits and vegetables, processed foods, and a variety of manufactured and handicraft products.

The picture that emerges from any review of export policy is that government policy in general has not incorporated measures that would encourage the development of these products as a rapidly growing source of foreign exchange. This is true both of exchange-rate policy and of other sorts of actions that might enable rapid growth of export earnings. For example, Turkey's mineral wealth is much greater than current production and export figures reflect. Government policy has generally favored public ownership and development of mineral resources, yet many government-owned economic mineral reserves have not been exploited. Turkey's proved reserves of borate ores, for example, are the second largest in the world, and world consumption of borates is increasing at an average annual rate of 10 per cent. Yet Turkey's exports remain at about $5 million per year. Technical surveys have suggested that a four-fold increase in borate production could be accomplished in a relatively short space of time if the managerial, organizational and capital resources were available for the purpose. Yet despite applications by private firms to enter into joint ventures with foreign companies for the purpose of investing and developing mineral production, government action was not forthcoming.

World demand for lumber is also increasing rapidly, and the Anatolian plain is clearly an area with a comparative advantage in lumber products. Turkey's annual timber growth potential is about the same as Finland's, yet

Turkish exports have averaged around $2 million per year, contrasted with Finland's $550 million (excluding paper).[38] Investments in sawmills, plywood and other fabricating facilities have been estimated to yield high rates of return, yet efforts to develop these resources have been relatively small to date.

Turkey's proximity to Europe and the Mediterranean climate of southern Turkey suggest a strong comparative advantage in fresh and processed fruit and vegetable exports.[39] Citrus fruit exports averaged around $2 million in the early 1960's, rising to $10 million by 1969. Similarly, processed food exports rose from $10 million in the early 1960's to $20 million in 1969. As will be seen below, there is considerable evidence that these exports are sensitive to changes in the effective exchange rate.

With or without appropriate exchange-rate policy, other sorts of government actions could have facilitated the growth of minor export industries, but they were not forthcoming. The lack of standardization of grades has been a frequent headache for Turkish exporters, and even those whose quality control has been adequate have found themselves suspect, given the failure of their compatriots to conform to similar standards. Considerably more could have been done to assist the many small producers of given commodities to organize export development and promotion. This is particularly true in the case of export crops and the agricultural processing industries. As with exchange-rate policy, government actions with respect to import-substituting industries were much more strenuous than those for promotion of new exports.

IV. The determinants of exports

As seen in Section III, direct government actions have frequently been the dominant determinants of export performance, especially for the major agricultural commodities, the export prices of which have not been reflected either to domestic consumers or to domestic producers because of intervention. It is nonetheless worthwhile to examine the degree to which Turkish exports have been responsive to exchange-rate policy. To examine this question, a simple model was tested statistically for a variety of exports.

In theory, as Turkish resources increased the transformation curve shifted outward. Given the outward shift, the relative growth in export supply would

38. Turkey's standing forests are about half those of Finland, but with appropriate conservation practices weather conditions would yield higher growth.
39. Wool and olive oil are two other commodities whose export performance could have been considerably better. Turkey's share of the world market is very small in each, and there is ample opportunity for increase in production and exports.

be a function of the price received for a given commodity relative to the price of home goods. While such a specification is obviously too simple to capture all aspects of export determination, it nonetheless has the advantage of focussing directly upon the role of the commodity-specific PLD-EER as a determinant of export earnings.[40] Of course such a model is invalid for those commodities where Turkish exports were large enough to affect the world price significantly. But as seen above this was probably true only of figs, tobacco and hazelnuts. And for hazelnuts the possibility of substitution with other nuts raises a question as to the degree of monopoly power held by Turkey.

As a proxy for the outward shift in the transformation curve, two variables were used: (1) for agricultural commodities an index of total agricultural production was used as the "capacity" variable; (2) for other exports time was used as a proxy. An index of agricultural production was developed in the following manner: the U.S. Department of Agriculture provides price weights (at international prices) for each major agricultural commodity,[41] and employs those prices to devise an index of agricultural production during the 1960's. Estimates of physical output by specific agricultural commodities were obtained for the 1950's, and the outputs were then multiplied by the price weights to devise a continuous index for the 1950-to-1969 period. That index was used throughout the regression analysis.

Since weather conditions lead to large fluctuations in agricultural production, the use of an agricultural production index as an indicator of the shift in the transformation curve has an additional advantage. Since weather factors affect commodity production generally, an agricultural production index reflects weather variation and provides a good measure of total domestic capacity for agricultural commodities.

The relative price variable was constructed as follows. When a dollar export price series was available, it was multiplied by the effective exchange rate appropriate to the commodity, and the resulting product was then divided by the index of the price of home goods (from Table I-5). Thus if an increase in the relative price of an export commodity generated an increase in the quantity exported, the sign of the relative price coefficient would be positive.

In general, physical quantities of exports were employed as the dependent

40. It was initially anticipated that a variable to reflect the state of domestic excess demand should also be employed, since that variable would reflect the net shift in excess supply. The percentage rate of inflation did prove to be significant but not quantitatively important. It was finally dropped from the regressions, since better fits resulted from logarithmic estimation, and negative observations could not be used.

41. *Indices of Agricultural Production, 1960–1969,* USDA Economic Research Service, Foreign Regional Analysis Division, ERS-Foreign 265, April 1970.

variable except in cases where no appropriate physical unit was available, as with minor exports. In those cases the dependent variable was in units of millions of U.S. dollars. Since the logarithmic form of the regression generally differed little from the arithmetic and had the decided advantage that the coefficients are easier to interpret, logarithmic estimates were used in all cases.

International prices are assumed given and the dependent variable is in physical units, so that the coefficients on the price terms indicate the percentage increase in exports resulting from a 1 per cent increase in the real domestic price of the export commodity. Thus a zero coefficient implies that the quantity exported is not affected by the real price of the export (PLD-EER multiplied by the international price), and a positive coefficient is the percentage increase in export earnings resulting from a 1 per cent increase in the PLD-EER, the foreign price assumed given.

One other factor should be noted. The Turkish export season for agricultural commodities covers the last quarter of one calendar year and the first quarter of the next. Therefore, in addition to estimating the supply response based upon annual observations, an effort was made to determine exports from the fourth quarter of one calendar year to the third quarter of the next. Such a construction was not possible for all exports, although quarterly foreign exchange earnings were available for a number of major agricultural export commodities. For those commodities the constructed fourth-to-third quarter annual export earnings figure was used as the dependent variable. To take the 1959 crop as an example, exports from October 1959 to September 1960 were the dependent observation; 1959 agricultural production and the prevailing real price of the commodity as of December 1959 were the independent observations. When it was impossible to construct such a dependent variable according with the export season, agricultural production lagged one year was used as an alternative independent variable.

Table VII-13 gives the results of the computations. The first column indicates the commodity and the units of the dependent variable. The "seasonal" dependent variable is export earnings from that commodity in millions of dollars, fourth quarter of one year to third quarter of the next. The second column indicates the number of years for which data were available. All variables except for time were estimated in logs. Pf.EER/PH is the foreign price of the commodity times the EER for that commodity divided by the price of home goods. Standard errors of the coefficients are given in parentheses.

As expected, the results for chrome, copper, hazelnuts and tobacco reflected no influence of the PLD-EER. In the case of the minerals, minimum export prices, domestic transport charges and other government policies determined export performance. As can be seen, the coefficient on time is

Table VII-13
Estimated export response to real exchange rate changes

Independent Variable	No. of Years	Independent Variables				R^2
		Agricultural Production	Lagged Agricultural Production	Time	Pf.EER / PH	
Chrome exports						
tons	19			−1.5 (0.12)	−0.12 (0.12)	0.29
dollars	19			−0.36 (0.18)	−0.23 (0.19)	0.41
Copper exports						
tons	19			0.65 (0.17)	−0.01 (0.22)	0.10
dollars	18			−0.07 (0.15)	0.57 (0.21)	0.35
Cotton exports						
tons	19	3.33 (0.41)			1.14 (0.34)	0.80
seasonal	15	3.47 (0.66)			0.99 (0.60)	0.73
Hazelnut exports						
tons	17	1.83 (0.50)			0.04 (0.09)	0.67
tons	17		1.78 (0.37)		−0.05 (0.08)	0.75
Minor exports						
dollars	19	1.19 (0.30)			0.81 (0.40)	0.51
seasonal	15	1.80 (0.24)			1.34 (0.26)	0.86
Mohair exports						
tons	19	−3.09 (3.82)			3.05 (1.24)	0.36
tons	19		−2.35 (3.30)		2.92 (1.21)	0.35
Olive oil exports						
tons	10	9.14 (6.75)			5.39 (6.04)	0.23
tons	10		1.13 (6.91)		8.21 (6.37)	0.30
Raisin exports						
tons	17	0.61 (0.50)			0.17 (0.11)	0.59
tons	17		0.91 (0.37)		0.10 (0.09)	0.68
Tobacco exports						
tons	19	0.42 (0.30)			−0.01 (0.17)	0.12
tons	19		0.45 (0.26)		−0.04 (0.16)	0.17

negative for chrome and insignificant for copper. In neither estimate where the physical quantity of exports is the dependent variable is the relative price coefficient significantly different from zero. The coefficient on relative price for dollar copper export earnings probably reflects the influence of the autonomously determined foreign price on total export earnings.

The coefficient of the relative export price for tobacco exports is also insignificantly different from zero, and even agricultural production (in either form) is insignificant. Given government price intervention policies and Turkish monopoly power in the export market, the results are hardly surprising. The picture for hazelnuts is similar: the PLD-EER does not appear to

have affected the quantity exported. In view of the government's direct intervention in the hazelnut export market, it seems clear that direct intervention, and not price policy, determined exports.

For cotton, where government intervention has been minimal, agricultural production and the relative export price are both highly significant. The results suggest that a 1 per cent increase in the real exchange rate led to a 1 per cent increase in export earnings from cotton exports. The sharp decline in cotton exports in the mid-1950's and the rapid growth in cotton exports in the 1960's can thus be attributed largely to exchange-rate policy.

"Minor exports" were defined to be all exports except those for chrome, cotton, hazelnuts, raisins, tobacco and wheat (since wheat was a major export in the early 1950's and not exported in the 1960's). The dollar value of exports had to be used as the dependent variable, and observations were constructed by subtracting the value of the major exports from total export earnings in each year. Minor exports averaged about $ 100 million in the 1950's and ranged from $133 million to $192 million in the 1960's. Given that commodities such as figs and copper are included in minor exports, the response of the commodity group as a whole to real exchange-rate changes is high. The "seasonal" dependent variable performed better; but upon either estimate, a 1 per cent increase in the real exchange rate resulted in more than a 0.8 per cent increase in minor export earnings. On a 1969 base, this would imply an increase in minor export earnings of $1.9 million in response to an increase of TL 0.1 per dollar in the exchange rate. These results must of course be interpreted with care, but they reinforce other available evidence. There probably is considerable scope for export diversification and growth along non-traditional lines with appropriate exchange-rate and government policies.

Two minor exports for which data were available were olive oil and raisins. Exports of olive oil were negligible before 1960. The production pattern remains bi-annual: a good crop year is followed by a very poor one. Since olive oil does not, therefore, conform to the fluctuations in agricultural production, it is hardly surprising that the agricultural production variable proved insignificant. Given the few degrees of freedom, the estimated coefficient of the relative export price is not significant. For what it is worth, however, it is large.

Raisin exports had a positive coefficient on the relative export price variable, although it was insignificant. Given government intervention, the surplus stocks of raisins in Turkey, and other factors, the result is not surprising.

Thus it would appear that except for cotton, Turkey's major exports have probably been determined primarily by government domestic policies and interventions in the export market rather than by the nature of the trade regime itself. For cotton (where intervention is less pronounced) and for

minor exports, the picture is very different. Exports of cotton and those of a variety of smaller commodities appear to have been considerably influenced by exchange-rate policy.

The general picture that emerges is one of strong bias toward import-substitution in both exchange-rate and domestic policies. An important question is what would have happened had Turkish policy been export orientated, or at least geared to equal emphasis on export promotion and on import-substitution. The fact is that cotton exports and minor exports grew much more rapidly than did earnings from commodities subject to government intervention. That happened despite the sizeable disparity in EERs between minor exports and imports and the consequently greater price incentives for expansion of domestic import-competing production. Failure to develop minerals exports, predominantly produced by SEEs, is perhaps most telling in this regard, since there can be little argument about market potential for those commodities.

What would have happened under an alternative government policy orientation is conjectural by its nature. Available evidence, however, suggests that Turkish export potential has not been given a chance. Insofar as pessimism about export prospects has influenced the government's decision to focus upon import-substitution there is little empirical support for such pessimism and a considerable amount of evidence that export prospects might, under appropriate policies and incentives, be fairly bright.