MASTER THESIS

# EFFECTS OF EXPORT PROMOTIONARY POLICIES ON MANUFACTURING INDUSTRY EXPORTS

BY

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1.Introduction :

The economic program persued since 1980 ,to overcome the recent economic crisis,characterized by nigh inflation rates and increasing balance of payments deficits,is primarily based on the strategy of restricting domestic demand and increasing exports.In the long run ,on the other hand,the aim is to transform the economic structure into a competitive and outward-looking one.

The present thesis,purports to investigate structural characteristics of the Turkish manufacturing industry and its three outstanding subsectors over the period 1977-82 with a view to determine possible longer-run responses to the economic program implemented since 1980.An attempt is also made to evaluate the success of the program in terms of recent export performance and its consequences.

The first part of the thesis reviews the significance of the manufacturing industry in the economy,weights of the subsectors of manufacturing industry and tendencies between 1977-82.The nature of the export promotionary policies persued after 1980 are reviewed in the second part.The effects of promotionary policies on the export performance of the three selected sectors are also considered in the second part and the reason for different tendencies therein are elaborated. In the last part the relationship between export growth and the increase in value added is investigated.

The changes in the shares of wages and profits are consi-

dered along with the increase in value added. The realization of aims of the economic program is evaluated in this context. Our results suggest that, even though the economic program has reached its targets in terms of realizing the desired growth in exports, the functional distribution of income has changed in favor of capital owners which was both means and result of the economic program.

In order to see the effects of the economic program on various economic variables, especially on exports, the three subsectors of the manufacturing industry are selected. Our choice of sectors, namely textiles, chemical products and fabricated metal goods, machinery and equipment industries, for investigation can be explained on the following grounds. Firstly, these sectors have significant shares either in manufacturing industry value added or in exports. Secondly, each of the three sectors represents a subdivision in the classification of commodities by use. Textile industry products are considered as consumption goods, chemical industry products are considered as intermediate goods and fabricated metal goods, machinery and equipment industry products are considered as investment goods. The relative shares of those goods in total output at a given time may be considered as suggestive of a particular economic structure and level of development reached by an economy.

The reason of our choice of the period 1977-82 for investigation is to see the net effect of export promotionary policies pursued after 1980 on overcoming the economic crisis before 1980, i.e., to see how effective the policies were to take the economy out of the crisis.

A number of methodological constraints have posed problems in handling the available data.First of all ,the classifications of various official data collecting institutions differ in many respects.Some items do not exist in one institution's data ,while the contents of other items differ in other institutions' sources. Such differences are observed even in two different sources of the same institution.Therefore some attempts have been made to attain the comparability of various sets of data. For example in evaluating some variables in manufacturing industry,the data is mostly obtained from Manufacturing Industry Surveys of SIS,while export values are taken from Foreign Trade Statistics of the same institution. In calculating export values,the classification of the Ministry of Trade was prefered since it does not include unprocessed food items,tobacco,unwoven fibers,crude oil,coal and other raw materials which increases total exports of manufacturing industry unnecessarily. The contents of all sectors are listed in the appendix.

Trend line analysis have shown significant differences between the exports of two periods,namely 1977-79 and 1980-82. When trend lines are extended to 1983,the line for 1980-82 gives closer export values than the trend for the entire period. 1984 export values for each of the three sectors are predicted according to this result.

In order to see the correlation between export promotionary devices and exports,a number of regressions are performed.Number of observations and number of variables are not enough to suggest a causial relationship between export promotion and

exports but sufficient to suggest a correlation between the dependant and independant variables.

## 2.Manufacturing Industry :

### 2.1.The Significance of Manufacturing Industry in the Economy :

The manufacturing industry has a vital importance in an economy since this sector creates more value added compared to many other sectors and it leads the economy by its backward and forward linkages.For these reasons,the value and the share of the manufacturing industry in the economy is an important criterion in order to determine the extent of industrialization.

The manufacturing industry in Turkey has achieved considerable growth since 1960's,within the context of the import substitution strategy,implemented during the 60's and mid-70's when the economic climate was highly suitable for the growth of the manufacturing industry.During 1963-77,the average growth rate of this sector reached 10%.

Following this period of fast growth,a general crisis in the economy characterized by a high inflation rate and a high foreign trade deficit,has emerged. The deficit could not be made up with foreign aid or other external sources as before. So that the economy entered into a general stagnation.The manufacturing industry which is highly sensitive to the general economic conditions,also stagnated during this period and the net value added created in this sector got smaller in real terms for three consecutive years,starting from 1978 (see Table 1 ).

The stabilization program which was announced on 24th

of January, 1980, brought about a number of radical changes which affected the economy in general as well as the manufacturing industry in many ways. The imported inputs of the manufacturing industry became available again and the level of production started increasing. In 1982, the value added in manufacturing industry reached the level attained in 1977. The share of the value added in GNP increased to 19.4 % in 1982 from 16.2 % of 1980 (1). Capacity utilization in this period has also recorded an improvement and increased to 66.6 % in 1982 (2).

The employment level in the manufacturing industry registered a decrease in 1979 and 1980, parallel to the decrease in real value added. In 1981 and 1982, on the other hand, the total employment level in the manufacturing industry has increased. The share of manufacturing in non-agricultural employment has declined in 1979 only and then has reached the original level in 1982 which was 14 % (3).

2.2. The Weights of the Subsectors of Manufacturing Industry:

The manufacturing industry in Turkey is mostly based on consumption goods production. This is typical for many developing countries since the import substitution strategy which was persued extensively in these countries during 1960's, allowed a fast growth in consumption goods production. The share of consumption goods in the output of the entire manufacturing industry was 48.5 % in 1982 and this share has changed only marginally from 49 % of 1977. The intermediate goods production on the other hand, has a share of 41.3 % in 1982 and the share

of this sector was 37.7 % in 1977 (4). Although the industrial production and thus the demand for intermediate goods has not increased notably, growth of intermediate goods' share is due to the increase in exports in some special items. The investment goods production has a marginal share of 10.2 % in 1982 in total production of manufacturing industry. This share was 13.3 % in 1977 which means that investment goods production growth is below the average growth of manufacturing industry in general (5).

Manufacturing industry can also be classified according to the contents of its subsectors. Those subsectors are listed in the appendix. In this study the developments in textiles, chemical products and fabricated metal goods, machinery and equipment industries will be studied in terms of production, employment, productivity and investment. In the light of these facts about the subsectors of manufacturing industry, the effect of export promotionary policies on exports of these sectors will be analyzed in the last part.

2.2.1. The Textile Industry :

The textile industry is the fourth sector in terms of its share in manufacturing industry's value added. This share, which was 15.3 % in 1977, has increased to 18.5 % in 1979 and then decreased to 15.6 % in 1982. The relative share of the textile industry in terms of number of establishments was 19.2%, whereas its share in total manufacturing employment was 23.3 % in 1977 (6). These figures show that the establishments in the textile industry are smaller in size and labor intensive in general,

compared to the rest of the manufacturing industry. Both of these shares have increased to 20.3 % and 24.1 % respectively in 1982, although the value added share has decreased (see Table 4). It is difficult to explain the reason for the rise in number of establishments and employment and decreasing value added in terms of relative shares in manufacturing industry, since the data for input, output and value added is collected in terms of quantity. Thus, the reason for the contradicting tendencies mentioned above cannot be determined exactly. The decreasing value added share of textile industry, while employment share increases, might be due to decreasing productivity and increasing capacity utilization. Rapid rise in cost items may be another reason.

The wage-value added ratio in the textile industry has increased to 37 % in 1982 from 33 % in 1979, whereas the ratio has decreased considerably in the rest of the manufacturing industry, although annual wages of workers in the textile industry have increased as much as the increase in manufacturing industry's wage bill (7). This is because the growth of value added in this sector has been slower in this period than the average for the entire manufacturing sector, due to the rapid rise in raw materials' prices and prices of other inputs of the sector.

The increase in the sector's input-output ratio between 1977-82 also points to decreasing productivity which may be due to decreasing capacity utilization or rises in costs. The input-output ratio in the textile industry in 1977 was 62 %

decreased to 57 % in 1980 and then increased to 63 % again in 1982 (see Table 3 ).

THE SIGNIFICANCE OF THE TEXTILE INDUSTRY IN MANUFACTURING INDUSTRY

( % )

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Value Added | 15.3 | 16.9 | 18.5 | 16.2 | 16.4 | 14.6 |
| Number of Establish-ments | 19.2 | 19.9 | 19.1 | 19.1 | 19.7 | 20.3 |
| Employment | 23.3 | 23.3 | 23.5 | 23.3 | 23.6 | 24.1 |
| Input Output Ratio | 62.0 | 58.0 | 57.0 | 57.0 | 61.0 | 63.0 |
| Wage-Value Added Ratio | 42.0 | 36.0 | 33.0 | 37.0 | 36.0 | 37.0 |

Source: SIS, Manufacturing Industry, 1981, 1982, pp.2-7.

2.2.2. Chemical Products Industry :

Chemical Products Industry is the largest sector within the manufacturing industry, in terms of value added. When the share of this sector in total manufacturing industry value added declined to 8.3 % in 1977, chemical products industry became the third sector. In 1982, the share has increased to 26.2 %. The share of this sector in number of establishments of manufacturing industry was 12.9 % in 1977 and this share

decreased to 11.6 % in 1982.Total employment in this sector, on the other hand,was 10.2 % of the total manufacturing industry employment in 1977 and this share decreased to 9.3 % in 1980 and then increased to 9.9 % in 1982 (8).The set of data listed above gives important clues about the structure and the properties of the sector.The share of chemical products industry value added in total manufacturing industry value added and the share of number of estabilishments of this sector in manufacturing industry show that the scale of production in this sector is much higher than the manufacturing industry in general.The low share of the sector in terms of employment in spite of large scale of production,reveals that capital intensive technology is used in this sector in general. As a natural outcome of the capital intensive technology the rate of value added is much higher than the manufacturing industry average.

Another important property of the chemical products industry is that most of the inputs of this industry are imported. The economic policy persued after 1980 had adverse effects in this sector by increasing the import bill.So that the input-output ratio in this sector increased to 75 % in 1980 from the 65 % of 1979. In 1982,this ratio was 72 % and it was the highest ratio among the other subsectors of manufacturing industry.

The wage bill declined relatively after 1980 in this sector. The ratio of wages to the value added is the lowest among other subsectors of manufacturing industry due to the capital intensive technology.The annual wages per worker is the second

in manufacturing industry.This ratio was 28 % in 1977 and decreased to 14 % in 1982.

THE SIGNIFICANCE OF CHEMICAL PRODUCTS INDUSTRY IN MANUFACTURING INDUSTRY (%) :

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Value Added | 18.3 | 18.7 | 21.3 | 20.2 | 21.3 | 26.2 |
| Number of Establishments | 12.4 | 12.4 | 12.6 | 11.5 | 11.2 | 11.6 |
| Employment | 10.2 | 9.7 | 9.6 | 9.3 | 9.3 | 9.9 |
| Input-Output Ratio | 69.0 | 65.0 | 65.0 | 75.0 | 75.0 | 72.0 |
| Wage-value Added Ratio | 28.0 | 27.0 | 26.0 | 22.0 | 19.0 | 14.0 |

Source : SIS,Manufacturing Industry,1981,1982,pp.2-7.

2.2.3. Fabricated Metal Goods,Machinery and Equipment Industry :

This is the third sector in manufacturing industry in terms of value added. The share of this sector in manufacturing industry value added was 19.4 % in 1977 and increased to 20.6 % in 1980 and then decreased to 18.8 % in 1982.The share of number of estabilishments of this sector in manufacturing industry has increased to 27 % in 1980 from 23 % of 1977 and then decrease

to 25 % in 1982. The share of this sector in manufacturing industry employment was 20 % in 1977 and increased to 22 % in 1982 (9).The set of data listed above indicates that this industry has not shown a successful performance particularly after 1980.This may be due to a number of reasons.First of all investments in all sectors declined during 1980-82 period.The demand for this sector's products were low,thus capacity utilization has also declined.In addition,costs has increased considerably, due to particularly in imported inputs,but the prices of outputs could increase less than that due to the low level of demand.

The share of number of estabilishments of this sector in manufacturing industry is much higher than the share in value added.This indicates that the scale of production in this sector is considerably lower than the manufacturing industry average. The share in total employment of manufacturing is also higher than the share in value added which points to the low productivity of labor and to the labor intensive technology.The increase in share of employment,while the shares in value added and number of estabilishments of manufacturing industry decrease,may be due to the decreasing capacity utilization and to new investments with larger scale.

The input-output ratio has fluctuated between 58 % and 62 % which is probably due to the lag between rise in costs and output prices.The input-output ratio is lower,in general, than the manufacturing industry average (see Table 3 ).

The wage-value added ratio,on the other hand,has decreased from 44 % in 1977 to 36 % in 1982 with fluctuations (see Table 2 ).The wage-value added ratio is quite higher than the manu-

facturing industry average which may indicate that this sector uses labor intensive technology in general.

This sector has a wide variety of estabilishments which are usually small scaled.Thus entering and leaving the business or changing the employment level according to the general economic conditions is quite easy. The fluctuations observed in most of the data belonging to this sector is probably due to reason.

THE SIGNIFICANCE OF THE FABRICATED METAL GOODS, MACHINERY AND EQUIPMENT INDUSTRY IN MANUFACTURING INDUSTRY (%) :

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Value Added | 19.4 | 21.6 | 20.6 | 20.7 | 19.0 | 18.8 |
| Number of Establishments | 23.0 | 24.0 | 27.0 | 27.0 | 25.0 | 25.0 |
| Employment | 20.0 | 22.0 | 21.0 | 21.0 | 21.0 | 22.0 |
| Input-Output Ratio | 62.0 | 58.0 | 61.0 | 59.0 | 62.0 | 60.0 |
| Wage Value Added Ratio | 44.0 | 42.0 | 44.0 | 39.0 | 41.0 | 36.0 |

Source : SIS, Manufacturing Industry, 1981, 1982, pp.2-7.

3. Export Promotionary Policies and Their Application in Turkey since 1980 :

As it is mentioned in the previous parts of the thesis, the manufacturing industry and its composition is of vital importance for a developing economy. The aim of export promotionary policies, on the other hand, is to transform the structure of the economy and the industry in the long run. Creation of a competitive, outward looking industrial structure is expected to be the ban-vagon of the economy and growth in future. This of course depends on the reaction of the industrial structure to the economic policy and its flexibility. Application of contemporary technology and new investments will also be the determining factor in such a structural transformation.

In the first part of this section export promotionary policies in developing countries in general and particularly in Turkey after 1980 will be reviewed. In the second part the effects of these policies on exports of the three selected sectors of manufacturing industry will be analyzed.

The economic program implemented since January 1980 has the basic aim of decreasing inflation and the balance of payments deficit. One of the strategies followed to reach these targets is to limit the domestic demand through the decline in real wages so as to increase competitiveness of the industry by controlling inflation and also create additional exportable capacity. Another strategy is to pull down the export prices by decreasing the exchange rate which also makes exportation profitable. For encouraging exporters a number of devices are

used. Some of these devices were used before 1980 and some of them are totally new.

In most developing countries,a numoer of export promotionary devices are used for encouraging exports.The most important of all are foreign exchange policy,tax rebates and reductions,priority in reserving foreign currency before and after exportation and export credits.Those devices will be analyzed in general not by sectors,because particularly in Turkey these tools are not used selectively.

3.1. Foreign Exchange Policy :

One of the most important and popular tools that is extensively used in promoting exports is the foreign exchange policy According to the traditional pattern,the initial substantial devaluation of the domestic currency is accompanied by the transition to a more flexible foreign exchange policy to avoid overvaluation of the domestic currency.

The overvaluation of the TL. before 1980 has discouraged exports to a great extent since price competitiveness of Turkish products were very low due to the overvalued exchange rate. But in 1980 a radical change in the economic strategy of Turkey towards creating an outward looking economy occurred and within this context the foreign exchange policy changed considerably in accordance with the traditional export oriented policy mentioned above. Following the initial devaluation of 67 % the parity of the Turkish currency was reviewed every two months until May 1981 and starting from that date the value of TL. is

determined daily.As a result of this policy,the TL. has depreciated continuously in considerable amounts.The depreciation in the value of TL. has amounted to 89.9 % in 1980 ,48.2 % in 1981, and 39.8 % in 1982 (10) .

Rather than nominal exchange rate,implicit exchange rate which is the ratio of the TL. value of exports over the dollar value of exports,is a better measure to see the effects of foreign exchange rate policy on exports,since nominal exchange rate changes daily and it is difficult to determine the average nominal exchange rate in a year that is used for differing amounts of exports.

The new foreign exchange regime has contributed significantly to export growth since exports became relatively profitable but parallel to the increase in the exporters' revenues,the import bill increased too,due to the decline in the value of TL.

3.2. Tax Rebates and Reductions :

The short run aim of the implementation of this device is to improve the competitiveness of the exporting sectors by rebating the direct and indirect taxes which are levied during production process,and in the long run,to change the structure of exports in a way to increase the share of manufacturing industry exports in total exports.

In some sectors an exporable capacity exists,but because of customs duties on imported inputs and direct and indirect taxes that are levied during production process,the prices of exportable goods are high and the competitive position of the

exporting sectors in foreign markets are thereby impaired.There exist various ways of using this measure.Taxes are either not levied at the beginning or they are rebated after exporting and sometimes a combination of the two is used.In some other countries incomes generated during exporting are not taxed.Every country chooses the method which is the most efficient for its own economic system.

In Turkey,this device has been used since 1963.Its scope has been extended in 1982 and within this context,the lists and the ratios are revised.The implementation and the coordination of the system is carried at the Promotion and Application Office, which is established in 1980,within the State Planning Office.

The tax rebates are paid according to the permanent and temporary lists.The rate of rebate for the commodities on the temporary lists is 5 %,whereas the rate changes between 5-20 % for the commodities on the permanent lists.

The rebates are paid from "The Export Promotion Fund".The fund's sources consist of 90 % of importers deposits, a part of Price Supporting and Stabilization Fund's earnings,.10 % of total investments of investment projects,80 % of interests gained from export credits given by the fund and fines as a part of deposits of exporters,in cases of fail in fulfillements of export contracts (11).

Tax rebates are applied according to some criteria.The rate of rebate is related to the taxes which are levied during production.The higner the taxes levied , the higher the taxes rebated. The rate of rebate increases as the value added in the sector increases.The rate of rebate also varies with the size of the

exportable capacity of the sector.When this capacity is large, rebates are high.Even though some sectors do not fulfill those criteria,they are still supported by tax rebates.The reason for this is to create additional exportable capacity in line with the needs of the economy.

When the effect of tax rebates on exports are examined,the rates in the lists are not taken into account.Instead,the realized amounts of tax rebates are considered for each sector.Because,differing rates of rebates were announced in the lists for each commodity of every sector and these rates were often changed even in the year.

Another kind of tax reduction is the exemption from the corporate tax.According to this measure,which has been in effect since 1981,corporations which export industrial products, vegetables,fruits,sea products and those which earn foreign currency by touristic and shipping activities are subsidized by subtracting a portion of the export earnings from yearly gross earnings and taxing the remaining part. In order for a corporation to receive such a subsidy ,its annual exports should exceed 250.000 dollars (12).

3.3 Priority In Reserving Foreign Currency Before and After Export :

This device facilitates the importation of inputs for exporting sectors and gains special importance during periods of foreign exchange stringency.

The use of this device results in a loss in government revenue as duty-free imports take place.If this measure works

the range of exportable goods increase and thereby exporters' revenues increase.Taxation of those revenues may then allow the loss to be partly recovered.Priority in reserving foreign currency for exports is provided to exporters in order to allow them to compete with exporters of the same commodity abroad who do not rely on imported inputs in the production of exportables.

Financing exports by allotting foreign currency to the exporter before exportation allows the exporter to import inputs and to prepare for exportation.The foreign currency that is allotted after the exportation is for financing the necessary imports for new investments.The amount of the foreign currency allotted before exportation ,cannot exceed 60 % of the guaranteed export (13).

After the exportation,the amount of foreign currency that is reserved before the export is converted to TL. and 50 % of the remaining part of the export revenue is permitted to be used by the exporter in terms of foreign currency.The purpose of this measure is to permit manufacturers to compete or expand their investments. Exporters are also allowed to use some of the foreign currency they earn for their debt repayments abroad (14).

In cases when exporters cannot realize the export value guaranteed,the customs tax and a certain amount of fine is charged for the imports made with the foreign currency reserved.

3,4. Export Credits :

Cheap financial resources for production and exportation is of vital importance for export promotion and this device is used in both developing and developed countries extensively. In this context,credits cheaper than normal credits are provided to exporters from public or private sources which is also subsidized by public.In order to encourage the creditors in providing credits to exporters,the public may ensure these credits against various risks.These credits are namely,finance of investments,finance of production,finance of operating capital,finance of the sale and finance of transportation.

The new arrangements made in 1980 has modified the laws an by-laws related to export credits to a great extent .According to the recent changes,exporters may get export credits from private banks without any official document and still benefit from the discounted interest and other tax reductions.

The difference between the interest rates applied to ordinary credits and export credits is paid to commercial banks from "The Rebate of Interest Rate Differences Fund" estabilished within the Central Bank.The rebate of interest differences is realized at different rates.The reason for this is to achieve a selectivity and the rate is relatively higher for industrial products other than food ,beverages,tobacco,etc. and lower for other products.The rate of interest applied to export credits extended by commercial banks is determined privately,but the differing rates of rebate applied by the Central Bank creates a similar difference in the rates of these banks.18 % of the export credit is charged as deposit by commercial banks.If less

than 50 % of the guaranteed export value is realized at the end of the period ,this deposit is added to the Export Promotion Fund and extra period is not given to the exporter. The credit is charged back totally and all the other subsidies are taken back too.But if more than 50 % of the guaranteed export is realized within the given time, the subsidies given for the remaining part of the export is charged back (15).

In addition to "The Rebate of Interest Rate Differences Fund","The Eport Promotion Fund" extends credit for the production of export goods and for preparation of export.The interest rate charged for the credits extended by the fund is the same as the rate for otner export credits. An important criterion that is applied to the fund credits is that exports should be made by specialized exporters.To encourage this practise ,a number of requirementsfor borrowers are listed for such credits. According to these requirements,the borrower should be a corporation,and its paid capital should be at leàst 50 Million TL. The realized export of tne corporation should also amount to a minimum of 15 Million Dollars annually and 50 % of this value should consist of industrial products. These corporations should increase their exports by at least 10 % every year.The export credits extended to these corporations is 90 % of the TL. value of the guaranteed export (16).

The requirements listed above are revised recently in 1983 and the limits are increased.According to these recent arrangements tne corporations which can get credit from this fund snould realize an export value of 30 Million Dollars in the

previous year (17).

The export credits given by the Central Bank after 1981 are not financed from the Export Promotion Fund.The sources of this Fund consisted mainly of import taxes and interest repayments on export credits and this means that the credits were financed by the importers and exporters.That is to say there was not a direct subsidy to the exporters through credits of the Fund.A number of changes are made in 1981 and since then the export credits of the Central Bank are not financed from the Fund but from banks' debits.Therefore two basic sources of export credits are Central Bank's discount credits and commercial banks' credits.

4. Manufacturing Industry Exports in Selected Sectors :

The share of any sector in total exports is an important indicator of the sector in the entire economy.In view of the considerably large funds channelized into this sector over the period to subsidize it, the export performance of the manufacturing industry gains much importance and should be analyzed more closely.

The share of exports of manufacturing industry in total exports has increased to 44 % in 1982,showing a sharp increase from 26 % of 1977 (18).When the economic policy persued after 1980 is considered,it may be concluded that the manufacturing industry took advantage of the export promotionary policies. The export performances of three selected sectors of manufacturing industry will be investigated in the following sections.

4.1. The Textile Industry Exports :

The textile industry is the most outward looking sector of the manufacturing industry. The labor intensive technology used in this sector is the most important advantage in exporting since the comparatively cheap labor enables the textile sector to compete in international markets.The labor intensive property of the textile industry makes this sector attractive for most developing countries.Despite keen competition among developing countries in the markets of developed countries, the Turkish textile industry has shown an impressive performance and successfully passed the 1 Billion Dollars export level in 1982. The exports of the textile industry,the ratio-

of textile exports to textile output and industrial exports are presented in the following table :

TEXTILE EXPORTS :

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Textile Exports (Million Dollars) | 315.5 | 350.5 | 421.3 | 474.0 | 885.1 | 1,168.5 |
| Textile Exports (Million T.L.) | 5,576.8 | 8,504.8 | 15,428.1 | 36,138.0 | 100,054.1 | 191,509.5 |
| Textile Exports/ Textile Output(%) | 9.3 | 8.9 | 9.7 | 13.2 | 20.5 | 28.5 |
| Textile Exports/ Industrial Exports(%) | 69.7 | 68.7 | 66.5 | 59.2 | 51.8 | 46.0 |

Source :SIS, Foreign Trade Statistics, 1983, pp.362-365.

It is seen from the table that the textile industry exports an increasing amount of its products. The increase in 1981 and 1982 is particularly high and when it is considered in conjunction with the decreasing share of the industry in terms of value added, it may be concluded that the adverse effects of the declining demand in the domestic market has been overcome by emphasis on exports.

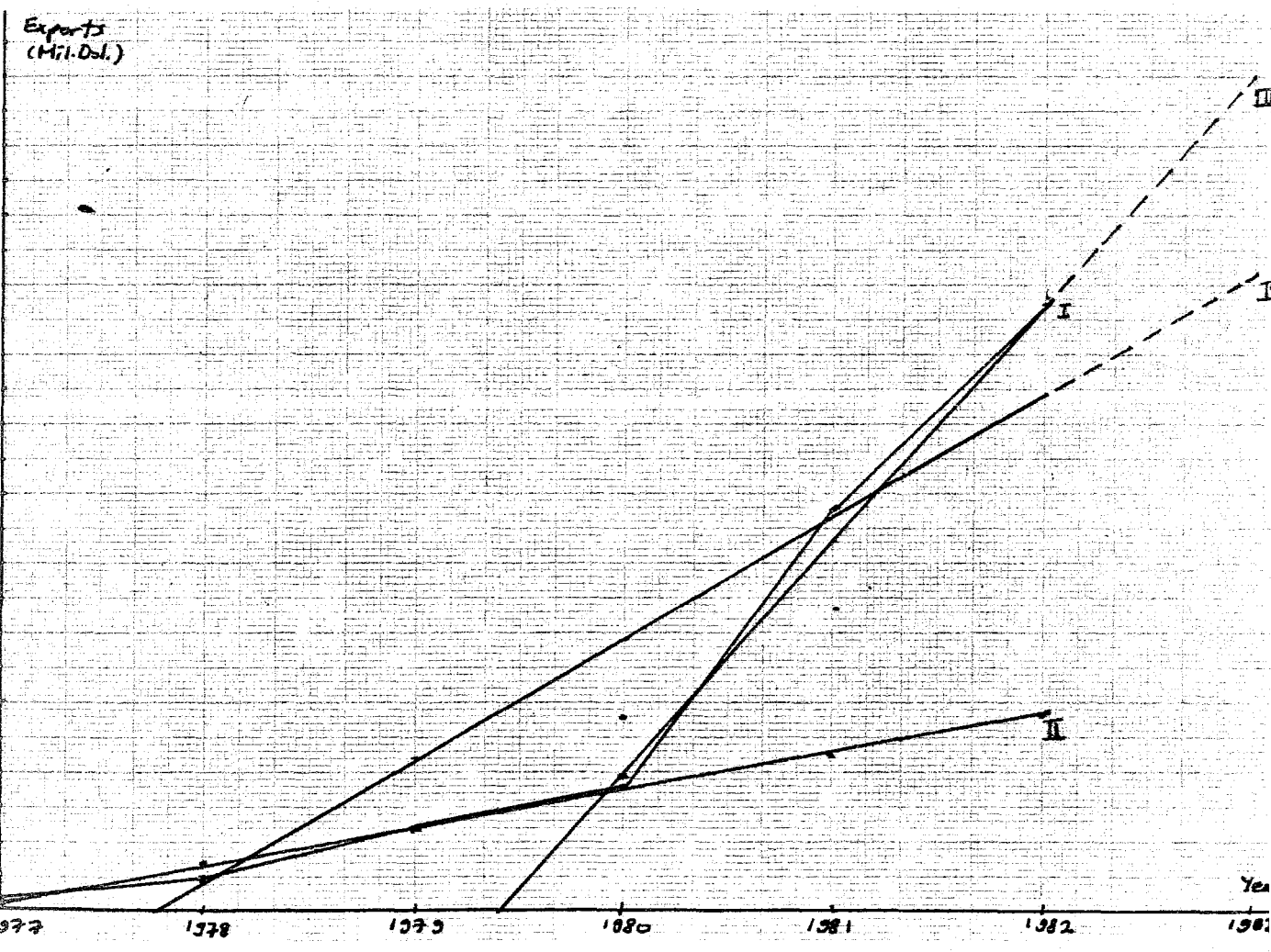
One striking tendency observed from the table is that the share of the textile industry in total industrial exports has shown a constant decline. This is because textile industry

is relatively more experienced compared to other industrial exporting sectors. Textile products are among the few industrial products Turkey has been able to export in considerable amounts until recently,i.e., industrial exports were composed of a few products,they were not diversified and textile products obtained a relatively large share in exports.After 1980 however industrial exports as well as other exports recorded a considerable increase due to the favorable effects of export promotion policy.Within this context,many other industrial products started to be exported and industrial exports were diversified to some extent.The textile exports also grew at a faster rate in this period,but further growth in this sector is limited with external demand and the quotas placed on the Turkish textile products by the EEC countries.The presence of higher growth of industrial exports may be attributed to the presence of unexploited market potential in this area,i.e.,the limits of the market has not yet been reached.Nevertheless the export performance of the textile industry after 1980 has registered a considerable improvement.This can be observed from the figure on the next page.

The line number I plots the actual export values of the textile industry and the IVth line shows the trend in exports over 1977-82.The considerable change in export growth after 1980 becomes more evident when trends before and after 1980 are analyzed. Line number II is based on the export performance over 1977-79 and the line number III represents the 1980-82 period.The large difference the slope of two trend lines points

to the significant change in the export level after 1980.

TREND LINES FOR EXPORT PERFORMANCE OF TEXTILE INDUSTRY:




Extention of the third line would predict a value of approximately 1,537 Million Dollars for 1983, very close to the realized export level which was 1,491 Million Dollars. The predicted value of 1984 textile exports on the other hand is found to be 1,884 Million Dollars.

An inquiry into the sources of the fast growth in textile

exports suggests that the export promotionary policies after 1980 has contributed significantly to the sector's export performance .In order to investigate the effect of various export promotionary measures on export growth, combining the effects of promotionary policies "the effective exchange rate" is constructed and a regression is performed with effective exchange rate to explain the growth of textile exports.

As mentioned before,the continuous depreciation of the TL. against the Dollar is expected to be one of the most important influences on the recent increase in the sector's export performance. The other important influences are tax rebates and subsidies in the form of export credits. The effects of other measures such as priority in reserving foreign currency before and after export,are difficult to quantify and could not be incorporated into the analysis.The effective exchange rate is calculated by adding the implicit exchange rate obtained by deviding the export value in T.L. to the Dollar value of exports, the tax rebate per Dollar exported and the subsidy created by export credits per Dollar. The subsidy is calculated by multiplying the value of export credits by the difference between interest rates for commercial credits.The relevant data and the results obtained are presented on the next page .

Net transfers are calculated by multiplying the difference between the nominal and effective exchange rates by the total exports of the sector.

An important advantage of using the effective exchange

rate as an explanatory variable in explaining the variation in total exports of the sector is to avoid multicollinearity between nominal exchange rate ,tax rebate and subsidies since effective exchange rate combines all three influences.

NET TRANSFERS TO THE TEXTILE INDUSTRY FOR EXPORTING :

| | Nominal Exchange Rate (TL.) | Implicit Exchange Rate (TL.) | Tax Rebates (Mil. TL.) | Subsidies (Mil. TL.) | Effective Exchange Rate (TL.) | Net Transfers (Mil. TL.) |
|---|---|---|---|---|---|---|
| 1977 | 17.77 | 17.67 | 2,009 | 95.5 | 24.34 | 2,104.6 |
| 1978 | 24.04 | 24.28 | 1,745 | 241.6 | 29.95 | 1,985.9 |
| 1979 | 30.13 | 36.62 | 1,797 | 676,6 | 42.50 | 2,477.4 |
| 1980 | 74.95 | 76.24 | 2,722 | 772.2 | 83.61 | 3,493.4 |
| 1981 | 103.00 | 113.04 | 9,682 | 4,513.1 | 129.08 | 14,197.1 |
| 1982 | 158.50 | 163.90 | 13,435 | 5,392.5 | 191.52 | 32,272.9 |

Source:1.TÜSİAD, The Turkish Economy,1983,p.181.

2.SIS,Foreign Trade Statistics,1983,pp.362-365.

3.SPO,Promotion of Investment and Exports,pp.107-112.

The regression performed with the effective exchange rate to explain the growth of textile exports over the period suggests that textile exports were closely correlated with effective exchange rate variation.

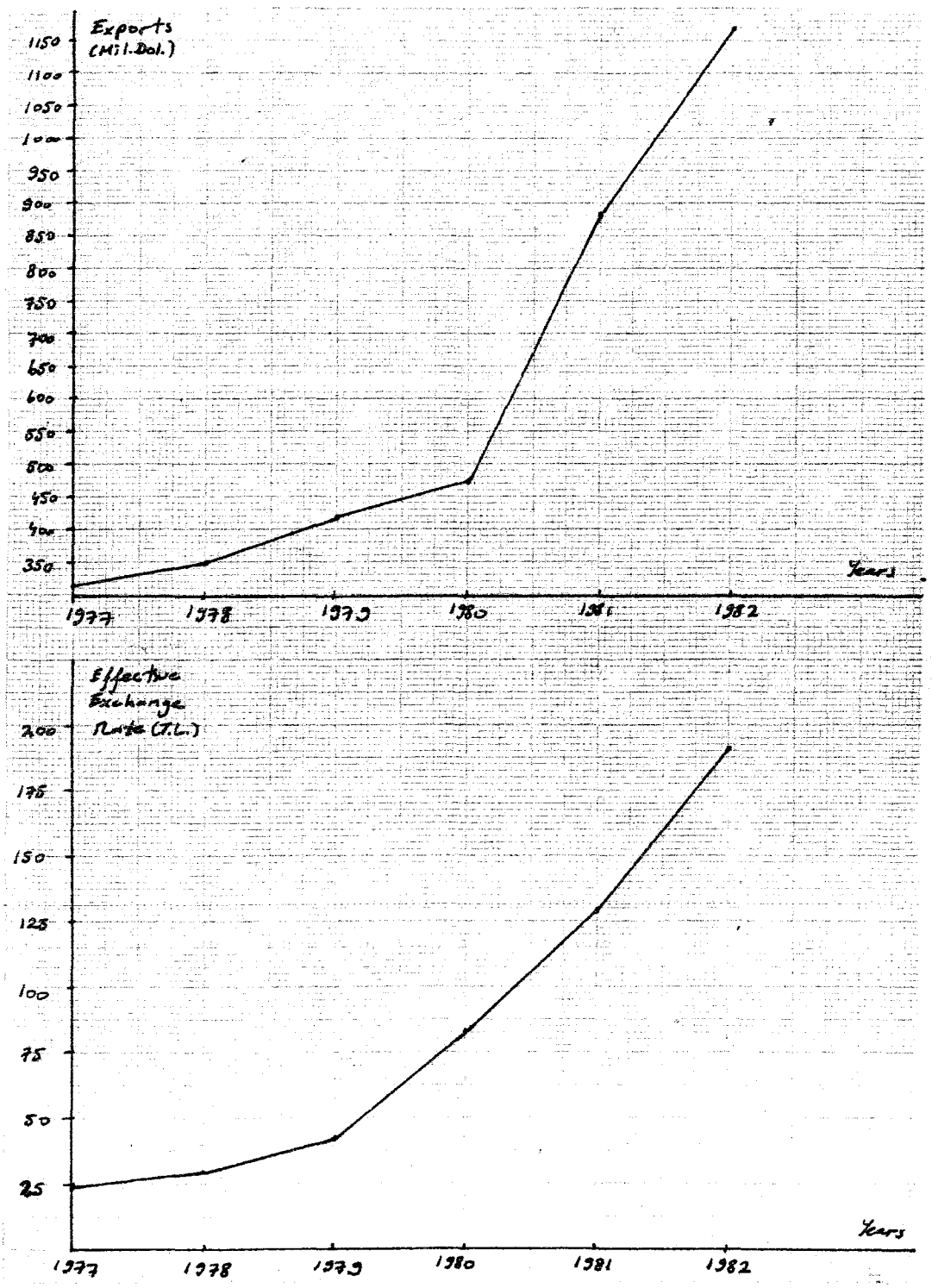
The regression results are presented below:

$$TX = 173{,}667 + 5{,}135\ EER_t \qquad R^2 = .96$$
$$(t=26) \qquad F_{1,4}=51$$

The high correlation between effective exchange rate and textile

exports can also be observed from the figure below :

THE RELATIONSHIP BETWEEN EFFECTIVE EXCHANGE RATE AND TEXTILE EXPORTS :



The fast decline in the value of TL. which has accelerated since 1978 ,has affected textile exports positively. This relationship has become even more obvious after 1980.

If the export performance and the production level is reconsidered,it may be concluded that the main source of the growth in value added during 1980-1982 is the increasing exports. The share of textile exports in total textile output has reached nearly 30 %,while this share was only 13 % in 1980.

4.2.Exports of Chemical Products Industry :

This sector has two main disadventages in exportation.One of these disadventages is rather structural and that is the capital intensive technology used in this sector.Capital is a scarce resource for all the developing countries and thus it is expensive compared to labor.Hence,the competitiveness is very small and decreasing price for the products of this sector because of mass production through high level of technology,makes exporting even harder in the international markets.Technique of production in this sector is developped in the industrialized countries.The developing countries are either behind the level of contemporary technology or import it.The situation in Turkey is similar and large amounts of imports are necessary for this sector which increases the costs and decreases the possibility of exporting even further.

Although the Chemical Products has certain disadventages with regard to exports,its export performance is promising.The relevant data about exports of chemical products industry are

presented on the following table:

EXPORTS OF CHEMICAL PRODUCTS INDUSTRY:

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Chem. Exp. (Mill. Dol.) | 33.4 | 23.6 | 25.6 | 87.2 | 123.1 | 172.9 |
| Chem. Exp. (Mill. T.L.) | 596.2 | 559.9 | 990.8 | 6,904.5 | 13,565.3 | 28,824.2 |
| Chem. Exp./ Chem. Output (%) | 2.2 | 1.3 | 1.3 | 4.8 | 5.6 | 6.5 |
| Chem. Exp./ Ind. Exp. (%) | 7.4 | 4.6 | 4.0 | 10.9 | 7.2 | 6.8 |

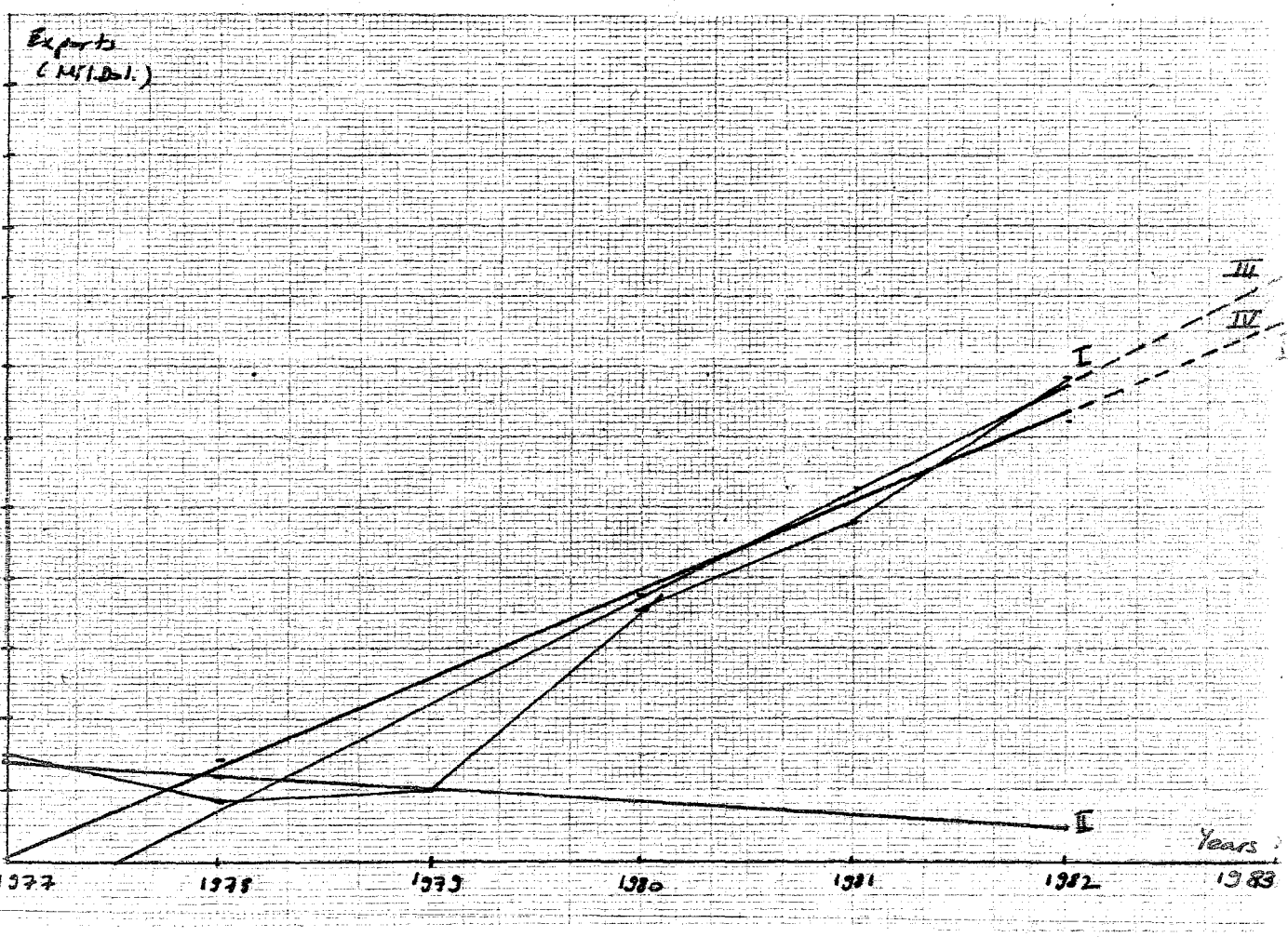
Source :SIS,Foreign Trade Statistics,1983,pp.362-365.

The export promotion policy that is pursued intensively starting from 1980 has affected this sector positively.The share of exports of chemical products industry in total industrial exports has increased to 10.9 % in 1980 from 4.0 % of 1979.After 1980 this share has declined in two consecutive years.This is mostly due to the fast growth of total industrial exports which couldn't be attained by the sector.Nevertheless the sector has shown a good performance until 1980 in exporting and this performance continued during 1981 and 1982.A good indicator of this is the chemical products industry exports-chemical products output ratio .This ratio has shown a sudden increase

from 1.3 % to 4.8 % in 1980 and this rise has continued in the following years.This shows the real export growth of the sector.

The export performance of the chemical products industry may also be observed from the figure below:

TREND LINES FOR EXPORT PERFORMANCE OF CHEMICAL PRODUCTS INDUSRY:




The line number I plots the actual chemical products industry export levels and IVth line shows the trend in exports over 1977-82.Line number II is the trend line for the period 1977-79 and since the exports of this sector declined during this period,the trend line has negative slope.As a result of export promotionary policies pursued after 1980,this trend

changed considerably.The trend line for 1980-82 period is signified by line III.The large difference between the slopes of line II and line III points to the significant changes in the export levels of the two periods.

1984 export level can be predicted by extending the trend line III, The predicted value is found to be 256.4 Million Dollars.

Sources of the export growth is suggested to be the export promotionary devices applied after 1980.In order to test this suggestion the relationship between the export performance and these devices is analyzed according to the procedures summarized in the previous section.In the table below,the relevant data used for the regression are presented:

NET TRANSFERS TO THE CHEMICAL PRODUCTS INDUSTRY FOR EXPORTING:

| | Nominal Exchange Rate (TL.) | Implicit Exchange Rate (TL.) | Tax Rebates (Mil. TL.) | Subsidies (Mil. TL.) | Effective Exchange Rate (TL.) | Net Transfers (Mil. TL.) |
|---|---|---|---|---|---|---|
| 1977 | 17.77 | 17.83 | 108 | 10.6 | 21.38 | 120,7 |
| 1978 | 24.04 | 23.69 | 87 | 16.1 | 28.05 | 94.8 |
| 1979 | 30.13 | 38.76 | 117 | 33.8 | 44.66 | 371.4 |
| 1980 | 74.95 | 79.18 | 223 | 144.9 | 83.40 | 736.8 |
| 1981 | 103.00 | 110.18 | 1,535 | 712.6 | 128.45 | 3,133.5 |
| 1982 | 158.50 | 116.63 | 1,801 | 808.9 | 192.13 | 5,817.5 |

Source:1.TÜSİAD,The Turkish Economy,1983,p.181.

2.SIS,Foreign Trade Statistics,1983,pp.362-365.

3.SPO,Promotion of Investment and Exports,pp.107-112.

The regression between exports and effective exchange rate gives a high fit.According to the results,both the regression as a total and the effective exchange rate as an explanatory variable are significant.

$CX=2,466+905EER_c$ $\quad R^2=.96$

$(t=11)$ $\quad F_{1,4}=51$

The results of regression suggests that exports of chemical products industry were closely correlated with effective exchange rate variation.

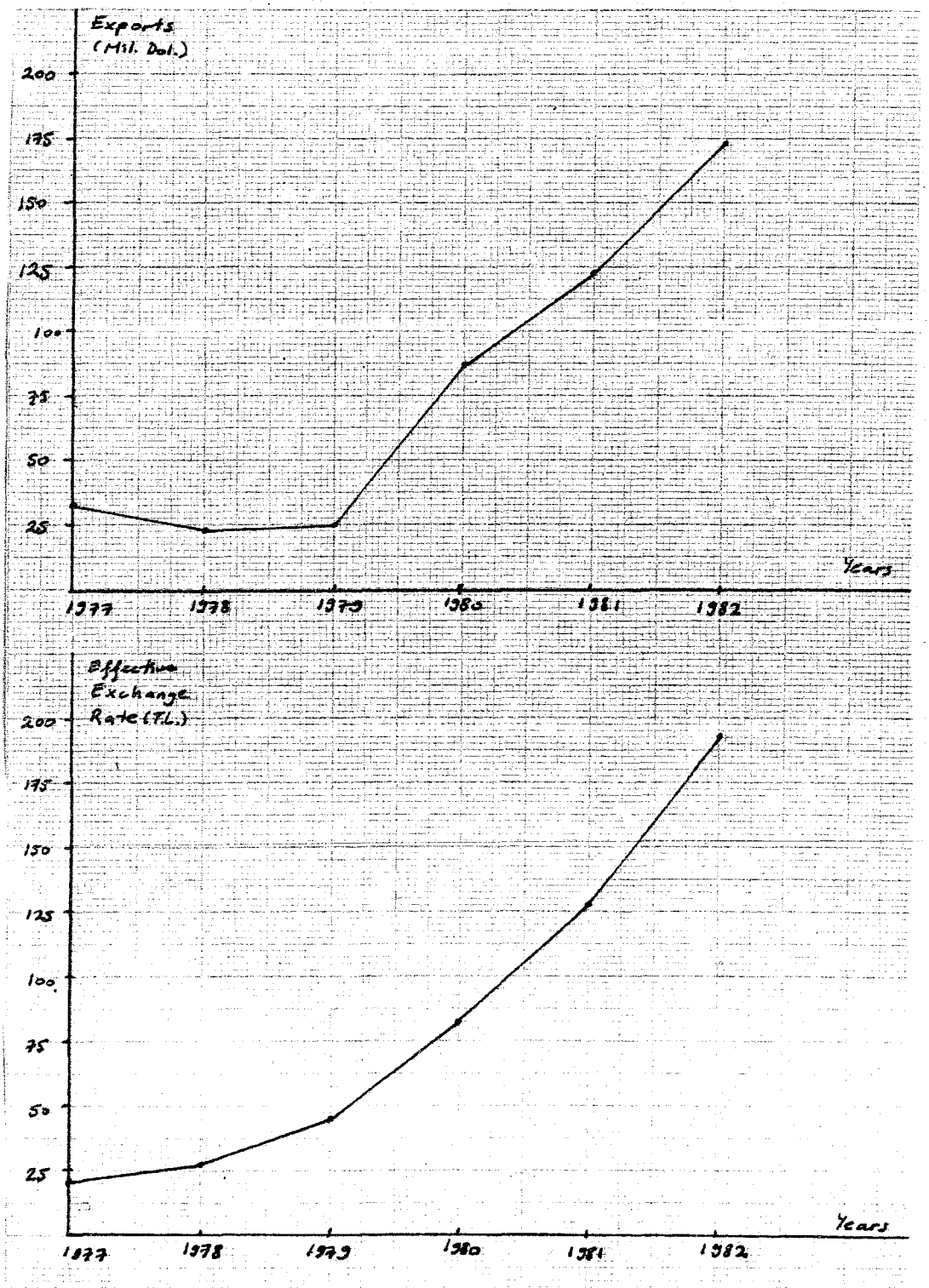
The correlation between the two variables can also be observed from the figure on the next page.

The exports of the chemical products industry increases parallel to the rise in effective exchange rate,except the decline in exports for 1977-79 while effective exchange rate increases for that period.The decline in exports of this sector in 1977-79 is probably due to the rise in imported inputs which also increases the costs ,thus export prices.Rise in export prices makes exporting harder.Starting from 1979 the effective exchange rate and exports of this sector show parallel tendencies .

The increase in the value added observed during 1980-82 is independent from the export growth of the sector,i.e., the value added of the sector has grown faster than the manufacturing industry average and the share of value added of this sector in the manufacturing industry value added has increased fastly,particularly after 1980.The share of exports

of chemical products industry in total industrial exports, on the other hand, has decreased after 1980, which implies that the export growth of this sector is slower than the other sectors. Thus, it may be concluded that the increase in value added is not necessarily based on the increase in exports.

THE RELATIONSHIP BETWEEN EFFECTIVE EXCHANGE RATE AND EXPORTS OF **CHEMICAL** PRODUCTS INDUSTRY:



4.3.Exports of Fabricated Metal Goods,Machinery and Equipment Industry:

This is one of the sectors which has recorded an unexpedly successful performance in terms of exports,particularly after 1980. The reason for the success of this sector in exportation is suggested to be the wide variety of the commodities produced within the content of this sector. Even if every commodity is exported in incremental amounts, the total exports of the sector increases significantly.If the stagnent domestic market is considered within this context , the fast growth of export can be understood. Most of the products of the sector are produced with labor intensive technologies thus the chances of exportation are quite high because of low prices , compared to international markets. The set of data about the export performance of the sector and its significance are presented in the table on the next page.

As it is observed from the table , exports of the sector have registered a considerably high improvement in terms of exports , particularly after 1980 - 82 period. The rate of growth of exports of the sector is over the average growth of the industrial exports after 1978 and thus the share of exports of the sector recorded a continuous increase in terms of the share in industrial exports , exept for the slight decrease in 1982.

EXPORTS OF FABRICATED METAL GOODS, MACHINERY AND EQUIPMENT INDUSTRY:

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Exports of the sector (Mil. Dol.) | 31.8 | 33.5 | 53.2 | 101.4 | 266.2 | 351.9 |
| Exports of the sector (Mil. TL.) | 561.8 | 815.4 | 2,070.7 | 7,780.7 | 30,190.9 | 63,569.9 |
| Exports of the sector/ Output of the sector (%) | 0.7 | 0.7 | 1.1 | 2.1 | 5.3 | 8.1 |
| Exports of the sector/ Indus. exports (%) | 7.0 | 6.6 | 8.4 | 12.7 | 15.6 | 15.4 |

Source: SIS, Foreign Trade Statistics, 1983, pp.362-365.

When the fast growth of the total industrial exports is considered, the increasing share of exports of the sector is a striking success.

The export performance of the sector can also be observed from the figure on the next page.

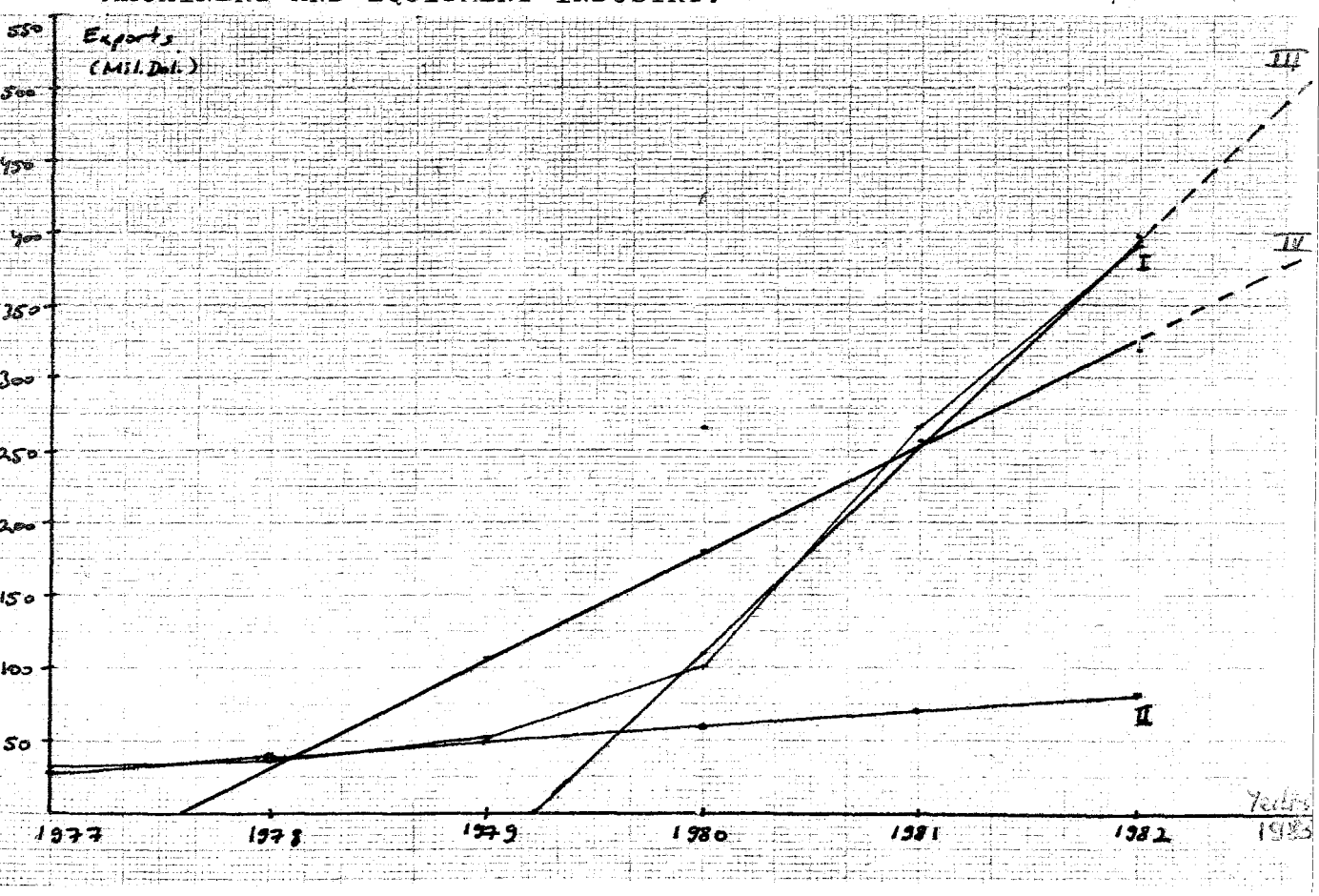
The line number I plots the actual exports of the sector, between 1977-82 and the IVth line shows the trend of exports in 1977-82 period. The line number II represents the trend for period 1977-79 and lastly the line number III shows the trend between 1980-82.

It is observed from the figure that this industry has two distinct periods in terms of the export performance. The

export growth which was comperatively slow during 1977-79 has increased sharply starting from 1980.The difference may also be observed comparing the two trend lines,namely II and III.The slope of trend representing 1980-82 period is considerably higher than that of trend representing 1977-79 period.The trend line including the entire period has a high slope too,since the sharp increase after 1980 increases the average growth rate of exports in the entire period.

The export value of 1984 can be estimated by extending the IIIrd trend line,since it gives closer values for 1983. The predicted value of exports is 689.0 Million Dollars for the sector in 1984.

TREND LINES FOR EXPORT PERFORMANCE OF FABRICATED METAL GOODS, MACHINERY AND EQUIPMENT INDUSTRY:



The sharp increase in exports of the sector, starting from 1980 shows that export promoticnary polices pursued during this period, has added much to the export performance of the sector. The relationship between the export performance and export promotion is analyzed according to the similar procedure followed in the previous sections. The relevant data are presented below:

NET TRANSFERS TO THE FABRICATED METAL GOODS, MACHİNERY AND EQUIPMENT INDUSTRY:

| | Nominal Exchange Rate (TL.) | Implicit Exchange Rate (TL.) | Tax Rebates (Mil. TL.) | Subsidies (Mil. TL.) | Effective Exchange Rate (TL.) | Net Transfers (Mil. TL.) |
|---|---|---|---|---|---|---|
| 1977 | 17.77 | 17.64 | 193.0 | 10.6 | 24.03 | 199.3 |
| 1978 | 24.04 | 24.37 | 97.0 | 16.1 | 27.75 | 124.2 |
| 1979 | 30.13 | 38.90 | 275.0 | 101.5 | 45.98 | 843.7 |
| 1980 | 74.25 | 76.70 | 631.0 | 193.2 | 84.82 | 1,001.2 |
| 1981 | 103.00 | 113.43 | 4,245.0 | 1,425.2 | 134.73 | 8,445.6 |
| 1982 | 158.50 | 162.17 | 5,259.0 | 1,887.4 | 193.81 | 13,841.0 |

Source: 1. TÜSİAD, The Turkish Economy, 1983, p.181.

2. SIS, Foreign Trade Statistics, 1983, pp.362-365.

3. SPO, Promotion of Investment and Exports, pp.107-112,

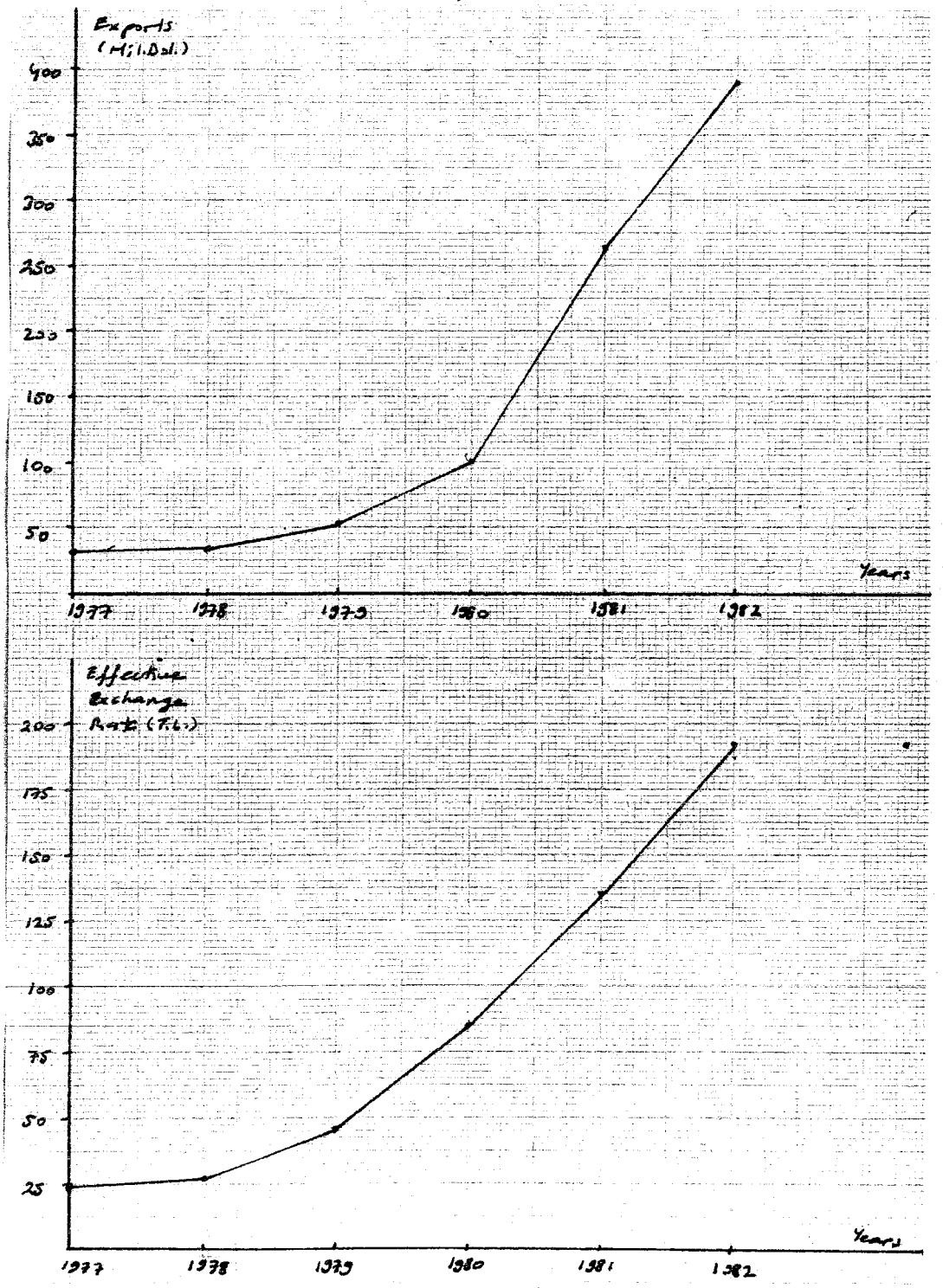
The regression between the exports of the sector and the effective exchange rate gives the following results:

$$EM=-39,362+2,180EER_m \qquad R^2=.98$$
$$(t=12) \qquad F_{1,4}=39$$

The regression results show that the relationship between exports and effective exchange rate is significant at all significance levels. According to the results, exports are highly correlated with the effective exchange rate.

The same relationship can also be observed from the following figure:

THE RELATIONSHIP BETWEEN EFFECTIVE EXCHANGE RATE AND EXPORTS OF FABRICATED METAL GOODS, MACHINERY AND EQUIPMENT:



When the changes in the value added of this sector is reconsiderid,it may be concluded that the exports constitute an important source of the growth of value added in this sector.The growth rate of value added is below the manufacturing industry average and the share of the sector declined particularly after 1980.The exports , on the other hand,has grown faster than total industrial exports and the share of the sector has nearly doubled in 1980-82 period. These two contradicting tendencies show that exporting is of vital importance for this sector as a source of demand, particularly for the period 1980-82.If the export increase in this sector was not so fast,the relative decrease in value added would obviously be faster during this period.

5.Relationship Between Exports and Value Added:

The major target of the economic policy pursued after 1980was to increase exports by giving subsidies through various ways and decreasing domestic demand.So a positive relationship between the value added growth and exports will show that the economic policy has reached its targets,i.e., it may be concluded that the source of growth of value added is the increase in exports.

In order to test the relevance of this relationship,for textile industry, a regression is performed between exports and value added.The results presented below support the conclusions reached before:

$VA_t$=45,203+1.1TX $R^2$=.92

The relationship is highly significant and shows that there is nearly one to one correspondence between value added and exports in textile industry.

The chemical products industry also gives parallel results to those obtained before and according to the regression the relationship between value added and exports in this sector is significant too.

$VA_c$=43,038+14CX $R^2$=.98

The hign correlation coefficient shows that the two variables are highly correlated.But the coefficient of chemical products industry exports show that the value added of the sector increases by 14 units while exports of the sector increases by 1 unit.This result suggests that the increase in value added is not necessarily based on the increase in exports

of the sector.This supports the conclusions reached previously.

The situation in the fabricated metal goods,machinery and equipment industry is similar to the textile industry and the relationship between the value added and exports is considerably high.The results are presented below:

$VA_m$=6,698+4MX $R^2$=.92

The regression is highly dependable and the coefficient of exports of the sector imply that the value added increases by4.2 units when exports increase by 1 unit.This result suggests that the relationship between the two is quite high although not as high as in the textile industry and this result supports the conclusions stated before.

Hence it may be concluded in general,that net transfers made to each sector to increase the exports ,create considerable export growth and this in turn feeds the increase in production.

An important point that should be mentioned here is the relationship between the functional income distribution and the economic policy within this context.One of the major targets of the economic policy after 1980 was to control the wage increases which ,in practice, meant to decrease the real wages due to the high inflation rate.When this is kept in mind it becomes easier to identify the real interest group who received these promotions.They are the capital owners.Thus,the income distribution or simply the profit shares has changed in favor of capital owners of exporting sectors .But the income distribution has worsened for all wage earners,whatever the sector they are working in.In manufacturing industry in general,the

share of profit in value added increased to 71 % from 64 % while the share of wages in value added decreased from 36 % to 29 % on the contrary. The similar tendencies for subsectors of manufacturing industry can be observed from table 2.

These results are meaningful within the context of the economic program. So that, increasing inequality in the income distribution is the only chance of success of the economic program and can be considered as its primary social cost.

6.Conclusion:

The manufacturing industry is of vital importance for an economy since it has the potential to transform the economic structure into the desired direction in terms of output and its composition.Thus.analysis of the developments in this sector between 1977-82 provides important clues abaut the economic crisis oefore 1980 and the effectiveness of the economic policies pursued.

The manufacturing industry contracted during the 1978-80 period with the adverce effects of the economic crisis and growth in the sector started to catch up again in 1981,partially due to export growth.The share of industrial exports in total exports thus increased considerably,particularly after 1980. The slight rise in the employment level in this period also points to the expantion in the sector.The increasing input-output ratio signals presence of cost-push inflation,mostly due to the rising import prices incurred by significant devaluations. The wage-value added ratio,on the other hand,has shown a sharp decrease,particularly after 1980 and this constituted the most important support for the economic program.

The textile industry,as stated before,is the most outward looking sector of the manufacturing industry and the labor intensive nature of the technology is an important comparative advantage of the sector for exportation.The export performance of this sector after 1980 was not as successful as that of entire manufacturing industry and the sector's share in total industrial exports declined during this period.This may be explained

by the fact , the share of textiles in total exports was already high initially.

Chemical products industry on the other hand can not be regarded as an outward looking industry in general. Export growth in this sector was below the manufacturing industry average after 1980 and the share of exports were very low in the sector's total output.

The export performance of the fabricated metal goods, machinery and equipment industry was more successful than expected and the sector's growth rate in exports was over the average of manufacturing industry. This could be mostly due to the variety of products within the contents of the sector.

The relationship between exports of each sector and net transfers provided by tax rebates, subsidized export credits and especially the exchange rate which was depriciated continuously over the period , was found to be highly significant in all sectors studied. The effective exchange rate and the nominal exchange rate have been the most important devices which promoted exports.

The relationship between value added and exports has been found highly significant for all sectors. This finding suggests that the growth of exports has been responsible for most of the growth in value added. The correlation appear to be highest in textile and lowest in fabricated metal goods, machinery and equipment industry.

The functional distribution of income has worsened between 1977-82, in the character of wage controls and the net transfers

made to the exporters.This result was expected and was necessary for the realization of the targets of the economic program from the viewpoint of its implementers and should constituted as its primary social cost.

TABLE:1 VALUE ADDED IN MANUFACTURING INDUSTRY(at constant 1968 price

Manufacturing Industry: D: State Ö : Private T : Total

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| D | 17,785,468 | 16,051,332 | 14,462,214 | 13,910,526 | 15,951,482 | 18,694,755 |
| Ö | 26,927,204 | 30,077,120 | 28,852,072 | 27,707,360 | 29,598,049 | 29,252,629 |
| T | 47,712,673 | 46,128,452 | 43,314,245 | 41,617,887 | 45,549,532 | 47,947,385 |
| Manufacture of Food,Beverage and Tobacco: | | | | | | |
| D | 6,108,507 | 4,877,125 | 3,859,872 | 4,284,523 | 5,569,288 | 6,208,908 |
| Ö | 3,069,066 | 3,583,839 | 2,971,682 | 3,608,510 | 3,982,731 | 4,040,440 |
| T | 9,177,573 | 8,460,964 | 6,831,553 | 7,893,033 | 9,552,019 | 10,249,348 |
| Textile,Clothing and Leather Industries: | | | | | | |
| D | 948,397 | 1,014,208 | 1,026,794 | 994,715 | 898,747 | 834,608 |
| Ö | 5,888,560 | 6,777,331 | 6,968,631 | 5,759,706 | 6,549,740 | 6,169,943 |
| T | 6,836,957 | 7,791,539 | 7,995,424 | 6,754,421 | 7,448,486 | 7,004,550 |
| Manufacture of Wood Products,Including Furniture: | | | | | | |
| D | 318,937 | 147,564 | 189,636 | 215,292 | 197,778 | 188,303 |
| Ö | 513,999 | 579,464 | 423,731 | 411,713 | 344,098 | 326,255 |
| T | 832,936 | 727,028 | 613,367 | 627,006 | 541,877 | 514,559 |
| Manufacture of Paper and Paper Products,Printing and Publishing: | | | | | | |
| D | 680,998 | 689,033 | 368,724 | 611,822 | 461,822 | 456,015 |
| Ö | 956,735 | 931,196 | 776,259 | 868,916 | 979,057 | 903,715 |
| T | 1,637,733 | 1,620,229 | 1,144,983 | 1,480,738 | 1,440,150 | 1,359,730 |
| Manufacture of Chemicals,Petroleum,Coal,Rubber And Plastic Products: | | | | | | |
| D | 3,405,913 | 3,305,016 | 3,325,586 | 2,867,917 | 4,216,950 | 7,301,961 |
| Ö | 4,754,778 | 5,309,826 | 5,996,861 | 5,522,534 | 5,463,491 | 5,241,091 |
| T | 8,160,691 | 8,614,842 | 9,222,447 | 8,390,452 | 9,680,442 | 12,543,051 |
| Manufacture of Non-Metallic Mineral Products: | | | | | | |
| D | 512,318 | 571,595 | 409,469 | 584,543 | 889,055 | 548,308 |
| Ö | 2,647,220 | 2,603,982 | 2,400,562 | 2,533,515 | 3,046,100 | 2,842,499 |
| T | 3,159,538 | 3,175,577 | 2,810,031 | 3,118,058 | 3,935,154 | 3,390,806 |

TABLE: 1 (CONTINUED)

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| **Basic Metal Industries:** | | | | | | |
| D | 4,101,204 | 3,655,632 | 3,625,734 | 2,910,856 | 2,431,650 | 1,560,944 |
| Ö | 1,938,972 | 1,940,043 | 2,038,982 | 1,732,733 | 1,713,248 | 2,123,533 |
| T | 6,040,177 | 5,595,675 | 5,664,717 | 4,643,589 | 4,144,897 | 3,684,477 |
| **Manufacture of Fabricated Metal Products, Machinery and Equipment; Transportation Vehicles; Scientific and Professional Measuring and Controlling Equipment:** | | | | | | |
| D | 1,680,674 | 1,769,041 | 1,756,401 | 1,442,691 | 1,269,432 | 1,595,709 |
| Ö | 7,012,552 | 8,202,073 | 7,146,247 | 7,156,727 | 7,399,992 | 7,427,870 |
| T | 8,693,226 | 9,971,114 | 8,902,649 | 8,599,418 | 8,669,424 | 9,023,579 |
| **Other Manufacturing Industries:** | | | | | | |
| D | 28,520 | 22,119 | - | 1,832 | 17,489 | - |
| Ö | 145,322 | 149,368 | 129,076 | 113,006 | 119,593 | 177,284 |
| T | 173,842 | 171,486 | 129,076 | 113,006 | 137,081 | 177,284 |

Source: SIS, Manufacturing Industry, 1981, 1982, p.5.

TABLE: 2 SHARES OF WAGES AND SALARIES IN VALUE ADDED IN MANUFACTURING INDUSTRY BY MAJOR COMMODITY GROUPS(%)

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Manufacturing Industry: | | | | | | |
| D | 40 | 46 | 48 | 47 | 41 | 30 |
| Ö | 34 | 33 | 31 | 28 | 28 | 28 |
| T | 36 | 37 | 37 | 35 | 33 | 29 |
| Manufacture of Food,Beverage and Tobacco: | | | | | | |
| D | 33 | 49 | 53 | 46 | 36 | 26 |
| Ö | 34 | 34 | 33 | 27 | 24 | 25 |
| T | 33 | 43 | 44 | 37 | 32 | 26 |
| Textile,Clothing and Leather Industries: | | | | | | |
| D | 77 | 60 | 58 | 57 | 71 | 67 |
| Ö | 36 | 33 | 30 | 34 | 31 | 32 |
| T | 42 | 36 | 33 | 37 | 36 | 37 |
| Manufacture of Wood Products,Including Furniture: | | | | | | |
| D | 41 | 72 | 56 | 38 | 48 | 45 |
| Ö | 28 | 28 | 34 | 33 | 34 | 32 |
| T | 33 | 37 | 40 | 34 | 39 | 37 |
| Manufacture of Paper and Paper Products,Printing and Publishing: | | | | | | |
| D | 67 | 55 | 125 | 63 | 70 | 74 |
| Ö | 28 | 33 | 30 | 27 | 25 | 29 |
| T | 44 | 43 | 60 | 42 | 39 | 44 |
| Manufacture of Chemicals,Petroleum,Coal,Rubber and Plastic Products: | | | | | | |
| D | 22 | 28 | 27 | 24 | 16 | 08 |
| Ö | 32 | 26 | 25 | 21 | 21 | 22 |
| T | 28 | 27 | 26 | 22 | 19 | 14 |
| Manufacture of Non-Metallic Mineral Products: | | | | | | |
| D | 59 | 47 | 73 | 43 | 24 | 39 |
| Ö | 35 | 36 | 37 | 26 | 26 | 27 |
| T | 38 | 38 | 43 | 29 | 26 | 29 |

TABLE: 2 (CONTINUED)

| | | | | | | |
|---|---|---|---|---|---|---|
| Basic Metal Industries: | | | | | | |
| D | 36 | 39 | 34 | 51 | 64 | 82 |
| Ö | 27 | 32 | 27 | 29 | 29 | 24 |
| T | 33 | 36 | 31 | 43 | 50 | 48 |
| Manufacture of Fabricated Metal Products, Machinery and Equipment; Transportation Vehicles; Scientific and Professional Measuring and Controlling Equipment: | | | | | | |
| D | 72 | 71 | 73 | 75 | 80 | 54 |
| Ö | 37 | 35 | 37 | 31 | 34 | 33 |
| T | 44 | 42 | 44 | 39 | 41 | 36 |
| Other Manufacturing Industries: | | | | | | |
| D | 80 | 91 | - | -628 | 70 | - |
| Ö | 40 | 41 | 40 | 36 | 41 | 27 |
| T | 47 | 47 | 40 | 47 | 45 | 27 |

Source: SIS, Manufacturing Industry, 1981, 1982, p.7.

TABLE:3 INPUT-OUTPUT RATIOS IN MANUFACTURING INDUSTRY BY MAJOR COMMODITY GROUPS (%)

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Manufacturing Industry: | | | | | | |
| D | 62 | 59 | 60 | 68 | 69 | 66 |
| Ö | 65 | 62 | 63 | 63 | 66 | 66 |
| T | 64 | 61 | 62 | 65 | 67 | 66 |
| Manufacture of Food,Beverage and Tobacco: | | | | | | |
| D | 65 | 62 | 65 | 59 | 58 | 54 |
| Ö | 78 | 73 | 75 | 73 | 75 | 74 |
| T | 71 | 68 | 70 | 67 | 67 | 65 |
| Textile,Clothing and Leather Industries: | | | | | | |
| D | 60 | 53 | 54 | 47 | 60 | 60 |
| Ö | 62 | 59 | 57 | 59 | 62 | 64 |
| T | 62 | 58 | 57 | 57 | 61 | 63 |
| Manufacture of Wood Products,Including Furniture: | | | | | | |
| D | 51 | 72 | 60 | 53 | 63 | 62 |
| Ö | 58 | 58 | 64 | 61 | 67 | 69 |
| T | 56 | 62 | 63 | 59 | 65 | 67 |
| Manufacture of Paper and Paper Products,Printing and Publishing: | | | | | | |
| D | 62 | 53 | 75 | 63 | 74 | 73 |
| Ö | 52 | 59 | 59 | 57 | 63 | 65 |
| T | 57 | 57 | 66 | 60 | 67 | 68 |
| Manufacture of Chemicals,Petroleum,Coal,Rubber and Plastic Products | | | | | | |
| D | 75 | 72 | 73 | 85 | 82 | 74 |
| Ö | 64 | 60 | 59 | 64 | 67 | 68 |
| T | 69 | 65 | 65 | 75 | 75 | 72 |
| Manufacture of Non-Metallic Mineral Products: | | | | | | |
| D | 54 | 49 | 60 | 57 | 53 | 63 |
| Ö | 46 | 47 | 48 | 51 | 52 | 54 |
| T | 48 | 48 | 50 | 52 | 52 | 55 |

TABLE: 3 (CONTINUED)

| | | | | | | |
|---|---|---|---|---|---|---|
| Basic Metal Industries: | | | | | | |
| D | 36 | 34 | 35 | 54 | 56 | 70 |
| Ö | 70 | 69 | 68 | 73 | 76 | 74 |
| T | 53 | 53 | 53 | 64 | 67 | 72 |
| Manufacture of Fabricated Metal Products, Machinery and Equipment; Transportation Vehicles; Scientific and Professional Measuring and Controlling Equipment: | | | | | | |
| D | 55 | 52 | 39 | 47 | 55 | 49 |
| Ö | 63 | 60 | 65 | 61 | 63 | 61 |
| T | 62 | 58 | 61 | 59 | 626 | 60 |
| Other Manufacturing Industry: | | | | | | |
| D | 41 | 49 | - | 138 | 18 | - |
| Ö | 52 | 53 | 57 | 56 | 68 | 55 |
| T | 51 | 53 | 57 | 57 | 66 | 55 |

Source: State Institute of Statistics, Manufacturing Industry, 1981.1982, p.7,

TABLE: 4 PERCENTAGE DISTRIBUTION OF VALUE ADDED IN MANUFACTURING INDUSTRY BY MAJOR COMMODITY GROUPS

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Manufacturing Industry: | | | | | | |
| D | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| O | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| T | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Manufacture of Food, Beverage and Tobacco: | | | | | | |
| D | 34.35 | 30.39 | 26.70 | 30.80 | 34.91 | 33.21 |
| O | 11.40 | 11.91 | 10.30 | 13.02 | 13,46 | 13.80 |
| T | 20.53 | 18.34 | 15.77 | 18.97 | 20.97 | 21.38 |
| Textile, Clothing and Leather Industries: | | | | | | |
| D | 5.33 | 6.32 | 7.10 | 7.15 | 5.63 | 4.46 |
| O | 21.87 | 22.53 | 24.15 | 20.79 | 22.13 | 21.09 |
| T | 15.29 | 16.89 | 18.46 | 16.23 | 16.35 | 14.61 |
| Manufacture of Wood Products, Including Furniture: | | | | | | |
| D | 1.79 | 0.92 | 1.31 | 1.55 | 1.24 | 1.01 |
| O | 1.91 | 1.93 | 1.47 | 1.49 | 1.16 | 1.12 |
| T | 1.86 | 1.58 | 1.40 | 1.51 | 1.19 | 1.07 |
| Manufacture of Paper and Paper Products, Printing and Publishing: | | | | | | |
| D | 3.83 | 4.29 | 2.55 | 4.40 | 2.90 | 2.44 |
| O | 3.55 | 3.10 | 2.69 | 3.14 | 3.31 | 3.09 |
| T | 3.66 | 3.51 | 2.65 | 3.56 | 3.17 | 2.84 |
| Manufacture of Chemicals, Petroleum, Coal, Rubber and Plastic Products: | | | | | | |
| D | 19.15 | 20.59 | 22.30 | 20.62 | 26.44 | 39.06 |
| O | 17.66 | 17.65 | 20.78 | 19.93 | 18.46 | 17.92 |
| T | 18.25 | 18.68 | 21.29 | 20.16 | 21.25 | 26.16 |
| Manufacture of Non-Metallic Mineral Products: | | | | | | |
| D | 2.88 | 3.56 | 2.83 | 4.20 | 5.57 | 2.93 |
| O | 9.83 | 8.66 | 8.32 | 9.14 | 10.29 | 9.72 |
| T | 7.07 | 6.88 | 6.49 | 7.48 | 8.64 | 7.07 |

TABLE: 4 (CONTINUED)

| | | | | | | |
|---|---|---|---|---|---|---|
| Basic Metal Industries: | | | | | | |
| D | 23.06 | 22.77 | 25.07 | 20.92 | 15.24 | 8.35 |
| Ö | 7.20 | 6.45 | 7.07 | 6.25 | 5.79 | 7.26 |
| T | 13.51 | 12.13 | 13.08 | 11.16 | 9.10 | 7.68 |
| Manufacture of Fabricated Metal Products,Machinery and Equipment; Transportation Vehicles;Scientific and Professional Measuring and Controlling Equipment: | | | | | | |
| D | 9.45 | 11.02 | 12.14 | 10.37 | 7.96 | 8.54 |
| Ö | 26.04 | 27.27 | 24.77 | 25.83 | 25.00 | 25.39 |
| T | 19.44 | 21.62 | 20.56 | 20.66 | 19.03 | 18.82 |
| Other Manufacturing Industry: | | | | | | |
| D | 0.16 | 0.14 | - | 0.01 | 0.11 | - |
| Ö | 0.54 | 0.50 | 0.45 | 0.41 | 0.40 | 0.61 |
| T | 0.39 | 0.37 | 0.30 | 0.27 | 0.30 | 0.37 |

Source:State Institute of Statistics,Manufacturing Industry,1981,1982, p.11.

TABLE: 5 EXPORTS OF INDUSTRIAL PRODUCTS BY MAJOR COMMODITY GROUPS

A:1000 T.L. B:1000 $

Industrial Products:

| | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| A | 8,060,287 | 12,404,057 | 23,270,952 | 61,395,562 | 201,777,510 | 413,696,090 |
| B | 452,747 | 510,182 | 633,958 | 800,797 | 1,707,530 | 2,540,343 |
| Textile,Clothing and Leather Industries: | | | | | | |
| A | 5,576,761 | 8,504,846 | 15,428,134 | 36,138,098 | 100,054,140 | 191,509,510 |
| B | 315,525 | 350,254 | 421,325 | 474,002 | 885,107 | 1,168,462 |
| Wood Products,Including Furniture: | | | | | | |
| A | 27,427 | 40,689 | 118,198 | 660,704 | 4,683,040 | 14,337,002 |
| B | 1,563 | 1,667 | 3,219 | 8,290 | 39,874 | 89,509 |
| Paper and Paper Products; | | | | | | |
| A | 11,213 | 8,599 | 109,477 | 143,278 | 1,703,022 | 2,778,140 |
| B | 629 | 349 | 2,604 | 1,954 | 14,474 | 17,264 |
| Chemicals,Rubber and Plastic Products: | | | | | | |
| A | 596,172 | 559,937 | 990,769 | 6,904,525 | 13.565.338 | 28,824,236 |
| B | 33,435 | 23,639 | 25,561 | 87,196 | 123,123 | 172,986 |
| Non-Metallic Mineral Products: | | | | | | |
| A | 644,831 | 1,722,955 | 2,788,726 | 5,708,929 | 34,406,874 | 48,410,916 |
| B | 36,512 | 70,051 | 81,152 | 73,441 | 229,047 | 309,077 |
| Basic Metal Industries: | | | | | | |
| A | 546,313 | 613,836 | 1,565,626 | 3,278,217 | 10,827,501 | 57,253,147 |
| B | 27,855 | 25,096 | 41,359 | 44,251 | 94,618 | 347,591 |
| Fabricated Metal Products,Machinery and Equipment;Transportation Vehicles; | | | | | | |
| Scientific and Professional Measuring and Controlling Equipment: | | | | | | |
| A | 561,750 | 815,394 | 2,070,703 | 7,780,678 | 30,190,856 | 63,569,937 |
| B | 31,839 | 33,465 | 53,229 | 101,443 | 266,170 | 391,984 |
| Other Industrial Products: | | | | | | |
| A | 95,820 | 137,801 | 199,319 | 795,907 | 6,346,737 | 7,013,198 |
| B | 5,389 | 5,661 | 5,509 | 10,220 | 55,117 | 43,470 |

TABLE: 6 EXPORTS OF INDUSTRIAL PRODUCTS BY MAJOR COMMODITY GROUPS (PERCENTAGE SHARES)

| 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|
| Industrial Products: | | | | | |
| 100 | 100 | 100 | 100 | 100 | 100 (*) |
| Textile, Clothing and Leather Industries: | | | | | |
| .69 | .69 | .66 | .59 | .50 | .46 |
| Wood Products, Including Furniture: | | | | | |
| .003 | .003 | .005 | .01 | .02 | .04 |
| Paper and Paper Products: | | | | | |
| .001 | .001 | .005 | .002 | .008 | .007 |
| Chemicals, Rubber and Plastic Products: | | | | | |
| .07 | .05 | .04 | .11 | .10 | .07 |
| Non-Metallic Mineral Products: | | | | | |
| .08 | .14 | .12 | .09 | .17 | .12 |
| Basic Metal Industries: | | | | | |
| .07 | .05 | .07 | .05 | .05 | .14 |
| Fabricated Metal Products, Machinery and Equipment; Transportation Vehicles; Scientific and Professional Measuring and Controlling Equipment: | | | | | |
| .07 | .07 | .09 | .13 | .15 | .15 |
| Other Industrial Products: | | | | | |
| .01 | .01 | .01 | .01 | .03 | .01 |

(*) Approximetely equal to 1, because of rounding the results of devisions.

Source: DIE, Foreign Trade Statistics, 1982, p. 362-365.

APPENDIX:

Subsectors of Manufacturing Industry:(According to the classification of Manufacturing Industry Surveys ofSIS.)

1.Manufacture of food beverage and tobacco,

2.Textile,Clothing and Leather Industries:

2.1.Spinning,weaving and finishing textiles,

2.2.Manufacture of made-up textile goods,except wearing apparel,

2.3.Knitting mills,

2.4.Manufacture of carpets and rugs,

2.5.Cordage,rope and twine industries,

2.6.Manufacture of textiles,not elsewhere classified,

2.7.Manufacture of fur and leather products,

2.8.Manufacture of made-up wearing apparel except fur and leather,

2.9.Tanneries and leather finishing,

2.10.Fur dressing and clyeing industries,

2.11.Manufacture of products of leather and leather substitutes except footwear and wearing apparel,

2.12.Manufacture of all kinds of footwear except vulcanized or mouled rubber of plastic footwear,

3.Manufacture of Wood Products,Includung Furniture,

4.Manufacture of Paper and Paper Products,Printing and Publishing,

5.Manufacture of Chemicals,Petroleum,Coal,Rubber and Plastic Products:

5.1.Manufacture of basic industrial chemicals except fertilizers,

5.2.Manufacture of fertilizers and pecticides,

5.3.Manufacture of synthetic resins,plastic materials and man-made fibres except glass,

5.4.Manufacture of paints,varnishes and lacquers,

5.5.Manufacture of drugs and medicines,

5.6.Manufacture of soap and cleaning preparations,parfumes,cosmetics,

and other toilet preparations,

5.7.Manufacture of Chemical products not elsewhere classified,

5.8.Petroleum rafineries,

5.9.Manufacture of asphalt paving and roofing materials,

5.10.Manufacture of coke and briquettes,

5.11.Compounded and blended lubricating oils and greases,

5.12.Liquid petroleum,gas tubing,

5.13.Tyre and tube industries,

5.14.Manufacture of rubber products not elsewhere classified,

5.15.Manufacture of plastic products not elsewhere classified,

6.Manufacture of Non-Metallic Mineral Products,

7.Basic Metal Industries,

8.Manufacture of Fabricated Metal Products,Machinery and Equipment; Transportation Vehicles;Scientific and Professional Measuring and Controlling Equipment,

8.1.Manufacture of cutlery,hand tools and general hardware,

8.2.Manufacture of furniture and fixtures primarily of metal,

8.3.Manufacture of structural metal products,

8.4.Manufacture of fabricated metal products not elsewhere classified

8.5.Manufacture of engines and tubines,

8.6.Manufacture of agricultural machinery and equipment and repairing

8.7.Manufacture of metal and wood working machinery and repairing,

8.8.Manufacture of special industrial machinery and equipment and repairing,

8.9.Manufacture of office,computing and accounting machinery and repairing,

8.10.Manufacturing of machinery and equipment except electrical not elsewhere classified,

8.11.Manufacture of electrical industrial machinery and apparatus,

8.12.Manufacture of radio,television and communication equipment and apparatus,

8.13.Manufacture of electrical appliances and housewares,

8.14.Manufacture of electrical apparatus and supplies not elsewhere classified,

8.15.Ship building and repairing,

8.16.Manufacture of railroad equipment and repairing,

8.17.Manufacture,assembly of motor vehicles and repairing,

8.18.Manufacture of motorcycles,and bicycles and repairing,

8.19.Manufacture of aircraft and repairing,

8.20.Manufacture of transport equipment not elsewhere classified,

8.21.Manufacture of professional and scientific and measuring and controlling equipment not elsewhere classified,

8.22.Manufacture of photographic and optical goods,

8.23.Manufacture of watches and clocks,

8.24.Others,

9.Other Manufacturing Industry.

FOOTNOTES:

(1):TÜSİAD, The Turkish Economy, 1983 (Istanbul: TÜSİAD, 1983), p.6

(2):TÜSİAD, p.36.

(3):Halil Seyidoglu, Türkiye'de Sanayileşme ve Dış Ticaret Politikası (Ankara: Turhan Kitabevi, 1982), p.69.

(4):Seyidoğlu, p.63.

(5):Ibid.

(6):DİE, İmalat Sanayi Anketi, Geçici Sonuçlar, 1981,82 (Ankara: DİE Matbaası, 1982, 1983), p.2.

(7):DİE, p.5.

(8):Ibid.

(9):Ibid.

(10):Seyidoğlu, p.120.

(11):DPT, "Yatırımların ve İhracatın Teşviki." V.Beş Yıllık Kalkınma Planı Özel İhtisas Komisyonu Raporu (Ankara: Ajans Türk Matbaacılık Sanayi, 1982), p.134.

(12):DPT, p.141.

(13):DPT, p.136.

(14):Ibid.

(15):DPT, p.145.

(16):Ibid.

(17):Ibid.

(18):MPM, Türkiye'nin Sanayi Ürünleri Dışsatımındaki Artışın Çözümlenmesi; Boyutları, Dayanakları, Geleceği (Ankara: MPM Yayınları, 1983), p.4.

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