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Report No. 316a-TU

# The Economic Development of Turkey

(In Five Volumes)

## Volume III: Major Social and Economic Sectors

**April 25, 1974**

Country Programs Department II
Europe, Middle East and North Africa Region

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## CURRENCY EQUIVALENTS

### Prior to August 9, 1970

| | | |
|---|---|---|
| US $1.00 | = | TL 9.00 |
| TL 1.00 | = | US $0.11 |

### August 9, 1970 to December 22, 1971

| | | |
|---|---|---|
| US $1.00 | = | TL 15.00 |
| TL 1.00 | = | US $0.067 |

### After December 22, 1971

| | | |
|---|---|---|
| US $1.00 | = | TL 14.00 |
| TL 1.00 | = | US $0.07 |

VOLUME III

MAJOR SOCIAL AND ECONOMIC SECTORS

Table of Contents


| | | Page No. |
|---|---|---|
| Chapt. 8 | POPULATION, EMPLOYMENT AND EDUCATION ..... | 1 |
| | Population ..... | 1 |
| | Labor Supply and Demand ..... | 7 |
| | Emigration ..... | 11 |
| | Education ..... | 14 |
| Chapt. 9 | REGIONAL DEVELOPMENT AND INCOME DISTRIBUTION ..... | 19 |
| | Past Government Policies ..... | 20 |
| | Present Situation and Problems ..... | 22 |
| | Third Plan Proposals ..... | 24 |
| | Urban Development ..... | 26 |
| | Land Policies, Controls and Housing ..... | 28 |
| | Municipal Services and Financing ..... | 29 |
| | Pollution ..... | 30 |
| | Prospects ..... | 30 |
| | The Distribution of Income ..... | 31 |
| | Annex 1 - Main Institutions for Regional Development. | |
| Chapt. 10 | AGRICULTURE ..... | 34 |
| | Changes in Agricultural Production ..... | 34 |
| | Performance by Key Commodity Categories ..... | 38 |
| | The Use of Inputs, Services and Investment ..... | 43 |
| | The Impact on Labor ..... | 46 |
| | Trade and Export Projections ..... | 48 |
| | Agricultural Policies ..... | 52 |
| | Irrigation ..... | 52 |
| | Price Policy ..... | 54 |
| | Effects of the Price Policies and Their Implications. | 61 |
| | Credit ..... | 62 |
| | Agrarian Reform ..... | 64 |
| | Current Land Reform Status ..... | 66 |
| Chapt. 11 | INDUSTRY, MINING, POWER ..... | 68 |
| | Industry ..... | 68 |
| | Mining ..... | 85 |
| | Energy and Electric Power ..... | 88 |
| | Annex 1 - Industrial Protection, Industrial Export and and Investment Incentives in Turkey ..... | |
| | Annex 2 - Iron and Steel ..... | 1 of Annex 2 |
| | Chemicals, Petrochemicals, and Fertilizers. | 2 of Annex 2 |
| | Forest Industries ..... | 5 of Annex 2 |
| | Motor Vehicles and Tractors ..... | 7 of Annex 2 |

Table of Contents (continued)


| | | | Page No. |
|---|---|---|---|
| Chapt. | 12 | TRANSPORT ..... | 94 |
| | | The Transport System ..... | 94 |
| | | Assessment of the System ..... | 96 |
| | | Planned Targets and Performance ..... | 97 |
| | | Organization and Management ..... | 100 |
| | | Policies and Implementation ..... | 102 |
| | | The Third Five Year Plan and Prospects ..... | 104 |
| | | Long Term Prospects ..... | 108 |
| Chapt. | 13 | TOURISM ..... | 110 |
| | | Development of Tourism 1950-1972 ..... | 110 |
| | | Incentive and Credit to the Tourism Sector .. | 111 |
| | | Third Plan Targets and Prospects ..... | 112 |

VOLUME III

Chapter 8

# POPULATION, EMPLOYMENT AND EDUCATION

## Introduction

8.1 In the post-war period Turkey has had a very high natural rate of growth of population: the population has nearly doubled in the last 25 years: it was 18.8 million in 1945, and 35.7 million in 1970, and the 1970 figure excludes the 440,000 or more Turks working abroad. The population was largely rural: less than 15% lived in cities of over 20,000 in 1950; but the ratio rose to 28% by 1970. The first two Turkish plans failed to increase productive employment fast enough to absorb the additions to the rapidly growing labor force, or to reduce appreciably underemployment in agriculture. The rate of population growth is likely to taper off in the future, partly in association with rapid industrialization and urbanization, but the labor force will increase at rates of around 2.5% or so in the next 15 years, as a result of rapid population growth in the past. In recent years, the demand for labor in Western Europe has siphoned off a considerable part of the increase in the Turkish labor force, and emigration is likely to continue, though perhaps at a lower rate. However, unemployment is likely to become a growing problem in the next 10 or 15 years, especially since the Third plan continues to emphasize industrialization and growth, rather than employment. While unskilled labor will be in surplus, shortages of certain modern industrial skills have emerged, so that educational reform has high economic as well as social priority.

## Population

8.2 Turkey's population has been increasing rapidly since 1950; the average annual rate of increase reached a peak of 2.9% in the intercensal period 1955-60, but fell to 2.5% in 1960-65 and 2.6% in 1965-70 (Table 1.1). Since Turkish censuses exclude Turks living abroad, the heavy emigration during this decade results in understating the rate of growth.

8.3 The crude birth rate has been declining from 1955 but the death rate has declined faster. Thus, Turkey still exhibits the typical demographic features of developing countries: a high birth rate (39.6 per 1000 in 1966-67), a reduced but still relatively high death rate (14.6 per 1000 in 1966-67 as compared to a little over 10 per 1000 in Western Europe), and a high infant mortality rate (153 per 1000). The expectation of life has risen from 48 years in 1960 to 56 in 1970. Typically, again, the 0-14 age group formed 41.6% of the total population in 1970, and the working age group (15-65) 54.2%, so that the dependency ratio is high.

8.4 The SPO expects the rate of growth of population to rise to 2.72% per annum by 1980-85, and to decline gradually thereafter to 2.01% in 1990-95. 1/ At these rates Turkey's population will be nearly 66 million in 1995. Projections of population growth must take into account projected fertility and death rates, the age and sex compositions of the population and the interrelations between these factors; in Turkey's case the most controversial projection relates to the crude birth rate. For the Plan projection to be fulfilled, the crude birth rate must decline from its 1970 level of 39.6 per 1000, to 37.5 per 1000 during 1970-75. A particularly sharp fall is projected after 1985 (see Chart 10), and by 1995 the birth rate is expected to fall to 26.7 per 1000.

8.5 The basic assumption underlying this projection is that Turkey has entered the phase of demographic transition through which nearly all industrialization (and hence in female labor force participation) and in education, particularly in female literacy, will lead to a fall in the fertility rate from the present level characteristic of an underdeveloped country to rates approaching those of industrialized nations.

8.6 There are in fact very sharp differences at present in fertility rates between the urban and rural areas (43.9 per 1000 in rural areas as against 31.4 per 1000 in the urban areas), and between the western and the less developed eastern regions. With the development of the latter and with increasing urbanization, fertility rates can be expected to fall. Also, fertility is inversely correlated with literacy: since the education of female children has been increasing, the cohort of females of reproductive age will be progressively more educated. However, the rate of decline will also depend on the type of urbanization and the kinds of employment opportunities offered to new migrants: studies of differential fertility in Turkey have shown that the fertility of village-born women hardly changes when they move to the cities, unless they also experience a change in their socio-economic status. 2/

8.7 The distribution, import and manufacture of contraceptives became legal in 1965, and although both the First and Second Plans incorporated family planning programs, their implementation has moved slowly so far.

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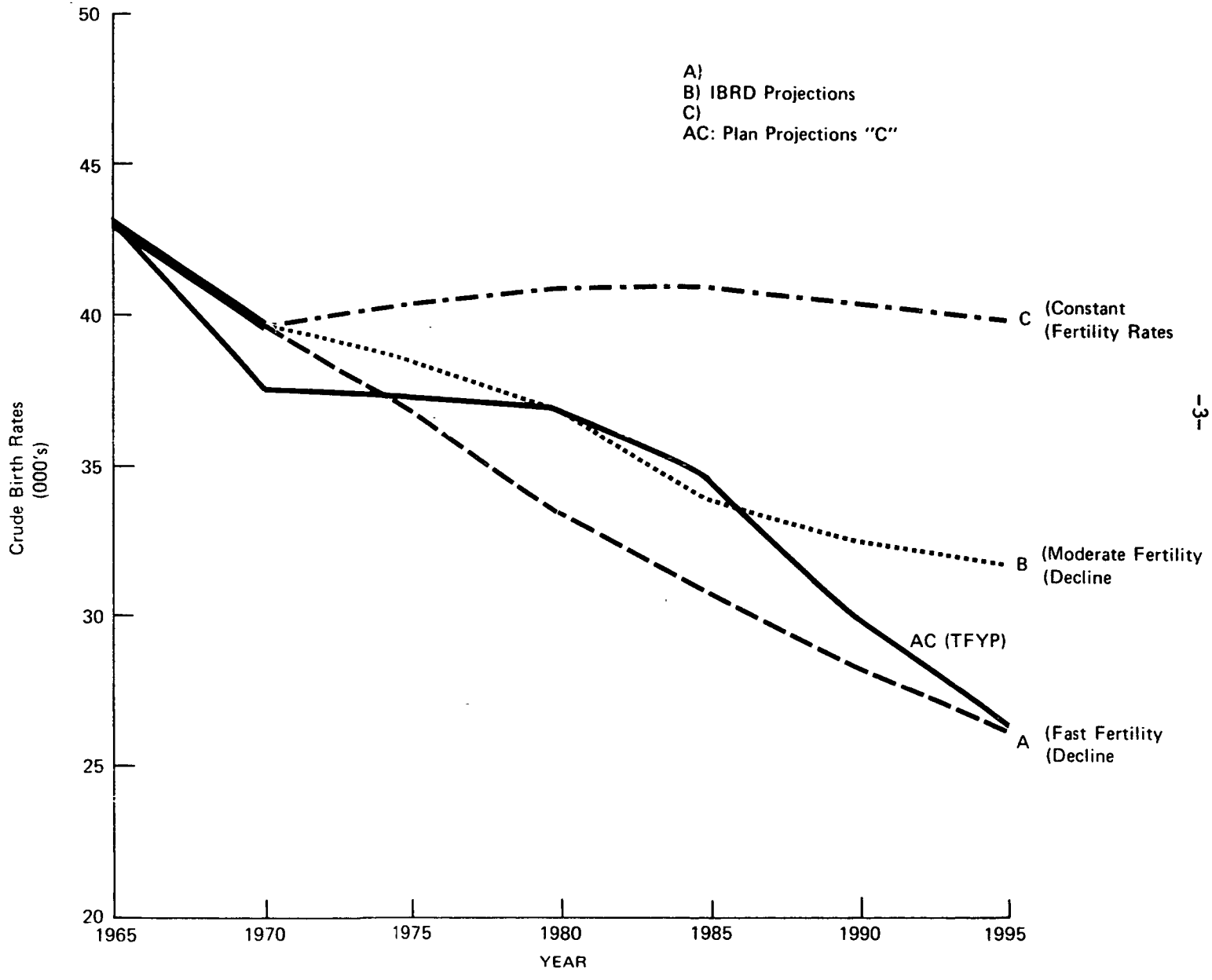
1/ The SPO makes several alternative projections ranging from a population of 76.4 million in 1995 with a high birth rate, to 62.8 million with a low birth rate, but adopts the intermediate figure of 65.9 million as a reasonable projection, and it is on this "Alternative C" that projections of labor supply and demand have been made.

2/ See Serim Timur, "Socio-Economic Determinants of Differential Fertility in Turkey", Institute of Population Studies, Hacettepe University, Ankara 1971, mimeographed; Table 3, p. 9. Professor Kiray has also argued that there is a good economic reason for this fact: children of the urban poor can work as shoeshine boys, peddlers, etc., and are therefore of as much economic value to their parents as farm children.

## CHART 10
## CRUDE BIRTH RATES

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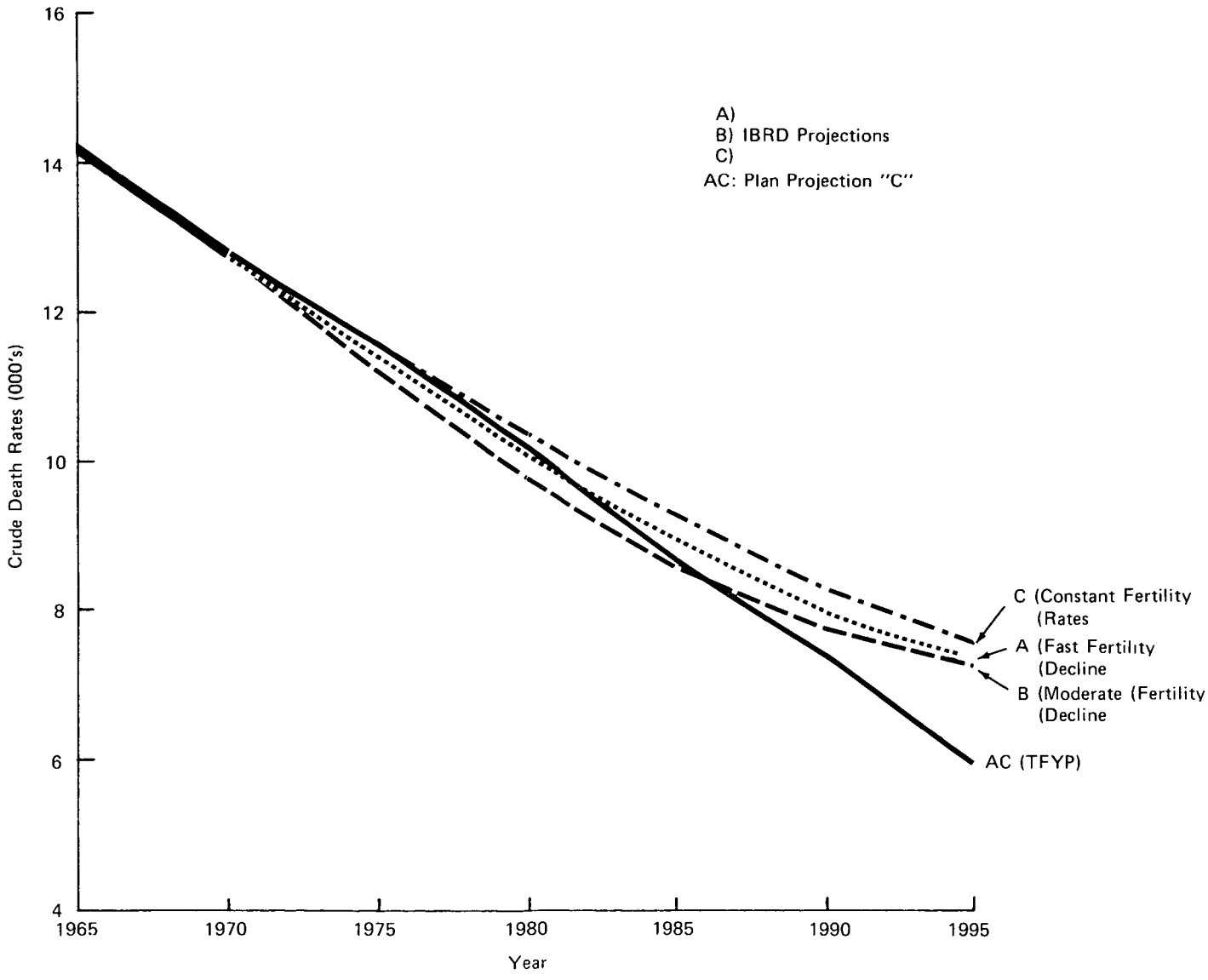
## CHART 11
## CRUDE DEATH RATES




World Bank—8083(R)

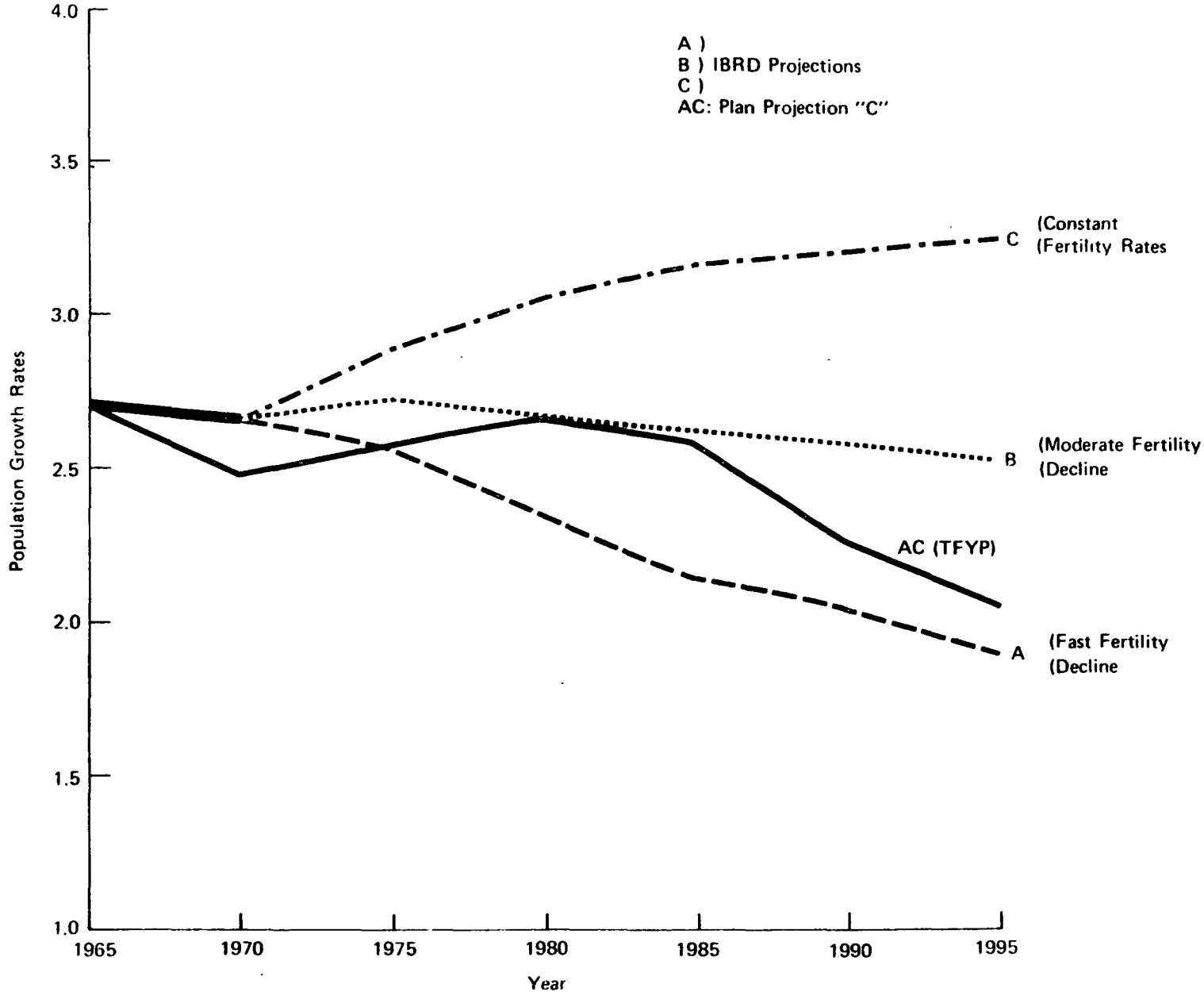
The Second Five Year Plan, for example, had targeted for a coverage of 2 million women by 1972, which has not been reached. In the Third Plan, the family planning services will be integrated with maternal and child health care services, and if the planned extension of these services to the rural areas materializes, a decline in the fertility rate in these areas may well occur. Public acceptance of the need for family planning is growing among the uneducated, but knowledge of efficient techniques is sometimes lacking.

8.8 On balance, taking into account the effects of increasing education and urbanization, the SPO projection "C" would seem somewhat optimistic regarding the fall in fertility rates, although quite possible, assuming that Government family planning programs are carried out. A more conservative projection is shown in the Graph 13. The costs of failure to reduce the fertility rates are high: increased expenditures on health, housing, and education; a reduction in the rate of savings; and higher unemployment.

8.9 The Plan "C" projection forecasts a fall in the death rate per 1000 from its estimated level of 12.8 in 1970 to 6.6 by 1990-95; this rate of decline again may be a little optimistic, though possible, especially if the planned reorganization and extension of the health services is brought about. A more conservative forecast would be a crude death rate of between 7.3 and 7.4 per 1000 in 1995 (see Chart 11). Turkey has suffered from a shortage of health personnel: thus while in 1970 there were 4.9 doctors (including dentists) for every 10,000 people, there were only 2.5 nurses and 3.2 midwives. The problem was compounded by the uneven distribution of health personnel: in 1960, 18% of the doctors worked in areas with a population of less than 25,000 though 80% of the population lived in such communities. The Third Plan aims at increasing the number of health personnel rapidly, and also at extending the health services in the rural areas: socialized medicine will be extended to 22 new provinces. Two thirds of the population are to be covered by the nationalized health services by 1977.

8.10 The growth of population has been accompanied by speedy urbanization: the urban population increased from 18.5% of total population in 1950 to 35.9% in 1970. Cities with a population of 100,000 or more have grown the fastest; the fastest growing city of all has been Ankara. The rate of urbanization has slowed down a little (with the slowdown in population growth and faster emigration), from 6.6% per annum in the 1960s to 5.8% per annum in the last three years. The Third Plan foresees a rate of urbanization of 6.6% during 1972-77 and a declining rate thereafter, but there is little discussion of the social and economic forces behind urbanization and no deliberate measures are envisaged to slow it down: it is taken for granted that the demand for labor in agriculture will fall, and that the rural population will move to the cities despite the increasing unemployment there. Rapid urbanization is considered an acceptable or even desirable aspect of modernization and industrialization. The SPO expects by 1995 the urban population will have increased to 75% of the total population, so that Turkey will have been transformed from a predominantly rural country to a mainly urban country in less than half a century, a rapid transformation by historical standards. The largest cities are expected to grow much faster than the medium-sized and smaller urban centers.

## CHART 12
## POPULATION GROWTH RATES [1/]




[1/] natural growth rate

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8.11 The urbanization process may well present major social problems. It has already strained the infrastructural resources of the big cities, and slums have sprung up in all of them. The environs of Ankara are covered with small houses built by the dwellers themselves with no legal claim to the land; 70% of the population is estimated to live in residences legally defined as substandard. Continued migration to the cities will strain their infrastructure further, particularly if the rate of urban unemployment increases, as the Plan expects. In this context it is particularly unfortunate that the share of housing in planned investment has been progressively falling, from 20.6% in the First Plan to 15.7% in the Third.

Labor Supply and Demand

8.12 The growth of the labor force depends on the changing age structure of the population as well as its rate of growth, and on changes in the participation rate. The proportion of the population in the age group 15-64 fell from 58.3% in 1950 to 54.1% in 1965 and has remained at 54.5% in 1970. The SPO expects this proportion to fluctuate between 55 to 56% until 1985, and then rise more steeply to 58.8% in 1995. However, in recent years a decreasing proportion of this age group has joined the labor force, whether because of increasing education, urbanization (and the consequent decline in female participation) or simply the lack of employment opportunities. Thus, the participants of the 15-64 age group in the labor force fell from 44.3% of the total population in 1960 to 38.5% in 1970 (see Table 1.2). 1/ The Plan expects this participation rate to remain at around 38% in 1972-77, and to rise to 39% in 1987 and 41% in 1995 — presumably as a result in part of the increase in the relative strength of the group of working age. The participation rate will more likely fall as the rural exodus accelerates, since the female participation rate is very much higher in agriculture than in other activities, and the overall participation rate is also somewhat higher. The pressure of unemployment and expanding education should also reinforce this tendency for the participation rate to fall, as people prolong their education so as to increase their chances of employment and earning power, especially since the cost of higher education in Turkey is very low.

8.13 While two thirds of the economically active population is still engaged in agriculture and related activities, there has been a perceptible decline in the last 10 years, from over 77% in 1962. This fall of 12 percentage points was accounted for partly by an increase of 3 percentage points in manufacturing, the most rapid growth occurring in employment in the basic materials industries - iron and steel, chemicals and cement. However, the most rapid increase has occurred in services, particularly the civil service and commerce, which includes retail trade. Many of these "jobs" are probably of very low productivity.

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1/ The Plan defines the participation rate as the percentage of the economically active in the 15-64 age group to the total population.

Table 31: DISTRIBUTION OF ECONOMICALLY ACTIVE POPULATION /1
(15-64 years)

| | 1962 | 1967 | 1972 |
|---|---|---|---|
| Agriculture | 77.1 | 71.3 | 65.0 |
| Manufacturing | 8.3 | 9.2 | 11.3 |
| Construction | 2.6 | 2.9 | 3.2 |
| Commerce | 2.7 | 3.1 | 4.5 |
| Transportation | 2.2 | 2.5 | 3.3 |
| Services | 6.4 | 8.3 | 11.7 |
| Unknown | 0.7 | 2.7 | 1.0 |
| Total | 100.0 | 100.0 | 100.0 |

/1 Excluding the armed forces.

Source: TFYP, p. 658.

Table 32: GROWTH OF EMPLOYMENT 1962-72 RATES
(percent per year)

| | First Plan | Second Plan | Average 1962-72 |
|---|---|---|---|
| Agriculture | -0.4 | -0.7 | -0.5 |
| Industry | 3.3 | 5.4 | 4.3 |
| Construction | 3.8 | 3.2 | 3.6 |
| Commerce | 2.3 | 8.0 | 6.3 |
| Transport | 4.6 | 6.8 | 5.7 |
| Services | 10.5 | 4.1 | 7.5 |

Source: Calculated from TFYP, Table 511, p. 658.

8.14 The development strategy of the Plans has emphasized a high rate of growth of output and labor productivity rather than employment. The rate of growth of employment in industry, commerce and transport has in fact accelerated during the Second Plan, but even so failed to absorb the increments to the labor force. Thus, it is estimated that by 1972 the labor surplus had risen to 1.6 million divided more or less equally between agriculture and the rest of the economy.

8.15 The estimates of unemployment include a large number of partly employed people, and is for that reason imprecise. The extent of seasonal unemployment in agriculture in any year is heavily influenced by the weather:

it has been estimated that underemployment in agriculture during 1965-70 fluctuated between 0.7 and 1.3 million according to weather. These estimates are predicated on the SPO's calculation that there was an underlying trend for labor productivity in agriculture to increase by about 3% per annum between 1962 and 1972 as a result of mechanization and other technological changes. If a lower rate of productivity increase is predicated - which is a reasonable hypothesis - then the estimate of disguised unemployment in agriculture in 1972 would be lower.

8.16 The dividing line between open and disguised unemployment is almost as blurred outside agriculture as within it. The SPO estimates disguised and open unemployment outside agriculture at 0.8 million or 14.5% of the nonagricultural labor force. However, only around 4.9% of the urban labor force was recorded as unemployed in 1969, the latest year for which the sample household labor force survey figures have been published. Nearly 42% of the unemployed were between the ages of 15 and 24, and over half belonged to two occupational groups: "craftsmen, production process workers and repairmen" and "unclassified"; agricultural workers also formed a sizeable part of the unemployed (Table 1.2). However, many of those recorded as employed were probably working at marginal jobs with very low productivity or for short working hours. The possibility of earning a living by shoe-shining, peddling or supplying traditional goods and services to city dwellers (including migrants living in slums) provides a safety valve, but their incomes are very low. 1/

8.17 Emigration has greatly eased the pressure on employment in the last decade but this again may slow down in the future (see below). Between 1965 and 1970, net emigration amounted to 300,000, or one third the addition to the labor supply during this period. In the Third Plan, net emigration is expected to run at an annual rate of 70,000 or 17% of the addition to the labor supply.

8.18 The Third Plan continues to emphasize investment in high growth, relatively less labor-intensive industries; the consequent increase in the level of unemployment in the medium-term is seen and accepted as a price worth paying for immediate rapid growth, with full employment expected after 1995. Thus, the SPO expects the level of disguised and open unemployment outside agriculture to grow from 0.8 million in 1972, or 14.5% of the nonagricultural labor force, to 1.1 million in 1977 (14.9%) and 2 million in 1987 (15.4%). It is only after 1987 that unemployment declines to 0.8 million in 1995 or 4% of the labor force; by this date too, disguised unemployment in agriculture is expected to disappear. Planned unemployment of this magnitude raises two questions: first, are the forecasts correct, and secondly, would alternative strategies not be preferable?

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1/ Urbanization & Modernization in Turkey, AID Discussion Paper No. 10; Ankara, July 1972, p. 26. A peddler in Ankara, for instance, may earn TL 200 a month or less than a fifth of the average wage of a factory worker, and peddlers in Ankara are very likely better off than in smaller cities.

8.19 There are several reasons for believing that the Plan's implicit estimate of the magnitude of the rural exodus may be too high. On the one hand, it is based on a rising rate of participation in agriculture (as elsewhere), but as education spreads and incomes rise, the employment of children and women is likely to fall rather than rise (children and old people formed 17% of the agricultural labor force in 1970). On the other hand, the estimate is predicated on very high growth rates of productivity in agriculture: 5.1% per annum in 1972-77, 9% in 1977-87, and 6.4% in 1987-95. These are unlikely to materialize: productivity increases of around 2.5% seem more likely in the medium-term (see Chapter 10). Thus, the actual extent of disguised and open unemployment in agriculture, or the rate of annual exodus, may well be less than estimated in the Plan. This conclusion is supported by projections carried out with a programming model (Annex II). All the projections but one reach the conclusion that agricultural labor force will increase slightly (by less than 1% per year) during 1972-87; the exception, which corresponds to a strategy of maximum employment, leads to a decrease of only 0.1% of agricultural labor force during 1972-87, compared with 0.6% in the long-term strategy of the Government. This result is reached although all solutions assume that a large volume of rural-urban migration will take place during the period (between 2.5 and 4.7 million).

Table 33: PROJECTIONS OF LABOR SUPPLY AND DEMAND OUTSIDE AGRICULTURE
(Increments, in millions of men)

| | Actual | Turkish development strategy | | |
|---|---|---|---|---|
| | 1965-70 | 1972-77 | 1977-86 | 1987-95 |
| Supply of non-agricultural labor: | | | | |
| Growth of civilian labor force | 2.0 | 2.1 | 5.0 | 5.0 |
| Decrease in agricultural labor force /1 | - | 0.2 | 0.6 | 1.8 |
| Total additional supply | 2.0 | 2.3 | 5.6 | 6.8 |
| New demand for non-agricultural labor: | | | | |
| Industry | 0.3 | 0.6 | 1.3 | 2.2 |
| Services | 0.8 | 1.0 | 3.4 | 5.8 |
| Emigration | 0.3 | 0.4 | 0.0 | 0.0 |
| Total additional demand | 1.4 | 2.0 | 4.7 | 8.0 |
| Change in unemployment | 0.6 | 0.3 | 0.9 | -1.2 |

/1 Excluding changes in agricultural underemployment.

Source: TFYP, Table 96, p. 147 and Table 1.2.

8.20 Similarly, the Plan estimates of productivity growth in the other sectors seem also a little on the high side, so that, assuming output targets

are met, the increase in urban employment would be a little greater than foreseen. In addition, labor-intensive sectors such as construction and services may expand faster than foreseen in the Plan. Nevertheless, unemployment will still present potentially grave social and political problems, and there is not sufficient discussion in the Plan of an investment plan which entails such large-scale unemployment, nor of the employment possibilities of alternative patterns of investment.

8.21 The effects of various alternative development strategies on employment and growth have been analyzed in the framework of a programming model of the Turkish economy (see details in Vol. IV). In the model growth is constrained by the availability of domestic savings and skilled labor and by migration costs and education costs for unskilled labor. The "basic case" which translates a strategy of growth maximization results in a rate of increase of urban employment of 5%, and a rate of increase of GDP of 7.2%, both of which are lower than the 5.8% and 8.7% respectively aimed at in the Turkish Development Strategy.

8.22 Most of the difference between the two sets of projections can be explained by the skilled labor constraint and the difference in marginal domestic savings rate (26% in the basic case and 38% in the Turkish strategy). Relaxing the labor constraints increases GDP growth to 7.5% a year, and increasing the marginal savings rate to 30% increases growth of GDP to 7.6% and of urban employment to 5.6% (sensitivity analysis (2) and (4), Vol. IV).

8.23 A strategy of maximizing employment (sensitivity (1), Annex II A) rather than growth translates into a substantially faster growth of urban employment, 6.2% per year, at the expense of a small loss in growth of 0.2% per year. It is worth noting that the variant which maximizes employment implies annual rates of growth of 14% for total exports and 20% for industrial exports; it is argued in Chapter 7 that these rates are achievable (also see sensitivity analysis (7): "EEC Entry", Vol. IV). If this judgment regarding foreign trade is accepted, and the assumptions underlying the basic case are realistic, then this would suggest that a development strategy which maximized employment would imply a small loss in growth of GDP. It would also have the advantage, through increasing employment, of directly making the distribution of income more equal.

Emigration

8.24 Massive emigration has been a striking, and on balance, beneficial feature of Turkey's recent economic development. By the end of 1972, there were over 625,000 Turks legally working abroad and several thousand illegal migrants - and between 1965 and 1972 migrants' remittances of foreign exchange to Turkey exceeded $2 billion, of which nearly 40% accrued in 1972 alone. Turkey was late in sharing in the mass migration of labor from the Mediterranean countries to the more industrialized Western European nations that has characterized the post-war era. Emigration from Turkey was relatively insignificant till the middle of the 1960s, but rose very rapidly thereafter (Table 1.3). By 1966, there were over 189,000 Turkish workers employed abroad, but even by the end of 1969, Turkish migrants were around 7% of the foreign workers

in the European countries importing labor. Again, emigration absorbed a much smaller percentage of the potential growth in Turkish labor force than in the other labor-exporting countries such as Portugal, Spain, Italy, Yugoslavia and Greece. However, the share of Turkey has increased rapidly as the flows from the other countries, except Yugoslavia, slackened; Turkey is now the second most important supplier of labor to Western Europe. Germany has been by far the largest market for Turkish labor, though it is interesting that Germany's share in the flow of migrants has diminished from 95% in 1966 to 77% in 1972; in recent years Turkish labor has moved to several other countries in Europe, particularly to France and Austria (Table 34).

8.25 The Third Plan estimates that net emigration during 1973-77 will amount to a further 350,000 so that there will be around one million Turkish workers abroad in 1977, and that their remittances will rise from $510 million in 1972 to $600 million, or to about $600 per head, in 1977 (in constant dollars). These estimates may turn out to be far too conservative, with import implications for the future course of development in Turkey. It would be useful therefore to re-examine the two components of the estimate of total remittances: numbers of migrants, and rate of remittance per migrant.

8.26 Given the surplus labor situation in Turkey, the relatively higher wage levels in Western Europe, and Turkey's association with the EEC, it can be safely assumed that the volume of emigration will be determined very largely by conditions in Europe. There are already well over a million Turks on the waiting list of the Turkish Employment Office, and the existing level and likely change in the absolute level of unemployment till 1987 will ensure an elastic supply of Turkish migrants. The foreign demand for Turkish workers will therefore depend essentially on the balance between domestic labor supply and demand in the European countries of immigration, on the balance in the other traditional suppliers of migrant labor, particularly in Europe, and finally on Government policies towards immigration in the various countries concerned.

8.27 The total demand for imported labor in the countries of Western Europe (where nearly all Turkish emigrants are likely to go) depends technically on past demographic trends - whose effects can be predicted with a fair degree of certainty - and on changes in participation rates, levels of economic activity, technical change, and the rate of migration from agriculture to industry - all of which are much more difficult to predict. Forecasts made before the oil price changes indicated that substantial domestic shortages of manpower would continue at least in the next decade or so, in most European countries. However, the recent decisions taken by Germany indicate that these prospects might be upset, at least for a short period.

8.28 In 1971, one forecast put the probable labor shortage in the ten Western European countries of immigration at 11 million in 1980; by 1969, there were already 5.5 to 6 million foreign workers in these countries, so that between 1969 and 1980 net migration should be between 5 and 5.5 million workers. The "high" - "low" estimates on which the "central" forecast was based are as follows:

Table 34: LABOR BALANCES IN EUROPE - 1980
(in 000's)

| | Countries of Immigration | High | Low | | Countries of Emigration | High | Low |
|---|---|---|---|---|---|---|---|
| 1. | U.K. | -3603 | -1320 | 1. | Italy | +228 | +18 |
| 2. | Germany | -4916 | -2691 | 2. | Finland | +27 | -221 |
| 3. | Switzerland | -487 | -139 | 3. | Spain | +578 | +144 |
| 4. | Belgium | -403 | -74 | 4. | Portugal | +454 | +300 |
| 5. | Sweden | -579 | -273 | 5. | Ireland | +162 | +39 |
| 6. | Norway | -29 | +99 | 6. | Yugoslavia | +3028 | +2675 |
| 7. | Netherlands | -421 | +11 | 7. | Greece | +667 | +273 |
| 8. | France | -1691 | -38 | 8. | Turkey | +5315 | +4336 |
| 9. | Austria | -344 | -165 | | | | |
| 10. | Denmark | -333 | -152 | | | | |
| Total: | | 12806 | -4742 | Total: | | +10459 | +7564 |

Source: Luisa Danieli, The Demographic and Social Pattern of Emigration from the Southern European Countries, Florence, 1971, pp. 28 and 35.

These estimates are based on various assumptions regarding the growth of output in agriculture and in the other sectors, and of the growth of labor productivity in agriculture; if these assumptions turn out to be unrealistic, or if Government immigration policies are changed, the demand for migrant labor and actual emigration may differ widely from these projections. Nevertheless, the estimates serve to show the large potential for Turkish emigration. On these estimates, between 4.3 and 5.3 million Turks could work abroad by 1980 implying a volume of net emigration of between 3.3 and 4.3 million over the next 7 years, as compared with the Plan estimate of only 350,000 migrants during the 5 years 1973-77.

8.29 Another forecast for Germany, which is by far the largest recipient of Turkish workers, suggested much lower figures of emigration 1/ than the above projection. This forecast gives the following numbers of foreign workers in Germany:

1/ The Institute for Employment Research, Erlangen.

Table 35: FORECAST OF FOREIGN WORKERS IN GERMANY

| Year | Number (000s) | Change (000s) |
|---|---|---|
| 1973 | 2455 | - |
| 1975 | 2656 | +201 |
| 1976 | 2709 | +53 |
| 1977 | 2703 | -6 |
| 1978 | 2672 | -31 |
| 1980 | 2704 | +32 |
| 1985 | 2163 | -541 |

These estimates are considerably lower than the previous "central" ones and are very close to the "low" estimates. According to this German estimate the total immigration into Germany between end-1973 and end-1977 will amount to 248,000. Adding an estimated 100,000 during 1973, total immigration during the Third Plan period (1973-77) would be approximately 350,000. If one assumes that 40-50% will be from Turkey (which is in line with past trends) and that this would represent 75% of total Turkish immigration (as in the last 3 years), then the total migration from Turkey to Germany would be about 190,000 - 230,000 during 1973-77.

8.30 In the early seventies the German Government has taken measures to restrict the foreign population in certain areas and to make it more costly for employers to employ foreign labor. In November 1973, it announced that effective immediately there would be a temporary ban on immigration of workers from outside the EEC member countries, due to an expected stagnation of the economy in 1974. If this situation were to last, the Plan expectations of a 350,000 net emigration during 1973-1977 would not be achieved. But there are factors in favor of a more optimistic perspective in the longer term. It is likely that there will be increasing migration to other countries, such as France, the Netherlands and Austria. In the long run, Turkish workers will be allowed to circulate freely in the EEC under the Additional Protocol between Turkey and the EEC. This provision will come into effect between 1976 and 1986, and the exact time will be influenced strongly by the development of the demand for labor in the EEC member countries.

Education

8.31 The extension and improvement of the educational system has long been one of Turkey's main social needs, and although rapid progress has been made in various fields - from the reduction of illiteracy to an increase in the number of technical personnel - the demand for education and for skilled manpower is greater than the existing system can meet. This shortfall is manifested particularly at the secondary school level, and schools are often overcrowded. The system is also wasteful, since classes are often repeated and drop-outs are common. The drop-out rate was 19-30% in the secondary

schools and 18-35% at the lycee level in 1970-71. Furthermore, the Universities produce too many arts graduates and too few of the kinds of technical manpower the economy requires. In particular, there continues to be a great shortage of technicians in Turkey: the ratio of technicians to professionals is less than two to one in Turkey, as against a ratio of around four to one in industrialized countries. This imbalance is particularly serious in the field of health, though it is improving: the ratio of nurses and midwives to doctors has moved up from 0.41 in 1962 to 0.71 in 1971, compared with at least 3 to 4 per doctor in developed countries.

8.32 The formal educational system consists of three levels: basic, secondary and higher education. Basic education is divided into 2 cycles: the first cycle concists of 5 years primary school for children from 7 to 12 years of age. The second cycle consists of an additional three years of middle school. In the following 3 years of secondary education, students either attend a general lycee or go to vocational and technical lycees. Higher education is provided by eight public universities and various other academies, and it is generally much easier to obtain admission to them after a general lycee education, than from technical schools.

8.33 Considerable progress has been made in the last fifteen years in extending primary education. However, the general illiteracy rate of the population over six years of age was still 54.6 percent in 1970. Illiteracy is particularly widespread among women, the elderly and the inhabitants of the poorer regions. Although special steps have been taken to increase female literacy, it is still increasing at a slower rate than male literacy.

Table 36: LITERACY IN TURKEY
(in percent of Population over 6 years)

| Literacy level | 1945 | 1950 | 1955 | 1960 | 1965 | 1970 |
|---|---|---|---|---|---|---|
| Males | 34.97 | 38.52 | 44.79 | 46.87 | 52.34 | 69.0 |
| Females | 13.70 | 16.55 | 20.59 | 22.56 | 26.85 | 40.0 |
| Total | 24.39 | 27.59 | 32.89 | 34.93 | 39.84 | 54.5 |

8.34 Universal primary education is a constitutional requirement, and the Second Plan had aimed at increasing primary school attendance to 100 percent, but by 1970-71 it had risen only to 83.6 percent, from 61 percent in 1955-56.

Table 37: PRIMARY SCHOOL ENROLLMENT
(in thousand and percent)

| | Age Group (7-12) | Total Students | Enrollment Rate % |
|---|---|---|---|
| 1955-1956 | 3,252 | 1,984 | 61.0 |
| 1960-1961 | 4,245 | 2,867 | 67.5 |
| 1965-1966 | 5,061 | 3,932 | 77.7 |
| 1970-1971 | 5,292 | 4,992 | 83.6 |

8.35 The main reason for this failure is that the remaining villages without schools are those in remote parts of the country; many of these villages are extremely small and do not have even the elementary facilities needed to set up a school.

8.36 The generally high illiteracy rate is also a reflection of the fact that so many of the older age groups, particularly in the rural areas and among women, are still illiterate. There is a need not only to expand the programs for adult education and training but also to give them greater vocational content, and the Plan aims at an extensive reorganization of these facilities.

8.37 In the last decade, there have been striking increases in the numbers of technical personnel: between 1960 and 1970 the number of engineers, technicians and skilled craftsmen doubled, while there was a three-fold expansion of agronomists.

Table 38: SUPPLY OF TECHNICAL MANPOWER: 1960, 1965 and 1970

| | 1960 | 1965 | 1970 |
|---|---|---|---|
| 1. Engineers | 15,461 | 17,692 | 31,401 |
| 2. Technicians | 27,056 | 37,417 | 54,753 |
| 3. Agronomists | 5,555 | 8,957 | 17,923 |
| 4. Skilled Craftsmen | 998,902 | 1,235,391 | 1,831,110 |

But there is still an overall shortage of scientific and technical manpower and particularly marked imbalances in certain lines. Thus, in 1972 there were excess supplies of certain kinds of engineers, such as construction, chemical, and agricultural engineers, but severe shortages of other types, such as electrical engineers. There were shortages of all types of technicians and particularly of skilled building workers. The Plan aims not only at increasing the numbers of trained personnel sharply, but also at correcting these imbalances,

though shortages of various types of skilled manpower, and particularly of technicians are foreseen even in 1992.

8.38 The Third Five-Year Plan has an ambitious scheme of educational reform. The structure of the educational system is to be altered, and its scope considerably extended. By 1977, for example, primary school attendance will be 100 percent of the relevant age group and by 1995, 75 percent will be in the middle school; 45 percent will receive secondary education and 15 percent, university education.

8.39 The 100 percent target for primary school attendance has now been shifted to the end of the Third Plan; by 1977-78 all the 6.2 million children between 7 and 12 years of age should be in school. In 4 years facilities for an addition of over a million students will have to be created -- the Plan estimates that this task will require an expenditure of TL 3,780 million. It will also require particularly concentrated efforts in the East and Southeast: the primary school attendance rate is as low as 40 percent in some parts of Southeast Anatolia. Given the difficulties of increasing facilities in the remote areas, the Plan allocation may be too low.

8.40 The Plan aims also at changing the pattern of secondary education substantially. At present, about 60 percent of the students in this level take general courses in lycees, and 40 percent are in vocational and technical institutes; the Plan aims at switching these proportions to 35 percent in the lycees and 65 percent in the vocational and technical institutes by 1995-96. The attendance at the vocational and technical institutes is to expand most rapidly (by nearly 0.4 million students) in the Third Plan, followed by the institutes of higher education.

Table 39: ENROLLMENT RATIOS AT VARIOUS LEVELS OF EDUCATION: THIRD PLAN TARGETS
(Percent of Relevant Age Group)

| | Actual 1973-74 | Target 1977-78 |
|---|---|---|
| Basic Education: 1st Stage (7-12) | 90.0 | 100.0 |
| Basic Education: 2nd Stage (13-15) | 44.3 | 50.7 |
| General Lycee (16-18) | 13.2 | 13.4 |
| Technical Vocational Schools (16-18) | 6.5 | 11.5 |
| Higher Education | 7.1 | 9.0 |

8.41 The structure of the universities is not to be changed greatly, though there will be greater emphasis on the training of technical and scientific manpower. However, a basic issue is whether the total number of University students should be expanded so fast, i.e. by 43.3% between the first and last years of the Third Plan, whereas the population in that age group will only increase by

12.6%. Over 15% of the total investments 1/ on education is to be spent on universities and higher academies, and some diversion of this expenditure to middle level technical and vocational training may well show greater returns to the economy. There is of course considerable political pressure to expand universities since the private returns on university education, which is practically free, is so high; but this return is probably also much higher than the social return. 2/

8.42 An attempt to determine the requirements of the educational system in the next twenty years has been carried out with a programming model of the Turkish economy (Annex II A). Skilled labor is divided into four classes according to the length of training required. 3/ The calculations confirm that the Turkish labor force has at present an excess capacity of professionals and a shortage of skilled urban labor force and middle-school level administrators. Growth requirements during 1972-1987 would require the training of 3 million persons in excess of what can be provided by the present educational system. A large proportion of the additional training needs consists of skilled workers of the middle-school level (Class 4) and of managerial and clerical workers (Class 3). During the whole period, the present educational system would continue to provide an excess of technical and professional workers (Class 2) who will have to be employed at a lower grade (Class 3) in their professions.

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1/ Estimates of current expenditure are not available; in the Second Plan current expenditures on education were about three times the capital expenditures.

2/ Anne Kreuger estimates at 25-27% the private rate of return and 8-9% the social return on university training. See Duncan R. Miller, Editor, "Essays on Labor Force and Employment in Turkey".

3/ A detailed definition of the skill classes is given in Annex II A, Table A 17.

## Chapter 9

## REGIONAL DEVELOPMENT AND INCOME DISTRIBUTION

9.1 Development and incomes in and around Turkey's three main cities, Istanbul, Ankara and Izmir, are ahead of those in other parts of the country, particularly in the eastern provinces. Though regional economic accounts are not kept, it is estimated that in 1965 the East Marmara subregion, which includes Istanbul and four neighboring provinces, with 12.5% of the population contributed about 22% of the nation's GDP. By comparison, the twenty-four provinces in the Eastern Black Sea and Eastern Anatolia regions with 33% of the population contributed only 22% of GDP. Per capita value added in the Eastern provinces was therefore about one-third the level in the East Marmara provinces. 1/ The Government made a study of social and economic development by province as of 1970, using 53 economic and social indicators (Tables 11.7 and 11.8) to build a composite index of provincial development. Using this index, the ten most developed provinces are located in the western half of the country and the twelve least developed provinces lie east of a straight line drawn from Zonguldak to Gaziantep (Map 10672). However, provinces falling in the mid-range of socio-economic development may be found in both halves of the country, next to the most and the least developed provinces. This composite index shows differences in development between the top and bottom provinces which are less marked than those derived from the 1965 estimates of value added. This may be due to the fact that the composite index, which reflects the numerous facets of social and economic development, gives equal weight to the 53 indicators, many of which are not indicators of production or welfare.

9.2 Table 11.16 gives the summary of results of a 1968 survey of 4,500 households in Turkey, classified by size of settlement and by rural regional differences. 2/ When viewed together with the aggregate index of development, several conclusions can be drawn: (a) The most pronounced differences in modernization and development are found between the rural population and the urban population and not between regions. (b) Although the main differences are between the rural and urban sectors, there are also considerable regional differences between the rural populations of different regions. In particular, the Black Sea, Aegean and Mediterranean areas have a more modern and economically better off rural sector reflecting their historical experience, geography, and higher level of agricultural development. They survey also found that significant differences in modernization existed between the middle size cities depending on whether they were old Ottoman cities with limited recent growth or post-Ottoman cities whose growth was recent and connected with industrialization.

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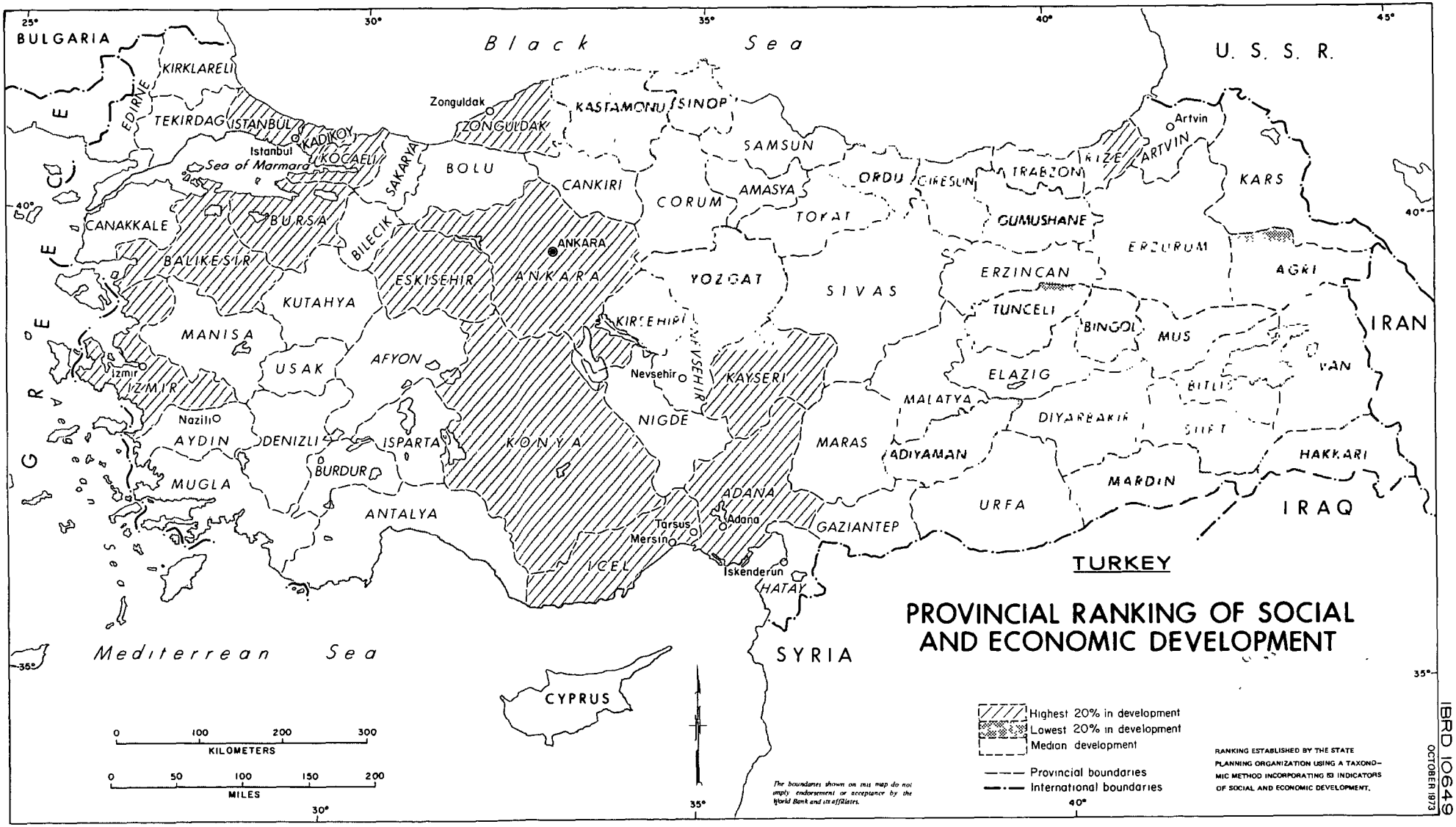
1/ For data on regional differences see Tables 11.1 to 11.8.

2/ K. Srikantan, Regional and Rural-Urban Socio-Demographic Differences in Turkey, Middle East Journal, Summer 1973.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Black Sea
U. S. S. R.
GREECE
IRAN
IRAQ
SYRIA
Mediterrean Sea
CYPRUS
KIRKLARELI
EDIRNE
TEKIRDAG
ISTANBUL
KADIKOY
Istanbul
KOCAELI
Sea of Marmara
Zonguldak
ZONGULDAK
KASTAMONU
SINOP
SAMSUN
Artvin
ARTVIN
RIZE
TRABZON
ORDU
GIRESUN
KARS
SAKARYA
BOLU
CANKIRI
CORUM
AMASYA
TOKAT
GUMUSHANE
ERZURUM
AGRI
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YOZGAT
SIVAS
ERZINCAN
TUNCELI
BINGOL
MUS
BALIKESIR
KUTAHYA
KIRSEHIR
NEVSEHIR
KAYSERI
ELAZIG
VAN
MANISA
Izmir
IZMIR
USAK
AFYON
MALATYA
BITLIS
Nazilli
AYDIN
DENIZLI
ISPARTA
KONYA
NIGDE
DIYARBAKIR
SIIRT
MARAS
ADIYAMAN
HAKKARI
BURDUR
MUGLA
ANTALYA
ADANA
Tarsus
Mersin
Adana
GAZIANTEP
URFA
MARDIN
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Iskenderun
HATAY
0 100 200 300
KILOMETERS
0 50 100 150 200
MILES
25°
30°
35°
40°
45°
TURKEY
PROVINCIAL RANKING OF SOCIAL AND ECONOMIC DEVELOPMENT
Highest 20% in development
Lowest 20% in development
Median development
Provincial boundaries
International boundaries
RANKING ESTABLISHED BY THE STATE PLANNING ORGANIZATION USING A TAXONOMIC METHOD INCORPORATING 50 INDICATORS OF SOCIAL AND ECONOMIC DEVELOPMENT.
The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.
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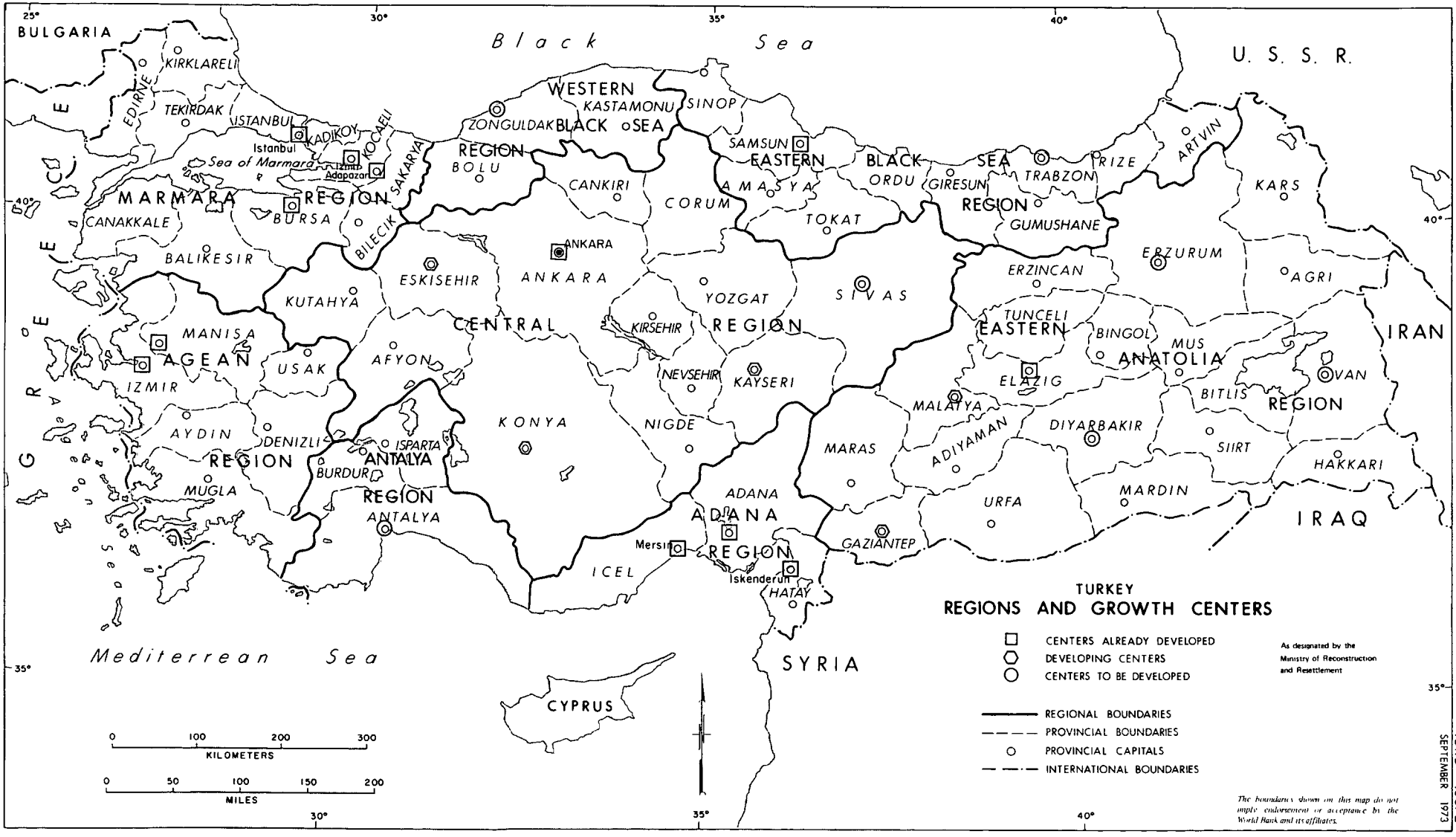
OCTOBER 1973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Black Sea
U. S. S. R.
GREECE
KIRKLARELI
EDIRNE
TEKIRDAK
ISTANBUL
KADIKOY
Istanbul
Sea of Marmara
Izmit
Adapazari
KOCAELI
SAKARYA
WESTERN
KASTAMONU
SINOP
ZONGULDAK
BLACK SEA
REGION
BOLU
SAMSUN
EASTERN
BLACK SEA
REGION
ORDU
GIRESUN
TRABZON
RIZE
ARTVIN
KARS
MARMARA
REGION
CANKIRI
AMASYA
CORUM
TOKAT
GUMUSHANE
CANAKKALE
BURSA
BILECIK
BALIKESIR
ANKARA
ESKISEHIR
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ERZURUM
AGRI
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YOZGAT
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CENTRAL
REGION
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TUNCELI
EASTERN
ANATOLIA
REGION
BINGOL
MUS
IRAN
MANISA
AEGEAN
REGION
USAK
AFYON
NEVSEHIR
KAYSERI
ELAZIG
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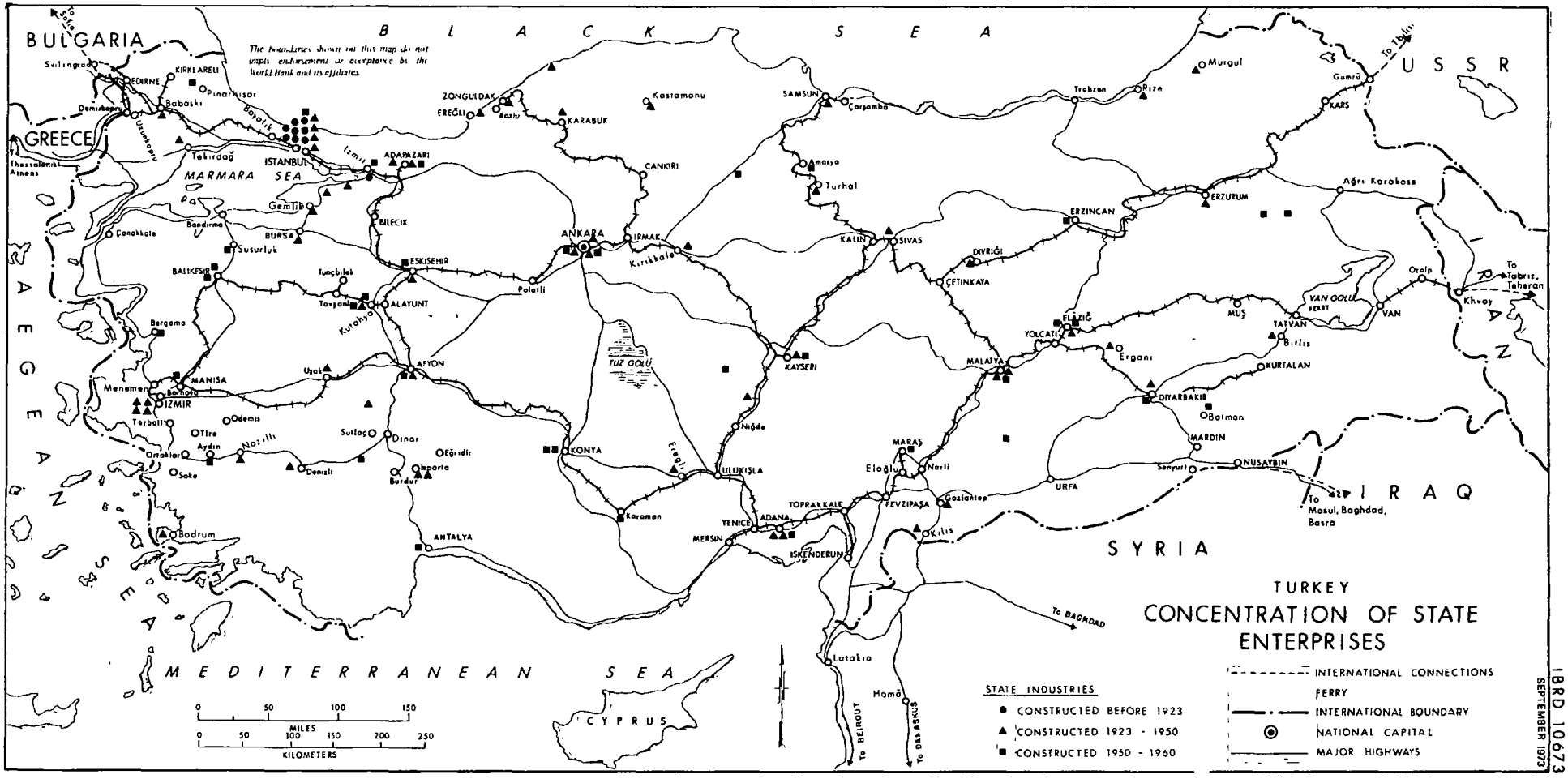
REGION
ADIYAMAN
MARAS
BURDUR
ANTALYA
REGION
MUGLA
ADANA
ADANA
REGION
URFA
MARDIN
IRAQ
Mersin
GAZIANTEP
ICEL
Iskenderun
HATAY
SYRIA
Mediterrean Sea
CYPRUS
0 100 200 300
KILOMETERS
0 50 100 150 200
MILES
25°
30°
35°
40°
TURKEY
REGIONS AND GROWTH CENTERS
CENTERS ALREADY DEVELOPED
DEVELOPING CENTERS
CENTERS TO BE DEVELOPED
As designated by the Ministry of Reconstruction and Resettlement
REGIONAL BOUNDARIES
PROVINCIAL BOUNDARIES
PROVINCIAL CAPITALS
INTERNATIONAL BOUNDARIES
The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.
IBRD 10672
SEPTEMBER 1973




TURKEY

# CONCENTRATION OF STATE ENTERPRISES

IBRD 10673
SEPTEMBER 1973

9.3 While some measure of the extent regional disparities can be provided, data are lacking to describe the trends in these disparities over the past two decades. However, if Turkey conformed to the patterns observed in other countries at early stages of development, regional income disparities probably increased. 1/ Considering various pieces of evidence, this seems to have been the case (see also section on income distribution, paragraph 9.33). There have been significant differences in the rates of urbanization between various regions (Table 11.4), per capita fixed investment has been higher in the most developed regions (Table 11.5) and private investment has been concentrated in Istanbul and Izmir. Istanbul and the neighboring provinces of East Marmara clearly increased their relative weight in the national economy between 1960 and 1965 (Table 11.6). However, this increase came from construction, trade, banking, insurance and other services and not manufacturing (Table 11.2).

Past Government Policies

9.4 Turkey was a land of sharp contrast in climate, topography and development when the Republic was established in 1923. Thrace was gentle, rolling country, with Istanbul as the main center. Bordering the vast and semi-arid Anatolian Plateau were high mountain ranges to the east and coastal plains on the other three sides. Due to an inadequate transportation system, the Anatolian Plateau had few economic relations with the outside world. The Aegean was Turkey's most developed agricultural region, and Izmir derived its importance from exporting and processing the region's crops.

9.5 The Republic initiated systematic efforts to integrate the Anatolian Plateau into the life of modern Turkey. The main measures, which were implemented during the Ataturk and Inonu periods, were the creation of a new administrative and cultural capital at Ankara, the transformation of many provincial towns into modern cities by making them governmental and cultural centers with extensive municipal construction projects, the extension of railroad lines to these provincial cities, and the establishment of many state industries in many interior centers (see Map 10673). These measures were effective in spreading industrialization throughout Turkey. Compared to a virtual monopoly on economic activity in the early twenties, Istanbul and Izmir by 1950 had respectively only 25% and 7% of the total industrial value added, and state enterprises had been located in some 35 cities throughout the country. However, agricultural development had been neglected, and there were still large disparities among regions.

9.6 During the 1950s, the policy of dispersing public investment was continued. Between 1950 and 1960, over 40 state factories were built in almost as many locations. Only one was in Istanbul, three in Ankara, and all but 12 were located outside the Marmara and Aegean regions. This policy provided some employment in these regions, but not enough to reduce significantly the flow of migrants to large urban centers. Dispersal of SEEs had

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1/ See J. G. Williamson, "Regional inequality and the process of natural development: a description of the patterns," Economic Development and Cultural Change, Volume 13, 1965.

significant secondary growth effects. For example, the Sugar Corporation has encouraged farm and livestock development and stimulated growth in smaller specialized industries to serve their needs. Besides their economic importance, the SEEs are often an important social and modernizing influence in small cities. Private investment, aided by incentives, also increased rapidly but was concentrated around Istanbul, Ankara and Izmir. The Industrial Development Bank (TSKB) was established in the early fifties to channel long-term loans from external sources to private enterprises. Of the 401 projects it help finance, 63% were in the Marmara region (205 in Istanbul alone) and another 12% in the Aegean (39 in Izmir).

9.7 The 1950s also saw a considerable Government effort in favor of agriculture. Government investment in agriculture came second only to investment in communications. The main policies affecting regional development concern irrigation, support prices and farm mechanization. The number of tractors and the amount of land cultivated by tractors tripled during the decade. The total area commanded by Government-constructed irrigation systems increased from 42,000 hectares in 1950 to 176,700 hectares in 1960 and over 800,000 hectares in 1970. The areas which benefited most from irrigation and mechanization were the most fertile areas in the Marmara, Mediterranean and Aegean regions, many of which had large farms. These developments enabled farmers to raise yields, but probably displaced some farm workers and increased the concentration of ownership. 1/ The effect of the Government agriculture price policies has been to maintain a high degree of national and annual price uniformity and of parity among crops. This has helped to maintain average farm incomes but has penalized producers of crops with sharply fluctuating yields and farmers in unirrigated regions, and has limited productivity gains and shifts in production, especially toward livestock and livestock feeds (Chapter 10).

9.8 The Government also undertook a large highway program with US assistance during the 1950s, which facilitated the development of outlying regions. All-weather roads doubled in length. The main increase in length occurred in the provincial farm-to-market network, although these remain far from adequate. The share of road transport in total freight increased from 43% in 1960 to 74% in 1970. However, road traffic is very unevenly distributed regionally with about 70% concentrated in the major centers of economic activity.

9.9 The 1950s saw an acceleration of population growth to about 3% a year, compared to about 2% during the previous two decades. This acceleration was accompanied by a sharp increase in internal migrations, due to rapid economic expansion in the main urban centers and limited economic possibilities in rural areas. Migrations were facilitated by the improved road network and the low rates charged by passenger transport companies. Population in cities over 50,000 increased by 111% during decade compared to 23% in rural areas. Population rose by 123% in Ankara, 65% in Izmir and 48% in Istanbul.

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1/ Studies of these effects have been made in Cukurova.

9.10 During the 1960s, the same policies remained in effect, but with some marked shifts in emphasis due to a growing concern over regional development lags and the need for regional planning. In agriculture, the same policies regarding mechanization, irrigation and support prices were continued. More concern was expressed for development at the village level but essentially little change occurred in development trends. The concentration of public investment remained on irrigation and mechanization, with no significant effort to recover the costs of the large irrigation investments. This in effect proved to be a major subsidy to producers of industrial export crops, especially cotton and sugar beets, where large yield and production gains have taken place. The food crops and livestock subsectors lagged. Price policies continue to favor producers with higher and more stable yields, and to impede regional specializations and shifts among crops. During the latter part of the 1950s and until 1967, public sector credit to agriculture declined in real terms and became more heavily concentrated in price intervention programs.

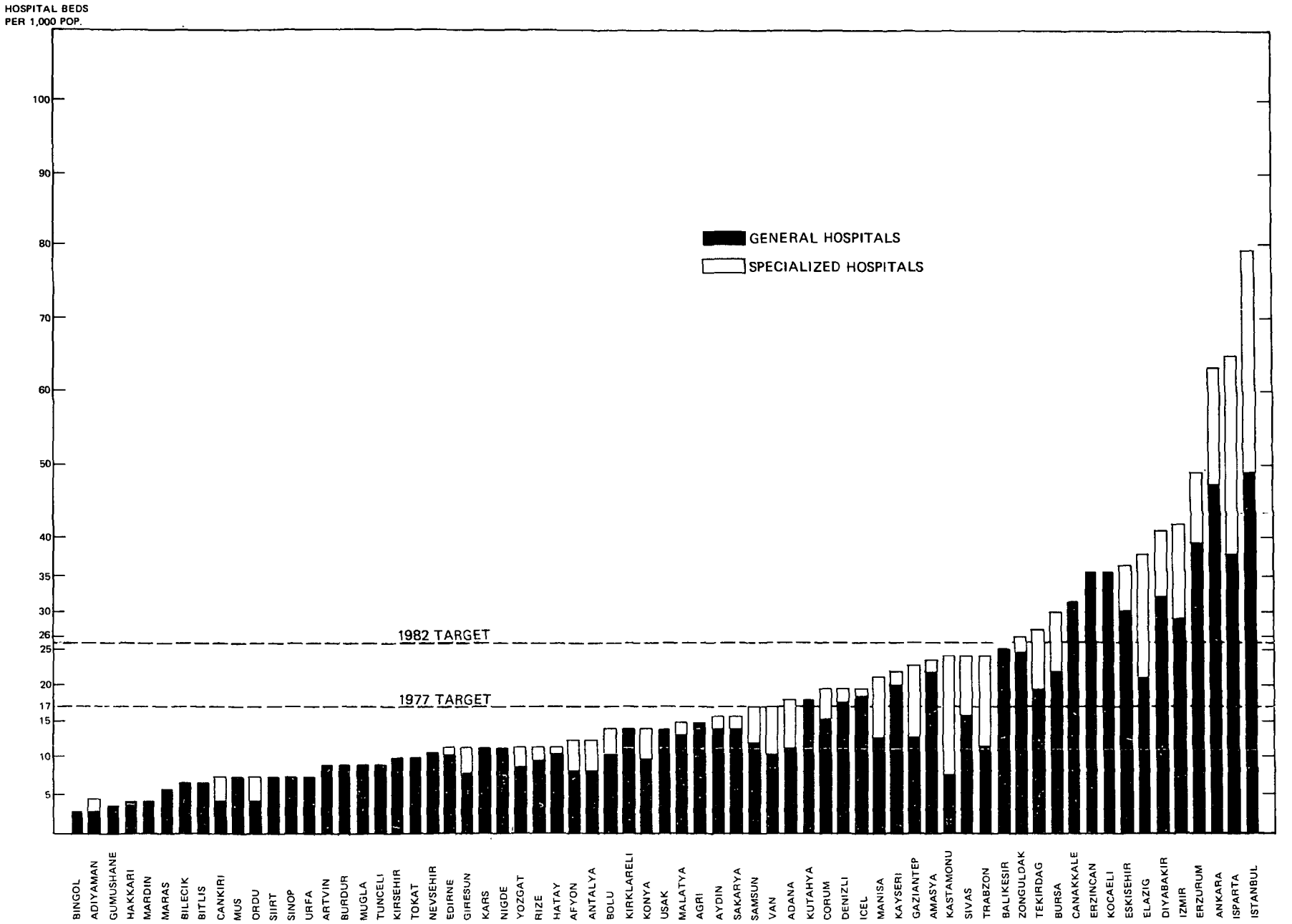
9.11 In industry, market forces continued to favor location in the most developed areas, but the incentive system was changed in 1963 to induce location in the less developed areas. The rate of the investment allowance against taxable profit which was 30% of investment for industrial projects and 40% for agricultural projects, was set at 50% for projects in less developed areas. From August 1967 to October 1969, the State Planning Organization was empowered temporarily to grant allowances up to 80%. The same principle of regional differentiation was applied in the case of the construction tax, real property tax and interest rates. Dispersion of state economic enterprises continued, but the need to apply economic and financial viability criteria more strictly than in the past was stressed in choosing location. Finally, the 1960s saw increased Government efforts towards a better regional balance of education, health and other social services (see Table 11.8 and Chart 13). A start was made in 1964 to bring electric power to villages and by 1971, 2,040 villages were electrified. By mid-1973, a total of 4,800 villages were expected to have been electrified, raising the percentage of population having access to electricity from 28% in 1953 to 39% in 1973. Despite these measures, internal migrations increased as reflected in the rising proportion of squatters in large urban centers, and emigration to European countries began to reach large proportions towards the end of the 1960s.

Present Situation and Problems

9.12 The First and Second Plans adopted the objective of balanced regional development for improved social justice, but progress towards this objective has been limited. Several attempts were made in the preparation of regional development studies and a strategy of regional development around growth centers. Detailed inventories of resources and growth potentials were conducted for some areas, but various reasons, including the difficulty of defining regional objectives and measures in the context of a strongly centralized system of government, these studies, mostly of resources inventory type or compilation review, by and large remained at the stage of research projects. Development lags persist in certain areas for three main reasons: limited economic opportunities due to resource and location

CHART 13

# TURKEY: DISTRIBUTION OF HOSPITAL BEDS BY PROVINCE.




Source State Planning Organization

World Bank-7979(R)

disadvantages; poor administrative and institutional capabilities for development; and lack of an aggressive policy in support of balanced development. Resource and location disadvantages include mountainous relief, unfavorable climate, low soil fertility and distance from markets which reduce the returns to factors of production in the less developed provinces. The scope for overcoming these disadvantages through incentive policies and public investments is strictly limited by budgetary constraints and the overriding objective of rapid economic growth. However, these disadvantages are compounded by administrative and institutional deficiencies in the less developed areas which could be remedied by appropriate Government measures. Among these deficiencies perhaps the most serious ones are a lack of resource surveys, long-term credits for the private sector, infrastructure, telecommunications, trained entrepreneurial talent, appropriate land tenure policies and poor public and private services. Government in Turkey is highly centralized with 90% of all government resources passing through the central government budget. Moreover, there are no formal regional planning authorities largely because the 1961 Constitution prohibits an intermediate administrative organization between the central government and local authorities. The law does allow regional departments of the sectoral agencies and about 21 of the 45 major government agencies do have regional organizations. But each agency has a different interpretation of the number of regions and their boundaries which reflects the technical requirements of the agency's function. Thus, regional planning and administration, in the sense of a systematic, integrated, cross sectoral approach to a geographical area, either gets done at the provincial level (called Iller, they are 67 in number) or at the center. The Iller are poor, understaffed and geographicall too small for sensible planning of some functions, while the central government is distant and remote from the problems (for details on institutional structure, see Annex 1).

9.13 In the private sector, industrial development outside the major centers has been small-scale, bedeviled by lack of knowledge, insufficient long-term funds, and a crushing bureaucracy. However, some recent developments indicate the possibility of substantial private initiative in the regions in the future. Private holding companies, long a major factor in the existing centers, have been encouraged by tax and other incentives to begin to make investments in other regions. In addition, there are increasing indications of the development in remote areas of projects utilizing the substantial savings and talents of returning migrant workers, many of whom prefer to return to the area where they have cultural ties.

Third Plan Proposals

9.14 The Third Plan proposals for regional development are scattered under various headings, such as industrial investment policy, agricultural and land reform, education reform, health and fiscal and credit policies. The Plan proposes that the less developed areas identified by the socio-economic study described in paragraph 9.1 be designated as priority areas for incentive policies and public investment. These comprise 36 provinces (Iller) and 50 districts (Ilceler). The list will be kept under continuous review in future. The general objective of the Plan is "to close the development gaps among the regions." However, the Plan recognizes that this is a

long-term objective, which can be achieved only over a considerable period of time. The main elements of the Plan strategy towards the achievement of regional objectives are to raise agricultural productivity and diversify agricultural production while modernizing rural living conditions, to expand public investment and promote private investment in industry, and to raise the standards of administrative and social services, particularly health and education, to national levels. The Plan does not give specific guidelines for the area allocation of public investment and other developmental expenditures.

9.15 In agriculture, the main programs which could affect regional balance include land and agricultural reform, crop and animal husbandry improvement, small-scale irrigation and village development (see Chapter 10). Here, we may indicate that the targets or village development include the supply of drinking water in all villages in five years, and the provision of electricity and the construction of access roads for all villages in ten years. Considering the current situation (35,000 villages without electricity and 22,000 without running water) and prospective financial resource constraints, it might take longer than specified to reach these targets. There is also a need to review carefully the effects of major agricultural policies (i.e., those concerning large-scale irrigation, mechanization and support prices) from the viewpoint of improving the regional balance of agricultural output growth, employment and incomes.

9.16 In manufacturing, the public sector plans to establish new industrial plans in 33 provinces. To stimulate private investment, the Plan proposes to continue the current system of extra incentives for industries in priority areas. In addition to existing incentives, there is a need perhaps for more Government assistance in identifying and preparing projects to be located in priority areas (resource surveys, marketing and feasibility studies, training, etc). The Government should study the desirability of establishing regional offices as TSKB has done in Elazig with some success. Further measures would include increasing the reliability and avilability of electric power supply, and improving the telecommunication network linking provincial towns to Ankara and Istanbul. The establishment of regional development corporations, as suggested in the Third Plan, may also be desirable, although the alternative of decentralizing the operations of existing institutions is probably less costly. The Third Plan envisages continuation of the program to establish estates for small industries in outlying regions based on a UNDP pilot program. This program seems well prepared, but suffers from a lack of trained staff for the crucial technical assistance element.

9.17 In education and health, the aim of the Plan is to equalize the provision of these services on a population basis throughout the country. The education system will be reformed to reach the most disfavored classes of the population. At the primary level, regional boarding schools will be established (starting first in priority areas) with an 8-year cycle and new curricula, which are expected to provide better education at a lower cost per pupil and help reduce the drop-out rate between 5th and 6th grades. Reforms are also proposed in secondary and higher education in favor of priority areas. The health program, which is called "socialization program" and covered 25 provinces during the first two plan periods, will be extended

to 21 new provinces during the Third Plan, providing one health center for every ten thousand, and a health station for every three thousand people. The targets for hospital beds are depicted in Chart 13 starting with priority provinces, the target is to provide one hospital bed for every ten thousand inhabitants. Thus, the Plan contains ambitious and innovative proposals to raise the standards of the two main social services in priority areas. Unfortunately, implementation in the past has suffered by the lack of trained medical personnel willing to shift to remoter facilities and a large number of Turkish doctors migrate. The Plan pays insufficient attention to family planning and labor migrations, despite the need to reduce population pressure and the importance of labor migration in reducing regional income disparities.

9.18 Finally, the Plan proposes to remedy the adverse effects of administrative centralization through provincial planning. Five provincial plans were prepared on a pilot basis in 1972. In view of the apparent good results, the system is being expanded to all provinces, and will be improved as experience is accumulated. This should help improve the coordination of central services at the local level, and increase the feedback of needs and information from local beneficiaries of development projects to central agencies.

Urban Development 1/

9.19 Like most developing countries, Turkey experienced rapid urban growth over the last 20 years as the population shifted away from the rural sector. The proportion of population in urban units over 10,000 rose from 18% in 1950 to 35% in 1970. Urban annual growth rate over this period was 4.6%, compared with a rural growth rate of 1.6% and an overall rate of 2.4%. In recent years, the urbanization rate has stabilized around 6%; it was 5.2% for 1960-65 and 6.2% for 1965-70. In the early part of the period the focus of urban migration was on the three largest cities, Ankara, Istanbul and Izmir, but in the last decade the secondary cities, 19 cities with populations above 100 thousand, have grown faster (see Table 11.13) and an aggregate absorbed more population. In recent years a large number of workers have gone overseas relieving what would have been even greater urban pressures. Nevertheless, rapid urbanization has led to largest cities, and these are compounded by the financial weakness of the municipalities. It is also creating profound changes in the traditional social, cultural and economic relations of the Turkish people.

9.20 Regionally, there are quite wide differences in urban ratios which coorelate closely to regional income differences. This is not surprising: per capital agricultural income is about 1/2 of average per capita income

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1/ This section has in part drawn on Rusen Keles's Urbanization in Turkey, International Urbanization Service, Ford Foundation, published in 1972 and a draft note on urban growth prepared by I. Ozusta, SPO, Ankara, Turkey, March 1973.

and 1/4 of industrial per capital income. The regional differences in the urbanization ratios range from 17% in the Easter Black Sea region in 1970 to 60% in the Marmara region (see below). An interesting feature of the recent pattern is that in most regions there has been growth in the medium sized cities (Table 11.13). Also, the more rapid urban growth over the 5-year period 1965-70 has been in the regions with the lowest urbanization ratios.

Table 40

| Region | Urban Growth Rate 1965-1970 (%) | Urbanization Ratio 1965 | 1970 |
|---|---|---|---|
| Eastern Anatolia | 9.1 | 19.0 | 26.0 |
| Antalya | 8.3 | 20.0 | 18.2 |
| Eastern Blacksea | 7.2 | 14.6 | 17.8 |
| Middle Anatolia | 6.6 | 28.8 | 34.9 |
| Western Blacksea | 5.6 | 13.3 | 18.7 |
| Marmara | 5.5 | 53.4 | 60.3 |
| Cukurova | 4.8 | 42.1 | 45.5 |
| Aegean | 4.1 | 31.4 | 33.3 |
| Turkey | 6.2 | 29.6 | 35.0 |

9.21 Turkey's approach to planning and investment decision-making has been largely sectoral and systematic economic planning for urban areas or regions is a relatively new concept. Although physical "plans" were prepared in the early 1960's (particularly for the Istanbul area), few attempts were made to implement the recommended strategy or projects. In the Second Plan, it was recognized that policies linking urbanization, industrialization and the modernization of agriculture were required but little was done. Among the major failures were: investment decisions were made without regard to external economies; speculation in urban areas led to high costs insufficient housing and Gecekondu construction; inadequate urban infrastructure; insufficient employment and inadequate physical planning and implementation in large cities. Moreover, plans for reorganization of the Ministry of Reconstruction and Resettlment, increasing municipal incomes and public acquisition of land in urban areas were not implemented.

9.22 At the present time Turkish law and administrative practice make it extremely difficult to create effective metropolitan institutions such as a regional water authority. The fact that most resource allocation decisions are made by the centralized agencies and coordinated only at the macro level by the State Planning Organization makes it very difficult to ensure a coordinated implementation of the plans as developed. Attempts are now being made to provide some regional structure in the Istanbul area. A large project in metropolitan regional planning and implementation is underway

in Istanbul and this may provide the basis for a broader metropolitan perspective.

Land Policies, Controls and Housing

9.23 The policy of expropriation and State control of large land areas as a means of directing urban growth in Turkey has been largely limited to the Ankara experience in the 1920's when approximately 4 million square meters were bought as a site for the new administrative capital. Both the national and municipal authorities have extensive rights to expropriate land for public purposes but the constitutional protection of landowners' rights and the limited funds and staff available made implementation difficult. Municipalities are required to prepare physical plans for urban development with assistance from the Ministry of Reconstruction and Resettlement or Iller Bank. Land policies and related laws and regulations have been under review for some time. Several important changes have been made in recent times, such as extensions in the Ministry's authority over the formulation and execution of physical plans, and changed zoning regulations affecting Ankara, Izmir and Istanbul which close loopholes. Other legislation is under consideration or in preparation but their successful implementation remains to be seen.

9.24 A major land control problem is the rapid growth of illegal settlements (gecekondu). Under the Turkish law "gecekondu" are defined as any construction which has been made without the express authorization of the municipal authorities. About 1/3 of the gecekondu are located on private land, some obtained through squatting, but a large proportion through illegal sales of shares in a larger private parcel. Gecekondu are nevertheless the main source of low cost housing (their average cost is estimated at about 8,000 TL) and are the homes of most of the recent migrants to the large cities. Most gecekondu are substandard in terms of space, construction and services, but many are substantial and even include apartment buildings and factories. About 60% are owned by the families who live in them. The Government adopted a policy with the passage of the gecekondu law of 1966 of prevention, improvement and clearance. These measures have been unsuccessful due to lack of enforcement and the failure to provide a viable alternative to gecekondu settlement through fundamental changes in policies for land use regulation and investment in urban services. Despite their obvious poverty when compared with the wealthier urban dweller, surveys show the income, health and general education level of the gecekondu inhabitant to be substantially higher than those of his village counterpart.

9.25 The gecekondo problem mentioned above is prima facie evidence of the difficulties that the Government has met in regulating the form and character of privately built housing settlements. The private sector constructs the majority of housing and direct Government investment is less than 5% of the total investment in housing although the Government provides assistance indirectly through the Real Estate Bank and the Social Insurance Agency. Most of these funds have gone to middle income families. During the Second Plan it was estimated that 900,000 dwelling units would be needed but only about 650,000 were in fact constructed according to building permits. The number of gecekondu constructed during the period are unknown.

Municipal Services and Financing

9.26 Inadequate water, sewage disposal and power are serious problems in all the major cities of Turkey. Accurage statistics are difficult to locate but the indication of the problem's magnitude can be gained from the following old survey results:

Table 41: RATIO OF HOUSEHOLDS WITH PIPED DRINKING WATER

| Size of City | Percent of Households with Drinking Water |
|---|---|
| 5,000 - 10,000 | 17.7 |
| 10,000 - 25,000 | 29.9 |
| 25,000 - 50,000 | 41.6 |
| 50,000 - 100,000 | 37.1 |
| 100,000 or more | 40.2 |

SPO (Report of the Working Group on Municipal Services), Ankara, 1966

The municipalities, who are responsible for providing these services, have very inadequate financial resources to do the job and may be inefficient in using these. As their taxing powers, and thus income, are insufficient they have to rely on limited central grants and expenditures by central agencies. Only about 9% of all Government resources are channeled through local budgets although the Central Government provides some additional assistance in the form of grants (16% of total local government revenue).

9.27 For the last decade, the local government and municipalities' revenues have been declining as a proportion of central government revenues. By 1972 average per capita municipal revenues were only TL 149; or 3% of national average per capita income. For many years the government has been considering tax and legislative reforms to improve the financial situation of the municipalities but mistrust in the abilities of the municipal authorities has prevented major changes. A new property tax law was implemented in November 1972. It was primarily intended to increase rateable values and property tax rates. And a new municipal revenues law is being considered, which is intended to increase the share of municipalities in the property tax from 25% to 50%.

9.28 In addition to cities, there are 35,000 conglomerations that satisfy the minimum legal requirement and are considered villages. Like municipalities, villages have locally-elected officials but extremely limited fiscal authority and responsibility. In 1972, 60% of the villages had an adequate water supply, 11% had power and 15% had telephones.

Pollution

9.29 Both air and water pollution are of increasing concern in Turkey. In Ankara, where the problem is one of the worst in the world, air pollution exceeds US standards for a safe concentration 75% of the time and although measures being considered include the substitution of briquettes for the lignite fuel presently used in most homes for heating and the reduction of the sulphur content in fuels. Istanbul air quality problems are less severe. The coastal waters around Izmir and Istanbul are heavily polluted from industrial effluents, shipping and inadequate treatment of sewage. There is increasing concern about the effects of pollution on the beaches, tourism and fishing, all important economic activities in these areas. Both of these cities have major sewage projects under preparation - Istanbul with Bank assistance. The industrial and shipping pollution problem will require a new framework of enforcement powers which can only result from increasing awareness of the problems.

Prospects

9.30 The pattern of rapid urban growth is expected to continue at an annual rate of 6 to 7 %. By 1985, 54% of the total population is expected to be urban. Agricultural policies are not likely to slow this migration. Projections by the Ministry of Reconstruction and Resettlement indicate that 75% of the urban population will be living in cities of more than 100,000 in 1985 compared to 56% in 1970. For the near future, the direction of urban growth in Turkey would seem to be towards dispersal among several major centers rather than concentration on one or two. The State Planning Organization and the Ministry of Reconstruction and Resettlement have identified these potential growth centers and they are indicated on Map 10672. The Third Plan continues the strategy of the Second Plan to increase employment opportunities and improve urban conditions by gathering together light industries in organized industrial districts (site and services projects). Infrastructure investments are to be made in the cities to alleviate urban problems and urban expansion projects are to be prepared (such as in the Istanbul Urban Credit). The Land Office's financial resources are to be increased and the local government system is to be reformed to increase their effectiveness in urban improvements. The implementation of these measures will be difficult because regulation of urban development, particularly the housing and construction industry would confront some of the most powerful interests in Turkey and the Government agencies involved are severely understaffed and under-financed.

9.31 Projections of local government and municipal revenues in the Third Five-Year Plan do not show any significant change in the level of local government revenues. In fact local government revenues are projected to grow at a slower rate than during previous plan periods (10.1% compared with 11.6%) and more slowly than central government revenues (11.8%). All local governments in Turkey are projected to have only an average of TL 1 billion per year available for investment of which the municipalities' share would be about 72%. The Plan assumes that local government current expenditures will rise only at about 7.3% per annum. In view of the inadequacy of local government staff, and the responsibilities foreseen for them, these allocations appear too low.

9.32 In view of these difficulties, urban problems are likely to worsen for some time. Improved organization of Government efforts in the large metropolitan areas, through the creation of regional or metropolitan authorities or better coordination of existing organizations and greather authority in local agencies could lessen the harmful effects. Methods of raising local finance can be improved, particularly by having the consumer pay more of the cost of urban services and by improved taxation to recover a larger proportion of the value created by public investment. But new land policies will be required if control over urbanization is to be achieved.

The Distribution of Income

9.33 Turkey shares with many other developing countries the experience of large income differences. The overall income distribution is highly unequal; the GINI coefficient of net household incomes was estimated at above 0.56 in 1969. 1/ 2/ Comparable data for earlier years are not available, 3/ and the lack of firm data makes it difficult to judge whether income differences have widened or have been narrowed down over the past two decades; the substantial difference in the rate of growth or real per capita output in the various sectors suggests that differences in income of various groups may have widened. On the other hand, the substantial and rapid growth of emigrant workers' remittances in recent years, much of which goes to the poorest groups, has been working in the opposite direction.

9.34 In Turkey, both rural and urban incomes are unequally distributed. The Gini coefficients of household income after tax have been calculated for some Turkish cities for the 1960's: they range from 0.46 in Ankara, Antalya

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1/ M. Krzyzaniak and S. Ozmucur, "The Distribution of Income and the Short-Run Burden of Taxes in Turkey, 1968," mimeo, 1968. These estimates are based on a survey of income distribution in 1968 conducted by T. Bulutay, Serim Timur and Hasan Ersel.

2/ This is roughly comparable to such countries as Colombia, Ecuador, Peru, Brazil, Lebanon, Madagascar, Mexico, Iran, Philippines, is somewhat higher than most Western Europe and other Latin American and Asian countries and is considerably higher than East European countries, the US, Canada and such European countries as the UK, Greece, Spain and the Scandinavian countries.

3/ A study of income distribution was made in 1963, using a variety of sources, of very varied degrees of reliability. The Second Plan quotes the results of this study. "20% of the families which made up the lowest income group had a share of 4.5% of the national income while the highest 20% had a share of 57%, thus, in 1963, annual income per family was approximately TL 2,500 for the former and TL 31,900 for the latter group."

and Ordu to below 0.3 in Adana. 1/ Rural income distribution is also skewed, since the ownership of land is extremely unequally distributed. According to the Census of Agricultural Holdings of 1970, covering about 60% of the total land area, 60% of the land holdings were less than 3 hectares and covered only 18% of the land area (Table 11.10). A study of farm incomes made in 1951-53 showed that there was a close correlation between the distribution of land holdings and the distribution of incomes: while the larger farmers, owning better quality land and more tractors, got more net output per hectare, the smaller farmers had more non-agricultural sources of income. 2/

9.35 In a study dividing the population into 6 socio-economic groups: 3/ low, middle and high income agriculturalists, wage and salary earners, civil servants and entrepreneurs, the per capita income of the poorest agriculturalists, who formed around 70% of the population was far below the average income of the other groups, so the average rural income is much lower than the average urban income. Furthermore, there was a sharp deterioration in the terms of trade between 1959 and 1960, and a decline again after 1966, so during these periods the relative position of the agricultural groups is likely to have deteriorated. Wages in the non-agricultural sector have increased well above the rural wages and in line with productivity in the industrial sector during the sixties, as a result of Government minimum wage policies and of the increased bargaining power of trade unions. Real wages of workers covered by social insurance increased by about 5.5% per year during 1964-1970, or at about the same pace as productivity in manufacturing.

9.36 In absolute terms, real wages began to decline from 1971. However, unionized workers received a part of their incomes in various prerequisites, 4/ ranging from free meals to clothing, which would not be influenced by rising prices and hence the decline in real wages may be overestimated in the period of inflation after 1970.

9.37 These estimates of income distribution ignore the distribution of public goods, e.g. education and health. The increase in literacy and in

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1/ T. Bulutay and H. Ersel, "The Distribution of Income in Certain Turkish Cities"; the Turkish Yearbook of International Relations, 1967. These studies are based on consumer expenditure surveys conducted in various cities by the State Institute of Statistics; some surveys were published after 1967.

2/ Eva Hirsch, Poverty and Plenty on the Turkish Farm.

3/ Keith L. Griffith and John L. Enos, Planning Development, pp 207-8. The figures were calculated on the basis of Census and GNP figures, tax data and employment records. It is not clear to what extent the groups are mutually exclusive: large landowners, for example, may also be entrepreneurs.

4/ According to one survey, benefits in kind amounted to an average of 13.5% of cash wages in 1971.

facilities for vocational training, the extension of health services and various other steps that have been taken to improve the conditions in the more backward regions, have raised the level of living of the poorest in Turkey. Furthermore, emigration of Turkish workers has been a strong equalizing influence because it helps to maintain the level of wages within Turkey and through workers' remittances the consumption of dependents is raised and the ownership of assets becomes more equal.

9.38 Taking into account all these various indicators, it may be that inequality has in fact increased over the last few years, as a result of rapid industrialization, urbanization and inflation, though no definite statements can be made regarding trends. But it is also likely that the proportion of the population below an absolute poverty line has in fact decreased as a result of economic growth, emigration and the Government's social policies.

9.39 The first two development plans adopted the objective of reducing income disparities and proposed measures to achieve this objective. As noted in the public finance section there was some progress in making Turkey's tax system more equitable, although there remain significant loopholes for farmers, entrepreneurs and independent professionals in the income tax. A policy was followed of keeping the prices of basic commodities in line with the purchasing power of lower income groups in cities and there was also an increase in education, health and other social services. However, the large number of rural emigrants received little attention. The Third Plan has adopted the improvement in the distribution of income as one of the five main tasks for the next 23 years and suggest policies of taxation and land reform, and the expansion of the level of the public systems of education and health, the extension of social insurance, etc. In 1973, Parliament enacted a controversial but toothless agrarian reform bill (see Chapter 10). A recent study estimated the proportion of income paid in taxes at 13-14% for the poor, and 20 to 34% for the rich, so that there is significant scope for redistributive taxation. The Plan neglects in the short-run one very important means of improving the distribution of income, namely increasing opportunities for gainful employment.

Main Institutions for Regional Development

1. In the centralized system of Government in Turkey, a first principle is that the provinces, 67 in number, are the main subcountry units dealing in an integrated way with the problems of a geographical area. Twenty-one of the 45 or so major central government agencies do have regional organizations responsible for several provinces. As each agency has defined its regions in a manner consistent with its own technical requirements, their boundaries are not necessarily the same. Pilot efforts to generate a regional approach through regional plans have been tried several times in the past but these have lacked the political force to surmount the difficulties presented by the existing administrative structure.

2. A second principle is that decisions concerning the allocations of public resources are made almost exclusively in Ankara. The provinces and the field representatives of the agencies have more of a advisory role and limited resources at their disposal (see section on public finance). Thus, there is in Turkey no single agency or collection of agencies charged with the task of regional development, and in order to understand Turkey's past performance and the possibilities for the future, the full range of public and private bodies should be reviewed. However, to keep the problem manageable, a selection has been made of those institutions which appear to have played an important role in either planning or implementing regional investments in the past or could in future play such a role.

3. The State Planning Organization (SPO) is responsible for all economic planning and occasionally views problems from a regional perspective. Part of the Prime Minister's office, SPO must approve all projects in the plan and the annual programs and as such has large residual if negative, powers. In the past these powers were exercised more actively. For the regional allocation of public resources and the guidance of the Government's incentive policy, SPO tried several approaches in the past. These include the comprehensive regional development studies carried out in collaboration with the Ministry of Reconstruction and Development. Recently, it has established a Department for the Development of Disfavored Regions (KOYD), which has terms of reference including research into the problems of regional development. The Department of Coordination has responsibility for coordinating investment implementation at the local level, in particular for supervising a program of provincial plans (see below).

4. The Ministry of Reconstruction and Resettlement, a small ministry with responsibility in reconstruction following disasters, urban planning and housing, has prepared regional studies with SPO in the past. The Ministry's identification of growth centers may have had some intangible effect on other ministries' choice of investments, but there was no formal compulsion. It is now concentrating with KOYD on the study of specific projects of physical planning.

5. Several ministries administer the incentives being given to private investors, most notably the Ministry of Industry. Although the Ministry of Agriculture is large and reasonably well represented throughout the country, its effectiveness is limited by the strength of other organizations operating in agriculture - DSI, Toprakşu, TPAO, the Sugar Corporation, etc. Diffusion of effort is widespread and conflicts are often resolved in favor of the more powerful organizations. The Ministry of Interior, which is responsible for law, order, and development in the provinces, has a very important coordination role at the local level through the Governors. The Ministry of Village Affairs is responsible for all services provided to the villages and thus retains a cross sectoral perspective.

6. In Turkey, the Banking System is separated into the private system, which with two exceptions deals almost exclusively with short-term financing, and the public system. The public banks are perhaps more accurately described as the financing arm of their respective ministries. However, they do have banking features and they are the major source of development financing. The flow of funds through the banking system has been generally away from the poorer regions of the east as shown below for 1971:

Table 42

BANK DEPOSITS AND CREDITS BY REGION

| Regions | Deposits | Credits | Credits as percent of Deposits |
|---|---|---|---|
| | (TL million) | | |
| Marmara | 19,734 | 18,053 | 91 |
| Middle north | 11,672 | 20,724 | 178 |
| Aegean | 6,932 | 6,793 | 98 |
| Mediterranean | 3,610 | 4,582 | 126 |
| Black Sea | 3,803 | 4,665 | 123 |
| Middle south | 2,320 | 1,475 | 64 |
| Middle east | 1,728 | 746 | 43 |
| South east | 723 | 1,022 | 141 |
| North east | 936 | 574 | 61 |
| Total | 51,462 | 58,638 | 141 |

The deviation of the south east from the pattern is explained by a large development investment program by the State Investment Bank. The per capita distribution of credits is given in the table below:

Table 43: TURKISH BANKING SYSTEM
1971 Per Capita Lending by Region 1/

| Region (No. of Provinces) | Population (000) 1970 | Development and Investment Credits | Agricultural Credits | Total Credits |
|---|---|---|---|---|
| Middle north (10) | 5,185 | 1,737 /2 | 264 | 3,996 |
| Aegean (9) | 5,298 | 197 | 364 | 1,282 |
| Marmara (7) | 5,555 | 577 /2 | 116 | 3,250 |
| Mediterranean (6) | 3,932 | 55 | 331 | 1,165 |
| North east (5) | 2,145 | 0 | 156 | 267 |
| South east (9) | 2,931 | 152 | 115 | 349 |
| Black Sea (9) | 4,592 | 260 | 542 | 1,016 |
| Middle east (7) | 2,941 | 1 | 128 | 252 |
| Middle south (5) | 3,084 | 5 | 201 | 478 |
| Total/Mean | 35,663 | 424 | 263 | 1,664 |

/1 Long- and short-term credits.
/2 These are artificially large as credit for countrywide investments (railways, power) are shown in the region where their management is located, most usually Ankara (middle north) or Istanbul (Marmara).

Source: Publication of the Banks Association of Turkey, 1972.

The distortions in the data make generalization difficult but, not surprisingly, bank credits are seen to follow economic activity with the Marmara (Istanbul) and the middle north (Ankara) regions receiving a lion's share of overall credits; the former because of its economic importance, the latter because it has the headquarters of the major state enterprises receiving development credits. Similarly, the major agricultural areas have the largest portion of agricultural credit.

7. The largest banking institution is the Agricultural Bank of Turkey (ABT). In 1971, it had assets of TL 21.6 billion, 793 branches and 19,000 employees. The bias in its credits has been towards the three regions with well developed agriculture; the Aegean, the Mediterranean and the Black Sea. The poorest regions got less. The narrowness of the distribution of the Bank's assets is partly due to the concentration of credit on price intervention programs which favor specific crops which are concentrated in a few regions. Over half of the Agricultural Bank's credits go for price intervention programs and this proportion is increasing. A generalized credit program for on-farm development would more effectively even out the benefits derived from the Bank's credit operations, especially if an effort were made to provide such credit to smaller farmers.

8. The State Investment Bank (SIB) is the second largest financial institution. It has only one office and 116 employees, but its assets exceed TL 13 billion. Together with the Ministry of Finance, SIB finances the external needs of the State Economic Enterprises (SEEs). Projects submitted to SIB must be in the annual programs prepared by SPO. However, SIB can, and does, refuse projects following appraisal, although the sponsoring SEE has the right to seek other financing, including direct budgetary support. Since its foundation in 1964, SIB has become an increasingly important source of long-term financing for the SEEs; in 1972, its loan disbursements represented 20% of SEEs fixed investment. SIB accounts for 85% of the investments in the Development and Investment Credit column above; the remainder is TSKB (see below). SIB's main role is to ensure the financial and technical soundness of projects, and as such there has little overt regional impact.*

9. The Bank of the Provinces (Iller Bank) is another central government institution with assets of TL 4.2 billion and 2,400 employees. It specializes in infrastructure planning and financing for 1,500 medium size cities is responsible to the Ministry of Reconstruction and Resettlement and has a number of regional offices. In 1972, Iller Bank expected to lend about TL 1 billion. Terms are 5 to 25 years on own funds and interest free on budgetary funds administered for the municipalities. An important part of Iller Bankasi's efforts is technical assistance in preparing and supervising projects. Actual construction is usually contracted. Theoretically, the 22 largest cities (those with populations above 100,000) are the responsibility of other agencies; the Turkish Electricity Authority for power and DSI for water and sewerage. The most likely regional growth poles are among this group of cities and if investment is to be focused on a few targets for maximum impact, these cities would be the logical choice. In practice, the responsibility for the large cities is less clear and Iller Bank is presently preparing, for example, the Istanbul Wastewater Project. Iller Bank could assume in future a more active role in developing and coordinating infrastructure investments in the larger cities but this would require a major augmentation of staff and resources for it to do so.

10. The People's Bank (Halk Bank) is to small industry what the Agricultural Bank is to agriculture. Associated with the Ministry of Industry, Halk Bank has 3,900 employees located in 220 offices and assets of TL 3 billion of which about half is in medium-term investments. The offices are well distributed around the country with at least one office in each province. Halk Bank reportedly needs to upgrade its appraisal standards and to increase its trained personnel. Nonetheless, Halk Bank is stimulating small and medium industry across a wide geographical area. With stronger management

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* However, as the projects of the SEE's are one of the main instruments available to government to regionalize investment, the Bank has an important role in seeing the project so selected by SPO are technically sound.

and staff, Halk Bank could also serve to provide badly needed technical assistance to small and medium industry, especially in project identification and feasibility work.

11. The Industrial Development Bank (TSKB) is the major source of long-term finance to private industry. TSKB assets total TL 2.3 billion and it has 220 employees. It recently opened three regional offices, and reorganized itself regionally. An increasing proportion of its investments are made outside the Marmara region. Its strong staff make it potentially a powerful instrument for stimulating sound industrial development in the provinces. To do this will require a ongoing assessment of policies, especially the minimum size of its investments, and it will have to avoid the risks of spreading its resources too thinly and reducing the quality of its operations.

12. Government in Turkey has essentially three levels: the Central Government and its agencies, which raise and distribute 90% of governmental resources; the locally elected city and village governments which have some revenue sources and responsibilities; and the provincial governments which have limited own resources, but occupy a strategic position as the linchpin between the local and central authorities.

13. The Governor is the representative of the Central Government, usually a career employee of the Ministry of Interior. He works in conjunction with two decision and policy making bodies: the provincial council which is elected by the people of the province on a population basis, and the standing committee with members elected by the council with the Governor as chairman. The provincial representatives of a majority of the national agencies report to their head offices through the Governor. However, those agencies with regional offices with responsibilities for more than one province while required to coordinate with the Governors, do not have to report to him. Moreover, the Governor does not have any direct control over the budgets of the agencies, although his view are supposed to be taken into account in the preparation of agency plans and budgets. The successful Governor thus persuades and inspires, his force to command as much a result of personality as circumstance. Provincial plans should enable him to assume a greater role in future, if sufficient staff are provided.

14. The Municipalities and villages also have financial and planning authority and responsibility. Their functions and problems are more fully covered in the section on urbanization. From a regional planning point of view they are of importance mainly for the services they provide which may stimulate or retard regional growth. In general, their financial resources have not been enough to provide sufficient basic services and the Central Government institutions have not compensated for this insufficiency. Despite problems, several of the medium sized cities (population 100,000 - 500,000) have grown fast and have potential for a leading role in the development of their hinterlands.

# Chapter 10

# AGRICULTURE

## Introduction

10.1 The importance of the agricultural sector derives from its substantial and varied contribution to the population and the economy -- over two-thirds of the total employment, the bulk of the foreign exchange earnings, much of industry's raw materials and between one-quarter and one-third of the net domestic product. Although structural and other sources of change can be expected, the perspective which these characteristics reveal is unlikely to change in any substantial way over the medium term.

10.2 The total land area of Turkey is currently estimated at 78.1 million ha, of which nearly 54 million ha is devoted to agricultural activities (excluding forestry). Cereal culture absorbs more than half the area used for field crops, but contributes only about one-fourth of the value added by agriculture. By contrast, fruit and vegetable production contributes almost as much on a fraction of the agricultural land. Industrial crops provide another important element, and one which has benefited significantly from irrigation. The area under meadows and pastures for livestock is about the same order of magnitude as that for crops of all kinds, but the trend in such use has been steadily downward in recent years as cultivated lands have encroached on traditional livestock areas. Forestry resources have not been used productively on a scale commensurate with their large size (estimated at 18 million ha.).

10.3 The production patterns reflect significant regional differences within the country. The coastal regions tend to be the most productive agriculturally, where rainfall is generally adequate but the distribution throughout the growing season can be unreliable. The central Anatolian plateau covers about one-third of the total area, and it is there that dryland cereal cultivation predominates under rainfall conditions which are both low in average quantity and unreliable. The isolated eastern highlands contain much of the livestock production. Against this general background one can consider details of recent performance.

## Changes in Agricultural Production

10.4 Agricultural growth in Turkey over the past two decades can be characterized as good. Of 65 countries for which FAO has computed growth rates from 1959 to 1969, only eight did considerably better than Turkey and 12 did about as well. 1/ Value added in Turkish agriculture grew at an annual trend rate of 3.3% between 1950 and 1972 and an annual compound rate of

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1/ FAO Production Yearbook, 1971, Vol. 2.

3.5% 1/ which compares with a world agricultural production annual compound growth rate of 2.7% 2/. Turkish agricultural growth has been essentially stable --growth during the Second Plan (3.6%) was about the same as the First (3.7%) 3/. The Third Plan (1973-77) anticipates much the same pattern (3.7%), but the prospective plan (1977-87) anticipates some acceleration in growth.

10.5 Without the sharp increase in production in 1971 -- 12% above 1970 and 17% above 1969 (in constant prices) -- which was again sustained in 1972, Turkey's agricultural progress during the Second Five-Year Plan would actually have been quite poor. Indeed, prospects for agriculture in 1969 and 1970 did not look promising. Part of the record output in 1971 resulted from very favorable weather, and both 1971 and 1972 benefited from strong domestic and export demand. But high production during these two years also reflected sizeable increases in the use of fertilizer, mechanization and irrigation during the Second Plan. Rapid growth has been largely confined to the export crop sector and has not been matched by comparable increases in per capita food production (Chart 14).

10.6 In the early period of the 1950's agricultural growth was almost exclusively due to extensive factors, the result of expansion in the crop area and increased livestock numbers. 4/ Productivity, e.g., the value of production per unit of land, increased by only 3% during the 1950's 5/. By 1960 this picture had begun to change, and expansion of the cultivated area and livestock numbers slowed down appreciably, or in some cases even declined. Growth since 1960 for a number of commodities, notably cotton and sugarbeets, has been almost exclusively due to productivity increases. While both intensive and extensive factors have been at work with respect to all commodities, food crops and livestock have registered the lowest productivity increases.

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1/ In 1968 prices the compound growth rate is based on averaged production in 1971-72 compared with averaged production in 1950-52.

2/ Agricultural Commodity Projections 1970-80, Vol. I, FAO, Rome, 1971, p. 13.

3/ Annual Value added growth rates. Long-term growth rates (1950-72) are lower than short period annual averages, and growth rates of value added are lower than growth rates at total production.

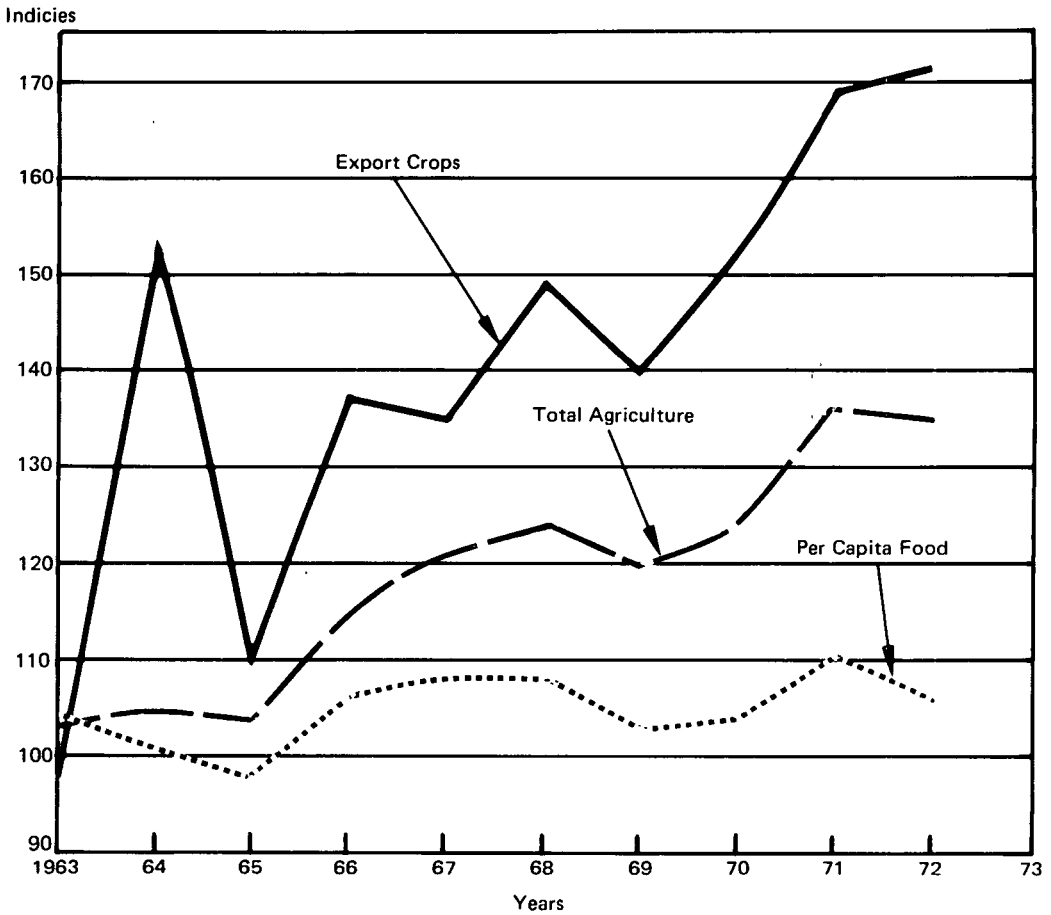
4/ The cultivated area increased by 58% between 1950 and 1961 influenced by the expanded use of the tractor while output increased by about the same amount.

5/ It actually fell from 1950 to 1955 and only regained the 1951 level in 1958, James E. Blalock, Capital and Finance in Turkish Agriculture, 1971, p. 7.

## CHART 14

### AGRICULTURAL PRODUCTION INDICIES

### 1961–65=100

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10.7 Compared with agricultural production proper, the value of forestry and fisheries is insignificant, although both did increase their relative position in the past decade. Value added by forestry was 2.3%, and by fisheries 0.7%, of agricultural production in 1972.

Table 44: INDEX OF VALUE ADDED AND GROWTH RATES IN AGRICULTURE BY MAJOR SECTORS 1962-72
(1968 prices)

| | 1962/1972 | Compound Annual Growth Rate |
|---|---|---|
| Total | 143 | 3.3 |
| Agriculture | 141 | 3.2 |
| Forestry | 284 | 10.0 |
| Fisheries | 220 | 7.5 |

10.8 Within agriculture the dominance of crops over livestock increased, but the relative place of cereals in the value of production fell substantially. Since cereals and livestock account for half the value of output, and therefore half the farm income, this has meant slow income growth for a large segment of the farm population, especially in regions where these are the main activities -- the Anatolian plateau and the Eastern region. The growth which did take place has tended to be concentrated in the coastal areas, especially the broad valleys opening onto the Mediterranean and Aegean Seas.

Table 45: RELATIVE SIGNIFICANCE OF AGRICULTURAL SUBSECTORS

| | Share in Production | | Index of Output |
|---|---|---|---|
| | 1962 | 1972 | 1972/62 |
| | (% of total agricultural production) | | |
| Total Agriculture | 100 | 100 | 141 |
| Livestock | 31 | 30 | 132 |
| Crops | 65 | 68 | 147 |
| | (% of total crop production) | | |
| Cereals | 47 | 41 | 129 |
| Industrial crops | 22 | 26 | 174 |
| Vegetables | 4 | 5 | 170 |
| Fruits and nuts | 18 | 20 | 162 |
| Grasses and hay | 5 | 5 | 156 |

Source: Derived from SPO Production Value Statistics.

Performance by Key Commodity Categories

10.9 The area under cereals expanded rapidly from 8.2 to 12.1 million ha between 1950 and 1955, rose gradually to almost 13 million ha by 1960 and stabilized at around 13.3 million ha during 1969-72. The importance of crops has increased relative to livestock, 1/ and wheat increased its relative significance among cereals (Appendix Table 7.2), rising to 65% of the cereals sown area in 1971. Area devoted to other cereals, primarily barley but also including rye, maize and oats, declined from a peak of 5.2 million ha in 1960 to a current level of 4.8 million ha.

10.10 This expansion was the dominant reason why cereal production nearly doubled from 9 million tons in 1950 to 17.5 million tons in 1970 2/. Yields in 1970 were only 28% higher for wheat, and 21% higher for other cereals, than they were in 1950, which meant that over two decades about 80% of increased grain production was due to increases in area, and only 20% to increases in yields.

10.11 Moreover, cereal yields fluctuate sharply in Turkey (graph 14), because most of the grain is grown in marginal rainfall areas, and the timing and amount of rainfall are major factors affecting annual yields. Their irregularity lends a strong element of instability to total agricultural production, and to the income of farmers in the non-irrigated, low-rainfall areas.

10.12 Industrial crops and oilseeds have dissimilar area, yield and production trends (Appendix Table 7.2). With the exception of tobacco, and very recently oilseeds, there has been no significant change in the area under these crops since the mid to late 1950's, but sharply differing yield trends (graph 16) have produced different production patterns (Table 46).

10.13 The tobacco area grew from 130,000 ha in 1952 to 336,000 ha in 1971, but yields declined by one-third to less than 500 kg/ha. The sugarbeet area rose sharply from 48,000 to over 200,000 ha during the 1950's, but fell back to 103,000 ha in 1969. Yields have risen rapidly in recent years to nearly

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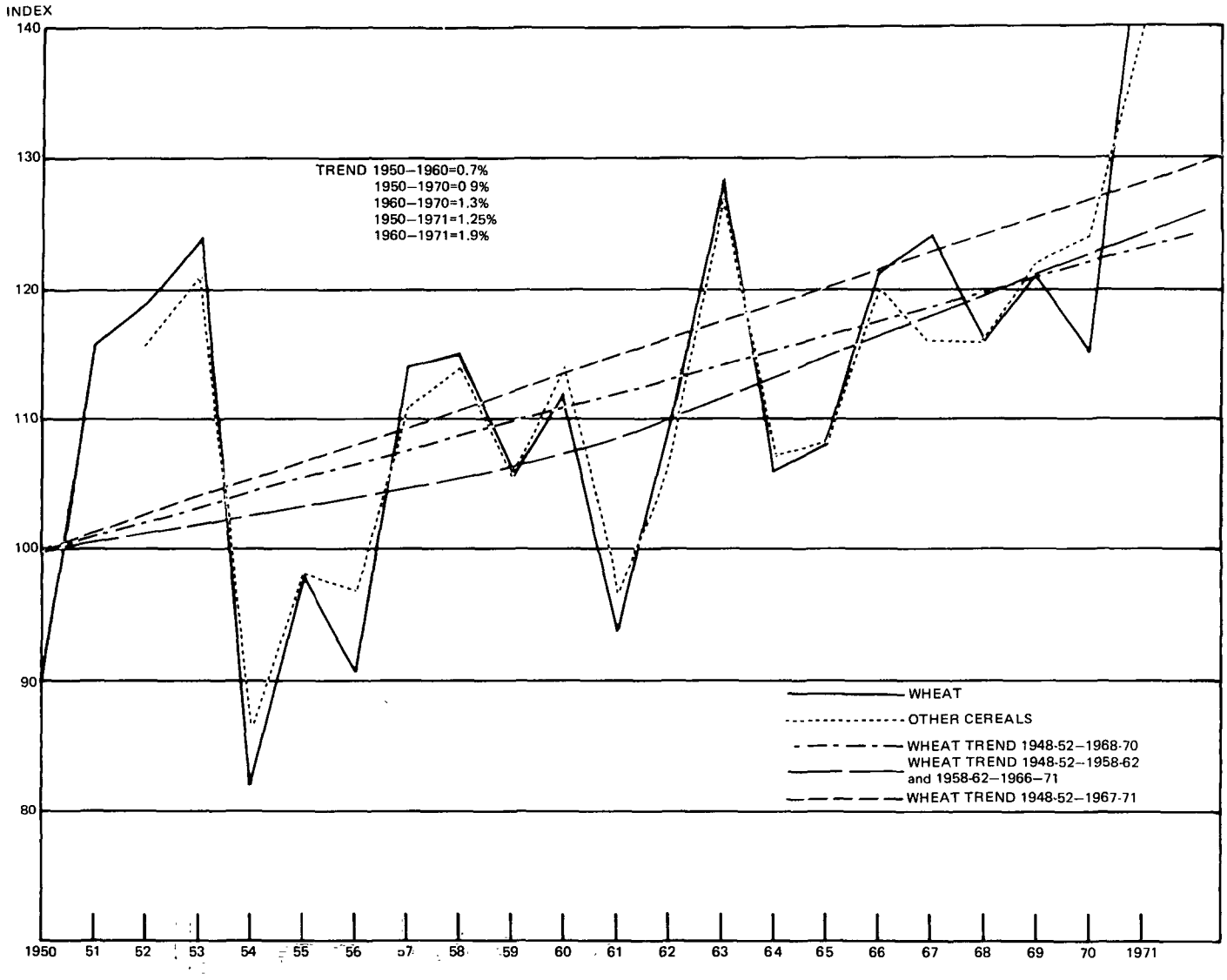
1/ When output is measured in 1971 prices, the value of livestock production and its relative share in total production are considerably larger than when 1968 prices are used because of the sharp rise in livestock prices relative to other farm prices.

2/ Wherever possible, yield and production comparisons are based on five-year averages to reduce the impact of large, annual yield fluctuations. Thus, 1950 is the average of 1948-52, 1960 the average of 1958-62 and 1970 the average of 1968-72 or 1967-71.

## CHART 15
## INDEX OF WHEAT AND OTHER CEREALS YIELD
### 1948–52 = 100




Growth rates are based on terminal year five year averages. 1970 is the average of 1966-70 and 1971 the average of 1967-71. 1950 is the average of 1948-52 and 1960 is the average of 1958-62. Accurate 1972 yield and area data are not available.

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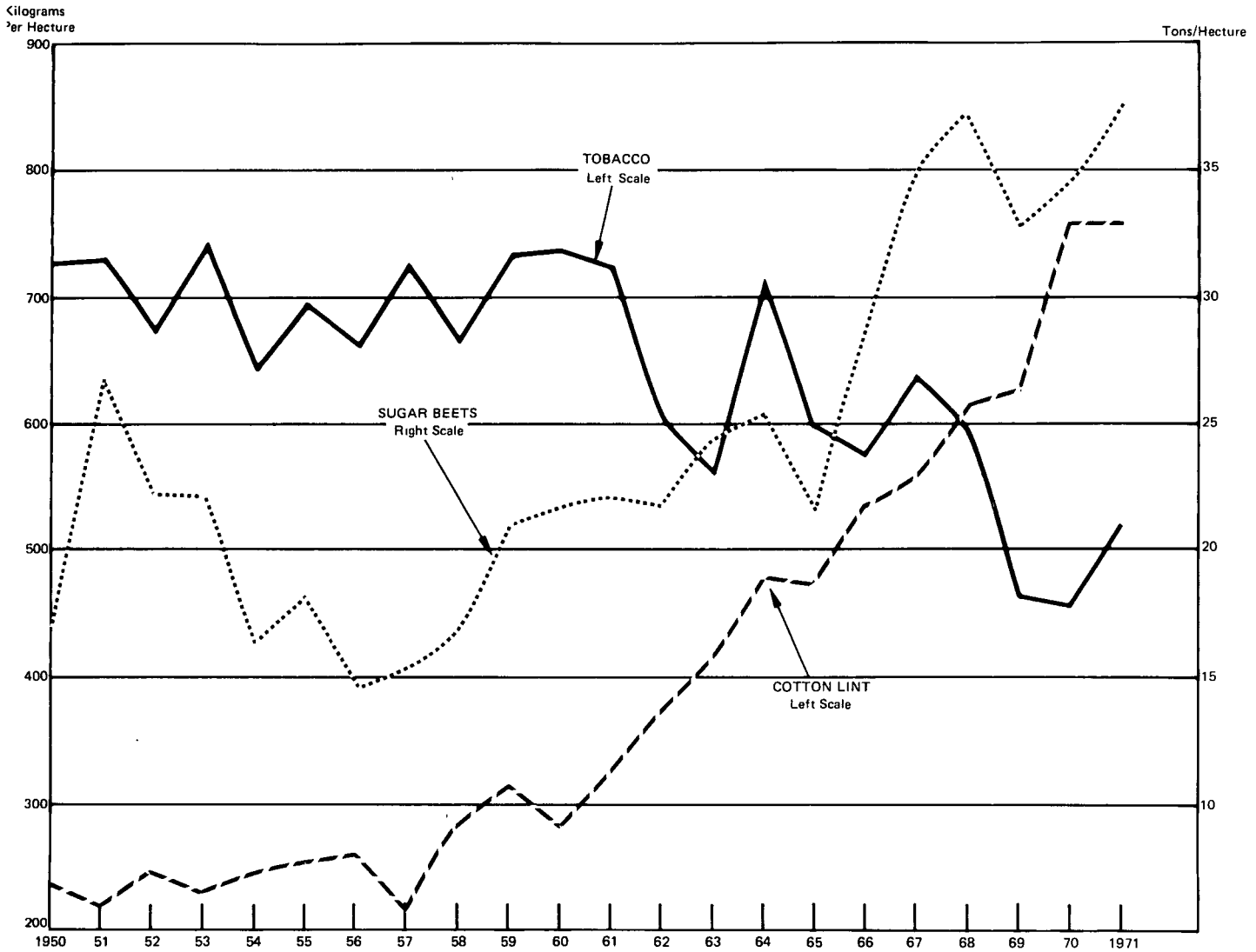
## CHART 16
## YIELDS OF INDUSTRIAL CROPS, 1950–1971

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40 tons/ha. The area devoted to cotton has stayed around 650,000 ha throughout the 1952-72 period (Appendix Table 7.2), but yields have been rising since 1960. Irrigation and fertilizer have been the dominant factors accounting for growth of both cotton and sugarbeet yields as production of these crops has shifted to irrigated land during the past two decades.

Table 46: PRODUCTION OF MAJOR INDUSTRIAL CROPS
1957-1972

| | 1957 | 1960 | 1965 | 1970 | 1972 |
|---|---|---|---|---|---|
| | | | (thousand tons) | | |
| Cotton lint | 135 | 175 | 325 | 400 | 544 |
| Cotton seed | 270 | 305 | 527 | 640 | 870 |
| Sunflower seed | 95 | 123 | 160 | 375 | 560 |
| Total oilseeds | 471 | 552 | 792 | 1,120 | 1,535 |
| Sugarbeets | 2,206 | 4,385 | 3,421 | 4,254 | 5,896 |
| Tobacco | 123 | 139 | 132 | 149 | 173 |

10.14 The area under oilseeds remained nearly constant between 1952 and 1965 (Appendix Table 7.2), but expanded to over 1.2 million ha by 1972, primarily reflecting an increase in the area producing sunflower from 94,000 to 393,000 ha. Oilseeds yields rose only moderately, however.

10.15 The combined value of fruit, nut and vegetable production in 1972 (at 1971 prices) was almost half the value of livestock production and one-fourth the value of total crop production. The output of fruits and nuts fluctuates annually, however, because of the nature of the crop. The annual production values of grapes, hazelnuts and olives each exceed those of tobacco or sugarbeets, while crops with lesser, but still substantial, annual value include tea, apples and melons, followed by other fruits and nuts including citrus.

10.16 The combined area of vineyards, fruit trees, olive groves and vegetable increased from 1.7 to 3 million ha between 1952 and 1972 1/. Except for olives and figs, the yields of most fruit, nut and vegetable crops increased from 30 to 60% over that period, which was substantially greater than the case with cereals.

10.17 Analysis of what has been happening in the livestock subsector is hampered by data which are weak and conflicting. For example, the State Planning Office (SPO) has developed estimates for the period 1962-72, but not for earlier years — estimates which show much more rapid output increases during 1968-72 than do those of the State Institute of Statistics (SIS).

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1/ The Turkish statistics there are not included in the cultivated area.

10.18 Between 1952 and 1959, livestock numbers increased rapidly, and sheep more than cattle, but growth during the 1960's has been extremely slow (Appendix Table 7.4). Total milk production from all animals increased from 3.5 to 4.3 million tons between 1952 and 1971, or just over 1% annually, but yields increased by only about 0.5% annually (Appendix Table 7.4). Municipal meat slaughter increased 3.6% annually from 1952 to 1971 but with higher rates in the 1950's than for later years.

10.19 This general picture closely parallels the slow increase which has typified feed supplies. During the 1950's livestock expanded on the basis of open range grazing, but this area has been declining steadily since then and feed grain output has remained at about 6.5 million tons since 1958. SPO estimates of the rates of growth of livestock production show substantial growth of 74% during 1968-72. Nevertheless, faster demand resulted in shortages of livestock products, and rapid increase in prices of livestock and livestock products in the past five years.

Table 47: SPO ESTIMATES OF THE GROWTH RATES OF PRODUCTION OF ANIMAL PRODUCTS DURING THE PLAN PERIOD

| | First Plan, 1963-67 | | Second Plan, 1968-72 | |
|---|---|---|---|---|
| | Plan Targets | Realizations | Plan Targets | Estimated Realizations |
| Items | Average Annual Rate of Dev. | Average annual Rate of Dev. | Average Annual Rate of Dev. | Average Annual Rate of Dev. |
| Beef, Mutton | 7.6 | 2.0 | 5.3 | 4.1 |
| Chicken | - | 3.5 | 6.1 | 10.3 |
| Milk | 4.8 | 2.8 | 4.6 | 4.0 |
| Eggs | 11.1 | 1.9 | 6.9 | 7.2 |
| Mohair | 4.5 | 2.3 | 4.2 | 3.6 |
| Wool | 2.3 | 2.3 | 2.1 | 0.9 |
| Total Products | 5.6 | 2.6 | 4.8 | 3.2 |

10.20 Although fish products contribute less than 1% of total value added in agriculture, the industry is a growinone. Fish production is presently twice the 1960 level of 80,000 tons, nearly 70% of which comes from the Black Sea, 23% from the Marmara Sea, and the balance from fresh water fisheries. Exports have fluctuated greatly -- from a peak of 24,000 tons in 1956 to a low of 3,400 tons in 1963 -- but the normal average is about 7-10,000 tons annually.

10.21 Forestry resources are large, and consist of some 6 million ha in high forest, 4.7 million ha in degraded high forest, and about 8.3 million ha in coppice. The annual volume of production is reported to be growing at 25%, of which the major share is in industrial wood and secondary by-products but only two percent is fuel wood. By comparison, the value of production during the First Plan grew by 7% per annum, and by only 5.3% during the Second Plan. Large-scale development projects have been implemented to increase production

of timber, paper and paper board. The public sector created all such large production units until 1964, but since then private sector activities have increased in all branches except pulp and paper.

10.22 Government forest development policy and objectives have been to preserve and manage the State forests and to attend to the social welfare of the 12 million forest villagers. Forest management is good, and out of 24 forest conservation areas in the country, 21 have been inventoried. High forest surveying has improved, but demarcation and registration have lagged. In general, conservation rather than production has tended to be the guiding principle. Forest road construction has progressed rapidly to over 50,000 km, and there is also a program of reforestration and erosion control.

10.23 Forest raw materials prices and pricing systems are major factors hampering the export of timber products. Until recently the Ministry of Forests did not use consultants nor accept foreign investments, and this served to delay the transfer of modern technology. The future of forestry experts will depend on whether costs of production can be lowered, and this will partly depend on what role the private sector is allowed to play in the development of this resource.

10.24 To summarize the broad influences responsible for recent sectoral performance, production increases in the early 1950's reflected increases in cropped area. Thereafter, i.e., from 1962 to 1972, extension of new area grew only ten percent while output for the sector increased by 44%. While Turkey can probably continue to expand the total area under crops at an annual rate of about 0.5%, real development of the sector will depend on measures which increase the productivity of the land already devoted to agriculture. Recent experience with these is outlined in the section which follows.

Table 48: LAND USE CHANGES 1952-72

| | Cultivated Area | | | Vineyards, Tree Crops and Vegetables | Meadows and Pastures | Waste, Lakes and Marshes | Forests |
|---|---|---|---|---|---|---|---|
| | Total | Sown | Fallow | | | | |
| | Million Hectares | | | | | | |
| 1952 | 17.4 | 11.8 | 5.6 | 1.7 | 34.8 | 13.5 | 10.4 |
| 1955 | 21.0 | 14.2 | 6.8 | 1.8 | 31.0 | 13.5 | 10.4 |
| 1960 | 23.2 | 15.3 | 8.0 | 2.1 | 28.7 | 13.1 | 10.6 |
| 1965 | 23.6 | 15.4 | 8.5 | 2.3 | 28.2 | 13.1 | 10.6 |
| 1972 | 24.5 | 15.9 | 8.6 | 3.1 | 26.1 | 13.1 | 18.3 |

The Use of Inputs, Services and Investment

10.25 The use of fertilizers has shown particularly rapid expansion during the last two Plan periods, which parallels the shift from extensive acreage to productivity increase as the major source of agricultural growth. In 1950

only 42,000 tons of fertilizers were applied, but by the beginning of the First Plan this volume had risen to 422,000 tons. The use of fertilizers tripled during the First Plan, and then more than doubled again during the Second Plan, reaching 3.3 million tons by 1972. This development was supported by both domestic production, which has grown from annual levels of 322,000 tons to 1.4 million tons, and imports. The latter amounted to 2.5 million tons in 1972.

10.26 Fertilizers have been an important factor explaining the rapid increases in productivity for cotton and sugarbeets over the past decade, but they have also contributed to higher cereal yields. In this latter case, the benefits have been largely confined to the coastal areas where there is adequate rainfall, or where cereals can be grown under irrigated conditions, and where improved varieties of wheat can be successfully introduced. In the marginal rainfall areas fertilizers can bring about significant increases in yields only when the rainfall is favorable, and such favorable weather and fertilizers are an important part of the explanation for the exceptional grains yields realized in 1971.

10.27 There is extensive use of farm machinery in Turkey. The numbers of tractors in use remained fairly stable during the late 1950's and early 1960's, but in recent years this stock of equipment has been rising at a rate of about 10,000 units per year. The number in use reached 136,000 by 1972. At the same time there has been continuing increase in the number of iron plows and horse-drawn grain drills and roughly the same level of use of wooden plows. This experience tends to suggest that tractors have been augmenting animal power rather than replacing it on a major scale -- an observation which is at variance with government statistics which show a drop in the area cultivated by animal power (e.g., from 20 to 15.8 million ha between 1963 and 1971) 1/.

10.28 Improved seeds are being distributed at an annual rate of 200,000 tons, with new varieties of wheat making up 140,000 tons of this total and other cereals accounting for an additional half million tons. The Ministry of Agriculture is largely responsible for this activity, working through a National Improved Seed Committee which sets up annual requirements on a regional and crop basis. While cereals are clearly the overwhelming bulk of the improved seeds program, other crops which benefit include cotton, sunflower, sugarbeets, sesame, peanuts, soybeans, grass and alfalfa.

10.29 The plant protection efforts have been substantial in recent years in dealing with losses from fungi, parasites, animals and insects which have been estimated to reach TL 8 billion per year. The Ministry of Agriculture's

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1/ Part of the explanation may lie in the use of a fixed coefficient of 75 ha cultivated per tractor in arriving at estimates of the area involved. Application of such a coefficient would automatically reduce the area of non-tractor cultivation when used with a growing number of tractors assumed to be in operation.

Plant Protection Department is now represented in 64 of the 67 provinces, organized in ten major areas for field operations, and there is also a nation-wide plant quarantine network. Much of the plant protection work is done by crop spraying from private sector aircraft, but the technical specifications are provided by the Government. As indicators of the extent of the effort involved, about one million tons of seed are treated annually (equally divided between the public and private sectors), over five million ha of field crops and 67 million trees are sprayed or treated, and 60,000 tons of crops are treated in warehouses.

10.30 Additional savings should be realized from the program of grain storage, cleaning and transportation begun in 1951. Much of this has been in the public sector under Soil Products Office (TMO), which, with external assistance nearly doubled its 1953 storage capacity to about 2 million tons in 1972.

10.31 Extension service activities are fragmented and spread among several government agencies and state enterprises, but the system works with varying degrees of efficiency. Executive, regulatory and control activities are organized on a provincial basis, chiefly for the Ministries of Agriculture and Rural Affairs, and the Ministry of Agriculture has established one extension division in each of the 67 provinces, and subdivisions in each of the 629 counties.

10.32 The Agricultural Bank, under the Ministry of Commerce, provides extension in more than 20 provinces, and the Sugar Factories Corporation does also through its 17 factories. Altogether some 7,000 government agents are involved in extension work, but extension staff shortages are serious -- the present ratio is only one extension agent for every 600-1,000 farm families. Furthermore, despite long-term effort toward the objectives there is not yet an agricultural extension service per se, satisfactory coordination has not been achieved among the several government agencies and organizations involved, and equipment and funds available at the field level are too limited.

10.33 Agricultural research is carried out at over 120 research stations, by government ministries and universities, and on experimental farms and ranches. Although no formal coordinating body exists, and there is thus some duplication, there are exchanges of views, progress reports and evaluations of proposed development projects for cereals, horticulture, agronomy, livestock and mechanization. Recent plans call for aggregating research stations into large units, on a regional basis, and taking a multi-disciplinary approach to problems. Unfortunately, and perhaps because of its diversification and rapid growth, research has not been closely linked with extension work at the farm level. It should be particularly noted that both Extension services and research are overconcentrated in relation to crops and to regions. The Sugar Corporation, for example, has an extensive and highly developed system of research on sugarbeets, soil samples and fertilizer and seed trials. Information needed to produce higher beet yields is rapidly disseminated to beet growers. There is also a concentration of research and extension efforts and services in priority coastal areas.

10.34 The investments in agriculture by the public sector during the First and Second Plans are summarized in Table 49. Although the amounts shown represent an increase of about 24% as between the two Plan periods, the share of public sector investment going into agriculture has been declining -- from about 20% at the start of the First Plan, to 17% by 1967 and to less than 10% by 1972. Private sector investment has tended to run about 35-40% of public sector levels through the First, and much of the Second Plan, but by 1972 it actually exceeded the public sector. The evident reason is the enhanced opportunities for private investment in agriculture in the wake of the technological improvements represented by irrigation and associated inputs. This also emerges in the breakdown of the public sector investment by major objectives, which shows that water and soils development and machinery and equipment accounted for more than three-fourths of such investment in both the First and Second Plans.

Table 49: INVESTMENT IN AGRICULTURE BY MAJOR OBJECTIVES DURING THE FIRST AND SECOND FIVE-YEAR PLANS (1971 PRICES)

| | First Plan 1963-67 | | Second Plan 1968-72 | |
|---|---|---|---|---|
| | (TL million) | (%) | (TL million) | (%) |
| Water and Soils Development /1 | 7,600.9 | 52 | 9,561.0 | 51 |
| Machinery and Equipment | 3,525.0 | 24 | 4,767.6 | 26 |
| Research, Publications and Other Services | 595.3 | 4 | 792.3 | 4 |
| Agricultural Structures and Marketing Facilities | 403.3 | 2 | 664.2 | 4 |
| Seeds, Orchards, Etc. | 306.5 | 22 | 351.2 | 2 |
| Breeding Stock | 36.5 | .2 | 47.2 | .2 |
| Forestry /1 | 1,699.0 | 12 | 1,756.0 | 9 |
| Fisheries | 351.7 | 2 | 508.0 | 3 |
| Other Investments | 56.9 | .4 | 185.8 | 1 |
| Total: | 14,625.1 | 100 | 18,633.3 | 100 |

/1 Machinery included.

Source: SPO.

The Impact on Labor

10.35 Special mention should be made of the role of labor in the sector, because the rural population is large and is rising -- from 17.1 million in 1950 to 22.8 million in 1970. Rural population is not a measure of the agricultural labor force, nor of the labor used in agricultural production, but the direction of change in the rural population may be as accurate an indicator as existing data on agricultural employment. If it is used to indicate labor's contribution to agricultural production, the growth in output of 3.6% annually between 1950 and 1960 occurred when rural population grew by 1.8%, which implies that labor productivity was increasing at 1.8% annually. Similar comparisons for the period 1960-1970 give 1.9% as the measure of productivity increase.

10.36 But growth in rural population probably overstates the growth of the agricultural labor force, and thus understates labor productivity. A rate of growth in labor productivity of about 2.5% - somewhat higher than that suggested by rural population growth -- may therefore be a better estimate for the past decade, and a more reasonable approximation for the Third Plan, than the high rate of 5.1% assumed by SPO. The rural population and agricultural labor force of most developed countries have tended to reach a plateau and remain there until well into the industrialization process, and this is even more likely to be the case where rates of population growth are high, as in Turkey, despite efforts to induce reductions in the agricultural labor force.

10.37 Agricultural unemployment was estimated at 8 to 10% during the peak season and 85% during the slack season in the First Plan; the Second Plan estimates were 9 and 77% respectively. A very detailed methodology, combining labor requirements for each major agricultural operation under differing methods (power sources) of production, was developed by FAO and Turkish authorities in 1963 to estimate labor force demand and supply in agriculture. This methodology produced the results for 1967-72 in Table 50 and 51.

Table 50: PEAK PERIOD (JULY-AUGUST) SURPLUS LABOR IN AGRICULTURE, 1967-72
(adults of both sexes in thousands)

| Year | Demand | Supply | Surplus Number | % |
|---|---|---|---|---|
| 1967 | 9.173 | 10.083 | 910 | 9.0 |
| 1970 | 9.680 | 10.143 | 463 | 4.8 |
| 1972 | 10.025 | 10.138 | 113 | 1.1 |

Table 51: NET SEASONALLY REMOVABLE LABOR SURPLUS IN AGRICULTURE, 1967-72
(adults of both sexes in thousands)

| | Seasonable Period | 1967 | 1972 |
|---|---|---|---|
| 1. | December - February | 619 | 959 |
| 2. | March - May | 3.824 | 4.463 |
| 3. | June | 4.744 | 5.016 |
| 4. | July - August | 0 | 0 |
| 5. | September - November | 4.227 | 4.523 |

Source: Essays on Labor Force and Employment in Turkey, Duncan R. Miller (Ed).

10.38 On the other hand, by modifying the methodology to include other age groups and adjusting the work week, it has also been demonstrated that the situation in 1972 need not improve over that of 1967, and that the peak season surplus could be 13% and the slack season surplus could be 61% of the total labor force in agriculture. General observation indicates a high degree of seasonal underemployment exists, but whether labor's marginal product could be

removed from agriculture without reducing output is debatable. Labor time is consumed in the rural sector in a great variety of ways which are missed by the coefficients employed in the study cited, and many activities "employ" the rural population outside the strict production of crops.

10.39 Agriculture, or the larger rural sector, will absorb the labor force which resides in it if wage rates are not kept high, and if mechanization is not subsidized. Irrigation, which is also subsidized, can increase employment by increasing yields and the number of crops grown, and by inducing more labor-intensive crops. Although large-scale irrigation projects, concentrated as they are in a few regions, have tended to use less labor-intensive methods in their construction, maintenance and operation, the availability of irrigation after the construction phase serves to concentrate the labor demand regionally. In those irrigated areas the demand for labor may rapidly rise above the local supply, and if machinery is then subsidized its acquisition costs may well be lower to an individual farmer than the costs of labor. A more regionally diversified irrigation program, along with smaller-scale projects, would use more labor in the construction and development stage, and produce a less regionally concentrated labor demand for the irrigated agriculture which ensues.

Trade and Export Projections

10.40 Following devaluation in the late 1950s agricultural exports grew at about 6.5% annually, reaching US$607 million in 1972. In addition to these, US$168 million of processed agricultural products were exported. By 1972 the agricultural sector accounted for about 87% of Turkish exports, and the growth of agricultural exports exceeded plan levels for both the First and Second Plans.

10.41 Exports are dominated by crops whose domestic prices are heavily influenced by government policy. Exports of cotton, hazelnuts and tobacco (each exceeding US$100 million in 1972) accounted for 70% of agricultural exports. Cereals, raisins, olive oil and sugar accounted for another US$90 million.

10.42 Both price and quantity increases accounted for the rapid rise in export value. Export prices have risen especially rapidly since 1968. (Appendix Table 7.19). The volume of cotton exports was especially large in 1970 and 1971, falling slightly in 1972, while record quantities of hazelnuts, tobacco and raisins were exported in 1972 (Appendix Table 7.19). Previously burdensome stocks of many of these commodities have now been reduced to fairly manageable levels.

10.43 The devaluation at the end of the 1950s was an important factor explaining the growth of agricultural exports in the 1960s. From 1950 through 1960, export prices of most crops were well below domestic prices, but since 1961 export prices have been above domestic prices (Appendix Table 7.19), with the exception of cotton, and hazelnuts in some years. Since 1968, the rise in exports has been paralleled by an equally rapid rise in wholesale prices.

Sugar and tea, however, are disposed of at whatever price is obtainable, and for these commodties the FOB export price is close to or below the Istanbul wholesale price (Appendix Table 7.19).

10.44 Despite rapid growth in Turkey's agricultural exports, the Government (SPO) has tended to underestimate growth possibilities, and continues to do so in future plans.

10.45 The world demand for raisins, hazelnuts and similar speciality fruits and nuts is not strong, but can be expected to increase as incomes grow. Despite the general assumption of an inelastic demand, research on export earnings indicates that "the foreign demand for Turkey's hazelnuts is elastic, and is probably more elastic now than it was during the 1950's". 1/ As the export of hazelnuts expanded and contracted in the 1960's, export earnings changed in the same direction but not to the same extent. The same appears true for raisins. Only minor downward adjustments in support prices seem necessary to ensure that Turkey remains competitive in these commodities.

10.46 Based on past performance, little potential exists for expanding exports of figs and olive oil. Sugar is likely to be imported to meet rising demand.

10.47 The quantity of tobacco exports did not change significantly during the 1960's, but quality problems associated with support price policies continue to be major impediments, despite the large export volume achieved in 1972. A flexible price support policy based on quality would encourage tobacco exports at competitive prices, improve export prospects generally, and reduce stock problems. This is especially true since the consumption of lower quality tobacco is increasing with changes in processing technology and the increased production of filter tip cigarettes.

10.48 Declines in cotton prices from their current high levels are anticipated in all commodity projection studies. Whether Turkey continues to export cotton lint or manufactured cotton products, its competitiveness partly depends on whether the present large, disguised subsidy through irrigation is continued. Future plans call for continued expansion of cotton on irrigated land and there appears to be some chance of altering the present policy with respect to recouping irrigation costs. As discussed further below, the high returns from cotton on irrigated land (particularly after the recent price increases), which have induced farmers in certain areas to undertake their own land leveling, suggest that reasonably competitive production could take place without the present subsidy.

10.49 Thus, continued growth in export earnings from the major export commodities can be expected, but it is reasonable to anticipate (as SPO does) that growth will not be as rapid for these commodities as in the past.

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1/ Forker, O.D. Vol. Two, 1972.

10.50 Fruits, vegetables, livestock and forestry products have the largest potential for expansion. The major impediment with respect to fruits and vegetables is the inadequate marketing mechanism. Production potential is good and farmers have demonstrated considerable ability to move into available markets, including widespread development of inexpensive greenhouse production.

10.51 Experience with the World Bank's fruit and vegetable export project further indicates that, under the conditions prevailing in Turkey, progress is likely to be slow, without the support of a strong organization concerned with the specific problems of fruit and vegetable exports. The same tangle of regulations, incomplete marketing facilities and inadequate credit inhibits rapid movement into fruit and vegetable exports by the private sector.

10.52 The prohibition of exports of livestock and feeds (oil cake for example) should only be a temporary measure in view of the difficulty of controlling illegal exports, and the comparative advantage that Turkey has in livestock production. Until domestic marketing improves, markets for livestock in the Middle East and in Europe are likely to continue to be more profitable for Turkish producers in regions closer to these markets than to the more distant domestic market. Turkey's location and production conditions might also justify long-run, export-oriented, livestock programs which depend partly on imported feeds.

10.53 Up to now, the pricing system for forest raw materials has been a major factor hampering the increase of timber product exports, but recent developments in the forestry industry to change this may provide some improvement in the outlook for exports. Nevertheless, the Third Plan projections seem too optimistic.

10.54 A fundamental shift is planned in agricultural exports. Compared with recent real growth of over 6% annually, agricultural exports are projected in the Third Plan to grow at only 2.8% (Table 52).

Table 52: EXPORT ESTIMATES OF THE AGRICULTURAL SECTOR[/a]
(TL million at 1971 fob prices)
(% increase per annum)

| | 1967 (1) | 1972 (2) | 2nd Plan % p.a. (3) | 1977 (4) | 3rd Plan % p.a. (5) |
|---|---|---|---|---|---|
| Crop Production | 2,582 | 3,476 | 6.1 | 3,990.6 | 2.8 |
| Livestock Production | 288 | 126 | -15.3 | 97.1 | -5.1 |
| Forest Production | 42 | 82 | 14.4 | 132.0 | 10.0 |
| Fishery Production | 92 | 33 | -18.3 | 52.5 | 9.5 |
| Total | 3,003 | 3,717 | 4.3 | 4,272.2 | 2.8 |

/a The exports of tobacco, hazelnuts, dried figs, raisins, pistachio nuts and meat are included in the sector on foodstuffs.

Source: State Planning Organization.

Export projections are not given in quantities, and the value projections (Table 53) were based on seriously underestimated exports in 1972. As a consequence, the 1977 level projected for the Third Plan (US$ 600 million) is below that actually achieved in 1972 (US$607 million).

Table 53: PROJECTIONS OF EXPORTS, 1972-77
(US$ million)

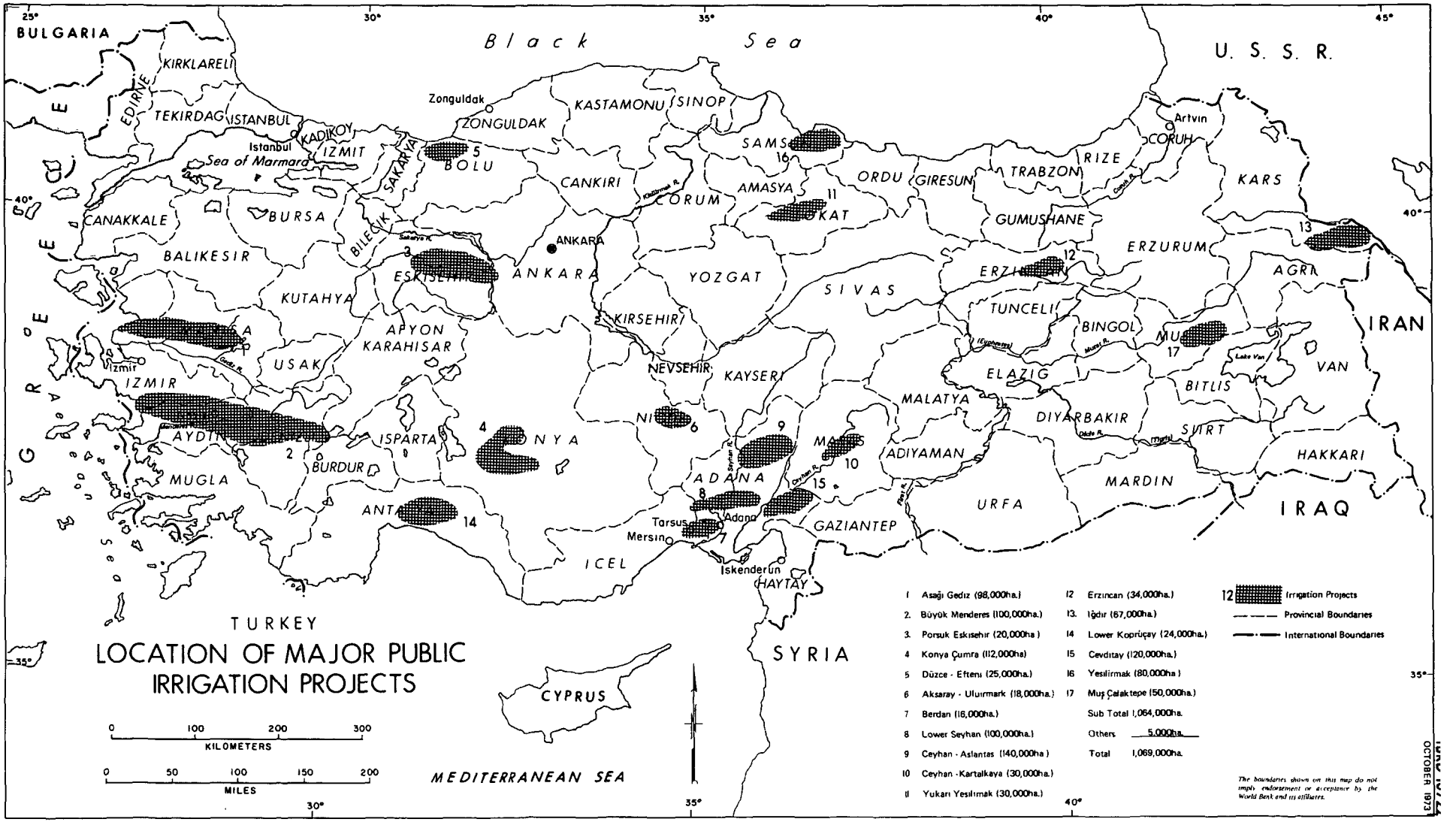
| | Third Plan Projections (1971 prices) | | | Mission Projections (1972 prices) | | |
|---|---|---|---|---|---|---|
| | 1972 est. | 1977 | % growth p.a. | 1972 actual | 1977 | % growth p.a. |
| Cereals | 16 | 17 | 0.1 | 36 | 20 | -12.5 |
| Nuts, Fruits Vegetables | 150 | 190 | 4.8 | 197 | 350 | 12.1 |
| Industrial Products | 325 | 365 | 2.4 | 333 | 397 | 3.6 |
| (Cotton) | | | | (191) | (257) | (6.1) |
| (Tobacco) | | | | (131) | (120) | (-1.9) |
| Animal and Fish Products | 30 | 16 | -8.9 | 36 | 79 | 17.0 |
| Forestry Products | 4 | 12 | 26.0 | 5 | 16 | 26.0 |
| Total | 525 | 600 | 2.7 | 607 | 862 | 7.3 |

10.55 These modest growth projections in agricultural exports are based on the recognition that domestic demands are increasing, and also reflect a policy preference for expanding industrial exports.

10.56 Because it has been regarded as inconsistent to export oilseed cake when domestic livestock production is lagging, exports of these and similar products which can be used domestically are not planned. The major crop exports anticipated are industrial crops (primarily cotton), and fruits, nuts and vegetables. Cotton lint export is expected to increase due to increases in production, and in spite of the expected growth of domestic consumption.

10.57 Agricultural imports are expected to increase at an annual rate of 10%, but this is, and will remain, an insignificant volume. Such imports are planned to consist primarily of breeding stock, improved seeds and products not raised in Turkey.

10.58 Caution with respect to agricultural exports is generally valid. The present boom in world agricultural export demand is likely to slack off significantly in the next five years, and domestic demand is growing rapidly. However, only a fraction of many of the crops that Turkey has traditionally exported - hazelnuts, raisins, tobacco, etc. - is consumed domestically, and continued growth albeit with fluctuations, can be expected. From a national self-sufficiency point of view, cessation of livestock and oil cake exports may be desired, but there are strong arguments to continue these exports until such time as they can be efficiently utilized within the country. Restrictions on their export in the past have simply resulted in illegal exports




# LOCATION OF MAJOR PUBLIC IRRIGATION PROJECTS

| | | | |
|---|---|---|---|
| 1 | Asağı Gediz (98,000ha.) | 12 | Erzincan (34,000ha.) |
| 2. | Büyük Menderes (100,000ha.) | 13. | Iğdır (67,000ha.) |
| 3. | Porsuk Eskisehir (20,000ha.) | 14 | Lower Kopruçay (24,000ha.) |
| 4 | Konya Çumra (112,000ha) | 15 | Cevdıtay (120,000ha.) |
| 5 | Düzce - Eftenı (25,000ha.) | 16 | Yesilirmak (80,000ha.) |
| 6 | Aksaray - Ulurmark (18,000ha.) | 17 | Muş Çalaktepe (50,000ha.) |
| 7 | Berdan (16,000ha.) | | Sub Total 1,064,000ha. |
| 8 | Lower Seyhan (100,000ha.) | | Others 5,000ha. |
| 9 | Ceyhan - Aslantas (140,000ha.) | | Total 1,069,000ha. |
| 10 | Ceyhan - Kartalkaya (30,000ha.) | | |
| 11 | Yukarı Yesilırmak (30,000ha.) | | |

12 Irrigation Projects
Provincial Boundaries
International Boundaries

*The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.*

OCTOBER 1973

(livestock) or reversal of the policies (oil cake in 1973). The Plan projections of forestry products seem somewhat optimistic in light of past problems affecting this subsector.

Agricultural Policies

10.59 The foregoing review of agricultural performance omits various policy aspects which have been important determinants of that performance and which deserve a more lengthy exposition. These include:

(a) Irrigation -- the importance of on-farm works and the need to complete existing irrigation projects;

(b) Price Policy -- the need to restructure pricing policies to encourage desired production patterns and to diversify (regionally and by commodity) agricultural investment;

(c) Credit -- increasing the amount of credit provided to farmers, in part by reducing the drain on credit availability stemming from existing institutional arrangements;

(d) Agrarian reform -- the scope for agricultural improvement for more effective implementation of agrarian reform intentions. The sections which follow discuss these in turn.

Irrigation

10.60 Irrigation has had important influence on selected aspects of recent agricultural performance, though its benefits have been limited to selected regions, and its potential for future development could be considerable. Large-scale irrigation is a recent, i.e., post-World War II, phenomenon, and the ultimate physical scope is huge - 5.5 million ha are considered economically irrigable (out of 12.5 million ha the Turkish authorities estimate can be physically irrigated).

10.61 State-financed development projects amounted only to about 180,000 ha in 1962, and the area under privately developed schemes probably exceeded this. By the end of 1972, however, the total area equipped for irrigation had reached 2.3 million ha, of which 1.1 million ha were in the public sector and 1.2 million ha in the private sector (Appendix Table 7.22). The current annual rate of irrigation development in the public and private sectors is now about 120-140,000 ha, but utilization of this area lags seriously. Official reporting places the total area under full agricultural production in 1972 at 1.9 million ha, or 400,000 ha less than the area equipped.

10.62 Benefits from irrigation have not been seriously analyzed, but studies indicate increases in average gross value of agricultural production of three times the level reached with dry farming. Full returns from irrigation are not being achieved because of poor preparation, deficient water use, inadequate on-farm development and insufficient inputs other than water.

Nevertheless, a number of benefits from irrigation can be observed -- modern technology has been introduced, new industries now supply irrigation structures and other production inputs, equipment and machinery. In many regions irrigated agriculture has brought about a definite and dramatic take off in economic development, and of special importance for the national economy is the fact that irrigation is available for about 67% of the sown area for industrial crops, (mainly cotton, sugarbeet and sunflower), more than 65% of the vegetables area, 20% of the fruit area and a small but growing part of the areas devoted to legumes and animal feed production. Only two percent of the cereal area is irrigated.

10.63 DSI and Topraksu - the Institutional Structure. Major irrigation development is the responsibility of the General Directorate of State Hydraulic Works (DSI), a part of the Ministry of Energy and Natural Resources. The General Directorage of Soils and Water (Topraksu) under the Ministry of Rural Affairs, is responsible for minor irrigation canals and drains, and on-farm development. A number of World Bank reports have dealt in detail with the organization, structure and problems of these agencies, including a detailed study in 1970 contained in the Development Prospects of Turkey, Vol. III, March 1971. The detailed observations of this and other recent World Bank reports will not be repeated herein, but certain of the critical elements warrant continuing emphasis in the discussion below.

10.64 The lack of coordination between DSI, Topraksu and the Ministry of Agriculture, each of which is involved in irrigation development but none of which is able or willing to take responsibility for the performance of irrigated areas has been strongly criticized in earlier reports, and various corrective organizational measures have been proposed. The essential problem accounting for the lag in on-farm work, however, seems to be that DSI, the strongest organization dealing with irrigation, receives the lion's share of the resources and has a strong bias toward large-scale projects with heavy engineering components. The resources it received from Government far exceed those available to Topraksu, which is under-funded and under-staffed, but the water charges levied by DSI recover nothing of investment, interest, planning design or supervision costs and only half of the operation and maintenance costs.

10.65 Even if the staffing and funding of Topraksu were improved to permit better performance in public sector on-farm development, the basic trends will probably continue, namely, the heavy unrecouped investment in irrigation development, which limits resources available for projects outside the irrigated areas. There is no question that a major economic advantage is gained from irrigation. The expansion of private irrigation and the extensive land leveling and on-farm works being carried out presently by farmers at their own expenses in the Gediz plain testify to this. Under existing policies, however, the State will eventually do both irrigation and on-farm work at little or no expense to the farmer if he is willing to wait long enough -- a practice for which there seems little justification in view of the large resources involved, the regionally-specific benefits received, and the obvious need for resources in other agricultural subsectors.

10.66 In 1968-71, 80% of Topraksu's irrigation development investment went to the Seyhan and Gediz project areas. In somewhat more precise terms, half the leveling in 1966-70 went to 152 farmers, adding an average of about TL 766,000 to each farmer's annual income. For the 23 largest farmers, the annual average income increased by over TL 2 million. Because Seyhan is a Government project area, most, if not all, of this investment was financed through Topraksu's budget, and all the work was carried out by public sector organization with large-scale, imported equipment.

10.67 A different approach to on-farm development in the Izmir region outside the government project area is of interest. There Topraksu provides technical assistance to farmers for planning and land improvement, and during 1968-71, the annual capacity for small-scale land leveling with domestically produced equipment rose to 11,940 ha. Half of the equipment used is owned and operated by the private sector, and the total annual land-leveling capacity which is privately financed has now reached 60% of Topraksu's capacity for land leveling. Besides encouraging private investment end expanding the benefit from a unit expenditure by Topraksu, the system has encouraged the emergence of a domestic small-scale industry, and has resulted in land leveling of much smaller farms than on government projects, as well as more employment of labor per ha leveled.

10.68 Extension of this system would free on-farm development from the present major restraint -- the size of Topraksu's budget. If these on-farm costs and a larger share of irrigation costs were shifted to benefiting farmers, some of the resources now tied up in major government irrigation projects would go to other regions and other projects -- smaller scale irrigation activities, livestock projects, soil moisture retention practices in dry grain areas, and the like. The same result would be achieved if on-farm work were paid for by the farmer, whether it was carried out by the private sector, Topraksu or DSI, except that in the latter case the scale of operation would probably remain large and the impact on local industry would be smaller. A reason for lags in the completion of on-farm works is the structure and staffing of DSI. Staff and operational costs absorb a disproportionally large portion of its budget, leading to pressure on funds available for works. When new projects are considered a clear deliniation between the various elements of investment costs should be made to insure that funds needed to complete projects are not absorbed by staff and operational costs. Completing existing projects should be given first priority before new large-scale projects are undertaken. This need is recognized in the Third Plan and strong efforts to meet it should be made.

Price Policy

10.69 Forces of supply and demand play a limited role in determining agricultural prices in Turkey because agricultural commodity prices, like many other "basic goods", are under comprehensive price support and control by the Government. They include wheat, sugar, hazelnuts, raisins, tea,

tobacco and others. The objectives of the pricing policy are social as well as economic and they are administered through complex and multi-institutional structures. The primary objectives appear to be:

(a) maintain low, stable and regionally uniform food prices for consumers;

(b) support incomes of producers.

10.70 The stated objective for intervention in wheat is to maintain a low, stable, uniform consumer bread price and a stable and nationally uniform producer price. Intervention in other crops is in order to support the producer prices. Direct intervention is not practiced for fruits and vegetables and livestock feeds, but their prices are influenced by intervention in other product prices.

10.71 Minimum support prices are specified by a decree from the Council of Ministers. The decision is influenced by the recommendations of the Ministers of Commerce and Finance, the State Planning Office (SPO) and the relevant agencies. Ultimately the decision is strongly influenced by political considerations. The appropriate agency is then directed to offer to buy all available quantities at the established price. The Government agrees to provide the funds for these purchases and to cover all operating losses of the agency, through short term loans supplied through the Central Bank or Agricultural Bank. The principal organizations and their agricultural price intervention activities include the following: (Chart 18) The Soils Product Office (TMO), a state economic enterprise, is responsible for supporting the producers' price and for maintaining retail prices of wheat and other cereals by purchasing all offered supplies at the established price and selling them with a fixed margin.

10.72 TMO announces purchase prices of commodities before harvest and purchases any amount offered at the established prices. A selling price is also announced at the same time, applicable to municipalities and villages with a small margin above the purchase price (currently 10%). TMO also handles all imports, storage and distribution of cereals, including those under US PI 480 aid.

10.73 TMO's purchases, which consist mainly of wheat, have typically been less than 10% of total annual cereal output in recent years (between 0.6 to 1 million tons), and only 50-60% of its annual storage capacity of 1.8 million metric tons have been used. The remaining transactions are undertaken in the private sector. TMO's support prices in recent years have tended to be below market prices, though they apparently have been above farm-gate prices. Because of TMO's dual objectives of price support and price control, the operating expenses are not fully covered by the margin between purchasing and selling prices, and the operating losses are financed by the Government. Operating expenses are burdened by the need to meet transport and storage costs which

the private sector has no incentive to carry due to small price difficulties. It is generally recognized that operating margins would need to be doubled if this organization were to be financially self-supporting.

10.74 The Sugar Factories Corporation is a long-established and powerful state economic enterprise (SEE) and by contract with growers, has a monopoly on sugarbeet purchases, sugar processing and retail sugar sales. The Council of Ministers establishes producer and retail prices. The differential between the sugarbeet and retail sugar prices is supposed to permit the Sugar Corporation to operate at a profit and pay the tax on sugar sales (TL 0.80 per kg), but the Corporation operates at a loss which accumulates in the form of outstanding loans with the Central Bank.

10.75 The financial account of each of the activities of the Corporation does not seem to be clear because it is engaged in a wide variety of activities in addition to sugar-related industries, such as livestock-fattening, poultry, dairying, research and extension. It is therefore difficult to identify the origin of the overall financial losses of the Corporation.

10.76 Turkish State Monopolies function in pricing and marketing of tea and tobacco. The tea monopoly has been reorganized in 1973 into a separate SEE and is expected to operate similarly to the Sugar Corporation. In the past, the monopolies had mainly concentrated in supporting producers prices through substantial public subsidies -- a pattern which resulted in over-supply, high prices and accumulation of stocks at government cost.

10.77 The Meat and Fish Corporation (EEK) is also an SEE. It operates as TMO and the Sugar Corporation, but exerts considerably less influence in the livestock sector, in part because it has fewer resources at its disposal. Since its establishment in 1952 it has constructed slaughter and meat processing plants in six locations, but has had considerable managerial difficulties, excess capacity and high operating costs. Thus, it has occasionally been unable to accept all animals supplied to it, and has had little influence in increasing meat output. In line with government policy to prevent meat prices from rising the Corporation has imposed price ceilings on meat animals accepted by it. Meat retail prices have been controlled not by EEK but by the muncipalities. In June 1972 meat price controls were centrally removed, but some form of municipal control may have continued.

10.78 Sales Cooperatives are essentially government organizations whose managers and staff are appointed by the Ministry of Commerce, but whose membership is voluntary. They can influence price intervention for cotton, hazelnuts, pistachio nuts, grapes, dried figs, olive oil and sunflowers. In the process of price intervention the Union of Cooperatives for each respective commodity concerned acts as an agent for the Government by purchasing all quantities offered at the intervention price by both members and non-members, handling, storing and selling the product. The Government specifies the intervention price and the Agricultural Bank extends credit to the Union of Cooperatives to cover purchase and operating costs, while any operating losses are borne by the Government as in the case of TMO.

10.79 No direct price intervention is undertaken for fruits and vegetables and for most livestock feeds. However, prices of livestock and livestock feeds have in the past been indirectly affected by the controlled retail prices of livestock products and meat animals.

10.80 Producer Prices. The "Prices Received by Farmers" in district markets have been published in Turkey since the 1930's (Statistical Appendix, Table 7.14). 1/ These, however, are district market prices and can be assumed to exceed farm-gate prices. A series of "crude" farm prices contained in the recently published results of the 1970 census (Statistical Appendix, Table 7.15) shows farm prices at 10 to 20 percent below district market prices for most commodities.

10.81 The relationship between aggregate farm prices (wholesale) and the general level of wholesale prices over the past two decades has been close, but the relationship between the prices of different farm products has not. Between 1954 and 1964 the index of agricultural product prices rose no faster than the general price index. It rose considerably slower than the implicit GNP deflator. During 1965-69 it rose slightly faster but fell rapidly behind after 1970.

10.82 There appears to have been no evident link between changes in the prices of most farm products and changes in domestic production. For example, wheat prices increased 27% in 1957 at the same time production increased 30%, but in 1959-60 wheat prices continued to increase at averages of between 15% and 20% annually when production was down, thus partially catching up with the rapid increases in general prices during 1955-59. For other years between 1953 and 1960 wheat prices either increased about 5% a year or did not increase at all despite sharp annual changes in domestic production. This behavior of wheat prices was significantly influenced by government intervention, which included the importation of PL 480 wheat to stabilize prices. Turkey has received US$650-700 million in food items under PL 480 since 1954 when the program was introduced, and wheat has accounted for over 60% of these imports. Nevertheless, area in production of wheat expanded rapidly throughout the 1960's. But given the significant percentage of total living cost devoted to these commodities, particularly wheat and its contribution to the food price index, PL 480 commodity imports contributed to the lag in food prices and general price stability.

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1/ These prices are collected on the "fifteenth of the data collection month" (six times a year) and are the "prices of crops sold by the villagers at the district markets." The published series is the "yearly average" of these data. TARMISAL YAPI VE URETIM 1969, State Institute of Statistics, Turkey, Ankara 1971, p.v.

10.83 Barley prices also exhibited the same lack of correlation with annual changes in production, although intervention was minimal, but barley prices consistently rose faster than wheat prices. This suggests that stabilization of wheat prices by the Government may have influenced the prices of other cereals.

10.84 As Table 54 and Chart 17 indicate, prices of commodities subject to intervention have generally risen less than prices of commodities which are not. Crops which receive support usually loom large in total land use, either in the country as a whole (wheat, cotton and sugarbeets) or in specific regions (tea and hazelnuts). The generally lower prices of supported crops may partially reflect the fact that the organizations which implement support programs are powerful enough to ensure that input flows and price/cost relationships are so structured that the desired level of output is forthcoming. In contrast, credit, fertilizer, marketing facilities and other resources tend to be less available to those sectors not associated with such institutions.

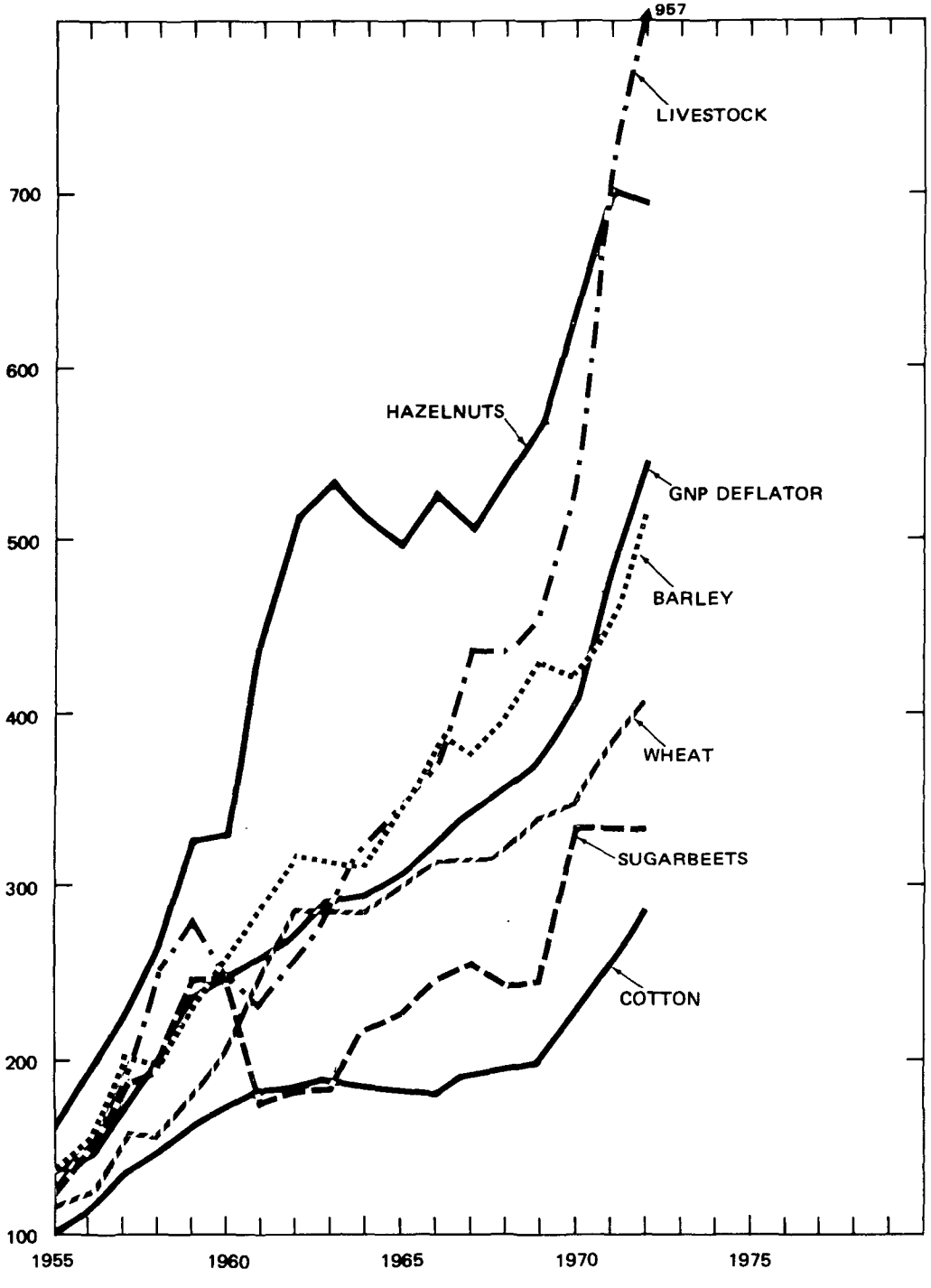
Table 54: INDEX OF 1972 PRICES OF MAJOR SUPPORTED AND NON-SUPPORTED AGRICULTURAL PRODUCTS COMPARED WITH 1963

| Supported Crops | | Non-Supported Crops | |
|---|---|---|---|
| Wheat | 167 | Barley | 202 |
| Sugar | 141 | Corn | 175 |
| Hazelnuts | 139 | Beans | 276 |
| Raisins | 151 | Lentils | 254 |
| Figs | 209 | Potatoes | 139 |
| Tea | 88 | Sheep Meat | 296 |
| Tobacco | 148 | Beef Meat | 296 |
| Olive Oil | 189 | Butter | 218 |
| Cotton Lint | 186 | Cheese | 238 |
| Cotton Seed | 147 | Eggs | 204 |
| Milk | 145 | | |
| Sunflower Seed | 188 | | |

Source: Ministry of Commerce.

10.85 One effect of TMO's operations may have been to retard productivity increases in wheat production and possibly other subsectors as well. Some of the land devoted to wheat could have produced livestock feed which could have brought some lowering of relative prices, and thereby facilitated the growth of livestock products. The consumer price of bread has been kept down, but so has the producer price, and as a consequence TMO has been a major drain on the short-term credit supply without serving as a force to promote technological improvement. If wheat prices had been higher, this might have stimulated greater productivity gains in that crop.

## CHART 17
## INDEXES OF SELECTED AGRICULTURAL PRICES 1955 - 1972

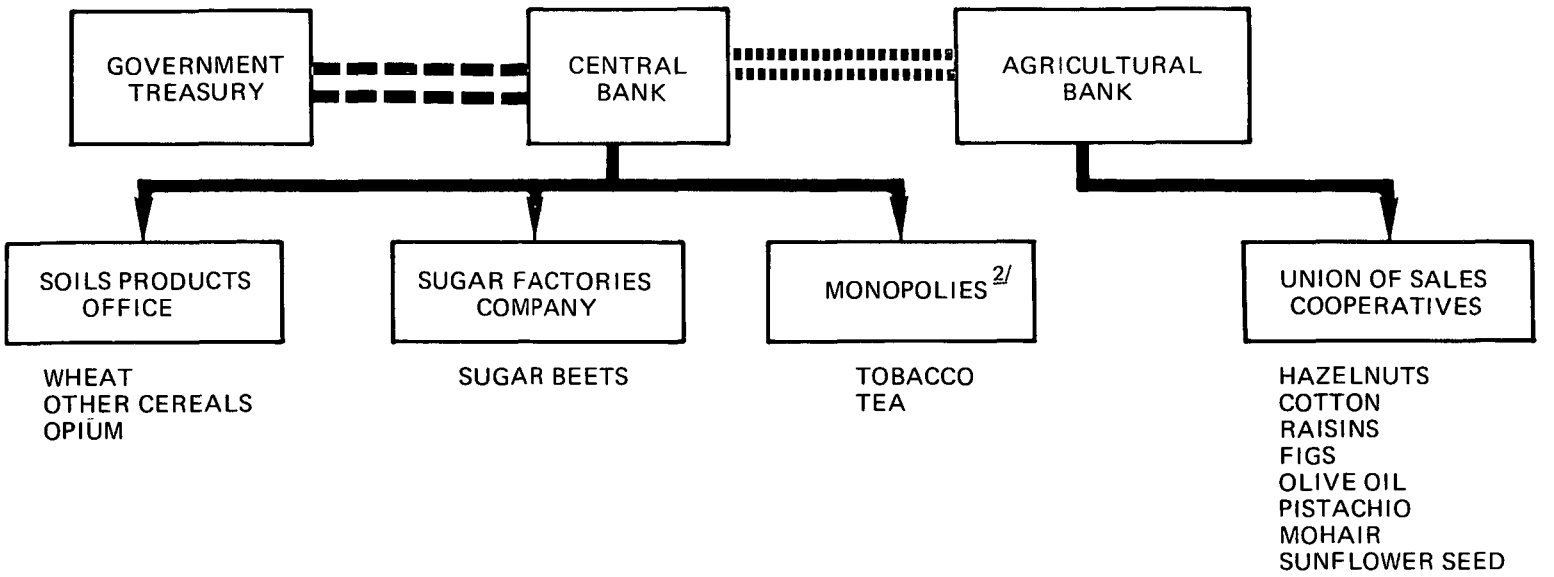



Source: 1955-66-TÜRKIYE THRIMINDA GELISME EGILIMI...1938-66, ANKARA 1968
1967-69-TARIMSAL YAPI VE URETIM 1969, ANKARA 1971
1970-72-DERIVED FROM MINISTRY OF COMMERCE INDEX (1963 BASE)
BY RAISING THIS INDEX BY SAME PERCENTAGE

World Bank—8116(R)

## CHART 18

## DIAGRAMATIC SKETCH FOR FUNDING DOMESTIC PRICE INTERVENTION PROGRAMS 1/




1/ This diagram covers the extension of credit only. In addition the Government makes a direct budget allocation to support some of the costs of the State Economic Enterprises.

2/ The Monopolies Organization was reorganized in 1972-73 into separate organizations for tea and tobacco.

World Bank—8060(R)

10.86 Sugar and cotton provide a case where rapid productivity gains have been achieved while producer prices have declined, or remained low in real terms. The prices of these and other export crops are evidently influenced by world prices, but the interplay of causal factors here is obscured by the large element of subsidy these crops have received through publicly supplied irrigation, and low fertilizer and machinery prices.

10.87 The impact of this subsidy is demonstrated by cost and income data for cotton in the Seyhan Irrigation Project (Table 55). Despite the slow growth in cotton prices, net returns from cotton are substantial, primarily because of the insignificance of the water charges. Since irrigation is a major factor permitting increased use of fertilizer and machinery, both of which are also subsidized, producers of these crops have a double advantage.

Table 55: PRODUCTION COSTS, GROSS INCOME AND NET RETURN PER DECARE OF COTTON SEYHAN IRRIGATION PROJECT

| | 1968 | 1969 | 1970 | 1971 |
|---|---|---|---|---|
| Production Costs | | | | |
| Rent | 103 | 103 | 120 | 172 |
| Fertilizer | 48 | 73 | 63 | 97 |
| Land Preparation | 36 | 18 | 13 | 40 |
| Seeding | - | 12 | 8 | 17 |
| Weed Control | 49 | 44 | 40 | 61 |
| Irrigation | 26 | 26 | 29 | 36 |
| Insect Control | 51 | 80 | 52 | 126 |
| Harvesting | 77 | 82 | 120 | 173 |
| Total | 390 | 439 | 445 | 722 |
| Gross Income | 580 | 656 | 953 | 1,357 |
| Net Return | 190 | 217 | 408 | 635 |

Source: Seyhan Irrigation Project, Stage II, Extension Service Annual Report for 1971, pp. 30-34.

The prices of cotton and tobacco relative to wheat have declined significantly but the provision of irrigation has allowed cotton to remain profitable and competitive with world prices. In the case of tobacco, however, price intervention has produced a deterioration in quality and declining yields.

10.88 Regional Prices. Retail prices of agricultural commodities are quite uniform among regions. Government provision of wheat, sugar and tea at fixed prices, and municipal control of meat prices was to ensure more uniform national prices. There is, however, a noticeable area of low beef prices in

the central and eastern parts of the country near production centers, but higher prices prevail in the western half and around the northern and southern boundaries. Producer price data indicate even greater national uniformity than exists for retail prices.

Effects of the Price Policies and Their Implication

10.89 Because of the complex mechanism in the pricing system, the multiplicity of the Government's objectives in price intervention, and interactions among these aspects it is practically impossible to quantitatively measure the net effects of the price policies. Nevertheless, a number of broad generalizations may be pertinent.

10.90 The price policies in general have permitted, if not actually encouraged, rapid output increases in the export crops, sugar, fruits and some vegetables. These policies have also contributed to general stability in the prices of grains and nuts, both of which are inherently unstable seasonally and from year to year. Against these advantages must be weighed the generally slower growth of food production, especially in livestock; limited productivity gains in food crops and livestock, the more rapid price increases for non-intervention crops, and the poor quality and costly surplus disposal problems for such crops as tea, hazelnuts and tobacco.

10.91 The rapid expansion of sugar production has forestalled sugar imports, and cotton exports have contributed substantially to export earnings. These earnings and savings are probably somewhat misleading, however, because of the existence of disguised heavy public irrigation subsidies which in turn, have high opportunity costs.

10.92 Although seasonal and year-to-year stability of farm prices is generally considered desirable, in the case of cereals, fruits and nuts the effect is a highly unstable income for many of the producers. A uniform price for wheat by region and season penalizes the producers of high quality hard wheat on the plateau while it gives an unwarranted advantage to producers of lower quality wheat in the coastal areas. Favorably situated farmers, i.e., those in plentiful and more reliable rainfall areas, or where irrigation has been provided, obtain both higher and more stable yields. They benefit from their location and from subsidized irrigation and inputs, but they are also the prime beneficiaries from price supports. 1/ The absence of price differentials between regions also inhibits investment in storage and transport facilities by the private sector and regional specialization of commodities.

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1/ Wheat farmers on the plateau may obtain one ton of wheat every other year from one ha, while those in the Chukarova or Cediz valley may obtain two to four tons per year from one ha. TMO's purchases have been especially heavy in the coastal areas where wheat quality is generally lower.

10.93 The practice of announcing the support price for most crops at or near harvest time rather than at the time of sowing, does not induce more efficient resource allocation to alter production patterns.

10.94 Greater regional and quality price differentials and greater price flexibility in general are required as long-term solutions. This has often been advised. Two considerations, however, make these impractical as short run measures, particularly in expanding livestock production or increasing fruit and vegetable exports. First, the deeply entrenched nature of price intervention and its heavy political content and the strong predilection for maintaining parity relationships among commodities and national price uniformity make it unlikely that any major freeing up of prices would be possible in the short run. Even if it were attempted, the result could be considerable short run confusion. Second, the strongest among existing public sector institutions tend to do a creditable job of channeling resource and service flows into agriculture and products out of it for their special clients, despite price distortions, regulations or market inefficiencies.

10.95 A more practical way of achieving short run improvements in selected sectors may be to develop or increase the relative strength of institutions serving the subsectors where stimulation is desired, while at the same time doing whatever is possible to bring about more desirable overall price relationships. In the livestock sub-sector, for example, recent rapid price increases have helped improve the command over resources flowing to that sector. But marketing and processing bottlenecks still exist and the incentives to produce livestock feeds are low because of the present price support policies for crops that compete with feed crops. If sufficient incentives for rapid development of private sector processing and marketing cannot be provided, but if it is also desired that livestock output should grow faster than output in other subsectors, more financial and human resources could be transferred to the Meat and Fish Organization. Alternatively, the present successful livestock fattening operations of the Sugar Corporation could be expanded. Special incentives could also be provided which induce the production of feed supplies until such time as the broader price policy problems can be resolved.

10.96 Such a system obviously carries with it the risk of further compartmentalization in agriculture, and delays needed changes in the general price and incentive structure. But, given the deeply entrenched price intervention and compartmentalization which already exist, some intermediate approach is needed to achieve short run resource reallocations while developing more flexible and effective long run price policies.

(c) Credit

10.97 The trend in the allocation of credits to both private and public sector agriculture reflects the emphasis on industrialization in the planned development strategy of the country and the major role of the public sector in fixed investment. From 1963 to 1971, 18% of increases in outstanding

credits was allocated to agriculture compared to 45% to industry and mining. The Central Bank credit to agricultural agencies is determined primarily by the needs created by price support policies and harvest surpluses. In addition, high purchase prices and inadequate margins to meet operating costs were responsible for additional borrowing needs of TMO and the Agricultural Sales Cooperatives which administer the price support program. Therefore, there has never been sufficient credit available to farmers for production purposes on reasonable terms, particularly to the small farmers.

10.98 Private sector credit to agriculture is only partially reported and public sector credit includes activities not directly related to the initial production of agricultural products nor to farming as such. The Central Bank and Agricultural Bank provide public sector credit to (a) farmers directly, (b) underwrite the operation of intervention agencies, especially TMO, the Tea and Tobacco Monopolies and the Agricultural Sales Cooperatives and (c) the Sugar Corporation and Agricultural Supply Organization, both of which have large industrial components. Private sector investment, of course, comes from private banks and the traditional sources of rural credit which are difficult to measure, including merchants, traders and larger farmers. In 1962 these sources probably provided 50-70% of agricultural financing. 1/

10.99 The Agricultural Bank, second in size to the Central Bank provides almost all of the institutional credit available to farmers. It has some 750 branches scattered throughout Turkey and carries out a full range of banking activities. In March 1973, the interest rate on short term loans made directly to farmers by the Agricultural Bank dropped to 9% from 10.5% which had been the rate in effect since September 1970. Allowing for interest subsidy, this would mean an effective rate of 8%. Interest on medium term loans was also lowered to 9% from 10.5%. (See Appendix 6.1 for other interest rates).

10.100 Productive "farm credit" is difficult to separate from the broader Turkish concept of "agricultural credit". Appendix 7.11 shows statistics on Agricultural Bank credit outstanding by functions for the period 1963-1971. In 1971, outstanding credits from the Central Bank and Agricultural Bank to all activities connected with agriculture rose from TL 3.4 billion in 1963 to TL 16.4 billion. Private sector credit is not included.

10.101 Agricultural credit provided directly to farmers by the Agricultural Bank and the Agricultural Credit Cooperatives rose from an annual volume of TL 2.1 billion in 1963 to TL 6.7 billion in 1971--roughly, half the total public sector credit supplied except in such intervention years as 1966 and 1971. The Agricultural Bank's outstanding credits (in current prices) are broken down according to length of term and function in Appendix Table 7.9. These outstanding credits rose from TL 2.5 to TL 11.5 billion between 1963

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1/ Small Farmer Credit in Turkey, November 1972, p. 14, American University Beirut, Lebanon.

and 1971 and excluded those supplied directly by the Central Bank and the small fraction of credit provided by the Sales and Credit Cooperatives from their own resources. When these outstanding credits are deflated to eliminate the effect of price changes, the amount of credit to the agricultural sector in real terms reached a peak in 1956 and did not regain that level until 1966. They then doubled between 1965 and 1969 or 1970, but declined thereafter.

10.102 The increase in agricultural credit after 1963 was associated with a heavy concentration on short term credit; short term loans were 58% of the total in 1961, and 84% in 1970. When considered according to function (Appendix Table 7.11), the supply of credit to farmers rose more slowly (300%) in current prices than the supply to other activities within agriculture (440%). There has been little increase since 1969 in the volume of outstanding credit which has gone directly to farmers, and this would even have fallen drastically except for the large increase in delinquent and foreclosed loans from TL 529 million in 1969 to TL 1.0 billion in 1970 and finally to TL 1.3 billion in 1971. The major increase in credit outstanding from the Agricultural Bank and the Central Bank has been for Governemnt intervention programs.

10.103 The public sector provided relatively minor proportions of assistance in the form of credit directly to farmers, or as investments which could be used by small farmers during the last two plans. Credit supplies have been eroded by intervention programs and investments tied-up in irrigation projects and machinery.

10.104 Aside from the need to increase credit resources for short term production and for investment purposes, there is a need for institutional reform in the administration of agricultural credit programs. The Agricultural Bank's policies and lending operations should be tied closely to the overall priorities of Turkey's agricultural development program. Effective coordination with the activities of other agencies in the sector is needed, especially with the Ministry of Agriculture. Given the importance of agricultural credit a study of overall requirements and policies, institutional and organizational arrangements for long term agricultural development within the sectoral context would be desirable. Such a study is an element in the Bank's Fruits and Vegetable Export Project.

(d) Agrarian Reform

10.105 Efforts at land reform in Turkey began with the adoption of the Swiss Civil Code in 1926, which legally ended feudal practices but did not eliminate large holdings, especially in the south and east. Land redistribution laws were enacted in 1927 and 1929, but little land was actually distributed. The laws were applied largely in the east, where the Government used land redistribution as a device to break the power of tribal chiefs who led the Kurdish uprising of 1925. The Land Reform Law of 1945 called for a transfer of sufficient land to landless and land-poor peasants to provide them a living. Four million ha, slightly more than one-fourth of the area then cultivated, were to be transferred to about one million peasant families.

10.106 The land to be distributed was held by the State, by religious foundations, by municipalities, by large landholders and by unknown owners. Private holdings in excess of 500 ha could be expropriated, and land-owners were to be compensated by 20-year Government bonds. A bitterly contested article of the law provided that in regions where these sources did not provide sufficient land for redistribution smaller private holdings could be broken up. This provision was never implemented, however, and was finally annulled in 1950.

10.107 From 1947 to 1967, almost 2 million ha were distributed to 370,000 peasant families in accordance with the 1945 Land Reform Law, of which about 1.8 million ha, or less than half the targets in terms of land and number of recipients, was distributed by 1960. Clearly, land redistribution had virtually ceased by the early 1960's. The State Planning Organization viewed land reform as essential if Turkey were to achieve its economic and social development objectives, but opposition from politically powerful landowners resulted in the deletion of any reference to it from the Development Plan. A resumption of modest land distribution, which began in 1967, reflected the land policy of the Justice Party Government to proceed with land distribution of the sort practiced in the 1950's, but it avoided controversial measures such as the expropriation of large holdings.

10.108 The existing landholding situation is still unclear because title to much of the land has not been registered and the cadastral survey is proceeding very slowly. Appendix Tables 7.44 and 7.45 compare conditions in 1963 with those in 1970. Both sets of census figures show that a large part of the land, e.g., about 13 million ha in each case, is unaccounted for. By 1970 about 4,000 farm units, with holdings of 1,000 ha or more, were at one end of the spectrum. At the other end were 800,000 farm units with 1 ha or less, and another 600,000 units with between 1 and 2 ha. Nearly half of all farms fall in these two latter categories, but accounted for only 11% of the land covered by the 1970 census sample. This share of total agricultural land would have been much lower had the census included more areas in the southeast, where large ownership units are numerous. A further complicating factor is that the distribution of rights within families, and the widespread practice of sharecropping, probably tend to reduce the size of the units which are reported in the census. The 1970 census sample also excludes 408,000 ha occupied by 97 State farms, and does not estimate the number of landless laborers.

10.109 There are significant differences in landholding patterns as among regions. In the fertile and generally well-watered alluvial plains on the Aegean, and in the Chukarova on the Mediterranean, large landholdings are numerous. These regions have the most productive, innovative and commercialized agriculture in Turkey and have been the major beneficiaries of large irrigation projects. In the short run, one would expect land reform in these regions to depress output, although much would depend on how a land redistribution was carried out. For example, factors such as the size of the new units, the availability of credit, marketing and other supporting services,

and the extent to which existing landholders were permitted to retain viable holdings would affect the outcome significantly. Breaking up larger holdings would undoubtedly bring change to the pattern of agriculture, including crop selection, and by reducing the scale of operation would probably encourage more labor-intensive practices.

10.110 Ownership units are also large in the dry area of the southeast, often running to several villages under one owner and with absentee landlordism prevalent. Agricultural practices there are mostly traditional and much of the land is sharecropped. Because these tenure arrangements pose a barrier to innovation and to increased agricultural productivity, land reform in this region should serve to raise output as well as contribute to a more viable social and political order. The need for supporting services there would be especially great because these services are not well developed at present, and farmers rely on the traditional landlord-merchant relationships for such services as they receive. Finally, around the Sea of Marmara and along the Black Sea coast, land is generally owned in smaller units of more nearly equal size. Land ownership on the Anatolian Plateau is also distributed in a relatively even pattern, but large units do exist.

10.111 In addition to varied land ownership patterns, landholdings in most of Turkey are highly fragmented as a result of inheritance practices. Nearly all farm units (90%) consist of two or more parcels of land, more than half include six or more parcels, and about one-fourth have ten or more parcels. Parcels are often minute and located in scattered directions around the farm villages. There is obviously scope for improvement through consolidation, and the problems may be less than those encountered by a policy of expropriation and redistribution.

Current Land Reform Status

10.112 After elaborate preparation, a draft Agrarian Reform Law was published in 1972. It proposed sweeping reforms, including detailed land allocations by province, methods of implementation and establishment of supporting services. The total cost of the reform--including expropriation and fully developed services -- was given in 1973 as TL 33 billion. A total of 3.2 million ha were to be redistributed, of which 830,000 ha were to be obtained through expropriation and the remainder from land presently owned by the State. Beneficiaries were to total about 540,000 farm families.

10.113 The reform was carefully designed, but after publication of the draft Law a series of modifications were made which reduce the significance of the reform--primarily by allowing larger holdings and increasing the speed and size of compensation payments. The Turkish National Assembly passed the Land Reform Bill on June 13, 1973, but in still further watered-down form. Maximum limits of 30 to 101 ha were established for irrigated land, and 48 to 202 ha for unirrigated land--the limits varying according to climate and soils. A crucial modification was introduced at the last minute which per-

mitted "model farms" (any farm with yields 10% above the average yield in the area) to retain twice the stipulated limit. In October 1973 the Government announced Urfa in the southeast as the first province in which the provisions of the Law are to be applied.

10.114 The future impact of the new Agrarian Reform Law is difficult to determine because it is not clear how fast, how completely and with what level of funding it will be carried out. Over TL 9 billion is to be earmarked for the reform during the Third Plan. This would be 27% of the total amount of agricultural investment, and commitment of such a sum or a larger sum to land reform, if made, may have to be at the expense of investment in agriculture or general investment.

10.115 As noted above, the 1970 Agricultural Census has deficient data on large farm units i.e., the farms from which much of the expropriated land would be obtained. It therefore seems likely that, as in the past, initial land allotments will come from Government land. It also seems likely that lengthy legal disputes will arise in the Cukurova and Aegean areas where rapid agricultural improvement has taken place in the past decade, and where large-scale farmers can be expected to search for ways of subdividing their farms among family members to stay within the provisions of the law. The land reform implementation is expected to start in the Akcale town of the Urfa region, and concerns 122 villages. Then would come the 39 villages of Viransehir. Land registration and surveys throughout the Urfa region are expected to be completed in 1975.

10.116 Land Reform without a heavy investment in associated services and a fundamentally different set of institutions to serve small farmers is not capable of producing rapid improvements in production. This is particularly true for the southeastern region. If the physical reform proceeds without the services, the production pattern is likely to shift toward one of self-sufficient farming. The draft Agrarian Reform Law stipulates that such services as cooperatives, extension and credit will be provided, and that machinery will be established to resolve the intricate legal issues connected with land title, fragmentation and communal property. Nevertheless, it seems unrealistic to assume that these developments will proceed rapidly enough to have much effect on overall production during this plan period. On balance it appears that Agrarian reform is likely to proceed somewhat more rapidly than during the past decade, but firm estimates of the direction of movement and its consequences must await enough time to assess how vigorously government will press implementation of the law.

# CHAPTER 11

# INDUSTRY, MINING AND POWER

## Industry

11.1 At the beginning of the fifties, the Turkish industrial sector was relatively small, though the policy of 'etatism' in the previous two decades led to reasonable growth. According to the 1950 Industrial Census, although the private sector accounted for over 54% of the value added in manufacturing and 67% of manufacturing employment, public enterprises predominated among the larger establishments: 103 public sector establishments with an average value added of TL 4.1 million contributed 58% of the total output of the larger establishments, whereas 2,515 private establishments with an average value added of only TL 120 thousand contributed 42%. Sumerbank had invested mainly in consumer goods, particularly textiles, but a substantial stake had also been acquired in cement and pulp and paper. Etibank had a quasi-monopoly in mining. The State Coal mines in the Zonguldak region, the Karabuk Steel Mill, and the Divrigi Iron Ore mines represented potentially by far the most important State industrial complexes. One positive aspect of State manufacturing activity was its regional diversification. This was partly due to the fact that many State industries are resource-based (e.g. mining, steel and paper) but it also reflects a conscious Government policy to spread industry. The private sector was concentrated in Istanbul with secondary footholds in Ankara and Izmir and mainly in consumer goods industries.

11.2 In retrospect and with some oversimplification, the period since 1950 may be divided into three stages of industrialization. During the first stage (1950-1962), the tendency was heavily towards import substituion, and the main emphasis was placed on new large projects in the State sector. MKEK, a general engineering company, was formed in 1950, the State Nitrogen Corporation in 1954, and steel, cement, textiles and paper production by State enterprises was greatly expanded. However, aided by strong protectionism and the creation of the Turkish Industrial Development Bank in 1950, the private sector also made substantial progress. During the second stage (1963-69) the emphasis on import substitution continued, but export promotion measures were started and there was increasing concern about the inefficiency of State Enterprises. Within the last three years, the country has entered into a third stage of greater outward orientation. The main vehicles for this transformation are the 1970 devaluation which coupled with rapidly accelerating inflow of workers remittances has eased the foreign exchange constraint, the Common Market Agreement and expanded incentives.

11.3 Industry, including mining and power, has grown at a rapid rate, accounting for about 23% of GDP in 1972, compared to 13% in 1950 and 17% in 1960. Of the total, manufacturing accounted for about 85% of value added and mining about 8% in 1972. The main manufacturing activities have been in traditional consumer goods: food, beverages and tobacco processing (accounting in 1972 for 37% of manufacturing production) and textiles (16%). During

the sixties, however, modern industries developed fast (mainly basic metals, metal products and machinery, chemicals and petroleum products) and now account for about 40% of manufacturing production.

11.4 Growth was slow during the fifties, but picked up remarkably during the sixties. Industrialization has been given high priority during the Plan periods and industrial growth averaged about 10.5% during the First Plan and 9.8% during the Second Plan despite virtual stagnation in 1970. Industry has absorbed a growing portion of the nation's resources, as the number and size of projects have been stepped up both in the State and private sectors. The share of manufacturing in total gross investment rose from 24% in 1962 to nearly 30% by 1972. As a result Turkey has acquired a very diversified industrial sector. However, the growth of output and investment in industry has been accompanied by a high capital-output ratio and a slow growth of employment. Employment in industry increased to about 11% of total employment in 1972, compared to 8% in 1962. As a result of the rising investments per worker, output per worker has increased substantially (Table 3).

11.5 The diversification of industry has implied a relative shift away from consumer goods industries, with the major shift taking place to intermediate goods and the share of investment goods fluctuating. Changes in industrial structure are difficult to analyze because detailed data in non-

Table 56: INDICATOR OF INDUSTRIAL PERFORMANCE (INCLUDING MINING AND POWER)

| | 1959 | 1962 | 1967 | 1972 |
|---|---|---|---|---|
| Gross Industrial Product TL billion at 1968 prices | 5.63 | 10.1 | 17.7 | 28.3 |
| Cumulative growth rate over preceding years, % | -- | 5.5 | 10.5 | 9.8 |
| Share of industry in GDP at current prices, % | 12.9 | 17.0 | 19.8 | 22.9 |
| at constant prices, % | 16.6 | 16.2 | 19.5 | 22.6 |
| Share of industry in gross fixed investment, %/1 | | 32.1/2 | 32.0 | 41.5 |
| Share of manufacturing in gross fixed investment, % /1 | | 23.6/2 | 20.4 | 29.4 |
| Industrial investments, TL billion at 1968 prices | 0.4 | 2.7 | 5.4 | 11.0 |
| Marginal capital output ratio over preceding period | | 3.1 | 2.7 | 3.4 |
| Industrial employment in thousands | | 995 | 1175 | 1519 |
| Average annual increase in jobs over preceding period, in thousands | | | 36 | 69 |
| Share of industry in total employment, % | | 7.9 | 8.7 | 10.8 |
| Output per worker, TL thousand at 1968 prices | | 15.1 | 15.1 | 18.6 |

/1 At constant 1971 prices.
/2 Figure for 1963.

census years is available only for medium and large-sized establishments, and more seriously because after 1968 only gross output figures are available, even for the larger establishments. Based on partial data, the overall changes in industrial structure are presented in the table below.

Table 57: INDUSTRIAL PRODUCTION STRUCTURE
(in percent)

| | Census Data | | Survey Data Large and Medium Establishments | |
|---|---|---|---|---|
| | 1950 | 1963 | 1963 | 1968 |
| Consumer Goods | 67.8 | 50.2 | 51.5 | 50.1 |
| Intermediate Goods | 21.3 | 31.6 | 33.1 | 38.1 |
| Investment Goods | 10.9 | 18.2 | 15.4 | 11.8 |
| | 100.0 | 100.0 | 100.0 | 100.0 |

11.6 According to the average daily wages published by the Social Insurance Institution, the overall wage increase has averaged 11.6% per year from 1965 to 1970 at current prices and 4% at constant prices. It seems to have slowed down in 1971, when the increase in money wages (11%) was less than the increase of the wholesale or consumer price indexes (16% and 21%). That tendency may have continued in 1972, when there were few major collective wage negotiations in manufacturing. The average rise in real wages has been about equal to the average rise in output per worker in recent years. Gains in productivity are very difficult to assess, but according to the available statistics, the average rise in value added per worker in industry has been about 4% a year during 1965-1971. (Tables 1.2 and 2.1).

11.7 Industrial Development Policy. The First and Second Five Year Plans aimed at rapid industrialization as the leading factor in sustained economic growth and as a means to absorb surplus manpower from agriculture and reduce dependence on foreign aid. In the pursuit of these objectives, industrial development policy has emphasized import substitution and the policy tools have been high protection and generous incentives for domestically-oriented industry (see Annex 1 for a discussion of protection and the incentives framework). The main results of this policy have been twofold: a fast growth in industries catering to the home market but sometimes at the expense of high cost production and uneconomic size plants and till recently a slow growth of industrial exports.

11.8 Turkey has achieved a high degree of self-sufficiency and industries such as cement, oil, refining, steel, fertilizers, paper and road vehicles have developed fast. The possibility of import substitution has now become very limited, except in the area of semi-finished and capital goods, where value added domestically is often obtained at a high cost and the size of the domestic market is often smaller than the output of economic sized plants. The case of road vehicle and tractor industries, in the private sector, is an

example. There are about 15 firms in that branch, producing about 30,000 road vehicles and 15,000 tractors per year. The local content ranges between 55% and 75% of the value of production. The importance of minimum economic plant size is appreciated by both public planners and private industries. Recently this has led the planners to aim at minimum economic size projects and to rely on exports to absorb the surplus capacities above the need of the domestic market (as is the case in planning the capacities of engine plants, the extensions of the Yarimca Petrochemical Complex or the proposed second petrochemical complex in Aliaga).

11.9 Inward-oriented policies have led to slow growth of industrial exports. Incentives for export oriented industries in the mid-sixties were insufficient to offset the disadvantages of an overvalued currency, high costs of imported and domestic imports and the insufficiently developed export channels. During the Second Plan period and particularly after the 1970 devaluation industrial exports increased sharply (an average of 21% per annum over the Second Plan). But despite this, exports still accounted for only 2.6% of the value of manufacturing production in 1972 (para 11.17).

11.10 Industrial development policy also puts a strong emphasis on heavy industries and sector of advanced technologies as a base for future industrial growth. Thus, projects for an aluminum smelter, a third integrated steel mill, a petrochemical plant, a diesel locomotive factory and a shipyard were promoted, in some cases despite economic disadvantages. While leading to a rapid growth of output such a policy has implied, however, the development of industries in which Turkey has no comparative advantage, as in the case of the petrochemical industry, sophisticated machinery and vehicle production, and which may not be able to compete freely with the EEC.

11.11 Certain types of industries deserve higher priority than they have been given. In particular, labor intensive industries are potentially more competitive and can help cope with the problems of unemployment, and regional under-development. Industrial development should be further accelerated also in fields where the domestic market has a high potential growth, either to support the development of other sectors (e.g., fertilizers), or to improve population welfare as incomes rise (e.g. food, clothing, housing, furniture, household appliances, etc.). Industries based on natural resources (minerals, woods, textiles) and their downstream processing can also be stimulated by measures ensuring adequate supply at low cost, including exploration and exploitation of the more economic mineral resources, improvement of forest management and access roads, and saw-mill reorganization. 1/

11.12 Another policy objective is a better balance between regions in industrial development. The textile factories of Sumerbank have been spread in this manner, and other public sector enterprises have been established in various parts of the country, sometimes at a substantial cost to the economy

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1/ For a detailed discussion of developments and prospects of individual industries, see Annex II.

(Chapter 9). Some specific investment incentives are granted on the basis of regional location. More and more enterprises choose locations outside the industrialized area of Istanbul in places where labor, utilities and land are cheaper, but this trend benefits the coastal areas and has not extended to central and eastern Turkey. Weak local administration and transport facilities, and general life conditions reduce their attractiveness. An alternative to dispersion of industries, which is worth studying for its economic cost is the promotion of poles of industrial development, giving due weight to such factors as the promixity of raw material supply and markets.

11.13 Turkey has followed a system of a mixed economy since the thirties. At present the public sector accounts for about 40% of value added in manufacturing industry and 80% in mining industry, and has a virtual monopoly in steel, petroleum refining, fertilizers, petrochemicals, pulp and paper. It has also accounted for about 55% of industrial investment during 1963-72. Most of these industries are operated by State Economic Enterprises (see paras 11.24-11.30). As a general rule, the public sector enters fields considered of vital importance or where the private sector is unwilling to invest, either because of shortage of financing capacity or because of low financial return. The policy proclaimed in the Second Plan is to encourage the private sector to take over manufacturing in the long run. This seems to be the trend at present in some mixed branches such as cement, earthenware, and textiles. Large enterprises with mixed capital have also developed.

11.14 The role of foreign private investments in industrial development is limited. The policy is to accept them where there is a pressing need for technological transfer and only in sectors which could not be developed with local resources. The Government has declared its intention in 1972 to be flexible in its application of the rule requiring a minimum 51% Turkish ownership (public plus private), which has been applied in 1971. Foreign direct investments in new industrial projects fell to nearly nothing in 1971 but extension of existing enterprises absorbed most of the $45 million of total direct foreign investment. Potential foreign investors are concerned about the long term effect of declining protection and import liberalization on prospective profits in such industries as vehicles, machines and chemicals.

11.15 Imports and Exports. As a result of the import substitution policy and the control system in external trade, the share of consumer goods in industrial imports has fallen considerably and that of intermediate and investment goods risen. By 1972, substantial import dependence existed only in machinery and transport equipment and in basic metals and chemicals and fertilizers. Together these groups accounted for over 90% of Turkey's industrial imports.

Table 58: IMPORTS OF MANUFACTURED PRODUCTS
(TL billion)

| | 1963 | Estimated 1972 |
|---|---|---|
| Consumer Goods | 0.3 | 0.3 |
| Intermediate Products | 1.6 | 7.2 |
| Investment Goods | 2.8 | 9.2 |
| | 4.7 | 16.7 |

11.16 During the 1960's, manufacturing exports lagged considerably behind agricultural and mining exports. Hence, their share in total exports declined from 25.1% in 1960 to 17.1% in 1970. Manufactured exports expanded at 3.9% during the first half of the 1960's but virtually stagnated during the second half of the decade. Since 1970, there has been a remarkable upsurge due to both the devaluation, which made the export incentives more effective and booming world demand and prices. Manufactured exports in 1972 ($237.1 million) not only exceeded the Second Plan export target for manufacturers ($196.9 million) for that year, but also the 1973 target ($233 million). The major growth in industrial exports in the last few years has been in textiles, food and beverages, hides and leather products, chemicals and petroleum products.

Table 59: EXPORTS OF INDUSTRIAL PRODUCTS BY CATEGORIES
(million US$)

| | 1951 | 1962 | 1967 | 1972 |
|---|---|---|---|---|
| Olive oil | 2.4 | 14.0 | 6.8 | 2.9 |
| Sugar | 0.2 | 7.9 | n.a. | 23.5 |
| Oil cake | 7.8 | 10.6 | n.a. | 28.0 |
| Other Agricultural Items | 10.1 | 2.8 | n.a. | 33.0 |
| Textiles | 0.9 | 2.0 | 3.1 | 54.8 |
| Hides and leather products | 0.2 | -- | 0.2 | 21.5 |
| Forest products | -- | -- | 1.2 | 4.9 |
| Petroleum products | -- | 6.1 | 0.4 | 22.7 |
| Chemicals | 3.6 | 1.7 | 3.2 | 10.7 |
| Non-ferrous metals | 8.1 | 9.9 | 18.2 | 3.7 |
| Other | 23.4 | 17.8 | 48.1 | 31.4 |
| | 56.7 | 72.8 | 81.2 | 237.1 |

11.17 Even the 1972 export totals are exceptionally low; the average share of exports to domestic production for all manufacturing industries was only 2.6%. Thus, as yet, Turkey has no major export industry. Even in hides and leather products and textiles, the export shares were only 13 and 3% respectively.

11.18 Protection and Incentives Framework. Various instruments are used for the protection of domestic industry, including tariffs, other charges and taxes on imports, quota restrictions and absolute prohibition of some imports. To some extent these measures merely offset the overvaluation of the lira, but their extent and scope have had various undesirable effects on industrial development. As shown above, high cost import substitution has developed and export growth has been poor, as a result of the relatively higher profitability to produce for the home market and the high costs of domestic and imported inputs. As an illustration, a manufacturer may realize (in gross proceeds) TL 22.40 for every dollar saved through import substitution but only about TL 15 for a dollar saved in export trade (at 1972 exchange rate of TL 14=US$1).1/ Other effects of the control system have been to substantially raise the domestic prices of imported goods, led to delays and substantial time use of skilled personnel in gaining import permits, underutilization of industrial capacity and high inventory costs to offset the uncertainty of import availability.

11.19 There have been some limited attempts to measure the extent of protection. One study undertaken in 1968 showed net effective protection rates ranging from minus 50% (certain batteries, rubber tires) to 300-500% (car and truck assembly). A more recent 1972 study covering a sample of 23 IBRD/TSKB financed projects in textiles, chemicals, plastics, glass, cement, and metal products shows protection ranging from minus 11% for metal drums to over 1,000% for steel billets and certain plastics. The median net protection was 42%, and there were ten projects with 96% or higher protection. There may be shortcomings in methodology and accuracy of measurement in both studies 2/ but these hardly affect the major conclusions, namely that industry is highly protected and that the present range of protection rates seems to have no clear economic rationale.

11.20 This is not a unique situation for a developing country. In fact, it is more likely to be the typical case. In Turkey, it is the result of several factors: a development strategy of import substitution which has only recently given way to a more outward-oriented industrialization philosophy, a chronic shortage of foreign exchange, only recently relieved, which made the country rely on quantitative import restrictions and other administrative controls, and a State industrial sector, whose investments were partly geared to non-economic goals and which has shown poor overall financial results.

11.21 During the sixties, export and investment incentives were offered to encourage industrial development. They include tax rebates for exports, exemption from custom duties or their deferral for 2-5 years, subsidized investment credits for export oriented production and tax allowances for in-

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1/ For a detailed discussion of protection measures and their effects see Annex I.

2/ SPO is undertaking a new survey covering a sample of 300 industrial firms.

vestment. Higher rates of incentives are offered for investment in regions that are classified as underdeveloped. The incentive schemes and their effects are discussed in detail in Annex I. The most important incentives have been the investment tax allowance and exemption and deferral of customs duties.

11.22 The total incentives package has been considerable and has undoubtedly encouraged private investment in industries, particularly textiles, processed food, chemicals, metal products and machinery, and transport vehicles. However, despite the extent of these incentives to industry (budgetary cost in 1972 estimated at $400-500 million), the cost of the incentives program and their distribution between sectors is only partially known. The Government has not evaluated the effects of the incentives in relation to its objectives, nor attempted to develop a system which would achieve the desired objectives at least cost. With such partial information, it is not possible to develop a rational system of incentives. Another difficulty with the measures was that they were implemented on a project basis leading to complaints about the lack of objectivity, delays and partiality. Based on available information, it seems that the industrial incentives have been concentrated in textiles (50% of total) and chemicals and foodstuffs (accounting for another 25%). Finally, till 1970 the incentives offered for export were unable to offset the relative disadvantages created for export industries by the protection framework. Incentives for regional dispersion of private investment have been insufficient to offset the natural disadvantages and it seems that the dispersal of State industries in different regions has had a more important effect on regional development (Chapter 9).

11.23 The Incentives bill presently in Parliament reportedly tries to systematize the whole incentives system. It is based on sectoral priorities, with different incentives laid down for each sector which would depart from the need to evaluate particular projects for granting incentives and thus hopefully solve the problems of delays and partiality of the past. It may also help in maintaining a better record of the cost and distribution of incentives and thus enable the definition of a rational incentives system. But its implementation still remains to be seen.

11.24 Role of State Economic Enterprises. The public enterprises sector in Turkey consists of over 100 enterprises spanning all major sectors, contributing over 10% of the value added in the economy and employing 6% of the non-agricultural labor force. The public sector has a virtual monopoly in electricity, petroleum refining, steel, nitrogen, paper, railways, air transport, controls most shipping and communications and has a big share in textiles, cement, coal, sugar, machinery and chemicals. Thirty-five major enterprises account for most of public enterprise activity. Of these, 8 are in the financial sector and the rest are titled "producing" or "operational" SEE's. The growth of all SEE's taken together and the share of SEE's in manufacturing, mining and electricity can be seen from the following table (in TL millions).

Table 60: INDICATORS OF SEE GROWTH

| | 1952 | 1957 | 1962 | 1967 | 1972 |
|---|---|---|---|---|---|
| Value added: Total | 1,231 | 2,648 | 5,305 | 9,672 | |
| Manufacturing | (402) | (688) | (1,602) | (3,101) | |
| Mining | (144) | (276) | (596) | (1,097) | |
| Electricity | ( --) | (26) | (111) | (312) | |
| Fixed investment: Total | | | 1,530 | 3,809 | 11,140 |
| Manufacturing | | | (287) | (748) | (706) |
| Mining ) | | | (491) | (1,067) | (7,120) |
| Electricity ) | | | | | |
| Employment: Total (in thous.) | 201 | 248 | 280 | 350 | |
| Manufacturing | (52) | (62) | (81) | (97) | |
| Mining | (39) | (43) | (48) | (59) | |
| Electricity | | ( 2) | ( 3) | ( 3) | |

11.25 The industrial SEE's show an increasing trend in their proportions of total SEE value added and fixed investment and a fairly steady proportion for employment (about 45%). Their share in total value added rose from 44% in 1952 to 47% in 1967 and their share in fixed investment from 51% in 1962 to 70% in 1972.

11.26 The hope of the planners was that the SEE's would generate substantial surpluses to finance future public investment, but the profits generated by the SEE's have not been commensurate with the volume of their operations or the capital resources used by them. The SEE's have required increasing budgetary support to finance operating losses. The financial performance of the SEE's and their implications for public finance are discussed in Chapter 5. The profit performance varies considerably between different SEE's (Tables 5.15 and 5.16). Railways have been by far the largest losers and others with substantial deficits were the Maritime Bank, nitrogen, petrochemical, coal and PTT. The industrial sector as a whole has had low but rising profits, as shown in the table below.

Table 61: NET PROFITS BEFORE TAX OF INDUSTRIAL SEE's
(TL Millions)

| | 1960 | 1965 | 1970 | 1972 |
|---|---|---|---|---|
| Mining and Power | 55 | 246 | 380 | 900 |
| Coal, Petroleum and Steel | 82 | 31 | 455 | 824 |
| Manufacturing | 105 | 103 | -26 /1 | 378 |

/1 Mainly as a result of devaluation, which raised the costs of inputs and TL cost of external loans.

Source: Table 5.16.

11.27 The low profitability of the SEE's is even more striking when one analyzes their rate of return (net profit before tax as a percentage of the book value of net fixed assets), which was only 2.7 in 1969 and only 0.9 between 1969-71 and this despite the highly subsidized credits provided to them by the State Investment Bank and the large subsidies by the Central Budget. Relatively few SEE's earned rates of return in excess of 10% during the Second Plan. These were sugar, Etibank, electricity, petroleum and iron and steel, which are all in the industrial sector.

11.28 Low profitability of SEE's may derive from two reasons: inefficient operations and/or the pursuit of non-economic objectives through the SEE's. A judgment on economic efficiency of SEE's can be arrived at only by first separating the costs incurred by the SEE's to fulfill the non-economic goals of the country and secondly by individually analyzing the SEE's for their efficiency of operations. However, Government subsidies to SEE's in Turkey are not allocated by specific category but are lump sum budgetary transfers to offset operating losses and meet additional investment requirements and secondly, the Government 'compensation' to SEE's does not provide for any 'normal profit' in addition to incurred costs. Consequently, a precise separation of the costs incurred individually by the SEE's to meet non-economic goals is not possible.

11.29 SEE's are burdened with numerous social goals, influencing the level of consumption of some goods, redistribute income, increase employment, encourage the development of backward regions, etc. In an inflationary environment, when the Government is exhorting producers not to raise prices, SEE's may also be required to set a good example. The relative importance of these objectives has varied considerably in the last couple of decades in Turkey. Before 1960, the socio-political pressures to keep SEE prices low and to subsidize agricultural incomes led to considerable expansion in bank credit to SEE's. This is regarded as the major reason for the rapid inflation which averaged 15% per annum from 1954 to 1959. Then the First Plan explicitly stated that prices ought to be determined on the basis of production costs but recognized that exceptions may be made to satisfy redistributive goals. The Second Plan deemphasized the role of costs and added the protection of price stability as one of the objectives of SEE pricing policy. This policy led to a delay of nearly a year before SEE prices responded to the substantially increased costs arising from the devaluation of August 1970, and was largely responsible for the deficit in 1970.

11.30 The principal reason for the low profits of SEE's has been the policy of rigid prices in the face of general inflation in the rest of the economy. This policy has been followed as a means of restraining the rise in the general price level and, in the case of SEE prices of intermediate goods, as a means of encouraging industrialization and import substitution. In several cases, low prices had social aims as well, particularly employment in underdeveloped regions, and maintaining income of some groups. A positive economic result of this policy has been the relatively high utilization of the production capacities of SEE's (with a few exceptions, notably MKEK and Milk). Since SEE's account for such a large proportion of non-agricultural

output (12% in 1969), their regulated low prices and the consequent budget support have a significant effect on the allocation of resources, the economic cost of which has to be set off against non-financial or indirect economic benefits. The pressure on the budget to finance the deficits incurred by SEE's led to price increases in mid-1971 in Post and Telegraph rates (60%), cement (8-20%), electricity (55%), coal (61%), and paper (34%). Prices of textiles and steel were also increased. With the continuing high inflation in 1972 and 1973, some further price increases in SEE products were announced in 1973.

11.31 Apart from pricing policy, there are many other factors influencing the resource generation performance of SEE's which are widely recognized and have been acted upon. Following an intensive study in 1960, a standardized accounting system has been devised and is now being introduced; decisions on participations in equity have been centralized to enable better control of the use of share capital. But many ills remain: the high turnover of management personnel, the shortages of skilled labor, the interference of the ministries in management decisions and the absence of an adequate system for assessing the operational efficiency of individual enterprises.

11.32 Improving the efficiency of SEE's has been a subject of discussion for many years by a succession of committees, but so far no concrete proposals have emerged. The main concern appears to be an administrative regrouping of the enterprises, perhaps into holding companies, a heavy emphasis on improving the quality of management and reducing staff turnover through financial incentives and greater autonomy. These are difficult measures which will remain subject to administrative and political pressures. In the meantime, to make possible a clear assessment of the operating efficiency of individual SEE's, an explicit statement of the social and general economic objectives of individual SEE's should be made and specific subsidies allocated to meet such objectives. The review system of SEE performance should thus be substantially strengthened and the rules governing management, salaries and operations made more flexible. Finally to improve the financial performance itself, pricing policy should be made more flexible so as to keep pace with the general price rise in the economy as well as to adjust individual SEE prices when they are far out of line with the market price structure.

Prospects

11.33 The Third Plan constitutes the first stage of a long-term strategy for the period 1973-95, in which industrial growth is emphasized. The major premises of the Third Plan for industry are the following. Turkey must accelerate the transformation of her industrial structure to resemble that of advanced industrial nations. This means establishing intermediate and investment goods industries in the shortest possible time which would permit the application of advanced technology, the development of a more diversified industrial structure and eventual development of a wide range of industrial exports. The overall Plan targets imply a reduced dependence on foreign aid through increase in exports, particularly industrial products, and through emphasis on import substitution, with the concentration shifting from light manufactures in the Second Plan to intermediate and investment goods in the

Third Plan. A restrictive attitude is taken with respect to foreign direct investments which would be allowed only where they bring in new technology (this criterion would be applied less rigidly where substantial exports are planned).

11.34 Net output in manufacturing is expected to grow by about 11% per year. Whereas consumer goods production would increase by only about 7% per year, growth rates of about 14 and 17% respectively are projected for intermediate and investment goods. The highest growth is assumed for petrochemicals (nearly a six-fold increase), fertilizers (3.5 times the 1972 figure) and machinery (nearly three times). The major projects would be expansion of the steel complexes at Erdemir and Iskenderun, the second petrochemicals complex, and a new petroleum refinery and chemicals complex at Tarsus. Further expansion would take place in nitrogen, fertilizers and aluminum. A breakthrough in the engineering industries would be highlighted by the production of automotive gears and transmissions, automotive and ship diesel engines and by the expansion of shipbuilding into larger vessels. All the projects mentioned would be in the public sector.

11.35 Just as in the Second Plan, manufacturing investments are targeted to more than double under the Third Plan, representing 45% of total targeted investments. Investments in intermediate goods industries would form a smaller percentage of total manufacturing investments than in the Second Plan (61 versus 68%) whereas investments in equipment goods industries would rise sharply. As before, investments in metallurgy and chemicals (including fertilizers) account for nearly half the total. The fastest growth would occur in metal products and machinery (including prominently motor vehicle components, heavy industrial machinery, and pumps and compressors), their share in total manufacturing investments rising from 9 to 18%.

11.36 Import substitution would be particularly heavy in basic metals (especially in steel), chemicals and fertilizers and, to a lesser extent, investment goods. For the balance of all other industries, the share of imports in total consumption would increase. As a consequence, the shares of imports of different categories would change, with investment goods imports rising from 55% in 1972 to 69% in 1977, intermediate goods falling from 43% to 28% and consumer goods rising marginally from about 2% to 3%. Rapid growth is projected in industrial exports, (21.5% per annum for manufactured products and 16.9% for mining products), thus raising the share of mining and industrial exports from 31% of total exports in 1972 to 49% in 1977 (42% for manufactured products) (Table 3.15). The fastest growth is expected to be in textiles (22.5% per annum), wood and printing products (29%), chemicals (33%), leather (18.5%) and non-ferrous metals (46.6%).

Table 62 : THIRD PLAN TARGETS FOR THE MANUFACTURING SECTOR
(figures in TL billion at 1971 prices)

| | 1972 | 1977 | | | | | Approximate Importance of Sector /1 | |
|---|---|---|---|---|---|---|---|---|
| | | Domestic Demand | Exports | Imports | Domestic Production | Perc.:Rate of Growth of Production 1972-77 /2 | Ratio of Value Added to Gross Output 1968 % | Approximate Share in Value Added 1972 |
| Consumer Goods Industries | | 69.1 | 7.0 | 0.6 | 75.5 | 43.0 | | 40.4 |
| Food processing | | 34.7 | 3.7 | 0.2 | 38.2 | 35.5 | 29.7 | 17.3 |
| Beverages | | 2.3 | 0.1 | 0.1 | 2.3 | 64.4 | 72.0 | 2.1 |
| Tobacco | | 5.3 | 1.5 | -- | 6.8 | 51.2 | 60.2 | 5.6 |
| Textiles and Clothing | | 26.8 | 1.7 | 0.3 | 28.2 | 50.9 | 39.9 | 15.4 |
| Intermediate Goods Industries | | 90.5 | 3.2 | 6.4 | 87.3 | 95.4 | | 48.6 |
| Forest Products | | 5.8 | 0.3 | 0.0 | 6.1 | 56.5 | 76.8 | 6.2 |
| Pulp, Paper and Printing | | 5.6 | 0.1 | 0.3 | 5.4 | 100.0 | 45.7 | 2.5 |
| Hides and Leather | | 3.7 | 0.6 | 0.1 | 4.2 | 82.6 | 22.6 | 1.1 |
| Rubber and Plastics | | 5.1 | 0.2 | 0.3 | 5.0 | 85.3 | 44.2 | 2.5 |
| Petroleum Products | | 19.2 | 0.2 | 0.2 | 19.2 | 128.5 | 70.0 | 12.1 |
| Chemicals and Fertilizers | | 22.7 | 0.7 | 4.1 | 19.3 | 87.7 | 39.0 | 8.3 |
| Non-metallic Minerals | | 7.6 | 0.1 | 0.2 | 7.5 | 59.7 | 58.7 | 5.7 |
| Basic Metals | | 20.9 | 1.0 | 1.3 | 20.6 | 112.5 | 51.0 | 10.2 |
| Investment Goods Industries | | 49.6 | 0.8 | 15.8 | 34.6 | 116 | | 11.0 |
| Metal Products | | 8.4 | 0.0 | 1.2 | 7.2 | 105.8 | 23.7 | 1.7 |
| Machinery | | 19.3 | 0.2 | 9.0 | 10.5 | 162.5 | 35.0 | 2.9 |
| Electrical Machinery and Electronics | | 8.3 | 0.4 | 2.8 | 5.9 | 156.5 | 37.4 | 1.8 |
| Transport Equipment | | 13.6 | 0.2 | 2.8 | 11.0 | 80.4 | 37.0 | 4.6 |
| Miscellaneous | | 0.5 | -- | 0.5 | -- | | | |
| Manufacturing Industry, TOTAL | | 209.7 | 11.0 | 23.3 | 197.4 | 73.9 | | 100.0 |
| Imports in Relation to Consumption | 13.5% | | | 11.1% | | | | |
| Exports in Relation to Production | 5.4% | | 5.6% | | | | | |

1/ Computed on two simplifying assumptions, namely (a) that the ratio of value added to gross output in firms employing 10 or more persons in a given manufacturing subsector would be representative for this subsector taken as a whole and (b) that there was no change in this ratio between 1968 and 1972.

2/ The rates of increase in gross output values, as might be suspected, differ somewhat from increases in value added by manufacture. The latter are not shown for individual industries but figures for major subdivisions are shown as follows in Table III.03 of the Plan: Consumer Goods 29%, Intermediate Goods, 90%, Investment Goods, 114%, All Manufacturing Industries, 67%.

SOURCE: Third Plan Document

Table 63 : INDUSTRIAL INVESTMENTS IN THREE PLANS AND INVESTMENT/OUTPUT RATIOS IN THE THIRD PLAN

| | Percentage Distribution of Industrial Investments | | | Investment/Output Relationships in the Third Plan | | |
|---|---|---|---|---|---|---|
| | FFYP 1967-67 Actual | SFYP 1968-72 Actual | TFYP 1973-77 Projected | Investments 1973/77 TL billion at 1971 prices | Increased Value Added 1972/77 /1 TL billion at 1971 prices | Cap/Output Ratio /1 |
| Consumer Goods | 28.0 | 17.5 | 16.6 | 14.5 | 4.1 | 3.5 |
| Food, Beverages and Tobacco | 12.8 | 8.9 | 6.6 | 5.8 | | |
| Textiles and Clothing | 15.2 | 8.6 | 10.0 | 8.8 | | |
| Intermediate Products | 58.2 | 68.2 | 61.4 | 53.9 | 11.7 | 4.6 |
| Forest Products and Printing | 5.7 | 9.5 | 6.7 | 5.8 | | |
| Leather, Rubber and Plastics | 5.1 | 1.9 | 2.1 | 1.8 | | |
| Petroleum, Chemicals, Fertilizers | 13.0 | 24.4 | 22.7 | 19.9 | | |
| Cement, Glass and Clay | 11.3 | 8.7 | 4.0 | 3.5 | | |
| Steel and non-Ferrous | 23.1 | 23.7 | 26.0 | 22.9 | | |
| Investment Goods | 13.1 | 13.8 | 22.0 | 19.3 | 6.0 | 3.2 |
| Metal Products and Machinery | 7.5 | 7.5 | 14.1 | 12.3 | | |
| Electrical Machinery and Electronics | 2.4 | 1.7 | 3.5 | 3.1 | | |
| Transport Equipment | 3.2 | 4.5 | 4.4 | 3.9 | | |
| Small Industries | 0.7 | 0.5 | n.s. | -- | | |
| TOTAL | 100.0 | 100.0 | 100.0 | 87.7 | 21.8 | 4.0 |

n.s.: Not specified

1/ Value added figured at factor cost which leads to some overstatement of the true capital-output ratio. However, the ratio of investment to output valued at market prices would presumably be even more biased because of the heavy incidence of indirect taxes on industrial prices. Thus, it appears that industrial net output valued at market prices is no less than 48% higher than the same output valued at factor cost whereas the difference for the economy as a whole is only 12.5%. Adding the latter average share in indirect taxes to net manufacturing output at factor cost would only reduce the incremental capital-output ratio from 4.0 to 3.6. This is indeed only a very rough calculation since (a) we do not know to what extent industrial investments bear their fair share of indirect taxes nor (b) whether there is an economic rationale (e.g. external diseconomies) behind the heavy indirect taxation of industry.

SOURCE: Investments, Plan Table IV.19
Value added, Plan Table III.03

Table 64: IMPORTS OF MANUFACTURED PRODUCTS
1972 and Projected 1977

| | Value in TL Billion | | Import Share in Domestic Demand | |
|---|---|---|---|---|
| | 1972 (est.) | 1977 | 1972 (est.) | 1977 |
| Chemicals and Fertilizers | 3.4 | 4.1 | 25.2% | 18.1% |
| Basic Metals | 3.1 | 1.3 | 32.2% | 6.3% |
| Machinery and Equipment | 9.2 | 15.8 | 35.6% | 31.9% |
| All Other | 1.0 | 2.1 | 13.2% | 18.0% |
| Manufactured Products | 16.7 | 23.3 | 13.5% | 11.1% |

Source: Third Plan document, SPO.

11.37 The prospects for achieving the Third Plan's targets for overall industrial growth (11% per annum) are good, with any shortfalls in sectors like chemicals and minerals production (in which the Plan expects the fastest growth) being offset by the growth of textile production faster than assumed (8.5%) 1/. The investment targets in industry also appear realistic, though the financing of State Economic Enterprises would have to rely more on external financing and higher borrowing from the financial markets than assumed in the Plan, because the optimistic targets of surplus generation by the SEE's are unlikely to be achieved (Chapter 5). Moreover, as the Plan expects, the share of public investments in manufacturing, which has been increasing in the past, will level off leaving the shares of public and private sectors at approximately one-half each.

11.38 The basic principle in investment policy in the Third Plan is that the State would undertake high priority investments (i.e. those introducing new technology or providing substantial external economies) in areas where, because of the long gestation periods, high capital requirements, and/or high risks, the private sector does not venture even when provided with reasonable inducements. On the other hand, the SEE's will not invest in fields where the private sector is sufficiently active nor expand their operations unnecessarily, except through complementary investments to improve the operational efficiency and competitiveness of existing State plants. Private investors are also barred from the exploitation of strategic natural resources and from investments with a monopolistic potential.

11.39 A major weakness of the Plan is that it opts for a capital intensive industrial emphasis without a careful analysis of its implications or consideration of alternatives, e.g. implications of a more labor-intensive industrial growth or more export-oriented strategy including the prospects for major industrial exports in the context of Turkey's membership in the

1/ For a discussion of prospects in individual industries, see Annex 2.

EEC. Moreover important analyses and assumptions are not spelt out in the Plan, e.g. criteria for project appraisal and employment and productivity assumptions etc. As a result the Plan does not contain a careful appraisal of projects to be included nor a consideration of alternative project specifications to achieve desired macro targets.

11.40 Moreover, the extent of import substitution emerges in the Plan as a residual requirement based on exogenously projected foreign exchange earnings, without a consideration of the costs and benefits of such a strategy. In the past, high costs of steel, basic petrochemicals and fertilizers have developed and distorted economic development and further development of high cost basic industries may impede the development of industrial exports in the future. A major cost of the type of approach taken in the Plan to determine import substitution requirements and hence the sectoral allocation of investments is that errors in forecasting future foreign exchange availabilities lead to a particular investment strategy which may be inappropriate in a situation of improved foreign exchange availabilities. The events of 1972 and 1973 have shown that foreign exchange earnings are likely to be much higher (Chapter 6) and Turkey would be able to import much more than projected in the Plan and consequently the extent of import substitution required would be less than assumed.

11.41 Imports of industrial goods are likely to grow faster than assumed in the Plan (7% per annum) due to the improved foreign exchange availability and because the import regime is likely to be more liberal than in the past. The high export growth assumed in the Plan is likely to be achieved, given the high growth in 1972 and 1973. Cotton yarns are being exported to Europe and gains are being made in exports of finished fabrics, despite the growing market difficulties. There are also good prospects for exports of ready made clothing, leather articles, non-ferrous metals, tomato juice and canned fruit, chipboard and plywood, and some cast-iron articles. Mineral exports may also expand rapidly, but this will depend partly on international price development (mercury and chromite are fairly difficult at present); and partly on the ability of Turkish mines to raise productivity and improve marketing efforts, particularly of new products (production of boron salts is planned to reach 800,000 tons/year by 1977). A number of other mining projects which are under construction or have been put in operation recently (copper, aluminum, mercury, lead and zinc, wolfram) should contribute substantially, as more mineral products are exported in processed form as metals (copper, aluminum, mercury, zinc, ferro-chromium) or chemicals (boron derivates). The mission projections for overall industrial exports are therefore based on the Plan targets (adjusted upwards by 10% to allow for the change of base year from 1971 to 1972, in view of the dollar devaluations and increased world prices in 1972). It is probable that processed food and beverage exports will be higher than assumed in the Plan and other items e.g. non-ferrous metals will be lower (Table 3.15) 1/. The achievement of the export targets

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1/ For a discussion of prospects in individual industries, see Annex 2 and for mining products see paras 11.47-11.55 below.

would however depend on the continuation of the export incentives policies and control of the present high inflation.

11.42 For the SEE's, the Third Plan explicitly recognizes all the problems discussed above (Chapter 5). The need to separate the goal of efficient operation from other socio-economic goals is clearly stated. Monopoly public enterprises are directed to set prices so as to make reasonable profits; competitive SEE's are directed to use market prices. The Plan promises budget subsidies to compensate for losses incurred in meeting the objective of optimum capacity utilization or other social objectives mentioned above. However, there are no new specific proposals in the Plan and if the past achievements in SEE reform despite various studies are any guide, overall reform of the SEE's would take a long time. In the meantime, reform of individual enterprises should be pushed ahead as rapidly as possible.

11.43 The availability of medium and long term funds to the private entrepreneur is recognized as a major problem in the Plan. It therefore aims to increase the resources of existing industrial and credit institutions and also to create a new Development Bank which would direct the private sector towards regions and industries of high economic priority.

11.44 The Plan is brief on industrial protection and incentives 1/. It expresses concern about duty reductions and greater enlargements under the EEC treaty 1/. The escape clauses in the EEC agreement, it is stated, provide for emergency protection of existing industries but will not help new industries. The main support for the latter would come from the incentives ("encouragement and guidance") system which will be designed to meet the following standards: objectivity: i.e. there should be a minimum of administrative discretion; and impartiality as between public and private enterprise, established enterprise and new enterprise. A judgment of the incentives system will have to await the passage of the Incentives Bill now in Parliament and its successful implementation.

11.45 Industry in the past has been relatively well distributed, due in part to favorable geography and infrastructure and in part to a deliberate State policy to spread locations for State enterprises in e.g. steel, cement, paper, and textiles, sometimes at considerable additional investment and operating costs 2/. The heart of the regional development problem is represented by the part of Turkey, east of the Adana-Kayseri-Samsun line, encompassing roughly one-quarter of the Turkish population. The Third Plan emphasizes the continued development of the mineral and agricultural resources of this region, continued implantation of State-sponsored "seed" projects in textiles, construction materials, agricultural processing, and mechanical

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1/ For a discussion of the changes affecting industry under the EEC protocol and its implications, see Chapter 7, Annex 1.

2/ For a detailed discussion, see The Development Prospects of Turkey, Volume V, Annex III - The Manufacturing Industries (EMA-30a of December 10, 1971), pp. 24-25 and 77-78.

industries and to the existence of preferential incentives for the establishment of private industries (see Chapter 3).

11.46 For the longer term, Turkey has the resource base for fast growth in industrial output and exports. Prospects would depend on the control of inflationary pressures or more frequent adjustment of the exchange rates than the past to offset domestic inflation and maintain competitiveness of Turkish industry, and the industrial policies undertaken by the Government in the medium term to prepare for eventual EEC membership. In view of the new conditions which will gradually prevail in the application of the association agreement with the EEC, the aim of reducing costs and raising the efficiency of industry in order to improve its competitiveness gains in importance. A smooth transition would also require greater responsiveness to market forces and flexibility of price policy. Development of new competitive industries should be concentrated in fields in which Turkey has or is reasonably expected to have comparative economic advantages. In addition to existing incentives, the development of export-oriented industries in particular would also require a better knowledge of the European markets, strict specialization in the lines of production, search for subcontracting activities, and a flexible policy on associations with foreign partners. Creation of various organizations 1/, e.g. a national export council, export promotion center, export bank and an export credit agency and subsidies for market research and market development would be needed to ensure substantial increases in exports in the future.

Mining

11.47 Minerals production today accounts for about 1.7% of the gross national product and about 8% of the combined value added in manufacturing and mining. Mining production (TL million at constant 1971 prices) increased by an average of 11.5% per year in 1962-1972. However, during the last three years there has been some stagnation, with declines in crude petroleum, copper and chrome ore production, and a very sizeable fall in iron ore production. With Turkish demand for minerals steadily increasing, particularly for crude oil, iron ore and phosphate rock, the balance of trade in minerals has deteriorated rather rapidly.

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1/ For a fuller discussion of organizations that may be useful, see Annex 3.

Table 65: TRADE IN MINERALS
(million US$)

| | 1967 | 1972 |
|---|---|---|
| Imports | 59.7 | 109.5 |
| Exports | 20.7 | 35.1 |
| Trade Deficit | 39.0 | 74.4 |

The above figures refer to minerals only. Copper, for many years, was exported in the form of blister; copper exports declined from $16 million in 1967 to zero in 1972.

11.48 The slow development of the minerals industry in Turkey (other than coal and lignite) reflects insufficient exploration, obsolete mining laws, management and staffing problems, and high transportation costs. Etibank which controls two-thirds of the country's minerals production has been unable to devise and implement an efficient approach. MTA has sacrificed basic geological mapping and surveys to exploration, and proven results have been meager. The private mining sector generally lacks the capital and know-how for efficient development. Foreign companies could make a contribution but it is difficult to find a viable formula for their participation because this is an intensely political issue in Turkey. The Mineral Reform Bill in Parliament therefore bars foreign companies from acquiring minerals exploration licenses in Turkey but apparently leaves a door open for their financial participation in companies formed to develop mineral resources.

11.49 The mining industry has a high priority for development for several reasons. Turkey has a substantial minerals potential, with great export possibilities in copper, chrome and boron products (being a leading world producer in the latter two categories). Though oil reserves may prove limited, there is enough high grade coking coal to supply the needs of the Turkish steel industry and enough lignite to provide the bulk of the country's thermal power needs for some time to come, particularly at recent oil prices. The plan sets a target of roughly doubling minerals production between 1972 and 1977, corresponding to an average annual growth rate of 15% (as compared with less than 10% in the Second Plan). Production of metallic minerals would grow by no less than 27% per year while fuel production would expand by 10% per year (mainly through a near tripling of lignite production from 6.5 million tons to 19.2 million tons). As a result, the increase in minerals imports would have been contained at about $70 million equivalent at 1971 prices (crude oil figuring prominently). However, the recent oil price increases will lead to dramatically increased mineral imports, estimated at $210 million for oil alone in 1973, going up to more than $600 million in 1977. Exports are projected to grow by $44 million (about 17% per year), with borates, sintered magnesite, chromite, tungsten and marble expected to lead the way. At the same time, iron ore production would be stepped up from 1.6 million tons of Fe content to 5.5 million tons, virtually eliminating the need for imports and integrated production of aluminum-alumina-bauxite (project under construction) would begin at a rate of 100,000 tons of aluminum metal per year.

11.50 The success of this program will hinge on two main issues: the general framework for mining operations in Turkey and the performance of three State Economic Enterprises which hold a key position in this sector, namely the State Minerals Survey (MTA), the State Coal Mines Authority (TKI) and Etibank, a State Holding Company for most of its mineral interests outside coal and oil.

11.51 Etibank is Turkey's largest State Economic Enterprise with a range of mining and industrial activities (chemical as well as metallurgical). During the last three years it has shown net profits after taxes averaging about TL 140 million per year. In contrast, its 1973 investments are expected to total nearly TL 1.0 billion. Having just completed substantial bauxite-alumina and sulphuric acid facilities, the company over the next few years would start up its first aluminum smelter and its first ferro-chrome smelter, and would greatly increase its production of boron minerals, boric acid and borate salts. It would furthermore expand its production of caustic soda, and would apparently take over from the Turkish Iron and Steel Company the expansion of iron ore production in two major State mines (one of them an entirely new operation) from one million tons today to 10 million tons by 1980. According to rough preliminary estimates, the necessary investments in iron ore and pelletising facilities alone would be about $250 million equivalent, to which must be added about $150 million equivalent for improvements in the rail lines to Samsun and Iskanderun.

11.52 The Third Plan is, therefore, the period during which Etibank would reach maturity as a minerals concern of world standing. The tasks seem enormous, and will not be attained unless (a) Etibank can strengthen its managerial, technical, and commercial capabilities; (b) pursue decentralization (the creation of separate companies, with private participation, for copper mining and metallurgy in the Black Sea region and zinc mining and metallurgy in the Kayseri region are steps in that direction); and (c) intensify its cooperation with foreign companies in both technical and marketing matters, preferably through some form of financial participation in Etibank subsidiaries. An important question will be whether the State will be able to exercise control over this powerful enterprise, to ensure that progress, costs and benefits in developing Turkey's minerals resources are reasonably in line with a good international standard. This question applies equally to exploration (in particular MTA activities) which, according to figures quoted above, would account for about 40% of the total investments in minerals development excluding metallurgy.

11.53 The State Coal Mines in the Zonguldak region by the end of 1971 employed 33,500. The mines produce about 4.8 million tons of coal per year, most of it metallurgical grade suited to the steel industry. It is expected that by 1976 the steel industry would absorb most of the output except for the lower grades separated in the washing process which are used for power generation at the mines. Mining conditions are difficult (seams are geologically disturbed and gassy), and the mines do not lend themselves well to mechanization. Operating costs rose at an average annual compound rate of 10.5% in 1965-71 due to steady wage increases unaccompanied by any significant increase in productivity. Nevertheless, even at present wages and low productivities, labor costs per ton coal are lower than in Western Europe

mines, and prices in mid-1972 were roughly competitive with imported coal. The company operated with a small profit in 1969 but during the last three years losses have averaged TL 160 million per year, with even higher losses expected for 1973.

11.54 Under its original investment program, the company had planned to increase its output to 5.8 million tons by 1972. This target date was subsequently changed to 1976 but at the same time the company initiated a Master Plan Study which would explore the economics of further expansion thus obviating coal imports. In the Third Plan, however, the target has again been reduced to 5.2 million tons by 1977. One of the major problems may be the drain of coal mining labor to Western Europe. The company has also experienced difficulties in staff recruitment. The Bank's 1972 Project Identification Mission recommended that the company be made to operate under a more objective market framework, with prices fixed at import parity, with freedom to establish salaries which would keep and attract skilled personnel, and with the Company's present heavy social and community obligations taken over by some other Government agency to the extent needed to place it on an equal basis with other industrial concerns. The future of the coal industry hinges, in part, on the results of the Master Plan study and the formulation of a long-run exploitation and investment plan but more fundamentally on management's ability to solve fundamental problems of staff recruitment, excess manpower, and spiralling wages.

Energy and Electric Power

11.55 Turkey has resources of coal, lignite, hydro-power and some oil, geothermal and uranium. Although Turkey's official energy policy is to "meet the entire demand ... by developing resources within Turkey, and to replace non-commercial energy resources ...", projections indicate that such a policy will be practically impossible to fulfill unless substantial additional resources are discovered. Despite intensive efforts to develop indigenous resources, reliance on imported sources was expected to increase from 20% of total consumption in 1965 to over 60% by 1985 (Table 8.10) before the recent increases in oil prices. This policy will have to be reviewed now, since Turkey will probably not be able to finance the cost of excessively large oil imports in the eighties.

11.56 In 1973, consumption of commercial energy is expected to reach about 16.5 million tons petroleum equivalent, nearly half of this from imported oil. Consumption in the form of electric energy accounts for about 20% of total commercial energy (Table 8.10). Consumption of non-commercial forms of energy (wood and "tezek" -- dried dung) add another 7.3 million tons petroleum equivalent, or 30% of total energy consumption in 1973. Consumption of these non-commercial forms has remained nearly constant, and is expected to continue to do so despite government efforts to conserve wood for other uses (e.g., paper) and to introduce alternative fuels for tezek.

Sources of Energy

11.57 Coal. The Zonguldak basin on the Black Sea is the principal coal-producing area. Proven reserves are about 150 million tons, with another 800 million tons possible. Annual production is about 5 million tons, expected to double by 1985. About half of this production is earmarked for the iron and steel industry and expansion will be largely for this purpose. The coal is of relatively poor quality (4,000 kcal/kg compared with ordinary bituminous at 7,000 kcal/kg) and the deposits are in thin, steep seams, usually faulted, which makes mining difficult and expensive. As a result of these conditions, average production is less than one ton per day per man compared with 3 or 4 tons per day in Western Europe.

11.58 Lignite. Lignite has been identified in over 45 basin areas throughout Turkey with present reserves estimated at 5,000 million tons of which 3,000 million are in the Elbistan basin in east-central Turkey. Other principal basins include Soma, Tuncbilek and Seyitomer, all in western Turkey. Although some lignite is mined underground (principally Soma and Tuncbilek), most production is by open-cast mining. The lignite is not of good quality (about 2,500 kcal/kg), that in Elbistan being especially poor (1,000 kcal/kg). The western reserves have a high ash content (up to 50%, although sulfur is low -- less than 1%) and consequently combustion is difficult. Since nearly half of the lignite production is used for domestic and commercial heating, pollution is a serious problem. The situation is particularly acute in Ankara because of the geographical location, so much so that government has undertaken a crash program to convert heating plants in public buildings from lignite to oil, and will not approve installation of lignite-fired heating plants in new commercial buildings.

11.59 Lignite production in 1973 is expected to reach 10 million tons but large increases are planned, in addition to the 20-million tons/year mine at Elbistan, reaching 50 million tons/year in 1985. Despite this intensive exploitation only about 13% of commercial energy requirements will be met from lignite through 1985; about the same as 1970.

11.60 Petroleum. Oil has been produced in small quantities in Turkey since the 1930s but no significant fields have been discovered. There are two general reserve areas; at Batman in southeast and on the Mediterranean coast near Iskenderun. Current production is from the Batman area and offshore prospecting is under way near Iskenderun. Proven reserves are variously estimated at 20 to 70 million tons, or only 6 to 20 years at current production rates. The wells are generally low-yielding and prospects are not bright for increased production. Despite this, in 1972 indigenous oil met 25% of Turkey's need for commercial energy. Various proposals exist for oil and gas pipelines from Iran and Iraq which, if realized, would strengthen Turkey's energy position. However, the construction of the proposed Sumed Line through Egypt is likely to have a negative effect on these proposals. No commercial fields of natural gas are known and there is no production, although some gas does occur in connection with the oil production. Since 1955, Turkey has produced most of its petroleum products from local refineries processing in-

digenous and imported crude. Refining capacity is being increased to meet anticipated needs, although requirements of some products, particularly fuel oil, will have to be met partially by imports.

11.61 Hydropower. Hydro-electric potential in Turkey is estimated to be 73,000 GWh (73 TWh; 16,000 MW at 50% plant factor). Of this, 31,000 GWh is in the Firat (Euphrates) basin. Hydro-plants in operation in 1972 totalled 880 MW and produced 3,200 GWh of energy. Plants under construction and expected in service by 1974 will add 368 MW and 907 GWh to this total. DSI (State Hydraulic Works) has a program to develop virtually all of the commercially viable sites, totaling over 7,000 MW (30,000 GWh) by 1990, of which 4,000 MW (20,000 GWh) will be on the Firat. Although accounting for only 4% of commercial energy production in 1985, hydro-energy will supply half of the energy consumed as electricity.

11.62 Other Sources. Exploration of geothermal resources started in 1962, assisted by a UNDP project in 1967. Nine prospective geothermal areas were identified and intensive exploration undertaken at Kizildere near Dinizli in southwest Turkey. Resources at this site are thought to be suitable for about 30 MW, but as yet there are no firm plans for development. The steam wells have the usual problems of relatively low temperatures and closure through mineral precipitation and development for power therefore may have to await improved technology. However, pilot projects for direct use of the heat energy (e.g., agricultural greenhouses) are under way. Although insigificant in terms of Turkey's total energy requirements, more aggressive development of this resource would probably be justified.

11.63 Early surveys have indicated the existence of about 3,000 tons of uranium oxide equivalent in relatively low-grade ores (less than 0.05%), but systematic prospecting for uranium and thorium is just beginning. The identified reserves, thought to be commercially exploitable, could provide the basis for a modest nuclear power program. A nuclear plant of about 600 MW capacity is planned for the early 1980s and electric power development after 1990 will have to rely heavily on nuclear energy. At present, natural uranium technologies are being considered to avoid dependence on outside enrichment but a final choice has not yet been made for the initial plant.

## Organization of the Sector

11.64 Control of energy policy and development in Turkey is the responsibility of the Ministry of Energy and Natural Resources. In carrying out this function, the Ministry acts through several agencies and enterprises, including principally: MTA, the mining development institute responsible for mineral and energy exploration; Etibank, a state banking enterprise with financing and operating interests in mining, formerly also in electric power; TKI, the Turkish coal mining enterprise, which operates all state-owned coal and lignite mines, including distribution and retailing; TEK, the Turkish Electricity Authority, responsible for operation of all state-owned electricity generation and transmission facilities, the construction of thermal power plants, village electrification and some distribution and DSI, the State Hydraulic Works agency responsible for the development of water resources. In addition, there are a Petroleum Office and several organizations for the

development of oil and oil products (TPAO, IPRAS, PETKIM); and the Atomic Energy Commission dealing with nuclear research and development.

11.65 Although control of the sector rests with the Ministry, other public and private interests are important. Some coal mining is in private hands but has stagnated, and is gradually being taken over by TKI under the provisions of the mining reform bill. Private oil companies (Mobil, Shell, BP) handle 50% of petroleum-product refining and distribution. Two concessionary companies (Cukurova Elektrik and Kepez) account for 10% of electricity generation; distribution still rests largely with municipal agencies.

Electric Power

11.66 The demand for electric power has for several years grown at a rate of approximately 12% p.a. This is expected to rise to about 14% through 1978, partly as a result of the addition of the Seydisehir Aluminum Smelter load. Thereafter, a progressive decline in the rate of growth is expected. Forecasts of an 11% growth rate in 1985 and 8% in the year 2000 are being used. Individual electric power intensive industries such as the Seydisehir Aluminum Smelter in 1974, will tend to distort this trend as they are added to the system.

11.67 Over 75% of electric power consumed in Turkey is used in industry; domestic and commercial consumption accounts for about 20% and the remainder is for government, street lighting, and miscellaneous consumption. These ratios have persisted since the introduction of intensive electrification in the early 1950s, and are expected to continue through the next two decades in accordance with the planned emphasis on industrialization.

11.68 TEK has an integrated system covering the western and central portion of the country and supplying 95% of the demand. TEK is expanding this system with the goal of establishing a grid covering virtually the whole of the country by 1980 (Tables 8.11 and 8.12).

11.69 The installed capacity of public generating plant at the end of 1972 was 2,346 MW. 1/ This capacity was insufficient to supply the total demand, estimated at 2,450 MW, and TEK shed load through frequency reduction, and voltage reductions of up to 5% on peak. In October 1973, plant failures and delays in completing projects forced actual interruption of supply of one hour per day to most customers on a rotating schedule. Even though nearly 3,000 MW of additional plant (including the 1,200 MW Elbistan project) is under construction or in the bidding stage, the system is expected to be strained until the completion of Elbistan, scheduled to come into operation in successive stages in 1978-80. The development program is a complex one, including over 30 separate projects through 1987.

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1/ There was also about 400 MW of privately owned generating capacity mainly industrial.

11.70 The Third Five-Year Plan (1973-77) provides for the expenditure of TL 21 billion (US$1,600 million) for capital projects in electrical energy in the public sector, including TL 13 billion for generation, TL 3.6 billion for transmission and TL 4.4 billion for distribution. This figure does not include power-related investments for mine and water resource developments which are estimated at TL 11 billion, bringing total planned investment in the subsector to TL 32 billion (US$2,300 million).

11.71 The program includes the addition of about 1,600 MW of hydroelectric plant (principally Keban, 900 MW, and Gokcekaya, 300 MW) and 1,800 MW of thermal power stations (net of retirments). About 2,500 km of 380-kV transmission lines are also included as the second stage of the EHV system, as well as about 4,000 km of extensions to the 154-kV network and about 2,000 km of lower voltage lines. When the 154-kV program is completed, the remaining separate systems will be integrated into the TEK interconnected system.

11.72 To meet part of the immediate shortage, the Government has negotiated an agreement with Bulgaria to import power into the Istanbul area. A 220-kV transmission line interconnecting with the Bulgarian system was to be completed early in 1972 for this purpose. However, delays in equipment deliveries and operating conditions on the TEK system have so far prevented completion of the tie. Power transfer will be limited to about 50 MW initially. Other international connections (USSR, Syria, Iran) have been explored but found unfeasible.

Village Electrification

11.73 A start was made in 1964 to bring electric power to villages, although some 10 villages had previously been assisted by the Government to install power supplies using self-help methods. During the First Plan (1963-67), the electrification of 1,026 villages was achieved, and under the Second Plan further 1,013 were electrified by the end of 1971. By mid-1973, a total of 4,800 villages will have been electrified under the Plans out of 36,000 villages. It is projected that 25,000 villages would be electrified by 1992 at the rate of 1,000 per year. Under this program, the percentage of the total population having access to electricity has increased from 28% in 1953 to 39% in 1973.

11.74 Prior to 1970, the responsible authority for village electrification was the Ministry of Rural Works. In 1970, responsibility was transferred from the Ministry of Rural Works to a self accounting unit in TEK. Finance to support the rural electrification work is obtained through a 25% capital contribution from the villagers, a levy of 1 kurus per kWh from all consumers whose annual consumption is not greater than 250,000 kWh, and contributions from the Government's annual budget. The 1973 program envisaged expenditures totaling TL 309.4 million, met by TL 97.8 million from the consumption levy, TL 69.8 million from village contributions, TL 111.6 million Government contribution from general revenues and TL 30.2 million by TEK in transmission line works. The average cost of electrifying a village is of the order of

TL 230,000 ($16,500). The total expenditure in the period 1964 to 1973 is expected to reach TL 1,400 million (i.e., $100 million). Villagers pay for electricity on a communal basis whereby the whole village is centrally metered and charged at 35 kurus/kWh.

Pricing Policies

11.75 Energy prices in Turkey are administered prices. Oil prices (including local production) are based on Persian Gulf posted prices plus transportation and taxes; the taxes range from TL 170 per ton for fuel oil to over TL 900 per ton for motor fuels. Retail gasoline prices are typically TL 1.8/liter (about US¢50/US gal). Coal and lignite prices are typically priced to be competitive with alternatives (e.g., fuel oil) at retail prices. In some cases prices set on this basis do not cover costs, consequently TKI receives periodic operating subsidies (e.g., TL 440 million in 1971).

11.76 Wholesale electricity prices are established under a rate-of-return provision in the law which created TEK. Retail electricity prices are set by each municipality, generally to meet cash flow objectives; however, cross-subsidization (e.g., electricity-gas-transport) is common in municipal operations, with electricity revenues often being diverted into non-energy operations. Under present structures, average wholesale electricity tariffs (including sales to large industry) are about 26 kurus/kWh (US¢1.8/kWh), and typical retail tariffs are 46 kurus/kWh (US¢3.3 kWh). Since Turkey is not blessed with resources which permit development of "cheap" electricity, prices on the whole cannot be considered high.

# Industrial Protection and Industrial Export and Investment Incentives in Turkey

## I. Industrial Protection

1. Over the last decade, tariffs along with import quotas and prohibitions, with the primary aim of keeping external payments in balance, have provided a high degree of protection and generated revenue. The existing structure of protection is briefly examined below.

### Tariffs

2. In 1954, Turkey adopted an ad valorem tariff covering most commodity imports. The 1954 schedule was revised in 1964 in order to increase revenues and protect certain new industries (by placing higher tariffs on finished goods imports than on primary product imports). 1/ As a result of the tariff revision, revenues rose sharply, with duties collected as a percent of imports rising 50% in 1964 over the previous year. Except for a few commodities, such as petroleum products, the 1964 tariff schedule is still applied on an ad valorem basis, and only minor modifications have been made in tariff rates, in 1967 and 1971.

3. The degree of protection afforded Turkey's manufacturing industry by customs duties appears to be relatively high, as may be observed in Table 1. 2/ These duties, on a comprehensive sample of manufactured goods weighted by the world value of output, averaged about 50% in 1968, and 61% if the production tax on imports (border tax) is included. The structure of Turkish tariffs -- higher rates on consumer goods and lower rates on intermediate and capital goods -- affects to some extent the pattern of imports, and reflects the government policy of favoring low cost inputs to the local manufacturing sector.

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1/ Tariff exemptions and special rates required by EEC, MFN and GATT agreements form a complex set of modifications to the standard tariff schedule.

2/ There are great analytical difficulties in evaluating relative degrees of protection in countries like Argentina, Brazil, or Chile, where customs duties were a substitute for devaluation. This was also true, to a lesser extent, in Turkey.

Table 1: AVERAGE TARIFF LEVELS FOR MANUFACTURES: SELECTED COUNTRIES (in percent)

| Developing Countries | Nominal |
|---|---|
| Argentina | 141 (1958) |
| Colombia | 106 (1962) |
| Pakistan | 96 (1963/4) |
| Chile | 89 (1961) |
| Brazil | 86 (1966) |
| Turkey [a] | 50 (1968) |
| Peru | 35 (1962) |
| Spain | 31 (1966) |
| Taiwan | 30 (1966) |
| Philippines | 29 (1965) |
| Mexico | 20 (1960) |

| Developed Countries | Nominal | Effective | Effective as % of Nominal |
|---|---|---|---|
| Japan | 16.1 (9.4) | 29.5 (16.4) | 183 |
| United Kingdom | 15.2 (9.1) | 27.8 (16.0) | 183 |
| United States | 11.5 (6.8) | 20.0 (11.6) | 174 |
| European Common Market | 11.0 (6.6) | 18.6 (11.1) | 169 |
| Sweden | 6.6 (3.8) | 12.5 ( 6.7) | 189 |
| Industrial Countries | 12.3 (6.5) | 21.7 (11.1) | 176 |

Source: Developing Countries: For Brazil, Chile, Mexico, Pakistan, and the Philippines: Bela Balassa, The Structure of Protection in the Developing Countries, John Hopkins Press Baltimore, 1971, Table 3.1, p. 54. For Argentina and Taiwan: Ian Little et al, Industry and Trade in Some Developing Countries, Oxford University Press, London, 1970, p. 163. For Colombia and Peru: Harry H. Bell, Tariff Profiles in Latin America, Praeger Publishers, New York, p. 65. For Spain: IBRD Industry Report on Spain, 1972.

Developed Countries: Bela Balassa, "The Structure of Protection in the Industrial Countries and Its Effect on the Exports of Processed Goods from Developing Countries," IBRD Report No. EC-152a, February 28, 1968, p. 16, except for Turkey.

a) Estimate based on incomplete data. Figures in parenthesis are post-Kennedy Round estimates.

Non-Tariff Import Levies

4. Imports are subject to a variety of non-tariff levies such as the municipal tax, wharf duties, production tax, and stamp duties. These non-tariff levies significantly increase the landed cost of manufactured imports, in many cases actually doubling protection to domestic manufacturers. This can be observed in Table 2 in the illustrative example of a piece of imported machinery with alternative customs duties of 25 and 50%, with the corresponding non-tariff levy rates shown. The table shows that the production tax is today the most important non-tariff levy on imports, followed by the stamp and wharf duties. The lower the customs tariff, the greater is the relative importance of the non-tariff levies. 1/

Effective Protection

5. Import duties and other non-tariff levies provide only an impressionistic view of the system of protection, because protection has been achieved through quantitative restrictions in addition to the tariffs and secondly, the protection granted a certain industry depends also on the effect of the import regime upon the cost of its inputs. The relevant concept is therefore effective protection, i. e. the percentage by which the domestic value added in a protected situation exceeds value added under free trade conditions. 2/

6. There is only limited information on effective protection in Turkish industries. One relatively comprehensive study undertaken in 1968 3/ is now out of date, and it would be hazardous to extrapolate it for generalizations with respect to the present situation. The State Planning Organization is undertaking a new survey of the cost structure and prices for a sample of 300 industrial firms but the results will only be available by the end of 1973. Instead we have used partial data from a 1972 IBRD/TSKB survey covering a sample of 23 TSKB-financed projects in textiles, chemicals, plastics, glass, cement and metal products (Table 3) 4/.

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1/ The figures quoted exaggerate the average incidence of customs duties and other levies because widespread exemptions have been granted on investment goods imported for projects deemed of sufficient priority.

2/ Nevertheless, it measures the effect of protection only and not the total impact of the protection and incentives framework.

3/ Ahmet Aker obtained price data for 130 firms and over 460 commodities, in order to make comparisons between Turkish and EEC prices in his Study of the Industrial Price Structure of Turkey as a Guide to her Association with the European Economic Community; 1968.

4/ International Bank for Reconstruction and Development, TSKB Special Studies Report, Part C; 1973.

Table 2 ILLUSTRATIVE TARIFF AND NON-TARIFF LEVIES ON IMPORTED MANUFACTURES, 1973

| Machinery import | 25% Custom Duty Percent | 50% Custom Duty Percent |
|---|---|---|
| (a) Import price (c.i.f.) | 100.00 | 100.00 |
| (b) Customs duty (25% and 50% of (a)) | 125.00 | 150.00 |
| (c) Municipal tax (15% of (b)) 1/ | 128.75 | 172.50 |
| (d) Wharf Duty (5% of (a) + (c)) 2/ | 135.18 | 181.11 |
| (e) Production Tax (10% of (a) + (b) + (c) + (d)) 3/ | 148.69 | 199.22 |
| (f) Stamp Duty (10% of (a)) 4/ | 158.69 | 209.22 |
| Total duties and levies (b)+(c)+(d)+(e)+(f) | 58.69 | 109.22 |
| Custom duties | (25.00) | (50.00) |
| Other levies | (33.69) | (59.22) |

1/ Municipal tax is a special import levy calculated on the basis of the customs duty rather than the c.i.f. value of imports. It is a constant share, 15%, of the value of the customs duty.

2/ The wharf duty is 5 percent of c.i.f. import value, the customs duty and the municipal tax.

3/ The production tax on this item of equipment is 10 percent of the c.i.f. value of imports, customs duty, and the municipal tax and wharf duty. This tax rate is the same for imported and domestically produced manufactured goods, and the rate varies from commodity to commodity.

4/ The stamp duty is presently (July, 1973) 10 percent (9.5 percent on imports from the EEC) but the government has the right to apply rates up to 25 percent. A duty of 5% was introduced in 1963, raised to 15% in 1967, and 25% in 1969. After the 1970 devaluation, the rate was reduced to 10%.

Table 3: ESTIMATES OF ECONOMIC AND FINANCIAL RATES OF RETURN AND EFFECTIVE RATES OF PROTECTION FOR SELECTED INDUSTRIES/PRODUCTS

| Industry/Product | Effective Protection | Financial Rate of Return (before Corp. tax) | Economic Rate of Return |
|---|---|---|---|
| Metal drums | -11 | 33 | 12 |
| Transformers | - 2 | 21 | 49 |
| Tires | - 1 | 12 | 31 |
| Chemicals | 0 | 41 | 44 |
| Motor pumps | 0 | 21 | 10 |
| Canning vegetables | 0 | 27 | 33 |
| Glass wool | 6 | 7 | 14 |
| Tomato paste | 15 | 16 | 22 |
| Wood/formica | 24 | 44 | 18 |
| Cement | 29 | 19 | 28 |
| Textiles | 40 | 19 | 14 |
| Cement | 42 | 30 | 19 |
| Plumbing supplies | 53 | 20 | 12 |
| Textiles | 96 | 9 | 0 |
| Light bulbs | 118 | 63 | 48 |
| Textiles | 153 | 52 | 22 |
| Textiles (synthetic) | 197 | 29 | 9 |
| Metal parts | 276 | 33 | 12 |
| Steel wire/rods | 291 | 12 | neg. |
| Copper/steel wire | 294 | 36 | 2 |
| Ceramics | 363 | 100 | neg. |
| Plastics | 1,060 | 26 | neg. |
| Steel billets | 1,911 | 44 | neg. |
| Median | 42 | 26 | |

Source: IBRD TSKB Special Studies Report (Part C: TSKB's impact on Resource Allocation, Table X.3, p.44).

7. The study shows effective protection for the 23 projects ranging from minus 11% for metal drums to over 1,000% for steel billets and plastics. While the median is 42%, there are ten projects with 96% or higher protection. Although detailed studies would be necessary for specific recommendations, it is clear that high prices permitted by protection and limited domestic competition produce monopoly or quasi-monopoly profits in some firms. Inefficient plants of suboptimal scale, such as in the auto industry, earn high financial rates of return. There is a strong incentive to invest in the highly protected sectors, which can earn high rates of financial return, although they may not be internationally competitive. This is clearly the case in some of the very highly protected firms in the textile, plastics, ceramics, steel wire, rods and ingots, and metallurgical industries which show negative or low economic rates of return. The few cases of low financial returns apparently reflect Government price control (auto tires and steel wire rods), the export of a high share of the output at unremunerative prices even after export subsidies, or a highly competitive situation on the domestic market.

8. The economic rates of return show a wide dispersion, ranging from negative to 49%, with a median of 14%. In the TSKB sample, about two-thirds have an economic rate of return equal to or exceeding 12%, and about one-fifth showed negative or zero rates of return. About half of the investment funds in the project sample were misallocated from a social as opposed to a private viewpoint. Economic inefficiency in the sample appeared to derive mainly from sub-optimal plant size and excessively diversified production lines, with inadequate management another likely explanatory factor.

9. Some broad conclusions emerge from this brief review of the Turkish tariff structure. The protective structure is characterized by a wide range of effective protection rates, with no clearly discernible economic rationale. Overprotection has led to overcrowding in many industries with uneconomic size of plants, with prices and profits remaining high. Industrialization through high tariffs and quota restrictions created a twofold bias against exports. Discouragement of exports is inherent in a protectionist policy because inputs whose imports are restricted raise the cost of production. Moreover, import restrictions enabled Turkey to maintain an overvalued currency which also has the effect of discouraging exports. However, the effect of tariff policy alone should not be exaggerated, because tariffs, combined with the other charges on imports, quota restrictions and absolute prohibitions, foreign exchange controls and tax/incentive schemes have shaped past industrial developments.

## II. Export Incentives

10. Prior to the 1970 devaluation, the combined effect of the overvalued exchange rate, rigid import controls and high import tariffs and taxes was a strong bias in favor of production of manufactured goods for the home market. During the 1960's various incentives were introduced by the Government that aimed at promoting Turkey's manufactured exports, but they were inadequate to make export production attractive.

11. An important export promotion measure was the provision of free exchange by the SPO of up to 50% of the value of the export commitments, the typical allocation being in the range of 20-35%. This free exchange could be applied to imports of raw materials and components required in the production of the export commodity. The benefits of this incentive were proportional to the price difference between inputs freely imported and inputs at domestic prices, which varied from commodity to commodity. Apart from the profits to be earned from such imports an important advantage for exporters was that it permitted savings in time, administrative and financial costs involved in obtaining imports through the cumbersome import regime. After the 1970 devaluation this incentive has become less important. The main present incentives to exporters of manufactured goods are tax rebates on exports and export credits on preferential subsidized terms.

12. Rebate of Taxes. Tax rebates on exports were established by Law 261 in 1963 in an effort to stimulate the growth of non-traditional manufactured exports. At present, the scheme refunds the following taxes: production tax, border tax, sugar tax, customs duties, stamp tax, taxes on services (insurance, banking, postal and transport transactions), municipal taxes and others. Profits from exports are also exempted from personal and corporate income taxes. A list of products benefiting from the export tax rebate is published annually in a special decree by the Ministry of Commerce. The present system (1973) classifies exports benefiting from tax rebates under six lists. Four of the lists contain export products for which two rates are applied; the higher rate is applicable to exporters whose total exports exceed $1.2 million during the course of any calendar year. The rebate is applied to the f.o.b. export price. In general, products subject to a higher degree of manufacturing of processing enjoy higher rebates.

13. Application of the scheme has been gradually broadened to cover an increasing number of manufactured articles. The share of eligible exports in total exports has risen from 2.8% in 1964 to 26% in 1972, the big jump occurring in 1969. Total disbursements under the rebate scheme have increased sharply from TL 12 million in 1964 to about TL 720 million in 1972, i.e. an increase in average rebate as a percentage of f.o.b. price of eligible exports from 11.7% to 22.4% (Table 4). Sectors receiving the greatest benefits (in rebate value terms) from the export tax rebate scheme are food products, textiles, chemicals and non-ferrous metals, followed by cement, leather and wood products. These seven categories of industrial exports accounted for nearly two-thirds of the tax rebates approved by the Government in 1972. Products of the mining, animal husbandry and fertilizer sectors have not been given the rebate privilege, and agriculture was only added to the system in 1968. The rebate system has, therefore, been encouraging industrial exports in accordance with Government policy.

Table 4: EXPORT TAX REBATES GRANTED TO MANUFACTURING INDUSTRY 1964-1972

| Year | Total Exports | Exports Eligible for Rebates | Share in Total Exports | Value of Tax Rebate | Average Rebate |
|---|---|---|---|---|---|
| | TL billion | TL million | percent | TL million | percent |
| 1964 | 3.6 | 104 | 2.8 | 12 | 11.7 |
| 1965 | 4.2 | 303 | 7.2 | 29 | 9.7 |
| 1966 | 4.2 | 220 | 5.2 | 28 | 12.5 |
| 1967 | 4.7 | 250 | 5.3 | 25 | 9.9 |
| 1968 | 4.1 | 248 | 6.1 | 57 | 23.4 |
| 1969 | 4.8 | 1,427 | 29.5 | 208 | 14.6 |
| 1970 | (7.1) /1 | 1,733 | (25.0) /1 | 290 | 16.7 |
| 1971 | 9.5 | 1,825 | 19.2 | 385 | 21.1 |
| 1972 | 12.4 | 3,202 | 25.8 | 718 | 22.4 |

/1 Because of the devaluation by the middle of 1970, this percentage is only approximate.

Source: Annual Budget Reports.

14. Export tax rebates only partially compensate manufacturers for the discriminatory treatment of their export sales under present exchange rate and protection policies. This may be illustrated by a hypothetical example 1/.

| | |
|---|---|
| Import price c.i.f. | 100 |
| Export price f.o.b. | 80 2/ |
| Import price including duty | 145 |
| Import price including duty and other levies | 160 |
| Export price and subsidy | 108 3/ |

1/ The reader may visualize the case of steel made predominantly from domestic coal and iron ore.

2/ The difference between the export and import prices is assumed to reflect the need to add transportation and similar charges to the import prices while deducting them from the net f.o.b. sales realization.

3/ At 35% of f.o.b. prices.

The implication, in this illustrative case, is that a manufacturer would get TL 22.40 (at the rate of TL 14 per US dollar) for every dollar saved through import substitution but only about TL 15 for dollars earned in export trade. We have no way of knowing how well this hypothetical illustration reflects reality but it does underline the need for further study of the incentives system, suggesting also that in the future, the gradual adjustment of the Turkish price level to the international level in the context of the EEC membership, might be achieved more smoothly and efficiently through greater reliance on the exchange rate and less on selective measures affecting trade like import quotas, duties and non-tariff levies, and export 'incentives'. In such a new policy framework, incentives might be granted for certain types of industrial production, with complete equality (neutrality), as between import substitution and exports.

15. Until such a new framework is developed, some strengthening, rationalization and updating of the export 'subsidy' scheme will no doubt be found desirable. This revision might be based on the following ideas:

(a) The rationale for excluding various categories from the export tax rebate should be re-examined. There are some inexplicable anomalies. Thus kraft paper enjoys a tax rebate. Cement bags made of kraft paper do not. But the principle of equal treatment of all exports goes beyond mere anomalies.

(b) Where an industry suffers from an excessively high cost of domestic inputs, an alternative route may be followed, namely a certificate for duty-free imports corresponding to quantities incorporated in exported goods. The domestic supplier industry may then be given the option of redeeming these certificates by meeting the terms quoted by foreign suppliers.

(c) The rationale for tying the export subsidy to the tax incidence would probably need to be re-examined if a uniform value added tax is introduced which is neutral between different industrial branches and between production for exports and the domestic market. This would mean that exports could no longer be subject to discriminatory treatment.

16. Export Credit Policy. Export credits have lower maximum lending rates than the general lending rate. Medium term credits made for export oriented production are exempt from the payment of the 25% banking transactions tax. About 10% of the commercial banking system credits to the private sector are for exports and hence these incentives are important. In addition to the lower rates the Government introduced interest subsidies for export credits to be paid through a Selective Credit Fund, but due to budgetary problems, these subsidies have not been operative for the last two years. The Government announced in 1973 that the selective subsidies will be properly funded and that the subsidies will be paid. The present terms and conditions for export credits are summarized below:

Table 6: TURKEY'S EXPORT CREDIT INTEREST RATES

| | Rates | | With Interest Subsidy/1 |
|---|---|---|---|
| | 1970 | 1973 | 1973 |
| Short-term Export Credits | | | |
| (a) General rate | 8.0 | 8.0 | 3.0 |
| (b) If rediscounted with Central Bank | 9.0 | 7.5 | 6.0 |
| Medium-term Export Credits | | | |
| (a) General rate | 12.0 | 12.0 | 12.0 |
| (b) If rediscounted with Central Bank | 12.0 | 10.5 | 8.0 |

/1 The effective rate paid by borrowers who receive the subsidies provided for Decree No. 7/5822, effective March 1, 1973. This subsidy is not in operation but is included in the draft reform of the incentive system.

Source: Table 6.1.

III. Industrial Investment Incentives

17. The industrial incentive regime aims at stimulating industrial development within the policy and incentive framework of the Five Year Plans, and over the longer run, modifying industrial incentives (tax, credit and other incentives) to harmonize with EEC policies and practices. The vehicle for granting incentives, thus greatly simplifying administrative procedures, is the investment certificate. Most industries are eligible for benefits (except those producing luxury goods), and the industries covered and the types of benefits available are published each year in the Government's Annual Program. Investment projects that meet the following criteria are given preferential attention in the allocation of investment benefits: new or advanced technology, export or import-substitution potential and efficient plant-size to insure world market competitiveness. The main incentives are described below.

18. Tax Allowances for Investments. Private investors with projects in eligible industry sectors and with investments of TL 300,000 or over are allowed to deduct from their taxable corporate income an amount equivalent to 30% of the value of investments financed with their own funds. This allowance sharply reduces corporate tax liability during the initial years of the investment when demands on a firm's cash flow are greatest. Investors in any one of 40 (out of a total of 67) provinces designated 'underdeveloped' in the 1973 Annual Program are allowed to deduct 50% of the value of self-financed investments.

19. Customs Duties and Import Tax Exemptions. At the pre-production phase of the investment, exemption from the payment of customs duties and import taxes has the effect of increasing the funds available for investment goods. Exemptions are authorized mainly for investment goods although some basic raw materials may also be granted exemption on a project basis. In order to maintain equitable treatment and fair competition between manufacturers, if one manufacturer of a given product is granted customs exemption, other manufacturers of the same product will also be eligible.

20. Deferred Payment of Customs Duties and Charges. Under this incentive all customs tariffs and similar charges on imported investment goods (customs duties, production tax on imports, municipal taxes and wharf duties, excepting only the stamp tax), can be paid in up to five equal annual installments. Most eligible industry sectors receive 5 years deferments, although foodstuffs, textiles, clothing and forestry products generally receive deferments in the 2-4 year range. In addition to reducing the demands on a firm's liquidity, this incentive implies a substantial effective reduction in import charges. Thus, the present value of TL 100 in import charges payable in five years, at an illustrative interest rate of 12%, is only TL 57.

21. Building Construction Tax Exemption. Payment of the construction tax is exempted for nearly all industries that are eligible for incentive certificates.

22. During the initial years of plant operation, the value of the tax, tariff and financial incentives made available to Turkey's industrial investors seems to be considerable. A rough idea of the incentive effect on a manufacturing enterprise that is eligible for the maximum available benefits can be gathered from the following example of a 39.3 million lira investment in a wood processing plant in Turkey (Table 7). Other evidence suggests that this illustrative case roughly represents average experience for those investors obtaining maximum benefits, although some downward adjustment of benefits must be made for firms receiving weaker incentives -- for example, customs tariff deferment instead of full exemption, or less subsidized credit.

Table 7: VALUE OF INCENTIVE BENEFITS ACCRUING TO INVESTORS IN A MANUFACTURING PLANT (in thousands of TL)

| Investment and Other Costs | Enterprise Costs Without Incentive | Enterprise Costs With Incentive | Estimation of Gross Benefits | Present Value of Benefits |
|---|---|---|---|---|
| Land | 556 | 556 | — | — |
| Factory and other Buildings | 2,568 | 2,568 | — | — |
| Machinery and equipment | | | | |
| - imported | 14,730 | 14,730 | — | — |
| - locally produced | 3,500 | 3,500 | — | — |
| Customs duties and import taxes | 10,310 | — | 10,310 | 11,547 |
| Other investment costs | 17,942 | 17,942 | — | — |
| Total Investment | 49,606 | 39,296 | | |
| Interest payments | | | | |
| - TSKB long-term dollar credit | 10,206 | 10,206 | — | — |
| - TSKB long-term TL credit | 717 | 358 | 358 | 1,110 |
| - Short-term export credit | 208 | 104 | 104 | 116 |
| Tax Refund on Export | | 1,444 | 1,444 | 4,476 |
| Investment Tax Allowance | | 2,911 | 2,911 | 4,075 |
| | | | 15,027 | 21,324 |

23. The most important benefits are the exemption from import charges and the investment tax allowance. In a different category, the tax rebate on exports is also important in this case. The other fiscal and financial incentives (credit subsidies, investment tax allowance, construction tax exemption) amount to less than half of the value of the customs exemption alone. Benefits derived from customs exemptions amount to 10 million lira, i.e. about 70% of the cost of imported equipment. The cumulative present value of all investment incentives, in this case, amount to about 54% of the total investment (fixed investment plus working capital, excluding customs duties). The approximate range of the benefits for individual projects, depending upon import requirements, access to subsidized credit, etc., appears to be of the order of 30-60%.

24. Data on the fiscal cost of the industrial incentive system are not collected and analyzed in a comprehensive and systematic manner. The following figures suggest the order of magnitude of the customs duties exemptions, investment tax allowance and tax rebates on exports granted in 1972.

Table 8: PROXIMATE FISCAL COST (REVENUE FOREGONE) /1
OF INDUSTRIAL INVESTMENT INCENTIVES, 1972

(in Million TL)

| | Private Manufacturing | All Economic Sectors |
|---|---|---|
| Custom exemptions | 1,595 | 3,009 |
| Investment Allowance | 783 | 1,351 |
| Export Tax Rebate | 476 | 718 |
| Total | 2,854 | 5,078 |

/1 Other incentive benefits not listed here together probably amount to an additional 25% of the major benefits listed above.

25. Additional data are provided in Table 9 to show the historical development of the system and the share of the private manufacturing sector in the total benefits to all economic enterprises, both public and private. With some reservation for the lack of complete comparability over time, the figures suggest the following conclusions. Up to 1971, private manufacturing firms shared only to a minor extent in eligible total investments and imports. However, their share rose substantially in 1971 and 1972. The private manufacturing sector's share in the total value of customs exemptions was 4% in 1968, 66% in 1971 and 53% in 1972. In 1972, the share of the private manufacturing sector in investment tax allowance was about 58%. Total customs exemptions to all sectors have been rising except for a sudden fall in 1971, probably related to the suspension of incentives in 1971.

Conclusions

26. Turkey's industrial incentive system has some substantial results to its credit in terms of stimulating private entrepreneurship, and production for the home market. The incentive system clearly has a powerful impact on industrial investment. The suspension of incentives in 1971 had an adverse effect on private industrial investment and their resumption in 1972 was paralleled by a sharp pick up in investments. However, it was only partially successful in promoting exports of certain manufactures, and had little impact on the geographical redistribution of private manufacturing investment. Some of the incentive programs may provide excessive benefits, such as the investment tax allowance, and others provided to stimulate exports and industrial relocation may be inadequate.

Table 9: INVESTMENT INCENTIVE LICENSES APPROVED FOR PRIVATE 1/ MANUFACTURING INDUSTRY
(millions of TL)

| Year | No. of Projects | Total Investment Costs | CIF Value Imports | Customs Exemptions | No. of Projects | Total Investment Costs | Investment Tax Allowance |
|---|---|---|---|---|---|---|---|
| 1968 | 14 | 215 | 83 | 40 | | | |
| 1969 | 21 | 801 | 401 | 312 | | | |
| 1970 | 21 | 907 | 324 | 165 | | | |
| 1971 | 27 2/ | 2,603 | 1,461 | 1,118 | | | |
| 1972 | 159 2/ | 7,087 | 2,456 | 1,595 | 117 | 2,609 3/ | 783 4/ |

INVESTMENT INCENTIVE LICENSES APPROVED FOR ALL 5/ ECONOMIC SECTORS, PUBLIC AND PRIVATE
(millions of TL)

| Year | No. of Projects | Total Investment Costs | CIF Value Imports | Customs Exemptions | No. of Projects | Total Investment Costs | Investment Tax Allowance |
|---|---|---|---|---|---|---|---|
| 1968 | 30 | 4,774 | 1,584 | 945 | 183 | 3,702 | 1,852 |
| 1969 6/ | 85 | 5,203 | 2,355 | 1,722 | 214 | 4,809 | 2,065 |
| 1970 6/ | 37 | 8,111 | 3,151 | 2,529 | 167 | 3,278 | 1,858 |
| 1971 | 36 | 5,447 | 2,238 | 1,685 | 66 6/ | 1,274 | 616 |
| 1972 | 308 | 11,622 | 4,307 | 3,009 | 154 | 4,504 | 1,351 4/ |

Source: compiled from various official sources.

1/ The table includes specific incentive license granted to private investors who have received general incentive certificates. The figures in the table refer to planned, not realized investments.

2/ Based on private sector data which may include other non-manufacturing sectors.

3/ Last 11 months of 1972, but includes most of the licenses granted in 1972, since few were granted in January, 1972.

4/ Estimate.

5/ The table includes specific investment licenses granted to private and public investments that have received general investment certificates. The figures refer to planned, not realized investments, imports, etc.

6/ First 11 months.

27. There are a number of problems facing the existing incentive legislation. First, it is transitional legislation which creates some investor uncertainty. A codification of existing incentives has been proposed in draft legislation although new legislation is not likely to be introduced until sometime in 1974. Given the large amount of revenue foregone (of the order of $400-500 million a year), a full analysis of the costs and benefits of the incentive schemes and their impartial implementation is very important. Secondly, there are considerable sectoral imbalances in the granting of incentive certificates. For example, the textile sector accounted for nearly half (12 billion lira) of the 26 billion lira of approved investments in 1972, with chemicals and foodstuffs accounting for just under one-fourth, leaving just over one-fourth for all other industry sectors. Thirdly, to ensure effective implementation, the administrative machinery for the implementation of incentives needs to be improved.

28. In view of the discussion above, consideration should be given to the following:

(a) The government should undertake a thorough review of the budgetary effects (and differential sectoral and geographical effects) of tax, tariff and other incentives with a view to rationalizing and improving the administration of the industrial incentive system and to evaluate the "benefits" of the incentives relative to their costs so that a rational incentive program can be implemented at least cost.

(b) It may also be useful to examine, in view of widespread application of customs duties exemption or deferment on manufactured imports, the practicality of lowering tariffs on investment goods imports and applying restrictive measures to non-encouraged industries.

(c) Benefits in favor of export production compared to benefits granted to home market-oriented investors should be increased. Export incentives might be related to the amount exported on the principle that proportionally greater benefits go to firms that export a higher proportion of their output.

(d) Greater attention should be given to the inter-sectoral allocation of benefits. Some sectors received large allocations in recent years, and industrial promotion outside of the textile, foodstuffs and chemicals sectors may have been deficient.

(e) The investment promotion services of the Ministry of Industry should be strengthened (or alternatively to create another entity, to undertake the investment problem-solving, coordinating and expediting function previously discharged by the SPO), e.g., commissioning feasibility studies, extending technical assistance to investors (especially small and medium-sized) and expanding long-term credit.

(f) Regional investment incentives for the private sector are too weak to overcome the adverse investment conditions in many of the less developed provinces. The government might establish a Regional Development Bank, to provide medium and long-term credits and to promote regional industrialization, by helping local investors to establish local industries, undertake resource and investment surveys, feasibility and marketing studies, and generally to assist investors to obtain government incentives and services in Ankara.

(g) Since inefficient small-scale production is a major factor explaining high costs in some sectors. The Government might consider adopting an industrial merger policy, providing special inducements to merge small-scale enterprises into larger ones, able to benefit from the economies of scale and marketing.

Iron and Steel

1. The following table summarizes supply and demand for finished steel products in 1962-72, together with the Plan projections for 1977.

Table 1: CONSUMPTION, PRODUCTION, AND IMPORTS OF FINISHED IRON AND STEEL /1

(thousand tons)

| | 1962 | 1967 | 1972 | 1977 |
|---|---|---|---|---|
| Consumption | | 1,267 | 2,198 | 4,185 |
| Annual rate of income | - | - | 12.4% | 14.7% |
| Production | 451 | 1,247 | 2,007 | 3,956 |
| Imports, finished steel | no data | 107 | 241 | 229 |
| semis | | 154 | 815 | 44 |
| Import value (TL m. at 1971 prices) | | (740) | (2,624) | (1,000) |

/1 The difference between imports plus production on the one hand and consumption on the other hand in 1967 and 1972 presumably reflects inventory accumulation plus exports. The latter are known to have been quite small.

One outstanding characteristic of the 1972 demand-supply pattern is the imbalance between metallurgical and rolling capacity necessitating large imports of "semis". This imbalance will be eliminated by 1977. The 1972 production of finished products came essentially, and in roughly equal proportions, from two integrated mills: the old and badly situated Karabuk steel mill which produces bars, rods, rails, etc. and the recently constructed Erdemir steel mill on the Black Sea which produces exclusively flat products. A third steel mill is under construction with USSR financial aid at the deep-sea port of Iskenderun. By 1982, both Iskenderun and Erdemir would have attained a production of 4.0 million tons. During the Third Plan, MKEK (the State metal products and machinery concern) would create an additional 200,000 tons of electric steel capacity.

2. The Plan shows the following investments in steel expansion:

| | TL million at 1971 prices | US$ equiv. million /1 | Finished steel output tons | Investment per ton steel US$ equiv. |
|---|---|---|---|---|
| First Plan | 4,337 | 482 | 796 | 605 |
| Second Plan | 5,684 | 440 | 760 | 580 |
| Third Plan | 15,400 | 1,100 | 1,949 | 565 |

/1 At current exchange rates.

Whereas steel absorbed 14% of total manufacturing investments in the Second Plan, that share is projected to rise to 17.6% in the Third Plan. The economics of such expansion is therefore a vital issue which is not seriously faced by the Plan. Preliminary indications are that the two major raw materials, coal and iron ore, could be supplied at, or close to competitive world market prices. Barring an unexpectedly sharp increase in wages over the next decade, Turkey should have an edge in labor costs (in spite of relatively low productivities). Turkey's main disadvantage in this highly capital-intensive industry lies in the investment cost per ton steel. Erdemir's average investment at the projected 1.3 million ton finished products level works out at about $450 per ton which is hardly competitive, though the projected marginal cost for the expansion from 0.5 to 1.3 million tons, at an estimated $360 per ton would be competitive. The latest Annual Report by the State Investment Bank implies for the Iskenderun complex an average investment of $630 per ton, including working capital. As a standard of reference, a recent estimate indicates an average investment cost for steel expansion in industrialized countries, excluding working capital, of about $300 per ton. In view of this, the question should be seriously analyzed (in planning for the fourth steel mill) whether investments in steel represent the best use of the country's capital resources.

Chemicals, Petrochemicals, and Fertilizers

3. The chemicals and fertilizers industry accounted for slightly more than 8% of the value added in manufacturing in 1972. Contrasted with its contribution to GNP, this industry is absorbing a very large share of total manufacturing investments, about 25 and 23% respectively in the Second and Third Plans. Whereas, at the end of the First Plan, consumer goods (soaps, detergents, paints, matches, medicines) dominated the picture, the Second Plan was characterized by the expansion of fertilizer production (the capacity of nitrogen fertilizers production rose from 118,000 tons to 1.4 million tons and of phosphates fertilizers from 222,000 to 1.6 million tons) and the initiation of petrochemicals production, synthetic fibers production (from imported intermediates), and boron chemicals production.

4. The Third Plan paces high priority on the chemicals industries which is said to be justified by heavy increase in the demand for both chemicals and fertilizers, the strong forward and backward linkages in the chemicals industry and the role of these industries as "carriers and accelerators" of technological development. As a result, rising imports during the Second Plan would be slowed down. The increase in imports would fall almost entirely within the group sundry unspecified chemicals. Major increases in chemicals production would occur in alkalies, boron products, synthetic fibers, detergents, films, medicines, insecticides, plastic materials, carbon black and synthetic rubber. Production of nitrogen fertilizer would triple and phosphate fertilizers double, with even larger increases in phosphoric acid and sulphuric acid production. Apart from marginal exports in, e.g., plastics to take advantage of unused capacity, the major increases in exports would come from boron products. The Third Plan period would witness the completion of the petrochemicals complex in 1974, the partial completion of the Aliaga complex (producing intermediates for synthetic fibers), two major nitrogen fertilizer plants, a major alkali complex and a new boron products plant. All the projects described would be in the State sector.

Table 2: IMPORTS OF CHEMICALS AND FERTILIZERS
(TL million)

| | 1967 | 1972 | 1977 |
|---|---|---|---|
| Specified chemicals | 1,000 | 1,108 | 1,327 |
| Sundry unspecified | 405 | 450 | 1,608 |
| Petrochemicals | 273 | 796 | 485 |
| Fertilizers | 638 | 987 | 681 |
| Total Imports | 2,316 | 3,342 | 4,100 |
| Exports | 59 | 172 | 708 |
| Net Imports | 2,257 | 3,170 | 3,392 |

5. Petrochemicals and fertilizer production up to now have proved difficult fields for developing countries, because they are highly capital-intensive lines with major advantages in scale; there is intensive development of new products and processes where the profits are typically made in the early period of the introduction of a new process or product, and with a tendency towards over-capacity, price cutting is practiced extensively on the world market. However, Turkey has entered in a gradual manner in this field, starting with products at the consumer end where a market exists and where advantages of scale are relatively moderate. It has also initiated production of intermediates and basic chemical raw materials like amonia, ethylene, aromatics, although the derived demand is, at present hardly sufficient to justify units of optimum size.

6. Historically, this is not the way the Turkish chemicals and fertilizer industry has grown. The first major unit, the integrated nitrogen fertilizer plant at Kutahaya (1961) based on lignite, encountered all the difficulties mentioned above, and has made losses even in recent years. The Yarimca petrochemicals complex faced many delays in construction, and several of the major units were well below competitive size. Capacity utilization in nitrogen fertilizer production in 1968-72 has varied between 44 and 69%.

Textiles and Clothing

7. The textiles industry holds an important place in the Turkish economy. Together with clothing and footwear (production of which on an industrial scale is relatively insignificant), it accounts for over 20% of manufacturing output and roughly one-third of manufacturing employment. Textiles exports, of minor importance until 1967, have increased 18 times over the last five years. At $55 million equivalent, they now account for roughly one-third of industrial non-food exports (Table 3.2). Whereas cotton yarn exports led the way and still accounted for one-half of the total in 1971, there has recently been increasing diversification into grey and printed woven goods, towels, carpets, and garments. Before World War II, textiles production was dominated by Sumerbank, a state undertaking. During the post-war period, the private sector has expanded, often with State encouragement, and now contributes 75% of the total output.

8. The textile industry has drawn substantial investment and export incentives. Most textile products benefit from an export tax rebate of 25% (10% higher for exporters with more than $1.2 million exports per year). In addition, till recently export proceeds from cotton were exchanged at a lower rate than the official rate, thus encouraging the processing of cotton for exports.

9. The Third Five-Year Plan envisages a 8.5% annual increase in textile and clothing production, with exports increasing by 23% per year. Most of the expansion is expected to take place in cotton spinning and weaving, artificial fiber weaving and knitwear. In the woolen and worsteds sectors, the major effort would be towards modernization (in fact, substantial unused capacity is reported for this sub-sector). Total investment requirements for textiles and clothing are estimated at TL 8.8 billion.

Table 3: SUPPLY AND DEMAND OF THE TEXTILE AND CLOTHING INDUSTRY
(TL million at 1971 prices)

| | 1972 Estimate | 1977 Projection |
|---|---|---|
| Gross output | 18,700 | 28,200 |
| Imports | 210 | 350 |
| Export | 600 | 1,680 |

10. The textiles and clothing industry has a high priority for development because there is an expanding market in Western Europe to which Turkey will be granted increasing access on increasingly favorable terms. 1/ Although the OECD countries now absorb over 80% of Turkey's textile exports, Turkey's share of the total OECD are textile imports is insignificant, except for grey cotton yarn representing about 9% of total imports and cotton yarn about 5%. Turkey has a comparative advantage because of its high quality cotton, of which only 40% is being processed in Turkey, low labor costs 2/ and easier physical access to the European market than major Asian producers.

11. Turkey could therefore expand its exports, but to do so it must improve its productivity and marketing effort. Present productivity, measured in yards per man-hour is only about 60-80% of the British and German productivities for print cloth and about 50% for duvetyne. Clearly, there exist problems, both of management and of inadequate structure. The structural problem relates to both the size of individual units and the balance between production units. A 1971 survey found 47 out of 72 spinning plants, and 36 out of 50 weaving plants, below optimum size. On the other hand, there were also a few mills of a size too large for proper supervision and management under Turkish conditions. Finishing plants were poorly utilized; there was a tendency for small mills to have their own finishing plant apparently out of fear of becoming too dependent upon large finishing plants. However, the potential for improvement is there, as indicated by the fact that some recently engineered, well managed plants show excellent productivities, comparable to best European standards. A training and technical research center has been proposed for the textile industry which could make a valuable contribution. Because of its employment-creating potential, the clothing and knitwear sector would seem to merit more study and a more intensive Government promotional effort than it seems to have received thus far.

Forest Industries

12. The forest industries in recent years have contributed about 5% of the net manufacturing output and, together with forest exploitation, account for about 3% of GNP. This proportion has been declining during the last decade. Exports of forest products are comparatively small, and in 1972 Turkey had a net import surplus (essentially imports of pulp and paper) of approximately $5 million equivalent. Turkey's forests, located mainly in

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1/ According to the EEC Treaty and Annex Protocol, immediate duty-free access will be granted to Turkey for 29 out of 32 textiles positions, including fabrics of blended natural and man-made fibers as well as ready-made garments. Duty-free quotas for cotton yarns and fabrics are fixed at respectively 500 and 1,000 tons per year. Import duties will be eliminated over 12 years, and reduced by 25% initially and by 50% after four years.

2/ In 1970, the hourly labor cost in the textile industry was about 2/3 of Hongkong, 1/2 of Japan, and 1/4 - 1/5 of Western Europe rates.

the coastal mountain areas, are among the largest in Europe, covering an area not far below the Swedish or Finnish forest. Yet, the 1972 annual cut of about 0.8 $m^3$/ha was less than one-third of the Swedish figure, and whereas the Swedish production is predominantly industrial wood, nearly two thirds of the Turkish cut is fuel-wood. Much of the forest is overmature or otherwise degraded, with a consequent subnormal annual growth rate and a great need for accelerated exploitation.

13. Both forestry and conversion have been largely State-managed, with centralized control and a lack of integration between saw milling and pulping operations. The State Forest Department controls the felling and marketing of logs. Buyers complain about irregular supplies and uncertain qualities and prices. High prices for wood reflect the overvaluation of the currency (particularly until 1970) and the subsidization of the forest villagers, who have entrenched rights to free wood. The low degree of exploitation is another handicap. In the absence of a recent forestry inventory, there has been poor knowledge of the total resource. According to FAO studies, a doubling of the cut, even at present techniques and degrees of mechanization, could be achieved with a relatively small increase in the work force through improved organization and a better seasonal utilization of labor. With a 70% increase in the cut of industrial wood over the last six years, the situation is improving. It is expected that wood costs in the new Antalya project (see below) will become competitive by international standards.

14. The State Pulp and Paper Corporation (SEKA) was established in the early 1930s when its first mill was built at Izmit. The economic results from this mill have never been good due to small units, lack of specialization, overstaffing and frequent changes in management. In 1965, SEKA started constructing three new integrated paper mills with a combined capacity of about 230,000 tons of paper. There were delays in implementation and higher than expected capital costs. Two of the three mills are now operating at near design capacities but even at full operations, these mills will have high production costs per year, since at an average capacity of about 75,000 tons they are only about one third the size of similar modern North European and North American mills. One reason for the small scales originally selected was concern over wood supplies.

15. There are also three small recently constructed non-integrated private paper mills with a capacity of about 10,000 tons each. Wood conversion other than paper production is dominated by the private sector: among 5,000 saw mills in Turkey, 14 relatively large state-owned mills account for only about 7% of the total output. The private mills are hampered by small size, obsolete equipment and, again, because of uncertainty regarding log supplies, the need to keep excessively large wood inventories. Difficulties in obtaining the guaranteed local supply of logs may explain the clustering of many plywood and board mills around the main market of Istanbul. Turkey has altogether 10 plywood mills with a combined 1971 capacity (based on one shift) of 42,500 $m^3$, three fiberboard mills (46,000 tons) and two particleboard mills (42,000 tons). All the wood conversion plants are small by international standards.

16. A new approach is clearly needed for the development of the Turkish forest resource, based on the following ideas:

(a) an economic size for the industrial installations, specifically a 150,000 tons/year integrated kraft paper mill deriving much of its raw material in the form of waste from a saw mill located on the same site with an output of 182,000 $m^2$/year sawn wood;

(b) increase of log production in the Antalya region from presently 300,000 $m^3$ roundwood to 800,000 $m^3$;

(c) feasibility studies to prepare future integrated forest utilization projects in the Adana/Mersin and Marmara regions;

(d) the hiring of high level expertise to assist in construction and early operations and to prepare long-range forest management plans.

Motor Vehicles and Tractors

17. The Turkish automotive industry is essentially an assembly operation and is highly fragmented. During the Second Plan the local content of trucks and vans assembled in Turkey increased from 20% to 57.5%, and of buses from 30% to an average 70%. This, however, was done without efficient planning and coordination of subcontractor industries; the result was a large number of scattered firms operating at non-economic levels of production. There are nearly 20 companies engaged in motor vehicles and tractors production. Six of these manufacture tractors, four make buses, and three make passenger cars and/or light pickups. Engines and transmissions are imported. Whereas other car production plants in the Mediterranean area have reached an output of 200,000 or over, which is often regarded as a minimum economic scale, in Turkey two manufacturers by 1977 would share a production of 50,000 vehicles. The difference between local and c.i.f. prices for trucks and tractors ranges between 40 and 60%.

18. Statistics for Turkish production of motor vehicles over the last two Plan periods are as follows:

| | 1962 | 1967 | Average annual increase 1962-1967 | 1972 Planned | 1972 Actual | Average annual increase 1967-1972 |
|---|---|---|---|---|---|---|
| Tractors | 2,574 | 12,038 | 36.0% | 15,000 | 20,000 | 10.8% |
| Trucks/vans | 1,354 | 8,903 | 45.0% | 12,000 | 18,300 | 15.5% |
| Buses | 820 | 944 | 2.8% | 3,900 | 3,600 | 31.0% |
| Passenger vehicles | 877 | 4,032 | 36.0% | 16,500 | 26,000 | 45.0% |

19. The Turkish strategy for the Third Plan is to push hard towards the all-Turkish car and truck (85-90% domestic component). In a second stage, tractor production and truck production would be reorganized to achieve desired additional integration of domestic components through merger of scattered small firms. Complementary industries (i.e., manufacture of parts, including engines) will be encouraged, as well as participation by foreign companies with a view to opening foreign markets. To push backward integration, the Government intends to launch two key projects shortly: a diesel engines plant, and a gears and gearboxes plant.

20. The State Planning Office estimates that by the end of the Third Plan, Turkey's domestic demand for motor vehicles, its exports, imports and national production, would be as follows:

| | Domestic demand | Imports | Exports | National Production | Average annual increase |
|---|---|---|---|---|---|
| Tractors | 35,350 | 400 | 50 | 35,000 | 11.8% |
| Trucks/vans | 28,400 | - | 100 | 28,500 | 9.3% |
| Buses | 8,650 | - | 180 | 8,830 | 19.5% |
| Passenger vehicles | 53,000 | 3,000 | - | 50,000 | 14.0% |

A group of consultants (TUSTAS) in connection with a 1971 study for the development of engine production prepared fleet forecasts for private automobiles, trucks, buses, and tractors. Their figures shown below are more optimistic than the Plan projections:

| | Passenger Vehicles | Trucks | Buses | Tractors |
|---|---|---|---|---|
| 1969 actual | 137,000 | 122,000 | 35,000 | 90,000 |
| Projected 1978 | 362,000 | 260,000 | 83,000 | 248,000 |

21. According to the same study, about 25% of the trucks would be light vans for up to 1 ton load, another 10% light vans with 2.5 tons load, 40% would be medium trucks in the range of 3-5 tons and the remaining 25% trucks over 5 tons. The same fragmentation holds true for the tractor market. It will take extremely careful planning to find a viable production structure both for the vehicle industry and for the production of major components like engines, gears, and transmissions at these small scales of output. Among major possible development objectives (apart from optimum timing of investments) should be the concentration of truck production to one or, at the most, two plants (perhaps one for heavy and the other for medium trucks), standardization of tractor engines, limitation of the build-up of domestic content to economically defensible levels, and increased pressure on foreign companies to secure some of their procurement in Turkey in return for the protected market that they would be guaranteed.

# Chapter 12

# TRANSPORT

## The Transport System

12.1 Turkey's large size and rugged terrain have rendered construction of the land-surface transport network difficult and costly. Its area is 777,000 of which 15,000 square kilometers lie in Europe, separated from the Asian part by the Bosphorus Strait, the Sea of Marmara and the Dardanelles Strait. About one half of Turkey lies above 1,600 meters; the Anatolian plateau in the center is bordered by the northern Anatolian Range and in the south by the high Taurus Mountains, and in the east mountains rise to over 5,000 meters. In view of the rugged terrain, transport routes have had to be circuitous (see attached Map). Population density and economic activity are highest in Thrace and along the Black Sea, the Marmara and Aegean coasts. However, early in the Republic, Ataturk followed a deliberate policy of promoting inland regional centers and connecting them with Ankara, mainly through railways. During the past three decades the transport system underwent basic structural changes, and the emphasis placed on railway construction was replaced by a rapid expansion of the highway system.

12.2 In the period 1950 to 1970 the length of all surfaced national and provincial roads has doubled, from 24,000 km to 48,000 km and the number of motor vehicles per km of road increased five-fold from 1.3 to 6.3. Similarly, traffic density increased eight-fold, from 150,000 unit-km per km of road to 1.2 million unit-km per km of road. This compares with a three-fold increase of GDP in real terms during the same period. Road traffic is very unevenly distributed, with 68 percent of the total in 1969 concentrated in the major centers of economic activity: Istanbul, Bursa, Izmir, Konya, Ankara and Adana.

12.3 The Turkish State Railway (TCDD) network has remained substantially the same in the past 20 years at around 8,000 km, except for a small extension in 1971 to connect Turkey with the Iranian railway system and the construction of a small line form Edirne to the Bulgarian border. The alignment is generally circuitous and as a result, rail distances between main traffic centers are generally greater than via the more recently developed road network. The network also conforms poorly to the present pattern of main traffic flows. Partly due to lack of funds, track maintenance has been largely neglected, and nearly 50 percent of the network has become overage and a safety hazard. Consequently delays, accidents and speed reductions are frequent. On the other hand, overall traffic density on the railways increased during 1950-1970 by 75%, from 680,000 to 1.2 million traffic units per km of line. Still about 30% of TCDD's network has very low density traffic and studies of abandonment or rationalization of these lines will soon be started as part of a program for the physical and financial rehabilitation of the railway.

12.4 Analysis of the traffic in each mode, as given in Table 64, shows a shift during 1950-1970 in the relative traffic shares of rail and road as follows:

Table 66: PERCENT OF TOTAL TRAFFIC
(Rail and Road)

| | 1950 | 1960 | 1970 | 1972 |
|---|---|---|---|---|
| Freight | | | | |
| Rail | 76 | 56 | 25 | 28 |
| Road | 24 | 44 | 75 | 72 |
| Passenger | | | | |
| Rail (main line) | 51 | 25 | 8 | 6 |
| Road | 49 | 75 | 92 | 94 |

12.5 In absolute terms rail freight increased by about 3.5% p.a. during 1950-1965, while main-line passenger traffic grew at about 2.3% compared with an annual increase in population of 2.7%, and as in GDP of 5.8% during that period. The faster development of road traffic can be attributed partly to the effects of the rapid development of light and heavy industries centered around major cities which primarily generate short-haul general goods traffic that favors road transport. Conversely the slower growth of rail traffic, which is generally more competitive in transport of agricultural and mining bulk commodities over long distances, reflected the relatively slow expansion of these sectors.

12.6 Bulk traffic is the backbone of TCDD's business; it accounted for about 70% of the railway's total freight transport (in ton-km) and 60% of total freight revenues in 1971. Minerals (iron ore, chrome, coal and others) and cereals accounted for over 50% of total ton-km in 1970. General goods (such as building material, machines and equipment) and consumer goods represented about 30% of total ton-km and remained almost static in the period 1964-1971, indicating that only road traffic benefited from the increased production and consumption of these commodities. However, prospects for future rail traffic particularly bulk traffic are encouraging. Total railway traffic is expected to double during 1972-1982 from 5.7 billion ton-km to 11.4 billion ton-km. This net growth of about 8% p.a. will be almost wholly due to the planned expansion of iron ore mining in Turkey and iron ore traffic is expected to quadruple in the decade 1972-1982 from its level of 1.4 million ton-km. As for passenger traffic TCDD will be merely a residual carrier in 1982 with about 2.3% of all passengers carried by land surface transport. More detail on traffic forecasts is given below (para 12.32).

12.7 Turkey operates seven ports for international trade: Istanbul and Haydarpasa (also in Istanbul area), Izmir, Samsun, Trabzon, Mersin, Iskenderun and Derince. These ports Zonguldak, Eregli and Izmit are predominantly industrial. There are also many minor ports, harbors of refuge and natural landing places along the long coastline. Port traffic increased in the past (1963-1971) at about 6 % per annum. Operation of these ports is the responsibility of the Maritime Bank (Istanbul, Izmir, Trabzon) and TCDD (Haydarpasa, Derince, Samsun, Mersin and Iskenderun); specialized ports are operated by other state economic enterprises. The Ministry of Communications has prepared a draft law which would consolidate operation of ports under a single authority. However, the draft law has not yet been submitted to parliament.

12.8 The Turkish merchant marine consisted in 1970 of about 786 ships of 100 gross tons and over with a combined gross tonnage of 455,736 of which cargo ships accounted for 64%, tankers 20%, and passenger ships 15%. In international seaborne shipping Turkish flag vessels carried about 37% of all imports to and 20% of all exports from Turkey. Coastal vessels transported approximately 11 million tons (unloading only). With the exception of tankers the national and international fleet is outmoded and too small in average size.

12.9 There are two international airports (Yesilkoy at Istanbul and Esenboga at Ankara), 15 civil airports for domestic traffic and three military airports which are also used for scheduled domestic air traffic. Out of 103,000 aircraft movements recorded in 1970, about 39% were international traffic (60% in terms of passenger traffic). The importance of the two international airports for Turkey is highlighted by the fact that in 1970 they handled about 70% of all aircraft movements and 75% of all passenger traffic. The civil airports are operated by the General Directorate of State Airports (DHMI). Operation of air services are subject to approval by the Ministry of Communications. However, at present only Turkish Airlines (THY), a state economic enterprise, operates domestic services.

Assessment of the System

12.10 Considerable efforts are still needed in order to raise the physical efficiency of the system and lower transport costs. In the road sector new construction is at present on a modest scale, attention being focused on maintaining and improving the existing network. Demand for road capacity is greater than supply mainly in the larger urban areas. Of these Istanbul is of particular importance. A new bridge crossing the Bosphorus has been opened in late 1973 and a circumferential highway is to be completed in 1974. As regards the road vehicles the problem of an antiquated vehicle fleet seems to have been partially resolved through a sizeable increase in the domestic production and assembly of motor vehicles. Implementation of plans to increase the output of domestically manufactured or assembled vehicles is underway and is expected to result in a marked improvement in the age composition of the road vehicle fleet within the next five years.

12.11 The most urgent need of the railways is for renewal of track on main trunk routes and new rolling stock, especially locomotives, which are

mostly overage steam locomotives. In the shipping sector, the fleet consists of old and small ships which do not permit economic operation. The commercial air fleet has expanded considerably in recent years (1968-1972) and operates now a modern fleet of jet aircraft.

12.12 Turkish ports need improvement to meet efficiently the demands of growing traffic. There are shortcomings in equipment, availability of mechanical installations and speed of operation, harbor depths, length of wharves and storage capacity.

12.13 The airport infrastructure is, by and large, adequate. There is a program underway to equip Turkey's major domestic and international airports with modern air control facilities. Only the important international airport, Yesilkoy in Istanbul, needs considerable extension and improvement to cope with future tourism and other international traffic. Summaries of traffic data and the transport infrastructure and traffic data are given in Tables 10.1 and 10.2 respectively.

Planned Targets and Performance

12.14 Targets for traffic growth have been met or surpassed with the exception of railway traffic, while shipping traffic exceeded the plan estimate by over 100% and international air traffic by several times. The following table shows the growth targets and actual performance for each mode of transport:

Table 67: SECOND PLAN TRANSPORT TARGETS AND REALIZATIONS

| | | 1967 | 1972 | Annual Increase Percent Plan | Actual |
|---|---|---|---|---|---|
| (a) | Freight (million t/km) | | | | |
| | Road | 12,500 | 25,700 | 15.8 | 15.5 |
| | Railway | 5,476 | 6,600 | 4.9 | 3.8 |
| | Sea | | | | |
| | Coastal Shipping | 4,417 | 7,417 | 2.4 | 11.0 |
| | International | 8,131 | 24,260 | 2.9 | 24.5 |
| | Air | | | | |
| | Domestic | 2 | 2 | 11.8 | 4.8 |
| | International | 1 | 4 | 15.6 | 25.3 |
| (b) | Passengers (million pass-km) | | | | |
| | Road | | | | |
| | Interurban | 36,100 | 60,000 | 10.7 | 10.7 |
| | Intraurban | 1,045 | 1,325 | 2.9 | 4.9 |
| | Railway | | | | |
| | Interurban | 3,548 | 3,650 | 4.1 | 0.6 |
| | Intraurban | 753 | 1,300 | 4.8 | 11.5 |
| | Sea | | | | |
| | Domestic | 1,277 | 1,711 | 0.3 | 6.0 |
| | International | 102 | 230 | 4.9 | 17.7 |
| | Air | | | | |
| | Domestic | 216 | 198 | 12.0 | -1.8 |
| | International | 115 | 683 | 8.7 | 42.8 |

12.15 The actual increase in traffic corresponded closely to the expansion of the vehicle fleet of the transport industry. However, there are signs of over-investment in road passenger transport where capacity has grown much

faster than demand. Growth rates of ship capacity (in DWT) both in the private and state sector was below plan targets and passenger shipping transport capacity actually declined, although demand increased in the Marmara area and did not decline in the Black Sea and Aegean.

12.16 The share of the transport sector in total capital formation (both public and private) was 14% in the First Plan period (1963-1967) and is estimated at 16% during the Second Plan period (1968-1972). Public investment in transportation totalled TL 8.9 billing during 1963-1967 and is estimated at TL 12.2 billion during 1968-1972. Highways accounted for 71% of the total during the first period and are expected to account for 51% of the total during the Second Plan. These investments were used almost exclusively to upgrade existing roads. The total amounts spent on highways appear adequate but there is a need to place greater emphasis on expanding capacity or modernization in the main centers of industrial activity, where serious bottlenecks already exists, particularly in Istanbul and on the links Istanbul-Ankara and Istanbul-Izmir. Railway investments in the First and Second Plans amounted to about 17% and 2% of total transport investment respectively. Expenditures for railways were too low in relation to the needs for renewals and for cost-reducing investments, resulting in accelerated deterioration of the railway infrastructure. In ports and shipping the need for modernization was also not met. Development of a more balanced investment program in transport was hampered by institutional weaknesses (see below), as well as by financial constraints.

12.17 Partly as a result of inadequate investment, coordination and management, and also as a result of the Government's pricing policy, the state transport sector has sustained heavy financial losses. The deficit in the transport sector amounted to about 1.3 billion TL in 1970, equivalent to about 51% of total budget expenditures in that year (Table 66). The financial results of the transport enterprises varies, however, from a huge deficit in the case of the railways to a relatively large surplus in the case of ports.

Table 68: RESOURCES AND EXPE DITURES OF TRANSPORT ENTERPRISES, 1970

| | Revenues | Expenditures | Net |
|---|---|---|---|
| | | ---Million TL--- | |
| Transport Enterprises | | | |
| Railways | 1,248 | 2,566 | -1,318 |
| Maritime Bank | 947 | 1,068 | - 121 |
| Airports | 38 | 52 | - 14 |
| Total | 2,233 | 3,686 | -1,453 |
| Ports | 306 | 147 | 159 |
| Airlines | 353 | 341 | 12 |
| Cargo Lines | 311 | 300 | 11 |
| Total | 970 | 788 | 182 |
| Total Government | 27,100 | 29,900 | -2,800 |

12.18 The financial results of the railways have progressively worsened since 1965. The 1970 deficit of TL 1.3 billion was larger than total gross revenues and no reduction in the deficit is expected in 1971 or 1972. The principal factors contributing to this financial deterioration are the following: on the cost side, (i) increases in personnel costs and a stagnation in the productivity of labor, (ii) worn out track, which hampers the efficiency and quality of service, (iii) continued operation of some uneconomic lines, stations and services; on the revenue side (i) lack of a commercially-oriented, cost-related tariff system and (ii) insufficient marketing efforts. Rates and fares have increased only slightly since 1965. In real terms they decreased by about 25% in the period 1965-1971. For passenger services and certain commodities, analysis suggest that revenues do not even cover the marginal cost of providing the service.

Organization and Managment

12.19 The present system of formulation and implementation of transport policies is complex and uncoordinated. Besides the six state transport enterprises which operate services, there are many ministries and agencies 1/

1/ The ministries and agencies dealing with matters affecting the transport sector include: Ministry of Transport and Communications; Ministry of Public Works; State Planning Organization; Ministry of Finance; Supreme Planning Council; Council of Ministers, Ministry of Commerce and Industries; Ministry of the Interior; Ministry of Village Affairs.

- directly or indirectly dealing with transport policy formulation, infrastructure planning and construction, pricing, licensing, taxation and subsidies, and public service obligations, and the supervision, administration and operation of transport services. The regulatory policies, tax policies, subsidies, investment policies, etc., are not coordinated, and their effect on transport costs and prices and intermodal competition is not adequately analyzed.

12.20 The Ministry of Transport and Communications, which theoretically is in a position to assume responsibility for formulating and implementing a national transport policy and coordinating all activities related to the transport sector is, in fact, the weakest of the agencies dealing with transport matters, due mainly to its poor organization and the difficulty it has to attract qualified personnel. Although the Ministry has broad statutory authority over the transport sector, the only main function it performs at present is the supervision of the state transport enterprises.

12.21 Managment of state enterprises is according to Law 440, the responsibility of the Board of Directors and the Director General of the state enterprise. However, government intervention occurs frequently, particularly by the Ministry of Transport and Communications with respect to the railways and air transport.

12.22 Pricing of transport services of public and private enterprises is, according to Turkish law, the responsibility of the enterprises. There are many exceptions to this rule and, as regards state enterprises, their pricing policy is controlled by the Ministry of Transport and Communications. The Government uses direct and indirect subsidies and administrative control of prices of the state transport enterprises to promote regional and sectoral objectives. This policy has led to price distortions (in relation to costs and to increasing deficits of major public transport enterprises particularly the Turkish State Railways (para 12.17)). Furthermore, in 1971 a price control board was established with the authority to control price increases. For road operators, the Ministry of Communications has established price ceilings as an upper limit for price increases. Because of intense competition, these ceilings are at present of no practical importance.

12.23 While operation of air transport services requires a license, (with the exception of domestic passenger services of ships over 18 tons) entry into the road and sea transport industries is not restricted. No quality standards are established for operators who wish to enter the road transport industry. In view of the small amount of capital required for purchase of a vehicle and easy credit terms, many operators with insufficient capital and qualifications have entered the market. This has led, in conjunction with lax enforcement of existing traffic laws, to overloading, neglect of proper maintenance of vehicles, non-insurance of drivers, passengers and freight and an ever-increasing rate of accidents. A stricter weight control system has been instituted since 1971, but control on the entry into the market and compulsory insurance for drivers, passengers and freight, which were envisaged by the second Five Year Plan, have not been carried out.

12.24 Importation of equipment by public and private transport enterprices is subject to various taxes, customs duties and restrictions. The complicated system, dating back to the 1920's, was intended to raise revenues and promote import substitution, but its impact on transport prices and intermodal competition has not been assessed. Recommendations for abolition, modification or creation of new taxes, etc., are not coordinated and are made by the Ministries of Finance, Commerce, Customs and Monopolies, and Industry to Parliament; the Ministry of Transport and Communication is consulted.

12.25 Studies carried out by the TCPC in 1971 on road user charges indicated that revenues covered construction, maintenance and renewal needs of the road system. The structure of road user charges was found however to favor trucks, particularly heavy trucks, and seemed to encourage operation of obsolete vehicles. However, it remains unclear to what extent the system of taxation and other charges conforms with the principle of equality of treatment of each mode, a question that will be investigated by the Transport Coordination Agency.

Policies and Implementation

12.26 The Second Five-Year Development Plan (1968-1972) contains guidelines for a rational economic approach to transport policy which would bring about extensive reform of the sector. 1/ However, the principles formulated in the Plan have not been implemented so far, although their importance is

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1/ The guidelines contained in the plan are the following:

(a) intermodal competition under similar conditions as well as encouragement and regulation of intermodal competition on the basis of the inherent cost and service characteristics of each mode rather than on discriminatory pricing;

(b) setting rates and fares so as to reflect the incremental costs of each type of transport service plus an equitable share of the infrastructure cost of each mode;

(c) the operation of state transport enterprises according to commercial criteria;

(d) specific accountability for compensation of losses resulting from imposed non-economic services;

(e) modernization of the technical facilities of the transport sector as well as of its organization, management, administration, planning and research both on the Government and modal level; and

(f) establishment of safety standards and prevention of accidents in the transportation system.

well appreciated by the Government. 1/ In particular, effective coordination of policy and investment planning is unrealized; the problem of reducing or eliminating the numerous direct and indirect subsidies which are a main cause of the sector's deficit, has not been tackled; the reorganization of the state transport enterprises with the objective of organizing them more along qualified specialists to the private sector has not been checked.

12.27 In the area of investment planning, the responsibility for new investments (including construction of railway lines) comes under the Ministry of Public Works which generally initiates plans and executes them. Other types of investment (renewal, modernization, etc.) may be initiated by the state enterprises concerned, the supervisory ministry or the State Planning Organization, and are usually executed by the state enterprises. Plans and prospects of both types of investments have to be approved by the State Planning Organization, which also works out a financing plan in conjunction with the Ministry of Finance. The project also requires the approval of the High Planning Council and the Council of Ministers. This system has not resulted in systematic coordination at the planning stage between the two types of investment in the same transport mode, and between investments in the various modes of transport.

12.28 Coordination is sometimes achieved in the subsector through personal contact between officers of the agencies concerned, but is not systematically pursued. One of the consequences, in the road subsector also, investments were too low to check the increasing deterioration of the system and, at the same time emphasized somewhat such lower priority projects as electrification and new line construction.

12.29 Coordination of investment projects and plans between various modes of transports is undertaken at present by the State Planning Organization according to macroeconomic criteria such as increase in GDP, sectoral distribution of economic activity, etc., taking also into account financial constraints. However, this useful framework for overall planning does not fully utilize the detailed data and forecasts of demand necessary for the establishment of intermodal project priorities. In addition, the interdependency between the transport projects and projects in other sectors such as mining, industry, agriculture, and tourism is not adequately studied e.g., through proper systems analysis.

12.30 Improving coordination of transport planning and implementation would require some centralization of the responsibilities now dispersed among the various present ministries and agencies. Improving the organization and administation as well as resource allocation in the transport sector.

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1/ Several important draft laws have been prepared mostly in early 1971, but have not yet been acted upon. For example, the consolidation of port administration under one agency, a new organic law for the railways, a consolidation of the state's two shipping companies under one agency, and establishment of a state ship building organization.

would also require a substantial addition of qualified transport specialists to these agencies including the managment of most state transport enterprises.

12.31 In an attempt to improve the effectiveness of the institutional machinery dealing with implementation of transport programs and projects a plan of action was adopted by the Government in 1972 establishing target dates for (i) the setting up of a transport coordination agency within the Ministry of Communications; (ii) the formulation of a body of clear and consistent policies in the transport sector; (iii) the reorganization of the Ministry of Communications and Transport; (iv) development of a management information system; and (v) undertaking studies on the adequacy of user charges and on the effect which the existing restrictions on the importation of transport equipment have on the operational efficiency of the transport system. This plan of action is being implemented. The Government has strengthened the ministry's policy making and coordinating function by (i) setting up a transport coordination agency, directly responsible to the undersecretary of the ministry in August 1972, and (ii) by streamlining departmental responsibilities on the basis of transport modes in the spring of 1973.

The Third Five-Year Plan and Prospects

12.32 Compared with the Second Five-year Plan, total transport investment during the Third Plan period (1973-1977) will increase by about 28% in real terms, rising to TL 33.8 billion in 1971 prices. Of this about TL 10 billion is estimated as private sector investment, principally for road vehicles. The plan figures give only global investments by mode of transport as summarized below (see also Table 10.6).

Table 69: PLAN INVESTMENTS IN TRANSPORT
(TL billion)

| | Second Plan (1965 prices) | Third Plan (1971 prices) |
|---|---|---|
| Road Transport | 12.2 | 17.6 /1 |
| Railways | 3.2 | 7.6 |
| Sea | 0.9 | 4.2 |
| Air | 0.5 | 4.4 |
| Total | 16.8 | 33.8 |

/1 Of which new road construction or major renewals: TL 7.6 billion.

12.33 Since no breakdown into individual project is available and only general comments on a modal basis are given, a realistic assessment of the plan's investment objectives is very difficult. However, the physical and

traffic objectives set out in the plan allow an indirect assessment of the realism of the general investment level foreseen for each mode. The figures given in the plan should be considered as a frame of reference only and they are likely to be subject to considerable modification in the subsequent annual budgets for the following reasons:

(i) They are based on rough traffic estimates, often extrapolations of past trends.

(ii) No attempt has been made, except for railways, to determine the economically justifiable needs of each mode of transport.

The plan's traffic forecasts are presented in the following table, followed by an assessment of development prospects in each subsector:

Table 70: THIRD PLAN TRAFFIC FORECASTS

| | Unit | 1972 (Actual) | 1977 (Planned) | Annual rate of increase (%) |
|---|---|---|---|---|
| Road | | | | |
| Passengers | billion pass-km | 61.4 | 131.4 | 16 |
| Freight | billion t-km | 25.7 | 60.6 | 19 |
| Railways | | | | |
| Passengers | billion pass-km | 4.9 | 5.9 | 4 |
| Freight | billion t-km | 6.6 | 10.1 | 9 |
| Sea | | | | |
| Passengers | billion pass-km | 1.9 | 2.6 | 6 |
| Freight | billion t-km | | | |
| Domestic | | 7.4 | 12.8 | 12 |
| International | | 24.2 | 39.0 | 10 |
| Air | | | | |
| Passengers | million pass-km | | | |
| Domestic | | 498 | 1,236 | 20 |
| International | | 683 | 1,697 | 20 |
| Freight | million to-km | 6.1 | 8.8 | 7 |

12.34 Road transport will remain the most important transport mode for short and medium haul of bulk and non-bulk goods constittuting about 75% of total land transport in 1977. The Third Plan estimated growth in road freight traffic (in ton-km) at 19% per year compared with about 12% recorded in the previous five years. This rate of growth may not be achieved, however, considering that motorization is already well advanced, that fuel prices have risen sharply, and that the growth rate tends generally to slow down in later stages of motorization and approaches the GDP growth rate. In addition, the projected investments of about TL 7.6 billion in road construction and renewal would seem much too low in relation to projected demand, since the main traffic arteries would have to be enlarged to be able to cope with such additional traffic. As far as passenger traffic is concerned road traffic will retain its dominant role with over 95% of all land passenger traffic. Again, SPO's forecast passenger traffic growth (16% p.a.) seems to be on the high side in relation to the projected growth of GDP (8%) and of the transport sector as a whole. A more realistic estimate of traffic growth seems to be one in the region of 10% per year for both types of road transport.

12.35 The Third Plan emphasizes the maintenance and upgrading, rather than expanding the existing network. It is planned to convert about 1,100 km of road annually into hard surfaced roads and about 800 km of substandard roads into stabilized roads. While the envisaged program would generally meet the needs, additional investments will probably be required for the construction of throughways or bypasses that would ease the growing congestion in urban industrial centers. A new law will enable the Government to levy a toll on newly constructed roads provided there is an alternative road. The Bosphorus Bridge will be the first toll road in the country. Further plans call for a Gebze - Izmit speedway and a new highway between Tarsus and Pozanti.

12.36 The role of rail transport has shifted gradually with the growth of road traffic from that of an all-purpose carrier to long-distance bulk carrier, and it is now closely linked to mining and heavy industries. The geographical importance of the system is now confined to a few trunk lines running north-south from Samsun to Iskenderun and east-west from Istanbul-Ankara to Erzurum. The rail transport system has been allowed to deteriorate during the past three decades and it has reached a point where it is a serious bottleneck to the development of mining and heavy industry, especially with regard to the iron and steel industry. The investment plan which TCDD developed with the assistance of the World Bank is designed to eliminate this bottleneck. However, project implementation needs to be accelerated to meet the requirements of iron ore transport to the steel mills, particularly to Iskenderun in 1975 and 1976. Otherwise, the planned investments in railway infrastructure and rolling stock will be adequate to meet the needs of the economy. The growth rate of freight is expected to be somewhat lower than plan projections, and passenger traffic may actually fall.

12.37 Much emphasis is given by TCDD in a ten year plan to the physical and financial rehabilitation and to overall modernization of the railway in order to improve its efficiency and competitiveness. The first part of the

plan (1972-1977) envisages investments of TL 7.5 billion (US$533 million), mainly on track rehabilitation (US$150 million), signalling and telecommunications (US$23 million), dieselization and procurement of rolling stock (US$176 million), and on maintenance and repair facilities (US$25 million). The proposed investments compare with about TL 2 billion (US$140 million) in the Second Five-year Plan and are considered the minimum program necessary to achieve TCDD's physical and financial rehabilitation and provide the capacity required for the expected traffic. The Ministry of Public Works has been preparing an extensive new construction (TL 5.8 billion) program. However, none of these projects will be carried out during the Third Five-Year Plan period. Only those projects already approved during the Second Five-Year Plan will be completed.

12.38 In the field of air transport both international and domestic airports will need adaptation to the rapidly growing air traffic. Navigational aids and terminal facilities in general are insufficient. The Government considers that in four out of the 18 domestic airports (Bursa, Elazig, Erzican and Antalya) the capacity of the runways is inadequate at present for civilian traffic. Feasibility studies are underway for a new airport between Izmir and Antalya to develop tourism in this region.

12.39 The total appropriation of TL 4.4 billion ($314 million) for airports and the Turkish Airlines (THY) is justified by the rapid increase in air traffic which in the past was consistently underestimated. For airports, the investment consists mainly of equipping all Turkish airports with modern traffic control equipment. One larger investment project of TL 1.7 billion (of which TL 0.9 billion during the Plan) is the extension of Yesilkoy airport in Istanbul with the construction of a new passenger terminal building, and hangars and the installation of traffic control facilities.

12.40 While allocation for investment in the air transport subsector is adequate, the bottleneck for its development is rather the low capacity for efficient operation of such investments due partly to a dearth of qualified personnel, particularly engineers. Airport management suffers from the lack of coordination of the various services such as customs, processing of cargo and passengers, catering, etc. Consequently delays of planes are frequent.

12.41 The main problem facing the Turkish Airlines (THY) is undercapitalization. In 1972, the paid in capital was TL 300 million, the unpaid capital TL 100 million, whereas an adequate capitalization would be about TL 900 million. The Government is considering an increase in THY's capital. THY's domestic passenger tariffs do not cover their costs, and this contributed to a loss on domestic lines of about TL 140 million in 1972. The Government has not granted THY requests for increases in domestic air fares. Looking to the future THY traffic can be realistically expected to more than double by 1977, and the planned expansion of the airline's fleet will be able to cope with the projected increase.

12.42 The administration of civil aviation in Turkey is still in its formative stage. There are some legal gaps to be filled, e.g. there is

no air traffic law, and no master plan for Turkey's airports and air traffic control systems. However, technical assistance is helping to identify investment and organizational needs of air transport and preparation of necessary legislative proposals is underway.

12.43 In sea transport the main Turkish ports have difficulties in handling equipment despite recent improvements in warehouse capacity. A program is underway to modernize handling equipment in ports and to increase the length of wharves to accommodate larger ships. The port of Samsun, important for iron ore shipments, has been enlarged and improved during the Second Five-Year Plan to handle the projected increase in iron ore, copper and fertilizer traffic. A long-term expansion and modernization plan for the port of Izmir has been drawn up and will be implemented over the period of the Third and Fourth Four-Year Plans. Izmir may also provide facilities for container traffic after its completion. Faster modernizing of ports requires better coordination of planning and larger investment funds. A particularly acute problem is the congestion in the Istanbul and Haydarpasa port complexes which contributes substantially to Istanbul's urban traffic problems. Plans to construct a third port outside of the city have been drawn up but this port will probably not be operative before 1984.

12.44 During the Third Five-Year Plan a large program of modernization and expansion of the Turkish merchant marine will take place. DWT are expected to increase by 64% from 1.1 million in 1972 to 1.8 million in 1977. This increase will be sufficient to carry about 50% of Turkey's projected annual imports and exports. The program, while necessary, is very ambitious; and it can only be carried out if Government allows the import of a substantial part of the additional ships, given the capacity of Turkey's ship building yards.

Long-Term Prospects

12.45 The growth rate and pattern of transport services in the long run will essentially depend on the growth rate and pattern of the Turkish economy. By 1995 Turkey aims at a per capita income of 1,500 US dollars equivalent, a 50% share of services of GDP and a level of urbanization of 75%. This would imply that growth rates for freight and passenger traffic will probably decline gradually, as experienced in other European countries when they reached a similar stage. On the other hand the share of air traffic in total passenger traffic can be expected to increase. International freight traffic by all modes of transport is also expected to increase in importance with the gradual integration of Turkey into the European Community. As mining activity and processing of raw materials gain in importance during the next two decades, railway transport will benefit. However, road transport will remain the dominant mode of inland transport both for passengers and freight.

12.46 As far as long-term investment policy is concerned the strategy is to continue the upgrading and renewal of existing roads but not to extend the road system except for the construction of toll roads. While the road system will generally be adequate for the expected traffic the rapid urbanization

and industrial expansion in a few key regions are expected to necessitate some construction of new roads. The railways are expected to play a more active role in the coming decades, and should be completely rehabilitated and modernized by about 1982 if they are to cope with the planned growth of the mining and primary industries. In shipping, the expansion planned for the Third Five-Year Plan is likely to continue due to increasing international trade with progressing integration into the European Common Market.

12.47 In conclusion, while the transport pattern will not change drastically in the next two decades, investment policy will be focused on maintaining and upgrading the existing network with special emphasis on railways. The transport sector will face some existing problems which are likely to extend well beyond the Third Five-Year Plan period. Shortages of high level technical personnel, particularly engineers, are likely to continue to hamper the efficiency of state transport enterprises unless salaries are made competitive with the private sector. A difficult problem to handle will also be a cutback of direct and indirect subsidies to users of the transport infrastructure, already attempted without much success during the Second Five-Year Plan. Finally, coordination of government agencies as regards transport policy, investment planning and implementation may continue to pose a problem.

# Chapter 13

# TOURISM

13.1 Turkey offers a wide range of opportunities for tourism including long and varied seashores, high mountains and lakes, and many historical and archeological sites. However, tourism has played until recently a very minor role in the development of the country, and Turkey's share in the rapid expansion of tourism in the Mediterranean basin during the last ten years has been small. In 1971, Turkey received only about 1% of total tourists in the Mediterranean basin (Table 8.7). Domestic tourism has been expanding rapidly.

## Development of Tourism, 1950-72

13.2 During the period 1950-72, only modest efforts were made by the Government for the promotion of tourism: it extended credits for the construction or modernization of a few tourism facilities; created in 1955 the Tourism Bank which, however, had limited funds; and exempted new investments in the sector from building tax and real estate tax during ten years. Nevertheless, the number of tourists increased from 29,000 in 1950 to 173,000 in 1962 or by 16% per year. Tourist receipts averaged $3 million per year during the period, or about 1% of exports of goods (Tables 8.8 and 3.7).

13.3 The First Plan (1963-67) aimed at the development of tourism as a means of narrowing the large gap in the balance of payments. Measures to promote growth were to include training facilities for the personnel to be employed in the sector, and larger financial resources for the Tourism Bank. Investment in tourism represented however only 1.4% of the total planned investment. The public sector was to concentrate on the development of infrastructure, while investment on the superstructure was to be left to the initiative of the private sector. Priority was to be given to the development of the Marmara, the Antalya and the Aegean regions. During the Plan period, in fact, investment in tourism reached only 2% of the total Plan investment (Table 2.3). Measures envisaged to promote the development of the sector were not implemented; the Tourism Bank remained a weak institution, cooperation between private and public sectors remained minimal, and training of the required personnel lagged. Nevertheless, the number of tourists continued to increase at 15% per year (compared to a target of 19%) reaching 364,000 in 1967 (Table 8.8). The number of excursionists - foreigners visiting Turkey for less than a day - was registered for the first time and reached 175,000. Domestic tourists increased at 8% per year and reached 1.3 million. Receipts from foreign tourism were estimated, however, at $12 million (compared to the Plan target of $42 million) (Table 3.7).

13.4 Tourism continued to develop along the same lines during the Second Plan 1968-72. In 1972, the number of foreign visitors increased to about 1 million, or by 12.5% per year (compared to a target of 25%), the number of tourists reaching 570,000 (10.5% growth per year)(Table 8.8). Tourists receipts increased to $104 million (compared to a target of $135 million),

or at over 50% per year, and amounted to 9.4% of exports of goods and non factor services (Table 3.7). Domestic tourism increased also rapidly to over 3 million in 1972. Investments in tourism during 1968-72 amounted to 1.9% of total plan investment (compared to a target of 2.3%)(Table 2.3). During the last years of the Second Plan some progress was made in physical planning for the priority regions, and the Government implemented a system of incentives to encourage private investment. In 1973, the number of tourists increased by 47% over the comparative figure for 1972, and tourism receipts increased to $171 million, or by 64%.

13.5 The lodging capacity increased from about 42,000 beds in 1964 to about 72,000 beds in 1972, or at about 7% per year, and remained far behind the Second Plan target of 192,000 beds in 1972. The hotel occupancy rate was estimated at 70% in 1971 during the seven months average working season, which is a more favorable situation than in most Mediterranean countries. But a large share of the lodging capacity consists of city hotels, a large part of which do not have a tourism license. In 1972, 35,000 beds belonged to licensed establishments (48% of total beds), and only 28% of total bed capacity belonged to holiday resorts compared, for instance, with 77% in Tunisia.

13.6 The largest part of the licensed facilities is in the Marmara region (48%), followed by the Aegean (24%), Central Anatolia (14%) and the Mediterranean (8%). Most of the foreign visitors originate from Western Europe (56% in 1971) and USA-Canada (17% in 1971), and tourists spent an average of 5.5 days in Turkey in 1971 (compared to 15 in England and 9 in France and Greece). In 1971, excursionists arrived in Turkey mostly by sea, while tourists arrived nearly in equal number by road and by plane (Table 8.8).

Incentive and Credit to the Tourism Sector

13.7 In December 1972, the Government enacted several measures to promote tourism investments. Foreign investors who wish to undertake tourism investments have to form joint ventures with local firms, in accordance with Law 6224 on foreign investments, and are guaranteed the transfer of profits, capital, loan, repayments and interest charges. A 35% tax is levied on profit transfers. They are permitted to make use of blocked funds to finance their investment. Foreign personnel can represent up to 15% of the employees of an establishment, and is authorized to transfer savings outside of Turkey after the approval of the Ministry of Finance. The shares of local and foreign borrowing have to be the same as the shares of local and foreign equity financing.

13.8 Incentive measures, which benefit other foreign and local investors, include corporate tax exemption equal to 30% of the equity investment for projects with a minimum capacity of 100 beds. Holders of tourism licenses are exempt from building and land tax for a period of five years, and the Ministry of Tourism helps them in leasing suitable land for the development of their projects when these projects are located in priority areas.

13.9 The Government has recently drafted a new and more generous incentive bill which is still in Parliament. It would increase investment incentives for joint projects controlled for at least 80% by Turkish partners: the corporate tax exemption would range between 40% and 95% of the investment cost depending on the location, employment effect and the size of the project; projects with a minimum capacity of 300 beds would be allowed deferred payments in custom duties.

13.10 An important factor for the promotion of investment in tourism has been the reorganization of the Tourism Bank. The Tourism Bank which remained a weak organization, with practically no financing capacity during the two first Plans, was reorganized in 1972. Its head office moved from Istanbul to Ankara, and its capital was raised from TL 300 million, of which TL 144 million paid up, to TL 500 million, of which TL 417 million has been paid. The management and personnel of the Bank also underwent considerable changes, leading to improved qualifications and a larger number of professionals, many of whom trained abroad. Other public banks are no more allowed to finance tourism projects, and the Tourism Bank inherited the small portfolio owned previously by Vakiflar Bank and Iller Bank (TL 164 million). The Bank realized a small profit (only TL 1 million) for the first time in 1972, and increased its capital to TL 600 million in 1973.

13.11 Demand for credit from the Bank amounted to TL 135 million in January-May 1973, compared to TL 13 million granted credits in 1972, and the 1973 target amount of lending (TL 150 million) is expected to be exceeded. The Tourism Bank lends up to 60% of the investment cost for projects in priority areas and up to 40% for projects in the development areas, with 8% interest rate for construction and furniture and 11.5% for working capital, a maturity and grace period of 12 and 3 years respectively for construction, 6 and 2 years for furniture, and 2 and 1 year for working capital.

Third Plan Targets and Prospects

13.12 The Third Plan strategy for the development of tourism emphasizes the need for physical planning, to prevent the unregulated development of tourist facilities, and the need to coordinate the development of superstructure and infrastructure investments. The Ministry of Tourism and the Ministry of Reconstruction and Resettlement will be in charge of preparing and implementing land use plans in the priority areas. Private activity will be promoted through a selective credit system (para 13.11) and by adequate financing from the Tourism Bank and other commercial banks.

13.13 The number of tourists is expected to increase to about 1 million in 1977 (16.3% per year) and the number of excursionists to 811,000 (17.6% per year), leading to an increase of receipts to $187 million (12.4% per year). An investment program representing 1.5% of total plan investment is envisaged with one-third representing public investment in infrastructure, and two-thirds investment in accommodation facilities, mostly by the private sector. The public sector will participate in superstructure investment

only in case of failure of the private sector to provide the required financing in priority areas. The lodging capacity is expected to increase to 126,000 beds in 1977 (11.9% per year).

13.14 Investment will be concentrated in priority areas, and will have to conform to the needs of mass tourism. Priority will be given to the development of integrated tourist complexes on the south coast which could be large enough to sustain a variety of supporting services, and to attract charter group traffic. The three priority areas of the south coast are Side, Antalya and Mugla.

13.15 Over 1.3 million foreigners visited Turkey during 1973, or 10% above the Third Plan target. In the light of these recent developments and of the low present volume of tourism in Turkey, the Third Plan targets for tourism growth seem conservative and might be exceeded. Bed capacity is expected to increase rapidly, a large number of projects coming into completion in the early years of the Third Plan. The most important of these projects are the Side complex (5,000 beds), the Kiziltepe Vacation Village (1,300 beds, to be later increased to 2,500 beds), the Antalya Holiday Village (1,300 beds), the Istanbul Sheraton and Intercontinental Hotels (1,500 beds) and the Cesme Holiday Village (1,000 beds).

13.16 In the longer term, growth of foreign tourism in Turkey will depend on (a) the coordination between infrastructure and superstructure investment, (b) the adequacy of local financing and of training of personnel, (c) the promotion measures to attract mass tourism, as well as (d) the cost of tourism in Turkey in relation to competing Mediterranean countries. Domestic tourism is likely to continue growing at a fast rate, given the expected increases in real personal income, and might conflict with foreign tourism for bed and site occupancy. This situation should be analyzed carefully. Spreading the holidays on a larger part of the year, as proposed in the Third Plan, would help accommodating more tourists while increasing the occupancy rates in the hotels.

13.17 Proper phasing of the infrastructure development and the construction of tourism facilities is already becoming urgent so as to avoid possible bottlenecks. The demand in Western Europe and the USA is growing rapidly, and private investors are eager to take advantage of this situation without insurance that the infrastructure investments will be ready in time. The intentions of the Government on the order of priority to be given to infrastructure investments are not clear, and projects are not implemented, or not even seriously analyzed. As a consequence, shortages and bottlenecks begin to appear in various fields, such as water supply, energy, airport capacity for charter flights, and road transport. Further delays in the implementation of infrastructure master plans when generous incentives attract private capital would lead to an unbalanced development of tourism, and may damage the natural resources of Turkey. Master plans for the regions of Antalya, Mugla and the South of Izmir have been recently completed. Local infrastructure is available for Eastern Antalya, and investments have been approved for other infrastructure work.

13.18 Prospects for adequate local financing of tourism facilities have improved significantly with the reorganization of the Tourism Bank. The new incentives given to foreign investors should attract more foreign capital than in the past. During 1954-1972, only TL 59 million foreign equity was invested in the tourism sector against commitments of TL 185 million. The Tourism Bank is now liquid and will remain so as long as the yearly allocations it gets from the Budget continue. Financing 50% of the investment target for superstructure during the Third Plan would require TL 280 million per year, and the Tourism Bank should have the capacity of playing a leading role in insuring the financing needs.

13.19 Prospects of foreign tourism in Turkey can be adversely affected by the rapid rate of domestic inflation combined with a fixed exchange rate. Turkey has already lost a large part of the price advantage it had in the past as a result of the price inflation of the last three years. Continued rapid price rises (unless adjusted for by devaluation or a special exchange rate for tourism) can be expected to check the rate of growth of tourism and/or lead to lower expenditure per head.