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## Turkish Industrialisation: A Geographical View

by

J.M.Wagstaff B.A., Ph.D.

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# TURKISH INDUSTRIALISATION
# A GEOGRAPHICAL VIEW

by
J.M.Wagstaff B.A., Ph.D.

Published by the Department of Geography
University of Southampton

Edited by R.J.Small M.A., Ph.D.

## Illustrations

# TURKISH INDUSTRIALISATION: A GEOGRAPHICAL VIEW

## NATIONAL SPACE AND RESOURCES

Turkey began to introduce modern factory industry early in the nineteenth century, but the transformation of the nation's economy has been far from complete. This can be demonstrated by some simple statistical indicators and comparison with Japan, a country which began to industrialise only slightly later than Turkey but in similar circumstances and from a comparable socio-economic base[1]. By 1970 Turkey's manufacturing industry employed about 12 per cent of the active population of 13,519,000 and contributed 14 per cent of GDP, but produced few exports[2]. By comparison, about 27 per cent of Japan's 50,940,000 active population were then employed in manufacturing industry. Manufacturing contributed 33 per cent of Japan's GDP and produced all of her exports, apart from a small amount of raw silk[3]. This paper attempts to outline the geographical aspects of Turkey's struggle to industrialise.

The paper is concerned with the territorial area now occupied by the Turkish Republic and chiefly its Asiatic component, but it also includes European Turkey which contains the heart of the country's largest city and former capital, İstanbul. Although centred in the European section of the country, the Istanbul conurbation has spread over a considerable area on both sides of the Bosporus and its tentacles reach out towards the Black Sea in the north and the Gulf of Izmit in the south. In the following pages the Asiatic part of Turkey will be called frequently by its traditional name, Anatolia (Turkish Anadolu). This is partly to avoid confusion when discussing industrialisation under the Ottoman Turkish Empire and partly to remain consistent with the sources used to provide a regional framework for the later discussion.

Anatolia has presented formidable barriers[4] to national economic development by its size and the distances which have to be covered. It is a rectangular peninsula around which sea communications have long been important, but often neglected by the government. It is more than 1600 kms long from its Aegean coast to the eastern frontiers, but generally less than 800 kms broad between the Black Sea and the Mediterranean Sea, distances which in 1915 may have taken about 13 and 7 days of continuous motoring to traverse[5]. The area is 755,681 $kms^2$. European Turkey or Thrace (Turkish Trakya) is much smaller and covers an area of 24,895 $kms^2$, about 3 per cent of the total area of the country. Between Anatolia and Thrace lie the Straits - the Bosporus, the Sea of Marmara and the Dardanelles. Despite well-developed sea communications, they have formed something of an obstacle to national integration and regional development, especially since the

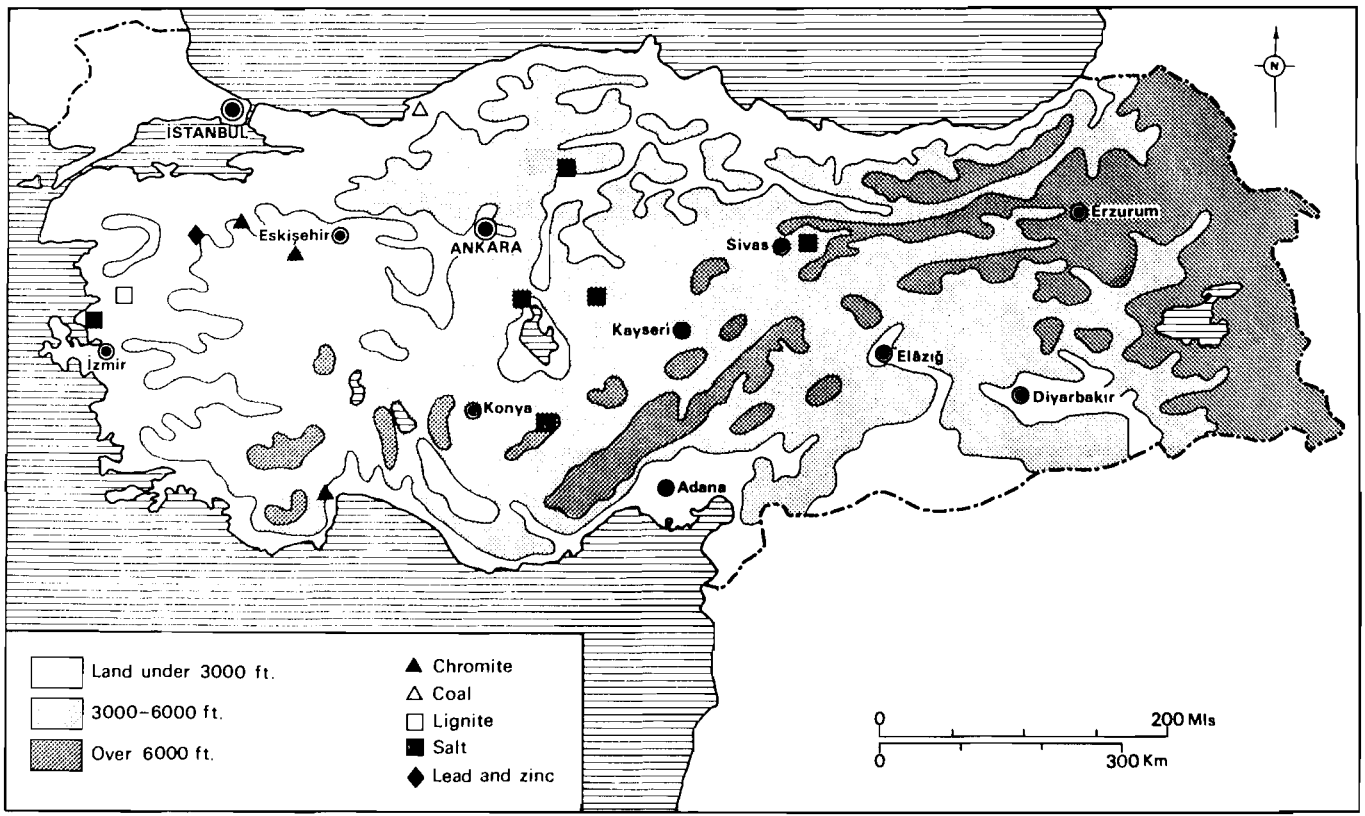


**Fig. 1: Turkey: Relief and Minerals Known c.1900**

coasts are frequently too steep to allow easy penetration. Dependence upon ferry services created a major bottle-neck, both physical and economic, at the heart of the İstanbul conurbation, but the construction of the Bosporus Bridge (opened 1973) should redirect and ease traffic flows, thus liberating economic development on the fringes of the conurbation and particularly in its Asiatic component.

Anatolia is framed on the north and south by chains of fold mountains which merge in the east to form a tangled knot (Fig. 1). Between the great mountain chains is a belt of terrain within which movement has been comparatively easy. Its north-western corner is an upland mass fringed by plains and extends across the Straits into Thrace. To the south lies a series of horsts separated by long, wide rift valleys which afford communication with the interior, particularly the valleys of the Gediz and Büyük Menderes rivers. Interior Anatolia, the "Grey Country"(Turkish Bozkır), consists of high-level plains (up to 1000 m) separated by mountain ranges rising up to 4000 m. South-central Anatolia is an area of aretic drainage, but most of the region is drained by the deeply incised Sakarya and Kızılırmak rivers. South of the plateau and closed off from easy communication with it by the embrace of the Taurus mountains are the large alluvial plains of Antalya, in the west, and the Çukorova in the east.

The rocks of Anatolia contain a variety of minerals, though for the most part they were little known and poorly exploited before the 1930s. The most important from the point of view of manufacturing industry are coal, lignite, oil, iron, chrome, copper, lead and zinc. Coal is chiefly found in the Zonguldak area near the Black Sea, though smaller deposits occur elsewhere (Fig. 1). Small deposits of lignite are widespread, but the main deposits lie in the west of the country. Oil was found in the south-east region of the country about 1940, but it was little exploited until the 1950s. Several sources of iron ore are known, but the most important were not discovered until the inter-war period, including the valuable magnetite of Divriği. Non-ferrous metals are widespread, but particular concentrations occur in the west and south-eastern parts of the country.

Turkey's climate has been described as transitional between classic Mediterranean and Continental types[6]. Most regions have a winter maximum of precipitation (Fig. 2), but Interior Anatolia has a pronounced spring maximum. Totals are generally low (< 300 mm in the Konya and Malatya areas), except in the west (600-800 mm) and over the mountains (800-1000 mm). A long summer drought is characteristic,

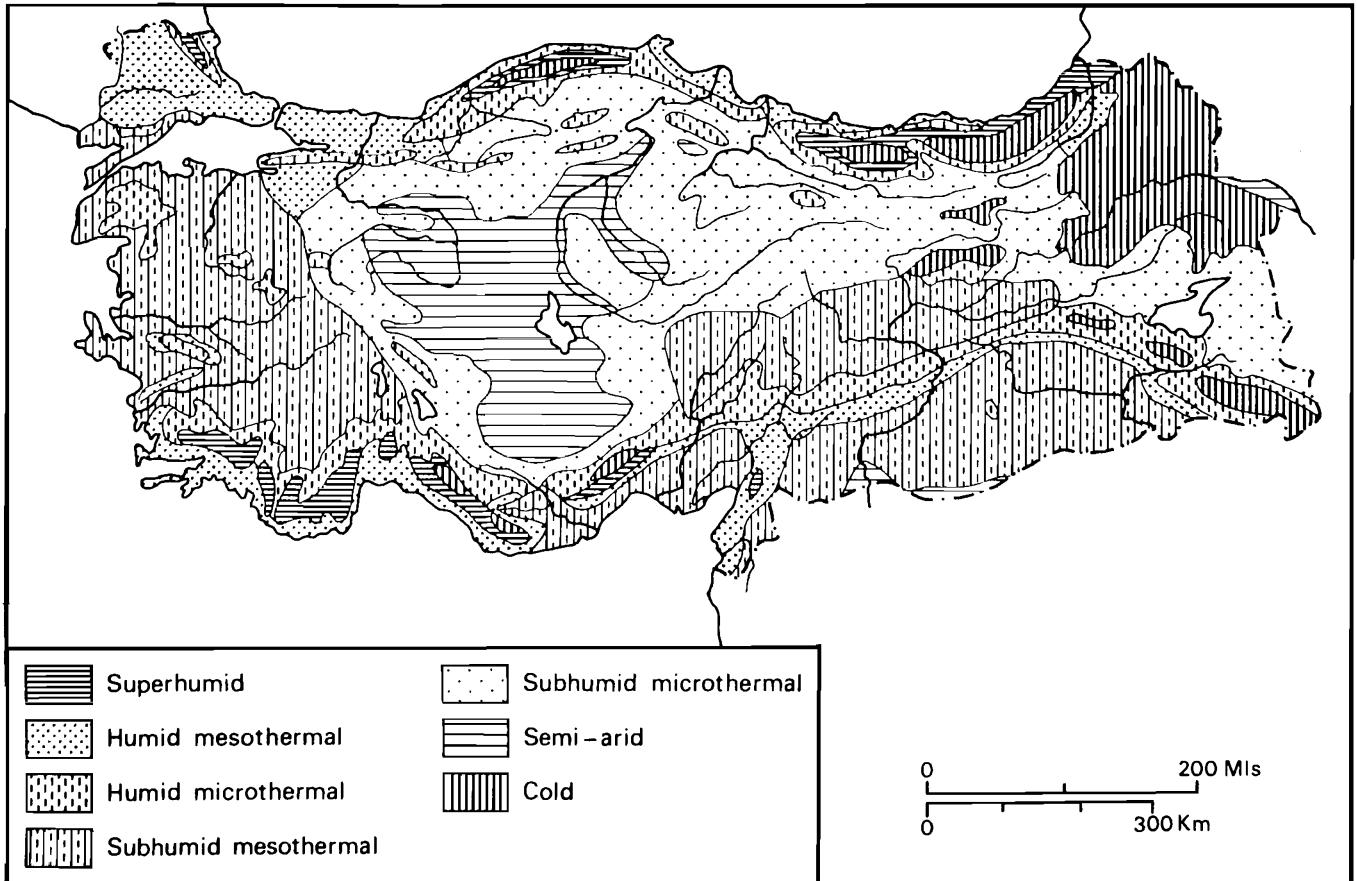


Fig.2: Climatic Regions of Turkey

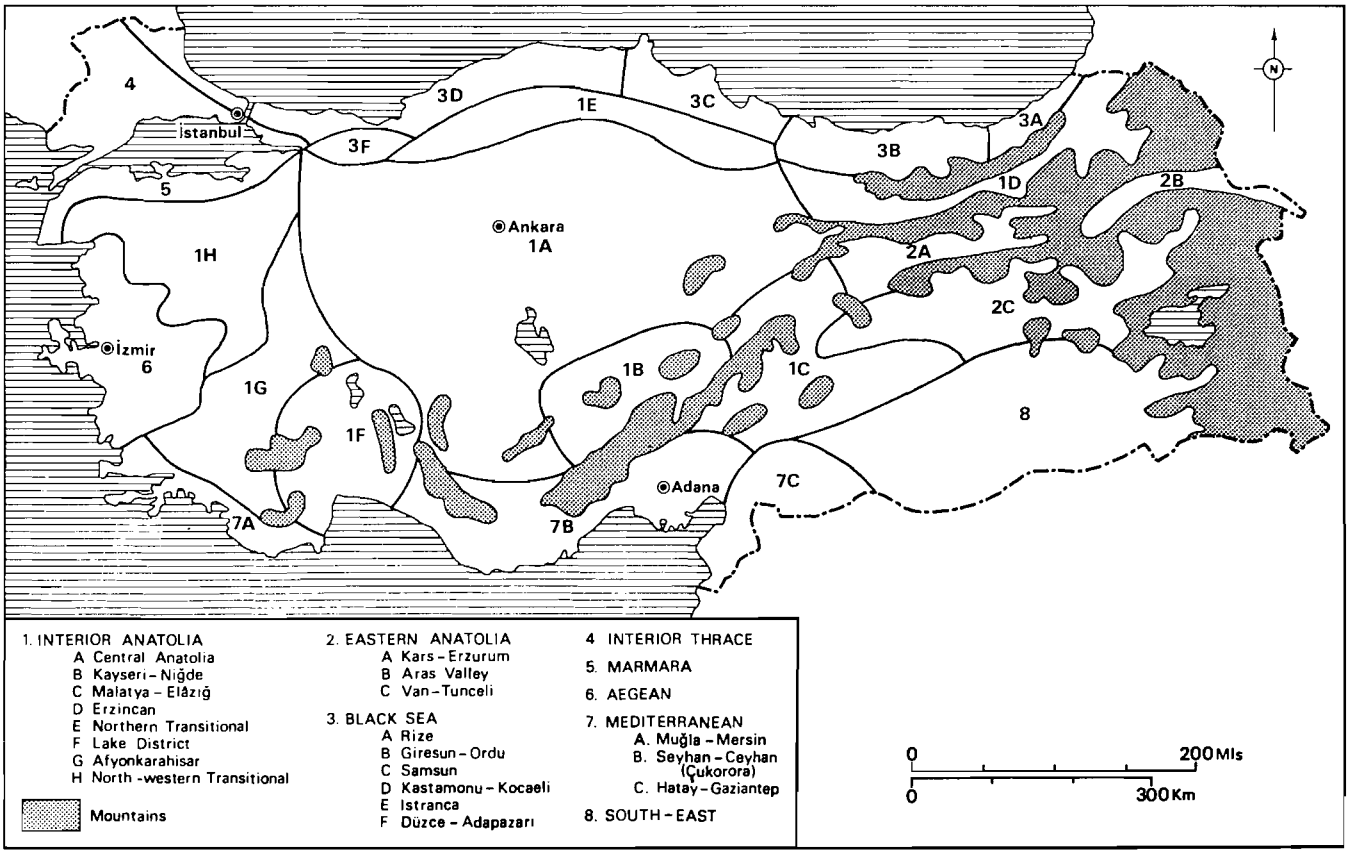


Fig.3: Agricultural Regions of Turkey (see table1)

but its extent and duration vary considerably from year to year with considerable direct effects upon crop yields. The interior is bitterly cold in winter, with frost and snow, and scorching in summer. Less extreme ranges are found around the periphery, chiefly adjacent to the coasts.

Climate and relief have interacted to produce a number of agricultural regions (Fig. 3)[7]. These may be distinguished by the combinations in which crops are grown and by the degree of livestock rearing (Table 1). Although the patterns recognisable today have remained broadly the same for several centuries, the intensity of land use has varied areally and temporally, whilst the crop mix has changed over time, especially with the introduction of such exotic crops as maize and tobacco (probably in the sixteenth and early seventeenth centuries) and, more recently, sugar beet (1920s).

Forestry and summer grazing have been characteristic of the high mountain areas. Everywhere else wheat and barley have predominated, probably since the "Neolithic Revolution", but the degree of dominance and the intensity of cultivation have varied. Livestock, especially sheep and goats, have been reared in most regions, but have predominated in the eastern regions of the country, where nomadic and semi-nomadic pastoralism are still found. Temperate fruits (apples, pears) have been grown in favoured areas. The major industrial crops,however, have been found around the edges of Anatolia in the Aegean, Black Sea, Mediterranean and South-eastern regions. Silk was produced in a number of districts in the same regions at the end of the nineteenth century, when Turkey was the world's fourth largest producer, but output dropped considerably after the First World War. Opium poppies were a speciality of the Afyonkarahisar and Amasya districts on the edge of Interior Anatolia, whilst flax has been grown near İzmit and hemp near İzmir and Kastamonu.

These different agricultural products are very often the raw materials of industry. Accordingly, their localisation might be expected to have affected the type and pattern of industrial development, though this has not been entirely the case in Turkey. Four phases of industrial development may be distinguished, two of them virtually new beginnings. Each has been characterised by different combinations of productive factors and marked by particular socio-political circumstances[8]. Each had contributed to the evolving spatial pattern apparent in 1970, the terminal date for this discussion.

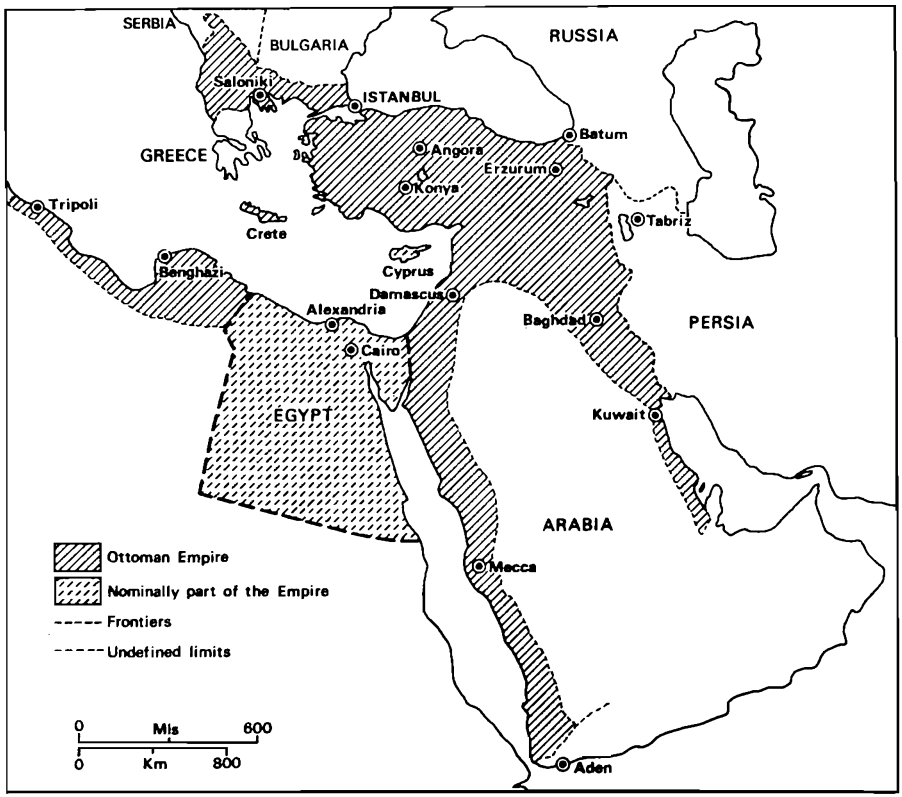


Fig.4: The Ottoman Empire, c.1900

PHASE I: THE BEGINNINGS, c.1800-1900

The industrialisation of Turkey in a modern sense really began during the last century of Ottoman rule, though the origins may be traced back at least as far as the closing decade of the eighteenth century[9]. The Turkish Empire may have been the "Sick man of Europe" during the nineteenth century, but her vast territories contained valuable minerals which could be exploited for the benefit of European and American industry and produced a diversity of crops, some of which could be transformed in the place of origin either for export or for sale in a market estimated at over 20 million people[10], even if many of them were impoverished. Anatolia, exploited and neglected, was the core of the Ottoman Empire (Fig. 4) and contained more than 50 per cent of its estimated population. Its more productive agricultural areas were fairly accessible from the sea, as were some of its more important minerals.

Mining was carried on in a haphazard and sporadic way, largely by a number of foreign companies, operating mainly in the western part of the country and comparatively near the coast (Fig. 5). Coal mining had begun in 1848 and by 1911-12 some 766,392 tonnes were raised, chiefly for bunkering and use in the İstanbul area, whilst lignite was used locally for raising steam and for heating in the Aegean and North-west Transitional regions[11]. Chromite was mined solely for export, mainly between Bursa and Kütahya, and during the period 1870-1900 Turkey was the world's leading supplier. Emery, used in polishing glass and metal, was also produced chiefly for export in the Aegean region. The production of other minerals was much smaller and more spatially scattered.

Handicraft industry was badly affected during the first half of the nineteenth century by imports of cheap western goods made possible by the Anglo-Turkish Commercial Convention of 1838 since it effectively removed most import controls. Output fell and many workshops closed, particularly in regions easily accessible from the ports[12]. The amazing thing, though, is that handicraft industry did survive. About 1000 workshops were listed in the Turkish Trade Annual for 1900[13], and this is probably a vast understatement of the true position. Local demand for traditional products seems to have remained strong, whilst distance and poor communications blunted the competitive edge of imports in the interior of the Empire. Cuinet's survey of the Asiatic provinces of the Turkish Empire in 1890-95 revealed that textile production was widespread in Anatolia and that there were a number of local specialisms, some of which entered inter-regional trade. Tanning, leather and

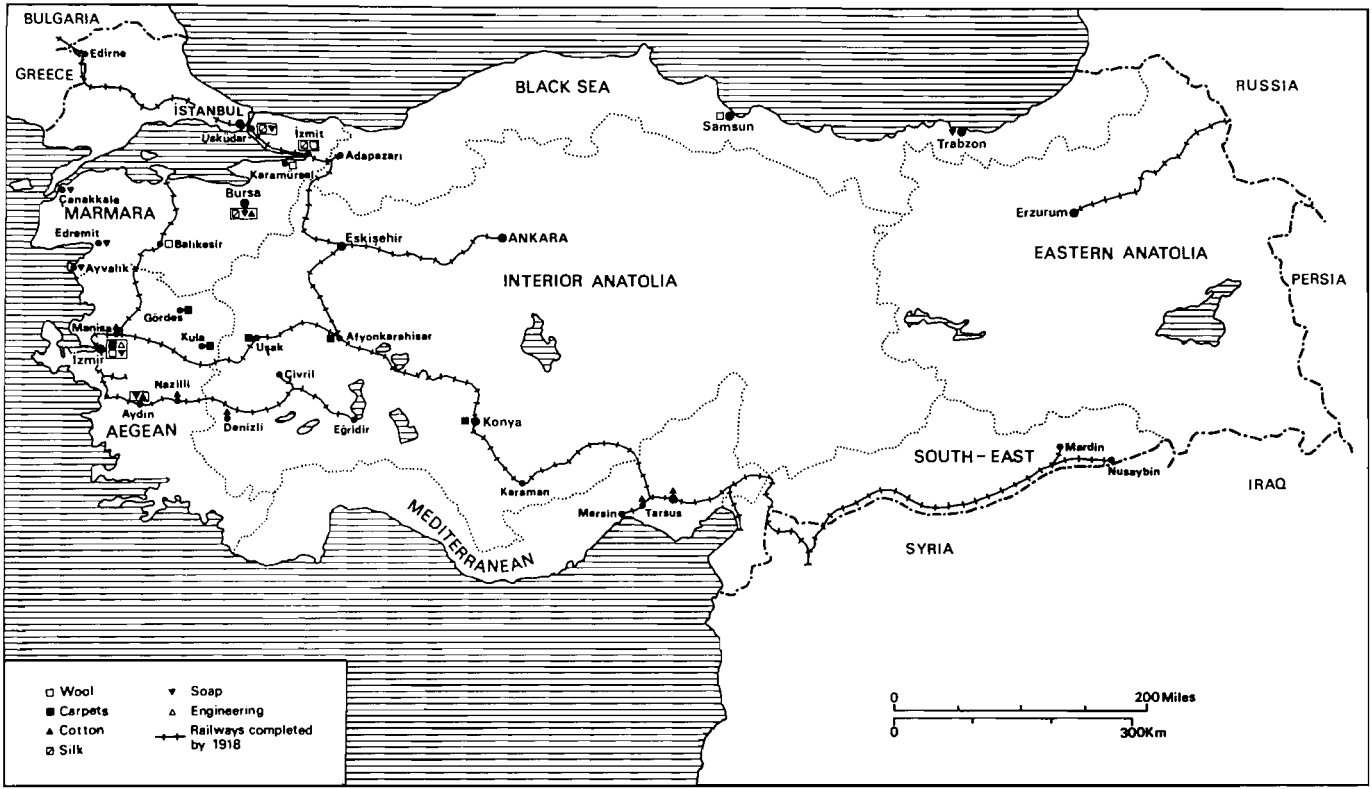


Fig. 5: Industry Within the Boundaries of the Turkish Republic, c. 1900–14.

metal working were also widely distributed, whilst charcoal burning and the sawing of planks were found in the forest districts of the Pontic and Taurus mountains. In addition, various other specialisms were found, amongst which the production of small arms and yataghans in a prize-winning factory at the military centre of Erzurum is one of the more surprising[14].

Power-driven, factory industry was very restricted in its distribution at the end of the nineteenth century (Fig. 5). An industrial census of 1913 revealed that there were 269 manufacturing establishments in the whole Empire using 5 H.P. or more; 76 of these processed food and 75 produced textiles[15]. Food processing was probably the most widespread industry of a modern type in Anatolia, but there was a marked concentration in the west, particularly across the Straits from İstanbul at Üsküdar, as well as around İzmir. The mechanical branch of the textile industry was very concentrated, too, and almost without exception plants were located in the districts producing raw materials. Bursa, in the North-west Transitional region, was the centre of the silk industry and its 10-12 reeling mills supplied thread for export as well as to the domestic weaving industry in the surrounding villages[16]. Cotton yarn and coarse cloth for the local market were produced in İzmir, where 15 spinning mills were reported in 1890s[17], in the towns along the Büyük Menderes valley (Aydın, Nazilli, Denizli) and at Adana and Tarsus in the Çukorova, later Turkey's leading cotton producing region. A domestic carpet industry was organised around a number of towns in the west. It was dependent upon power-produced woollen yarn made partly from local fleeces and partly from the fleeces of animals brought from the plateau for slaughter. Closely related to the textile industry was the production of soap in the olive-growing districts of western Anatolia, with the coastal town of Ayvalık as the leading centre. Atthe same time, the concentration of mechanised industry in İzmir was sufficient to support a number of machine building and repairing establishments[18].

Concentration in western Anatolia and Istanbul was very marked in the late nineteenth century pattern of industrial activity (Fig. 5). Small-scale cotton manufacturing in the Çukorova, silk producation at Samsun and soap-making at Trabzon were the major developments away from this region. Concentration owed much to the natural suitability of western Anatolia to a range of industrial crops and its comparatively dense and wealthy population, whilst İstanbul was the imperial capital

and the Empire's largest market. Accessibility was also important. All routes led to "New Rome", whilst İzmir was the focus of natural routes in the Aegean region and was linked with major agricultural areas by railways which had been constructed in the period after 1856 (opening of the İzmir to Aydın line). Railways opened up western Anatolia as a whole for industrial development in a way which was not achieved by the eastern sections of the Anatolian Railway[19] or of the Baghdad Railway[20]. A well-developed system of sea communications also focused on İzmir and allowed the easy export of goods in demand from Europe (silk thread and carpets, for example), as well as the import of coal from the Zonguldak area. In addition, the region itself possessed reserves of lignite which were exploited for industrial purposes. Finally, İzmir was the great centre of western commercial activity in Anatolia, and had been so since the seventeenth century, when English and Dutch merchants established themselves to tap the great inter-regional caravan routes which still terminated there.

At the end of the nineteenth century, foreigners owned most of the mechanised industries, as well as the railway and shipping companies and the mines. Indeed, foreign enterprise was of great importance in laying the foundations of mechanised industry in Turkey. The Capitulations, a series of agreements granting specific privileges in the Empire, had been extended in scope so much after the Anglo-Turkish Commerical Convention (1838) that foreigners enjoyed almost unrestricted freedom of movement and activity, as well as preferential tariff rates. Not only did this development facilitate an increase in imports, as mentioned above, but it also allowed foreign capital to penetrate deeply into the economy. Industrial entrepreneurs were attracted by the availability of raw materials, low wages, some skilled labour (especially in textiles), a potential market of about 10 million people in Anatolia alone and savings in transport costs. Their agents were often Armenian and Greek Christians, to whom the privileges of the Capitulations were extended by western embassies and consulates. The new privileged class of Avrupa Tüccari ("Europe Merchants") in turn became industrial entrepreneurs in their own right.

A comparatively small part was played in industrialisation by the state during the nineteenth century, though much has been made of it by western commentators. Unsuccessful attempts were made to protect industry against foreign competition early in the century and government help was given to the silk industry in the 1880s[21]. Efforts were also made to

establish new industries, particularly during the reign of Sultan Abdülmecit I (1839-61), but most of them failed after a short time. The privileges enjoyed by foreigners meant that they could not compete with imports, and protection was virtually impossible to provide because of Great Power pressures and the dominance of laisser-faire economics in the thinking of the period. Skilled manpower and managerial ability were scarce, whilst corruption was rife. Bottlenecks, particularly in transport, also created difficulties in assembling raw materials and supplying finished products[22]. Those factories which did survive were located near the capital, both in Thrace and Anatolia, and largely supplied military equipment for a guaranteed, non-competitive market in the shape of the large army which the Great Powers allowed the Sultan to maintain. From these modest survivals, the state sector expanded considerably during the next phase of industrialisation which began after the First World War.

## PHASE II: A NEW START, C.1920-1940

German intrigue took Turkey into the First World War on the side of the Central Powers. "Turkey had already been at war from 1911 to 1913, but her involvement in the clash of great powers was a new and shattering experience"[23]. She emerged from the holocaust at the end of October, 1918 as, in Mustafa Kemal's words, "a ruined land on the edge of the precipice"[24]. Her economy was ruined, her communications strained and her population decimated. Although the people were at first demoralised, the war had shaken them from the lethargy of centuries and a new spirit was soon to emerge. Allied plans to partition Anatolia, as well as the Empire's Arab provinces which they had already seized, met with unexpected resistance. A Greek invasion, mounted through İzmir in 1919, roused Little Mehmet even further. Rallied by Mustafa Kemal, Turkey's remaining successful general and a charismatic leader, the Turks stopped the Greek advance and finally threw the enemy back into the sea with the reoccupation of İzmir on 9 September, 1922. But the Greeks had devasted the countryside as they withdrew, and the effects of the war seemed crippling. On the political front, however, the War of Liberation forced the withdrawal of the Allied forces from south and south-eastern Anatolia, as well as from İstanbul, and established Mustafa Kemal's nationalists as the effective government of the country with a new capital at Ankara, in Anatolia. The immediate tasks of the new government were the preservation of political independence and the reconstruction of a war-torn country. The long-term goals amounted to nothing less than the

complete transformation of a suppressed and exploited population into an independent, western and industrial nation.

The Kemalists seemed to try to do everything at once, but in effect two phases of development may be recognised during the inter-war years. The first decade after 1923 was concerned largely with reconstruction and laying the legal foundations for subsequent economic advance. The second phase began about 1931 and was devoted to state-sponsored industrialisation.

During the 1920s industrialisation was encouraged in various ways. A massive educational programme was launched to prepare the people to support an industrialisation policy which previously had seemed alien to them. A law for "The Encouragement of Industry" was passed in 1927 to assist enterprises using machinery of at least 10 H.P. by granting such things as free land, reduced prices for raw materials and equipment, and by making various exemptions. The major impact of the law, however, came during the 1930s. In 1924 the İş Bankası ("Business Bank") was established to provide investment to industry. Government intervention around the same time saved the Bursa silk industry from the complete destruction which overcame the industry in Lebanon with the First World War, and steps were taken to establish sugar refining by encouraging the growing of beet and by opening factories at Alpullu (in Thrace) and Uşak (in western Anatolia).

The Republic also began an ambitious programme of improving communications, mainly by extending the railway system. The emphasis on railways has been criticised, mainly because of high construction costs and the low capacity of the single line track, but against this it needs to be remembered that, at the time, railways afforded the quickest and most efficient means of transport available, especially for the movement of troops and bulky raw materials. Some 783 kms of track were laid by 1929 and a further 2455 kms were added before 1939-40, bringing the whole system to a total of 7444 kms compared with 4106 kms in 1923. By 1938 most of the system was in public hands. The objectives were clear[25]. One aim was to open up the country, particularly its central and eastern regions. This was achieved (Fig. 6), though the western parts of the country remained the best served and even improved their position with new lines from Balıkesir to Eskişehir and from Afyonkarahisar to Dinar, whilst Eastern Anatolia was little more than penetrated. The second objective of the programme was to further the exploitation of Turkey's agricultural and mineral resources.

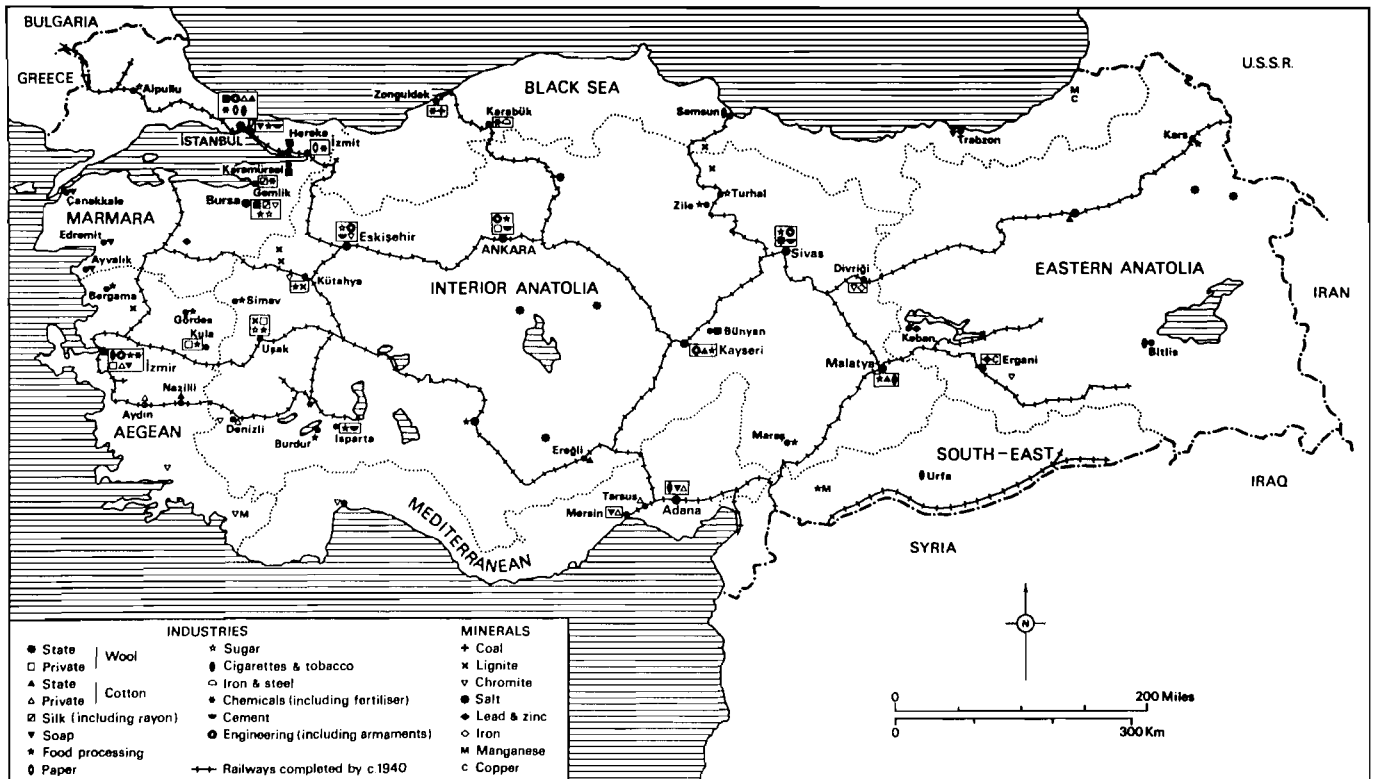


Fig. 6: Industry in Turkey, c. 1940.

Although exports benefitted most from this before the World Depression, Turkish manufacturing industry was also assisted. In the 1930s the railways were vitally important to the policy of dispersing industry to the less-developed parts of the country.

By comparison with the attention given to railways, little state effort went into the provision of energy. Nonetheless, coal and lignite output increased, distribution became easier and supplies could be dispatched to a much wider area than had been possible before the First World War. Steam remained the chief source of power, whilst electricity generation, which had been banned until 1900 and had made little headway before the War, was confined to the main towns.

The other obstacles to industrialisation were considerable. Liquid capital for investment was desperately short, whilst war had wrecked much of the fixed capital so laboriously built up under Ottoman rule. The population had been reduced by emigration and slaughter, many of those lost being Armenian and Greek Christians whose skills and investments had been so important in commerce and industry at all levels. Rebellion, dissession and nation-building, as well as post-war reconstruction, absorbed much time and effort. At the same time, the Treaty of Lausanne (1923) acted as a brake on industrialisation. In particular, it secured the continuance of low tariffs favourable to foreign imports until 1929 and retained foreign concessions; these were only gradually and expensively bought out[26].

It is scarcely surprising in the circumstances that by 1927 Turkey's industrial structure had advanced very little beyond the pre-war position. Although more than 65,000 industrial establishments were reported in that year, only 8.9 per cent employed more than 5 workers and only about 0.5 per cent (342) were industrial enterprises even within the meaning of "The Law for the Encouragement of Industry". Food processing involved about 44 per cent of all concerns and textiles about 24 per cent[27]. Little spatial dispersion had taken place and the major industrial concentrations remained in the west, especially in İzmir and around İstanbul. Change began during the 1930s.

The government was responsible for much of the industrial development during the 1930s, especially for dispersion away from the western parts of the country. Designation of Ankara as the new capital indirectly stimulated industrial developments under private enterprise by providing a relatively wealthy market, a boom in construction and by focusing communications. But this approach could be expected to achieve

major success only once in the national economic space, and the main impetus to industrialisation in Interior Anatolia came from direct action in the industrial sector. The new approach developed during the 1930s is usually called Etatism (Turkish Devletçilik). It was never adequately defined, but its aim became clear as the policy was implemented - "to initiate and develop projects in fields which were of vital concern to the strength and well-being of the nation, and in which private capital was incapable, inactive or dilatory"[28]. These fields were chiefly, but not exclusively, industrial. The Turkish leaders decided to embark upon Etatism only partially because of the failure of private enterprise to bring about the industrialisation of the economy and develop Interior Anatolia. Other influences were important. The ending of tariff restrictions in 1929 gave the government the freedom needed to implement a national economic policy, whilst an example of effective state action was available in the Soviet Union where the First Five Year Plan was launched in 1927, a time when Turko-Russian relations were friendly. The effects of the World Depression emphasised the lack of industrial development in Turkey and her dependence upon the export of primary products. Finally, there was the Ottoman imperial legacy, consisting of a number of state economic enterprises, on the one hand, and a long tradition of state intervention in economic affairs, on the other[29].

Investment was structured by two Five Year Plans (1934-39, 1938-c.1940). The first aimed at establishing consumer industries to use local raw materials and substitute for imports, whilst the second emphasised producer and capital goods as well as energy provision. Both plans were very unsophisticated by modern standards and were really little more than "listings of industry, mines and infra-structure which the government considered desirable"[30]. Only state industry was covered. The private sector was catered for by continuing previous arrangements, whilst agriculture and its basic relationships with industry were almost completely neglected. Funds were channelled through two, originally three, development corporations*. The Sümer Bankası was established in 1933 with the major responsibility of operating the existing state enterprises, as well as planning and ultimately running new industrial concerns. The Eti Bankası was founded in 1935 to develop mining in co-operation with the Maden Tetkik ve Arama Enstitüsü ("Mineral Research and Development Institute") and

*The Deniz Bankasi did not operate effectively and its responsibilities were taken over by the Ministry of Communications.

according to a special Five Year Plan launched in 1936[31]. Capital continued to be raised from government monopolies on tobacco, spirits and salt, as well as from confiscated evakf (mortmain) property, but new sources were also tapped. High taxes were applied internally, custom duties were raised, prices were fixed at high levels and loans were secured from Britain and the Soviet Union.

Industrial development was further assisted by the type of activity promoted and, to some extent, by a favourable combination of socio-economic conditions within the country. Several of the new activities had important linkages. For example, the new cement and iron works fed the construction industry, much of which was concerned with building industrial plant and extending the railway system. Railways eased the flow of goods and their business benefitted from increased production at the mines and in the textile mills. Import substitution was a major aim, particularly under the First Plan and even in the cotton industry, where Turkey started in the faintly ridiculous position of exporting raw cotton but importing much of the cotton cloth required by the population. Textile production, of course, was well suited to national circumstances, in particular the income-elasticity of demand, the availability of raw material and great mobility of the products, though the possibilities of large-scale production and high labour absorption rates were attractive to government planners. The use of local agricultural materials by industry was an important factor in increasing the cultivated area from 4.9 per cent of the total area of Turkey in 1927 to 12.2 per cent in 1940, and in raising the real value added in agriculture by 20 per cent over the decade 1929-39, despite the very severe agricultural depression of 1929-35[32]. Although rural incomes increased only slightly, the average population increase of 1.8 per cent per annum between 1927 and 1940 in turn helped to expand the national market for processed foods, cigarettes and textiles. Migration to the new industrial towns, though small scale and often seasonal in nature, provided the necessary labour force.

The consequences of government policy on industry weredramatic, both at the national and the regional level. By 1939 the number of industrial establishments covered by "The Law for the Encouragement of Industry" had risen to 1144. Agriculturally-based industries remained of first importance with 468 establishments (40.9 per cent of the total) and were followed by textiles with 249 establishments (21.8 per cent). Sugar refining had expanded by

the addition of new factories at Eskişehir (1933), Turhal (1934) and Bursa (1939) in the new beet-growing districts, whilst canning had been introduced to Adana, Bursa and Malatya and the production of powdered milk to Kars (Fig. 6). Soap making had been extended to the Çukorova and made use of oil produced from processing cotton seed, the residue from which was turned into cattle cake. Cotton and wool remained predominant in the textile industry, but the production of artificial silk was started at Gemlik and Bursa, using cellulose produced at İzmit from Turkish pulp. New departures were made in the mining, metallurgical, chemical and paper industries. Paper was made in 37 establishments, chiefly at İstanbul and İzmir, though a plant was opened also at İzmit. Mining, which had been stagnant during the 1920s, received substantial encouragement. Coal and lignite production was increased to 3,019,000 tonnes and 229,000 tonnes respectively. The valuable magnetite deposit was discovered and worked at Divriği, the chromite of Güleman was exploited for the first time and the neglected mines at Ergani and Keban were re-opened for copper and lead-zinc production respectively. The production of iron and steel was started at Karabük in the Yenice valley, using fuel brought from the Zonguldak coalfield and ore from Divriği. By 1940 the Karabük plant was supplying most of Turkey's demands for rails, bars, girders, plates and wire, despite the inefficiencies in production created by an uneconomic site[33]. Armaments factories were established at Ankara and Kırıkkale, 70 kms east of the capital, whilst railway repair shops were constructed at Eskişehir and Sivas. Vehicle assembly was started on a small scale by Ford near İstanbul and aircraft assembly was begun at Kayseri[34]. Chemical production was associated with the coking plant at Zonguldak and the blast furnaces at Karabük, but chlorine and caustic soda were made at İzmit and sulphur was processed at Keçiborlu, near the major natural deposit. One other important development of the 1930s was the spread of cement making. Six large plants were constructed, three near İstanbul and one each at Eskişehir, Ankara and Sivas.

A marked feature of industrial development during the 1930s was the spread of enterprises to the Central Anatolian and Kayseri-Niğde sub-regions of Interior Anatolia (Fig. 6). Single modern plants were established near railways on the outskirts of several towns with populations at the 1927 census of 10,000 or over. Small concentrations of industrial activity emerged in major provincial cities such as Eskişehir, Kayseri and Siva, which were important railway nodes, whilst

new industrial regions began to emerge along the Gulf of İzmit and around the ends of the Karabük-Zonguldak axis. The general effect, though, was to disperse industry in a way which was socially and politically justifiable, but which was often economically inefficient. Some new developments were located near raw material (sugar refining, for example) and markets (cement) or where communications were good (paper and cellulose at İzmit). Other locations were chosen primarily to "seed" socio-economic development, though they were sometimes justified on the grounds of national defence. This was particularly true of the cotton mills established at Ereğli, Kayseri and Malatya in Interior Anatolia. Although situated on the railway, the plants were distant from the main source of raw material in the Çukorova and located in regions of low population (35-57 persons/$km^2$ in 1935), where markets were likely to be comparatively small and labour scarce. The location of the iron and steel industry at Karabük has been severely criticised because production was dependent upon fuel located 100 kms away and upon ore transported for over 900 kms, though the original intention was to use ores from the neighbouring Camdağ[35].

The very dispersal of industrial activity created economic difficulties. Single, scattered factories required the duplication of basic facilities and this was expensive. Complementarity between investments was often lost, thus weakening the attractiveness of the new locations for other industries. This is the fundamental reason why industry remained concentrated in the west, especially at İzmir and around İstanbul. Necessary improvements to the harbours of these dominant cities only served to increase their attractions since they already enjoyed a better infrastructure than anywhere else in the country. İzmir's pull on industry was further strengthened by, on the one hand, the reconstruction necessary after the devastating fire of 1923, and, on the other hand, by the foundation of an international trade fair. Although transference of the capital to Interior Anatolia had looked like economic folly in the 1920s[36], only Ankara could compete with the two old ports as an attractive industrial location. As there were few resources in the vicinity of Ankara, industry developed during the late 1930s largely because of the market artifically created by government action. The town's increasing and wealthy population provided a valuable market for industrial goods, particularly consumer goods, whilst developing centrality gave access to the national market, such as it was at this period. A vast building programme stimulated the production of

construction materials by private firms, though the state took a hand by its investments in infrastructure and by establishing cement and armaments plants. These developments attracted even more people to Ankara. Migration thus reinforced the growth of local industries and provided the labour for the new factories and workshops, as well as for expanding service industries. The pull of Ankara became so great after the Second World War that severe strains were put on the urban services, while the rise in the number of unemployed and underemployed people created by saturation of the labour market, seemed to constitute a threat to public order. The slightly later emergence of similar trends in Turkey's other large cities created a situation in which the government renewed its commitment to industrialise the less-developed provinces, a policy which was somewhat in abeyance during the early years of Democratic Party rule following free elections in May, 1950.

## PHASE III: ECONOMIC GROWTH, 1950-1960

Turkey did not become involved in the Second World War until the very end. However, full mobilisation, vast defence expenditures and heavy taxation brought a decade of virtual stagnation, particularly in industry. The post-war period, especially during the ten years of Democratic Party rule from 1950 to 1960, was marked by four changes which together had a profound effect on the industrialisation of Turkey. These were the encouragement given to private enterprise, the availability of large amounts of foreign aid, the relative prosperity of agriculture, especially in 1951-53, and a rapid increase in population.

Private enterprise had not been neglected under the Etatist system, but its scope had certainly been restricted by the priorities and privileges given to the State Economic Enterprises (SEEs). The post-war years brought considerable criticism of the state sector. The SEEs were shown to be inefficient and doubts were cast on their effectiveness in raising per capita income, which had remained virtually stagnant over the period 1938-50, despite a 25 per cent increase in national income. Support grew for a policy which would give relatively less attention to the public sector of the economy and encourage private enterprise. Advocacy of this line helped the Democratic Party to win the elections of May, 1950 and thus become responsible for the implementation of new policies[37].

Old restrictions on private foreign investment were lifted and

American, Swiss, German and Dutch companies began to invest in Turkish industry, especially in the production of chemicals, rubber, machinery, cement, processed food and petroleum. The main instrument of government assistance, though, was the Türkiye Sınai Kalkınma Bankası ("Industrial Development Bank of Turkey") established in May, 1950 by 18 banks, industrialists and business groups, including the International Bank, which had suggested the idea, and the Turkish Central Bank[38].

Funds from the International Bank were important to Turkish investment policies during the 1950s, but American aid, available from 1947 onwards, was crucial. American aid began following Turkey's plea for assistance from the West when The U.S.S.R.claimed territory in the eastern provinces and asked for military bases on the Straits. The aid was initially military in character, but the role of purely economic assistance soon grew. This sudden availability of funds encouraged the reckless spending which was influential eventually in bringing about a revolution in 1960. At first, though, capital was available on a large scale for investment in industry and infra-structure.

One of the first programmes to be launched with American technical, as well as financial assistance was massive expansion of the road system. A total of 60,623 kms of road were built between 1948 and 1959, of which 63.5 per cent were all-weather roads. The military character of the network is apparent and the parallelism with the earlier railway system is striking (Fig. 7), but it did serve to open up the interior of Turkey as never before and to integrate the national space into more of a single economic system than existed before the Second World War. Travel times were reduced drastically, whilst the amount of freight and the number of passengers increased considerably. Railways continued to work, of course; the system was even extended and by 1959 still carried about 60 per cent of the goods moved and 30 per cent of the passengers[39]. Foreign aid also went into the improvement of harbours, notably at İzmir and İskenderun (initially for military purposes), and into increasing electricity production. Although a number of new thermal stations were built in the north-west and west, where coal and lignite were available, attention was also given to the development of Turkey's considerable HEP potential. A number of comparatively small HEP stations were built, chiefly in connection with flood control and irrigation schemes, but six large ones were also constructed, three of them in the Aegean and North-western Transitional regions but two on the Kızılırmak south-east of

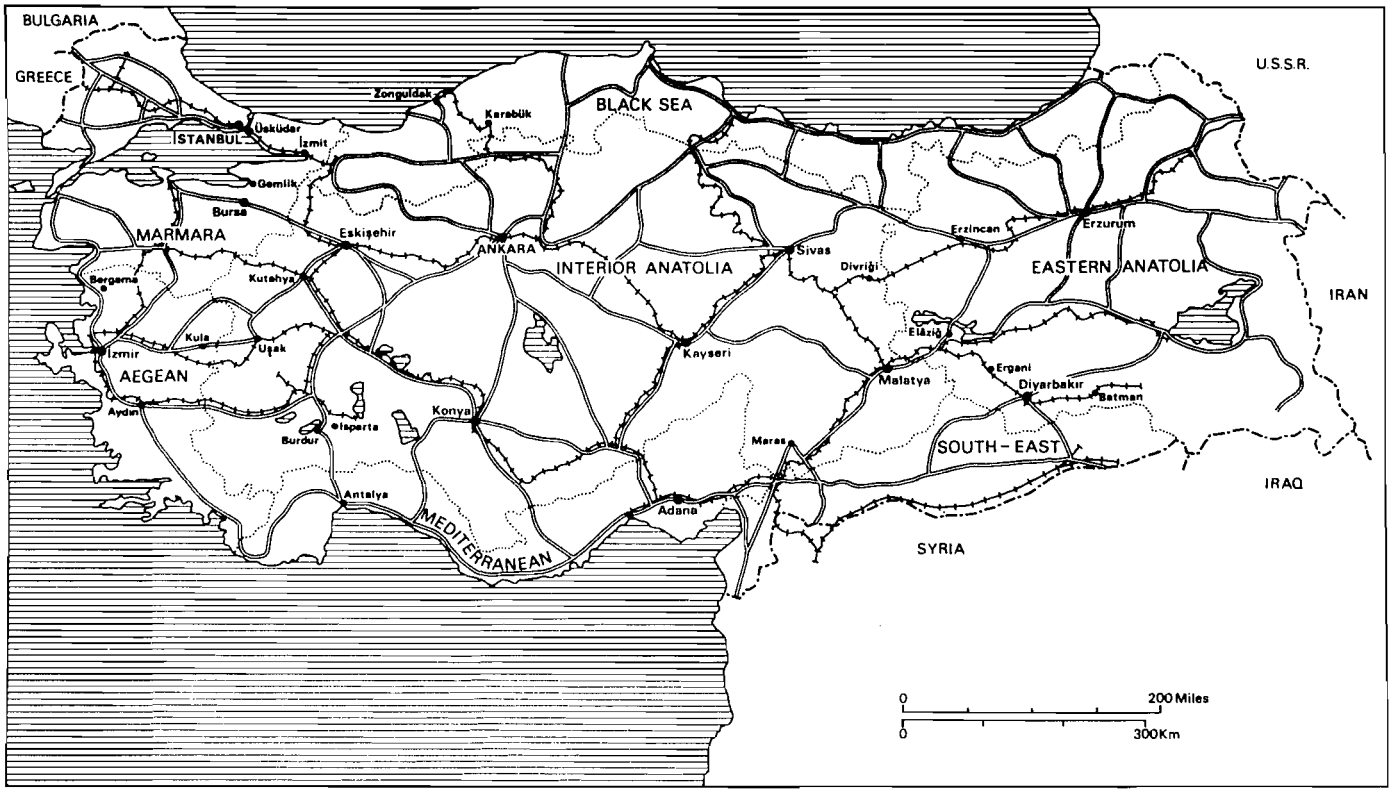


Fig. 7: Communications in Turkey, c. 1960.

Ankara and one in the Çukorova. Power stations in the Aegean, North-western and Central Anatolian regions were integrated into a grid, but elsewhere single power stations continued to supply large towns and their immediate neighbourhood.

Electrification was one of the ways of bringing the modern world to the Turkish village, which changed rapidly during the 1950s. Agriculture appeared to prosper, too. The cultivated area increased from 18.7 per cent of the total area of Turkey in 1950 to 29.9 per cent in 1960. Expansion was mainly in the cereal-growing regions of Interior Anatolia, for there was little change in the ouput of industrial crops, despite the extension of irrigation which might have been expected to encourage such developments[40]. It was achieved by ploughing up marginal land formerly used as extensive grazing. The use of tractors, which increased in number from 17,000 to 42,000 over the decade, made this possibly by allowing greater mobility to the farmer, but improved credit facilities, high prices and good weather in 1951-53 were also important. Changes in agriculture assisted industrialisation in several ways. A market economy was further developed by the farmer's need for machinery, fuel and fertilisers. At the same time, high incomes allowed some of the wealthier landlords to invest in industry, particularly small-scale food-processing plants[41]. For the mass of the people improved incomes meant that a wider range and a larger quantity of consumer goods came within their reach.

The rural situation began to deteriorate after 1953. Although not the only contributing factor, population increase was very influential. Between 1950 and 1960 the total population increased by 33 per cent, an amount nearly equivalent to that achieved during the whole period 1927-50. The causes were a falling death rate and rising birth rate which resulted from the eradication of malaria, the spread of preventative medicine, improvements in living standards and a reduction in the severity of famine. The net effect was to reduce the amount of land available for the support of each rural family. Together with unemployment created by the introduction of tractors[42], this increased migration to the towns to the level of about 30 per cent of the estimated rural natural increase, compared with an average of about 10 per cent over the previous 23 years. Consequently "rapid urbanisation became a critical factor in Turkish development"[43]. Ankara, İstanbul and İzmir experienced population increases of 123, 48 and 65 per cent respectively during the decade, and these were the largest in the country. Housing was not available

to accommodate the influx and the number of gecekondu ("built during darkness") is estimated to have increased from about 50,000 in 1955 to 240,000 in 1960; 70 per cent of these sub-standard dwellings were in the three great cities and they housed altogether some 25 per cent of the country's entire urban population. The rural influx provoked two reactions from the government. First, it tried to keep the rural population in the villages, but the measures adopted, which promoted mechanisation and cash cropping, tended to increase migration. Secondly, the government tried to relieve pressure on the three leading cities by itself providing work in new industrial plants established in provincial centres[44], though generally these were placed in the already developed rather than the less-developed provinces.

During the 1950s industrial output rose by between 7 and 8 per cent per annum. The contribution of industry to GDP rose from about 12 per cent in 1950 to 14 per cent a decade later, whilst the contribution of manufacturing industry alone doubled. The number of enterprises using more than 10 HP and/or employing more than 10 workers rose to more than 5,000 by the end of the decade[45]. Growth was greatest in the production of building materials (including cement), textiles, sugar and fertilisers.

A striking new development was oil production. Petroleum was first found in the Ramandağ district in the south-east during 1940, but production remained low until the 1950s when it increased from 30,000 tonnes in 1950 to 373,000 tonnes in 1959 as output was stepped up and neighbouring fields came into production (Fig. 8). A refinery was built at Batman, near the oil fields, and others were started at İzmit and Mersin, but were not on stream before the revolution of 1960.

The number of private industrial firms doubled over the decade, 1950-60. Their average number of workers was 35, compared with 200 in the SEEs[46], and they were kept small by a lack of capital and taxation policies. Textiles, food processing and tobacco production were the main lines of activity. However, the industrial enterprises sponsored by the Industrial Development Bank employed an average of 70 people and only 30 per cent of them were engaged in the food and textile branches. Some diversification was being achieved, since 25 per cent of the firms assisted by the Industrial Development Bank were concerned with vehicle repair and maintenance, about 10 per cent produced chemicals and pharmaceuticals and 5 per cent machinery and metal goods[47].

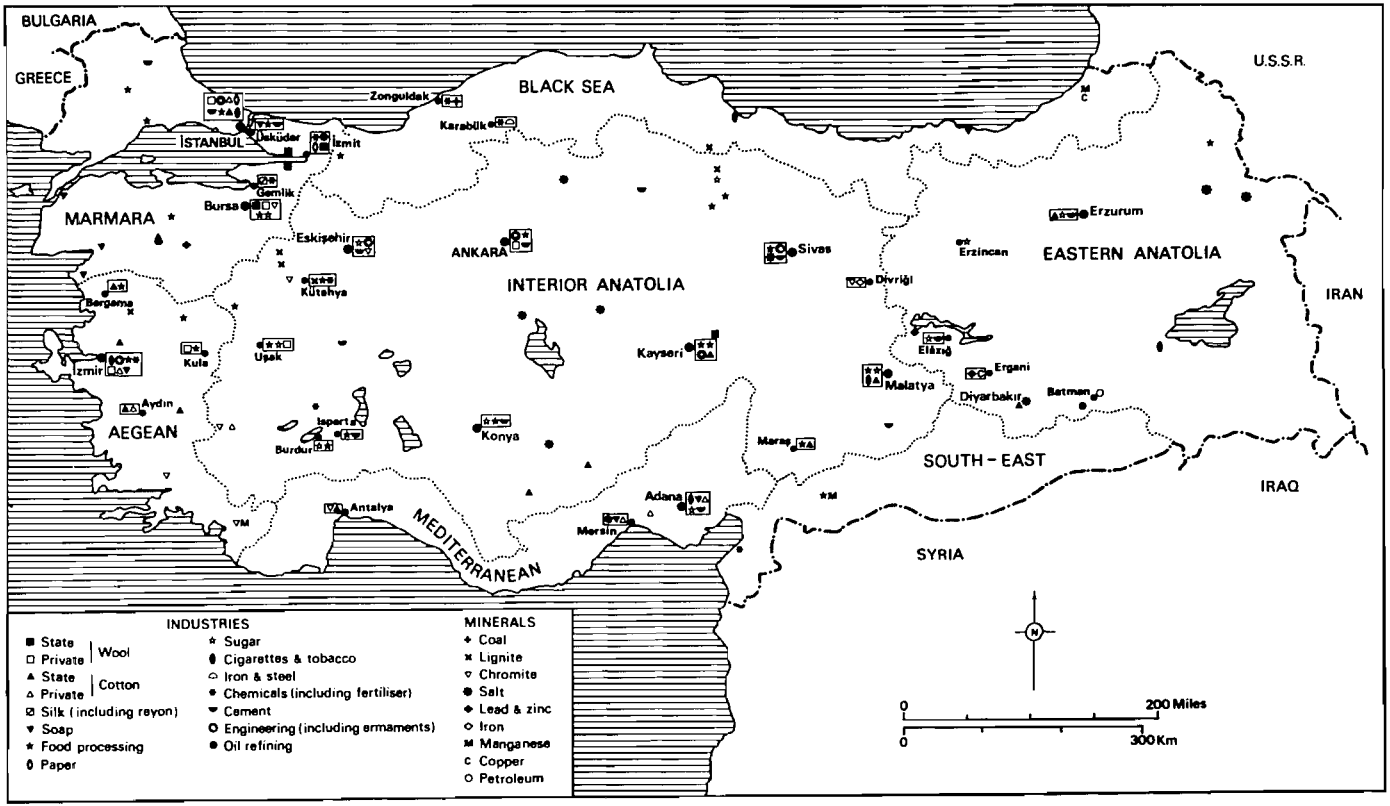


Fig. 8: Industry in Turkey, c. 1960.

Despite the encouragement of private industry, the SEEs not only continued to exist but also acquired another 40 factories during the decade, especially after 1953. They included the oil refineries and a new fertiliser plant, but most of the new plants produced sugar (14), textiles (11) and cement (10). The continuation of these almost traditional lines became uneconomic, though, since the market was already saturated. For example, Turkey becamse self-sufficient in sugar by 1950 on the output of just 4 refineries, and yet the state started the construction of 14 more, 11 of which were completed by 1956. High production costs meant that there was little possibility of finding a market abroad and the surplus was simply dumped, mainly on neighbouring Arab countries. Many of the new enterprises were launched without any co-ordination with other aspects of development in the economy, and many may be regarded as panic measures. They were induced by the failure of the economy to grow as extensively or as fast as the government's promises required, by the need for political support from the provinces and by the concern to stop the flow of rural migrants into Ankara, İstanbul and Izmir by trying to create counter-magnets.

All but 12 of the new SEEs were located outside the Aegean, Marmara and North-west Transitional regions in towns with populations of 10,000 or more. The pattern was dispersed (Fig. 8), as during the 1930s, but less clearly related to local resources or markets. Lack of co-ordination with other development activities meant that the plants were unable to act as foci for industrial concentrations. Nonetheless, industry was spread further across Interior Anatolia and towards the east of the country, but the most backward regions - Eastern Anatolia, the Mediterranean coastlands between Muğla and Mersin and much of the Black Sea region - were still neglected. Most industrial activity remained concentrated in the west of the country and, to a lesser extent, around Ankara. More than 1000 of the private firms using at least 10 HP and/or employing 10 or more workers in 1957 were situated in İstanbul vilayet ("province"), nearly 500 in İzmir, 351 in Bursa and 234 in Ankara vilayets[48]. Seventy-five per cent of the plants sponsored by the Industrial Development Bank were similarly located in the Aegean, Marmara and North-western Transitional regions, as were 30 per cent of the new SEEs. Other plants sponsored by the Industrial Development Bank were more scattered, but with some concentration in Ankara and Adana.

Concentration was due to four main advantages enjoyed by the already industrialised regions. İstanbul and İzmir offered the largest and wealthiest markets in the country, and tax receipts from the cities indicated that incomes were rising there more rapidly than in the rest of the country[49]. The government's concern to transform the three leading cities stimulated construction, thus expanding the market for construction materials of all kinds. The second advantage enjoyed by the growth regions was in transport. İstanbul and İzmir remained the most important ports and were improved. The road building programme emphasised their nodality and strengthened that of Ankara, easing the flow of goods between them and inwards from the provinces. At the same time, the relative ease of movement throughout the country reduced the need for manufacturers to locate their factories away from the existing industrial regions, whilst the relative paucity of transport links in the backward regions, as well as their comparative remoteness, both physically and perceptually, were positive disincentives to locate there. Capital availability was the third advantage possessed by the already industrialised regions. Private wealth was concentrated in the three main cities, whether this was generated by international trade or drained from the land in rents. Ankara, İstanbul and İzmir remained the main banking centres and entrepreneurs in the provinces experienced great difficulty in securing access to capital[50]. The Industrial Development Bank had only one office and this was in İstanbul, so that whilst industrialists in the North-western Transitional region had fairly ready access, their counterparts in, say, Diyarbakır were 16 hours drive or 2.5 hours flight away*. Finally, the leading industrial regions possessed the advantage of being able to offer external economies because so many industries already existed there and the necessary infrastructure had already been developed. Dispersal of industry in an ad hoc manner and the poor choice of locations meant that no other industrial area could fight successfully for more factories against the established industrial centres.

## PHASE IV: RETURN TO PLANNING, 1960-70

Extensive, often misallocated investments to develop the regions of the country, together with subsidies and deficit financing, caused

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*But the flight is available only once a week, Türk Hava Yollari, Yaz Tarifesi, 1973

the Turkish economy to overheat during the 1950s. Mounting inflation and a serious imbalance on current trading account resulted. Rigid government control of the economy was introduced in 1958 to curb inflation and to restore international confidence, but growing economic dislocation and increasing social frustration produced a political upheaval which culminated in a military coup d'état on 27 May, 1960[51]. Civilian rule was soon restored, but the army continued to loom in the background as the guarantor of democracy and socio-economic justice.

The revolution produced a return to planned economic development. Not only was the principle of planning enshrined in the new constitution but planning machinery was also set up. The High Planning Council, consisting of ministers meeting under the chairmanship of the prime minister, was responsible for policy and determining the broad planning strategy. The actual preparation and implementation of development plans was placed in the hands of experts collected together into the State Planning Organisation[52]. The first Five Year Plan was launched in 1963 and the second in 1968. Both were formulated within the general framework of a 15-year development perspective. They were based on a macro-economic growth model relating "income levels to gross investment with relevant capital-output ratios"[53] and, consequently, were more comprehensive than the industrial development plans of the 1930s. Nonetheless, the plans were really a set of desirable objectives projected on the basis of previous trends and related to each other in a consistent way, rather than detailed planning programmes.

The general aims and achievements of the First Five Year Plan are indicated in Table 2. Despite the continuing weakness of agriculture, which was partly due to an unrealistic target and inadequate investment, the overall rate of economic growth was more or less achieved. Turkey was also able to finance a larger proportion of the developments from her own resources than was envisaged originally, partly because of a substantial bonus in the form of remittances from Turkish workers in western Europe. Funds were available from abroad, particularly from OECD and EEC, with which Turkey entered a form of association in 1964[54]. Industry in general fell short of its target, though investment was actually higher than planned. This poor performance is probably related to the retardive influence of output fluctuations in agriculture and the continued inefficiences of the SEEs, but also responsible were the migration of labour abroad and the greater than expected growth of services, itself in part a result of the employment and wealth generated by the establishment of planning

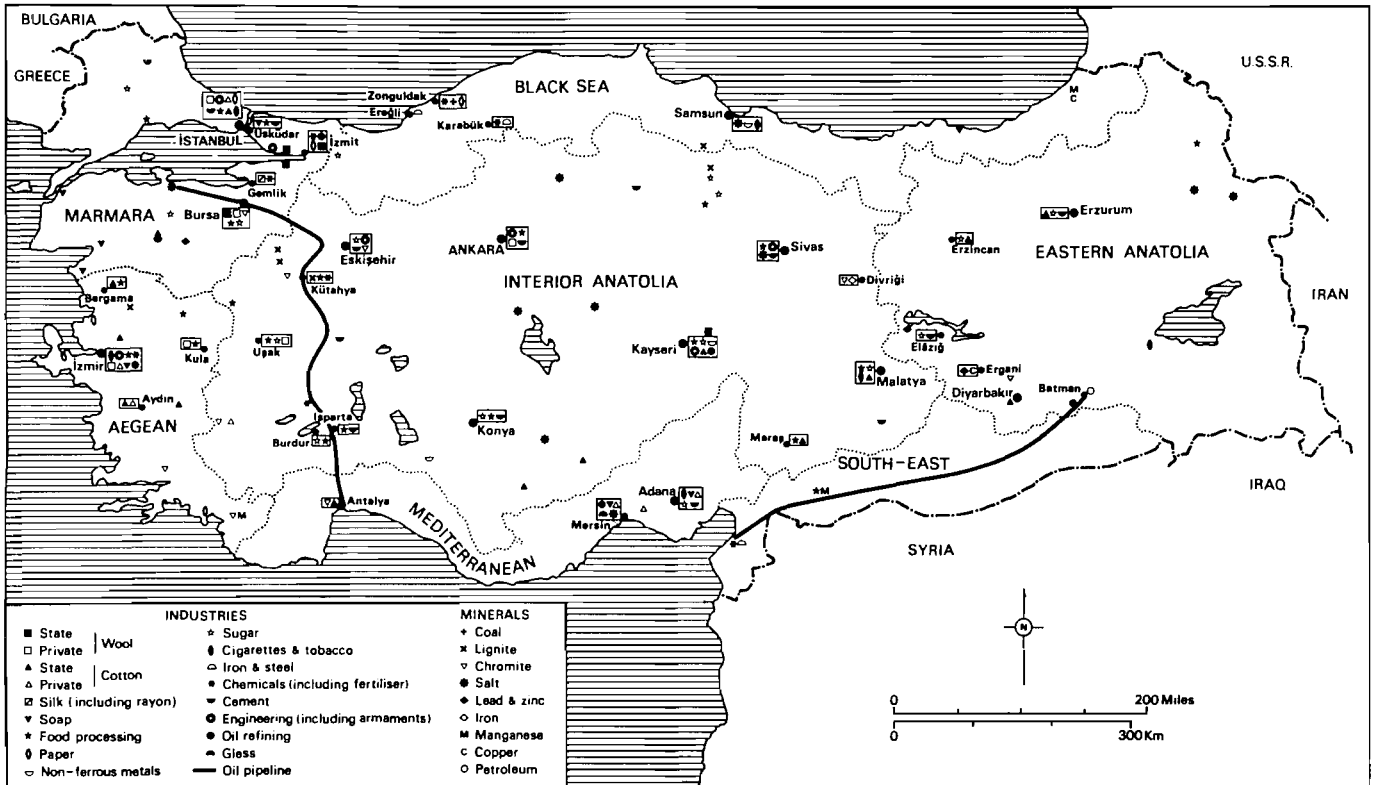


Fig. 9: Industry in Turkey, c. 1970.

machinery.

Growth was most rapid in the steel, oil and textile industries. To meet rising demand, a new steel mill was started in 1961 at Ereğli, near Zonguldak (Fig. 9), by a consortium composed of the Industrial Development Bank, the Turkish Iron and Steel Corporation and the Sümer and İş Banks. It was based on local coal, but ore was shipped from near Sivas, first by rail to Samsun and then by sea to the production site. Costs were thus below those incurred at the old steel centre of Karabük, but production was still not competitive in world terms. Ereğli specialises in flat-rolled products, whilst Karabük continues to make large constructional steel. Cotton textiles were an obvious target for expansion and the rise in output was considerable, achieved mainly by increasing the number of private plants and improving production in the state factories. Rising demand for oil ensured the continued growth of the petroleum industry, particularly when the new refineries came into operation at İzmit (1961) and Mersin (1962). These became centres of petro-chemical industries, as did the latest refinery, at İzmir (1971). Output of motor vehicles increased by 97 per cent between 1960 and 1967, with about 30 per cent of the total beingassembled in Turkey itself by foreign firms. Economies of scale were lost, however, by the fragmentation of the industry between 15 enterprises, most of which were located in the Aegean, Marmara and North-western Transitional regions.

## REGIONAL IMBALANCE

Despite Turkey's overall progress in industrialisation, the regionalisation of success is difficult to demonstrate directly over time. Numbers of industrial plants or industrial workers in the various regions provide only imprecise indicators. Not only have definitions changed considerably over the period surveyed in this paper but also government agencies have published statistics in very different ways. In any case, such figures do not indicate the degree to which socio-economic patterns in general have been changed. However, some indication of the extent to which the Turkish provinces have been industrialised and of the spread of industrialisation across space and through time may be gained through an examination of two rather indirect effects of the process.

First, provincial variations in development levels in relation to public investment for 1967[55] generally reflect the degree of industrialisation which had taken place by that date (Fig. 10). High

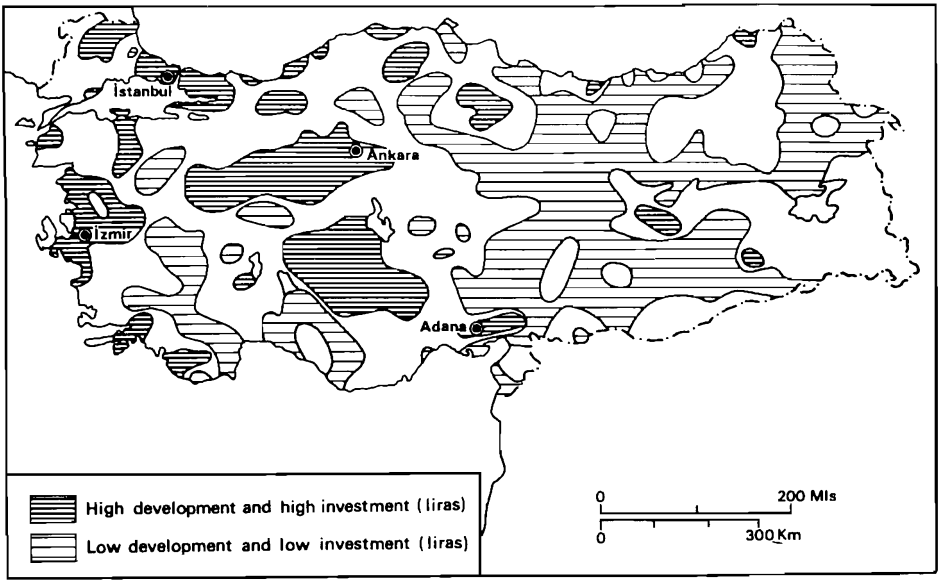


Fig.10: Development and Public Investment, 1967

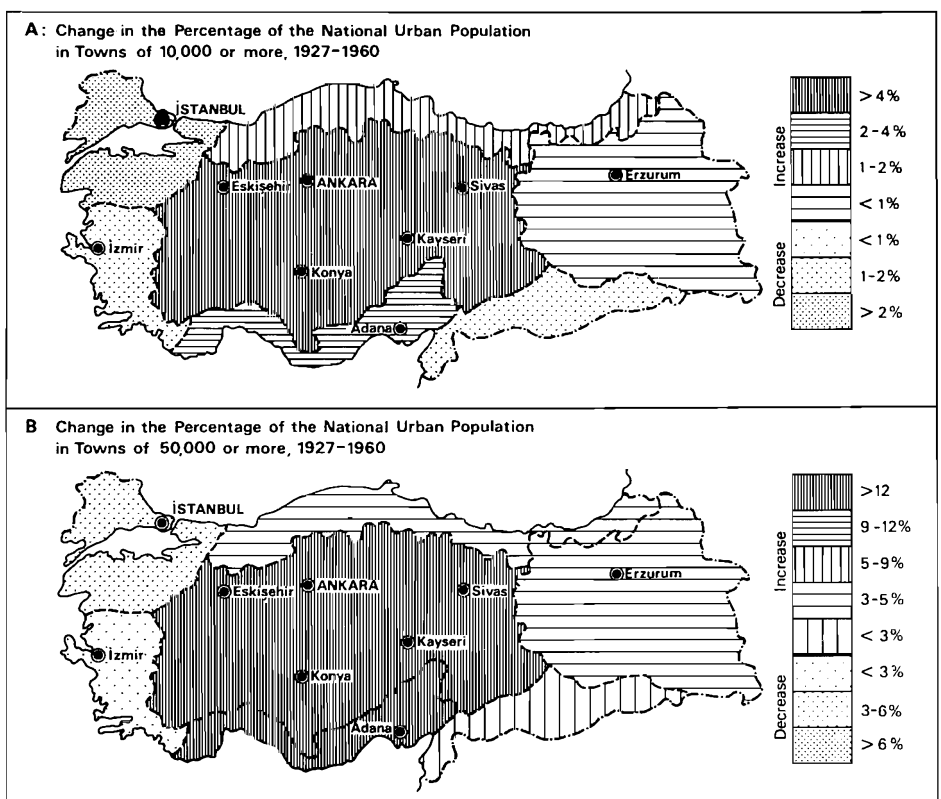


Fig.11: Urbanisation of Turkey, 1927-1960 (see Table 3)

development and high investment rates during the 1960s were associated largely with the major industrial areas already existing in the west and centre of the country as a result of some one hundred years of attempted industrialisation. The İstanbul and İzmir areas stood out very clearly, but so did an emerging axis of development running from Ankara through Eskişehir towards İzmir. The map also emphasises the patchy and scattered pattern of high development and high investment areas, even in the more advanced western parts of the country. High ranks elsewhere were both fewer in number and also more scattered in space, a pattern due largely to the influence of single recent projects. New cement works at Trabzon and Van and a superphosphates plant at Samsun were responsible for the high rank achieved by their vilayets, as was the development of refining and petro-chemicals in the Çukorova. Although a new superphostphates plant was built at Elâzığ, the high rank of that district can be attributed mainly to investments allocated to the Keban Dam, completed in 1973, and of national as well as regional importance for further industrialisation[56].

A second indirect measure of industrialisation is provided by the urbanisation* of Turkey over the period 1927-60, a process which can be examined thanks to work by Keleş (Table 3; Fig. 11). The increase of services and the expansion of communications have been important to urban growth in Turkey, as elsewhere in the Middle East, but the introduction of industry has been an important catalyst, especially in Interior Anatolia.

The Marmara and Aegean Planning Regions were the most urbanised in 1927. İstanbul and İzmir were the country's major ports and the nodes of industrial concentrations which remained strong from Ottoman times and were based firmly on access to a variety of raw materials, fuels and relatively wealthy markets. Interior Anatolia was the third most urbanised region, but this resulted largely from the build up of population in Ankara after it had become the capital of the new republic. At this date it was not related to the significant development of industry, though new plants were being established in Ankara. The Mediterranean region came close behind, mainly because of the concentration of towns in the Çukorova associated with the development of a cotton textile industry by private enterprise. By contrast, low levels of urbanisation were found in the Black Sea region, the South-east and Eastern Anatolia. Mechanised industry had scarcely penetrated these regions.

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*For purposes of this discussion, a town is a settlement with a population of at least 10,000.

Urban population increased throughout Turkey in the period after 1927, and was accompanied by a spread of modern industry. The Marmara region retained its predominance as the most urbanised region of the country. It also remained the most important industrial region as the already strong agglomerative tendencies asserted themselves and the early republican aversion to İstanbul diminished. İstanbul emerged by 1960 as the major concentration of leather, paper, electrical equipment and metallurgical industries in the country[57]. Despite continued investment by both public and private enterprise, the Aegean region lost its place as the second most urbanised region to Interior Anatolia by 1950. There was no absolute decline in degree of urbanisation or industrialisation. It was simply that the attempts to develop Interior Anatolia had been successful. Although the growth of industrial enterprises in Ankara slackened after 1960, until that date the existence of an expanding market made the capital the great industrial success of the period 1930-60. The period to 1960 was marked also by the emergence of Eskişehir, Kayseri, Konya and then Sivas as industrial cities with populations of about 100,000 or more. Industrialisation was spreading eastwards. Erzurum became a significant industrial centre and grew to a population of about 100,000 by 1960, but elsewhere in Eastern Anatolia progress was disappointing. The Black Sea and South-eastern regions were even further behind.

The most urbanised regions appeared to be those containing pockets of heavy and sustained public investment. Communications and the provision of electricity were improved, chiefly in the Marmara, Aegean and Interior Anatolia regions. Nineteen of the 21 cities over 50,000 in population in 1960 (excluding Ankara, İstanbul and İzmir) possessed major state industries and 15 of them possessed more than one[58]. Only one of these cities, Denizli, was in the Aegean region, whilst three (Isparta, Kırıkkale and Küthaya) were situated in Interior Anatolia. One each was found in the Black Sea (Karabük) and Eastern Anatolia (Erzincan) regions, indicating the relatively low degree of industrialisation in these peripheral regions. Only at Adana, Mersin and Tarsus in the Mediterranean region was private enterprise important in the spread of industrialisation away from the three core areas. Even in the Çukorova, though, state investment in road construction, drainage and irrigation was fundamental to the expansion of cotton growing on which growth in the regional economy depended. In fact, the lack of private investment in anything but cotton growing and the production of cotton textiles is a major problem for the region.

The situation in the Çukorova, one of the fastest developing regions of Turkey, illustrates the basic weakness of Turkish private enterprise. Private capital is generally invested only in activities where the turnover is rapid and the profits high. Commerce and construction are thus favoured instead of industry, a pattern of investment also encouraged by the short-term lending policies of most of the banks. State investment is essential, especially for the production of capital and even intermediate goods. It seems vital if there is to be any industrial development in the peripheral provinces. The SEEs receive most of the state's investments for these purposes, but they also suffer from being the essential tools of industrialisation. Thei, locations are often uneconomic, and expensive new infrastructure has to be provided. They are not competitive and drain state resources. Meanwhile, the constant shortage of development capital, despite large-scale aid from abroad and improved fiscal measures at home, raises the question of whether Turkey is wise to continue a policy of dispersing industry in the provinces. Realisation that the concentration of investment might be more effective in creating really viable counter-magnets to Ankara, İstanbul and İzmir has promoted the designation of Eskişehir, Samsun, Kayseri, Elâzığ, Gaziantep and Diyarbakır as potential growth centres.[59] The spread is in favour of the eastern provinces and may be seen as a recognition of the basic regional imbalance created as much by distance from the advanced parts of the country as by an uneven distribution of resources. Turkey is a very large country with a roughly rectangular shape and lines of communication are long. Industrial activity has been concentrated at one end, and though it has been spreading, the eastern regions are still remote from the advancing edge. Difficult communications have reinforced relative isolation, whilst economic development has been dispersed by the rather scattered pattern of available minerals and agricultural land.

Provided that they are afforded adequate investment, the new growth centres will become the cores of further industrialisation. Advance, however, may be impeded by uncertainties in Ankara over regional development policy. Thus, the First Five Year Plan stated that regional policy should aim "to increase overall productivity by priority allocation of resources to regions with high social and economic potential". At the same time the Plan maintained that regional policy should seek the "elimination of regional imbalances and (the) acceleration of the development of backward regions"[60]. The Second Five Year Plan contains similar contradictions. Decisive policy making is clearly called for, whilst

reform in the highly centralised administrative system is highly desirable to achieve inter-departmental co-operation in formulating intergrated and coherent plans for the regions. A departure from investment by vertical sectors alone is desirable, too, so that the spatial implications of industrialisation policies, for example, might be appreciated. At the same time, industrial development remains so firmly based on the agricultural sector that farming needs more serious attention from the centre. Not only is agriculture one source of industrial capital and the livelihood of the mass of the population, but it also supplied the raw materials for food processing and textile manufacturing, which remain the country's leading industries. Industry is concentrated currently where industrial crops are grown. Fluctuations in industrial out-put and in the contribution of industry to the national income are in phase with fluctuations in agricultural production. These in turn are controlled by inter-annual variations in precipitation[61]. Consequently, failure to invest in agriculture with a view to stabilising production, for example, are serious. Not only is industrialisation made difficult at the national as well as the regional scale, but also the whole economic advance of Turkey is retarded.

Table 1: Agricultural Regions of Turkey

| REGION | SUB-REGION | | |
|---|---|---|---|
| | Name | Physical Conditions | Specialities |
| I INTERIOR ANATOLIA | A Central Anatolia | -0.2 20.0 360 Plateau | Cereals Livestock |
| | B Kayseri-Niğde | 0.3 22.7 357 Volcanic Soils | Cereals (rye) Fruit Vines |
| | C Malatya-Elâzığ | -1.2 26.8 368 Mts Basins Plateau | Cereals Fruit Cotton Rice Tobacco |
| | D Erzincan | -3.6 23.8 365 Mountains | Cereals Vines |
| | E Northern Transitional | -1.3 20.3 438 Mountains | Cereals Tobacco Rice Sugar Beet |
| | F Lake District | 1.7 23.0 615 Karst | Cereals Roses |
| | G Afyonkarahisar | 0.3 22.0 461 Plateau | Cereals Poppies Livestock |
| | H North-Western Transitional | 0.2 20.5 552 Hilly | Cereals Maize Tobacco Vegetables |
| II EASTERN ANATOLIA | A Kars-Erzurum | -8.6 15.0 476 Mts Depressions | Cereals Vegetables Livestock |
| | B Aras Valley | -10.1 20.9 546 Depressions | Vines Cotton Rice |
| | C Van-Tunceli | -3.4 22.1 383 Mts Valleys | Cereals Livestock |
| III BLACK SEA | A Rize | 6.9 19.8 2440 Mts Plains | Maize Tea Citrus Tobacco |
| | B Giresun-Ordu | 7.2 22.7 836 Mts Plains | Maize Hazelnuts Beans Tobacco |
| | C Samsun | 6.9 20.0 731 Mts Plains | Cereals Vegetabls Tobacco |
| | D Kastamonu-Kocaeli | 6.0 19.2 1245 Mts Basins | Cereals Maize |
| | E Istranca | 5.5 22.3 735 Mountains | Cereals Maize |
| | F Düzce-Adapazarı | 6.6 23.1 774 Basins Plains | Cereals Maize Potatoes Fruit Sugar Beet Tobacco |

| | SUB-REGION | | |
|---|---|---|---|
| | Name | Physical conditions | Specialities |
| IV<br>INTERIOR<br>THRACE | | 2.0 21.9 609<br>Plateaux Basins | Cereals Maize Hemp<br>Sugar Beet Tobacco Vines |
| V<br>MARMARA | | 5.4 21.6 740<br>Plateaux Basins | Fruit Vegetables Cereals<br>Tobacco Olives Vines |
| VI<br>AEGEAN | | 8.6 24.8 693<br>Mountains Valleys | Cereals Tobacco Cotton<br>Vines Figs Olives |
| VII<br>MEDITERRANEAN | A Muğla-Mersin | 10.0.25.0 1030<br>Mountains Plains | Cereals<br>Cotton Flax Sesame Citrus |
| | B Seyhan-Ceyhan (Çukorova) | 9.1 25.0 611<br>Plains | Cereals<br>Cotton Early Fruit Citrus |
| | C Hatay-Gaziantep | 8.0 26.9 1141<br>Mountains Valleys | Cereals<br>Vines Olives Pistachios |
| VIII<br>SOUTH-EAST | | 5.0 27.7 452<br>Plateaux Valleys | Cereals Livestock<br>Rice Vegetables Vines<br>Fruit |

Key to Physical Conditions

Jan. mean Temp. ($^{o}$C), July mean Temp. ($^{o}$C), Average Annual Precipitation (mm) for representative stations.

Sources: Devlet Meteoroloji İşteri Genel Mürdürlüğü, Ortalama ve Ekstrem Kıymetler, İstanbul, 1962; Erinç, S. and Tunçdilek, N.(1952), 'The Agricultural Regions of Turkey', Geogrl. Rev. 42, 189-203.

Table 2: Aims and Achievements of the First Five Year Plan, 1963-67

| Selected Aspects | Target | |
|---|---|---|
| | Planned | Achieved |
| 1. Growth of GNP per annum | 7.0 | 6.7 |
| 2. Gross Capital Formation per annum | 10.7 | 13.2 |
| 3. Gross Fixed Investment as % of GNP | 19.0 | 18.0 |
| 4. Foreign Investments as % of GNP | 3.5 | 1.5 |
| 5. % Growth in Agriculture per annum | 4.2 | 3.3 |
| 6. % Growth in Industry per annum | 12.3 | 9.7 |

Source: OECD, Economic Surveys, Turkey, Paris, 1968, Tables 8 and 10.

Table 3: Urbanisation of Turkey by Regions, 1927-1960

| Administrative Regions | Towns with Populations of 10,000 or more | | | | | | Towns with Populations of 50,000 or more | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % of Regional Population | | | % of National Urban Population | | | % of Regional Population | | | % of National Urban Population | | |
| | 1927 | 1950 | 1960 | 1927 | 1950 | 1960 | 1927 | 1950 | 1960 | 1927 | 1950 | 1960 |
| Marmara | 36.5 | 37.0 | 42.5 | 43.0 | 35.7 | 31.3 | 29.0 | 28.5 | 35.0 | 72.0 | 50.0 | 39.5 |
| Aegean | 20.5 | 24.5 | 29.5 | 14.1 | 13.8 | 12.5 | 49.0 | 10.9 | 14.9 | 14.6 | 11.0 | 9.3 |
| Interior Anatolia | 11.1 | 17.2 | 25.0 | 15.4 | 20.7 | 22.8 | 21.5 | 11.8 | 17.5 | 7.1 | 25.6 | 24.5 |
| Mediterranean | 19.3 | 21.5 | 33.0 | 9.9 | 11.4 | 13.7 | 33.0 | 9.2 | 21.7 | 0 | 8.7 | 13.8 |
| Black Sea | 5.7 | 7.6 | 12.0 | 8.1 | 8.9 | 9.8 | 0 | 1.3 | 4.1 | 0 | 2.7 | 5.0 |
| South East | 15.0 | 15.2 | 16.0 | 5.1 | 4.3 | 4.0 | 0 | 0 | 8.4 | 0 | 0 | 2.8 |
| Eastern Anatolia | 7.6 | 8.5 | 13.0 | 5.4 | 5.2 | 5.9 | 0 | 2.2 | 7.8 | 0 | 2.0 | 5.1 |
| National Average | 16.4 | 18.8 | 25.0 | 100 | 100 | 100 | 7.7 | 10.5 | 16.6 | 100 | 100 | 100 |

Source:

R. Keleş, Türkiyede Şehirleşme Hareketleri, (1927-1960), Faculty of Political Science, Ankara, 1961, (mimeographed)

NOTES

1. Wary, R.E. and Rustow, D.A., (eds.), Political Modernisation in Japan and Turkey, Princeton University Press, Princeton, 1964.
2. United Nations, Statistical Yearbook, 1971, New York, 1972 Tables 77 and 181.
3. United Nations, op. cit.
4. Dewdney, J.C., Turkey, London, 1971.
5. Darkot, B., Turkiye Iktisadî Coğrafası, Istanbul, 1958, 165.
6. Dewdney, op. cit., 16-28.
7. Erinç, S. and Tunçdilek, N. (1952), 'The Agricultural Regions of Turkey', Geogrl. Rev., 42, 189-203.
8. Stewig, R. (1972), 'Die industrialisierung in der Türkei', Erde, 103, 21-47.
9. Clark, E.C. (1974), 'The Ottoman Industrial Revolution', Int. J. Middle East. Stud., 5, 65-76.
10. Cuinet, V., La Turquie d'Asie. Géographie Administrative, Déscriptive et Raisonée de Chaque Provence de l'Asie Mineure, Paris, Vol. 1, 1890.
11. Meriam, G.P., (1926), 'The Regional Geography of Anatolia', Econ. Geogr., 2, 86-107.
12. Sarç, O.C. (1941), 'Tanzimat ve Sanayimiz', in Tanzimat, İstanbul, 423-40; translated as 'The Tanzimat and our Industry' in Issawi, C. (ed.), The Economic History of the Middle East, 1800-1914, Chicago and London, 1966, 48-59.
13. Hershlag, Z.Y., Introduction to the Modern Economic History of the Middle East, Leiden, 1964, 70.
14. Cuinet, op. cit., 4 vols., Paris, 1890-94
15. Hershlag, Z.Y., Turkey: The Challenge of Growth, Leiden, 1968, 52.
16. Cuinet, op. cit., Vol. 4, Paris, 1894, 96-103.
17. Cuinet, op. cit., Vol. 3, Paris, 1893, 406-12.
18. Cuinet, op. cit., Vol. 3, Paris, 1893, 406-12.
19. Üsküdar to Konya, with a branch to Ankara, built 1871-96. Eldem, V. (1953), 'Turkey's Transportation', Middle East Affairs, 4, 324-36
20. Konya to Aleppo and Nuseybin, built 1902-18, ibid.
21. Hershlag, Z.Y., Introduction to the Modern Economic History of the Middle East, Leiden, 1964, 70; Sarç, op. cit.
22. Clark, op. cit.
23. Lewis, B., The Emergence of Modern Turkey, 2nd ed., London, 1968, 237.

24. Ibid, 239-56
25. Eldem, op. cit.
26. Hershlag, Z.Y., Turkey: The Challenge of Growth, Leiden, 1968, 16-27.
27. Ibid., 54: Rivkin, M.D., Area Development for National Growth. The Turkish Precedent, New York and London, 1965, 66.
28. Lewis, op. cit., 286.
29. Hershlag, Z.Y., Turkey: The Challenge of Growth, Leiden, 1968, 72; Lewis, op. cit., 281-88; Okyas, O. (1965), 'The Concept of Etatism', Economic Journal, 75, 98-111.
30. Rivkin, op. cit., 68.
31. Hershlag, Z.Y., Turkey: The Challenge of Growth, Leiden, 1968, 97.
32. Ibid., 112.
33. Hershlag, Z.Y., op. cit., 104-05; Naval Intelligence Division, Geographical Handbooks, Turkey, Vol. 2, London, 1943, 215.
34. Naval Intelligence Division, ibid., 216-17
35. Hershlag, Z.Y., Turkey: The Challenge of Growth, Leiden, 1968, 104-05; Naval Intelligence Division, op. cit., 109-30; Tümertekin, E. (1955), 'The Iron and Steel Industry of Turkey', Econ. Geogr., 31, 174-84
36. Toynbee, A.J. and Kirkwood, K.P., Turkey, London, 1926, 129.
37. Kerwin, R.W. (1951), 'Private Enterprise in Turkish Industrial Development', Middle East Journal, 5, 21-38.
38. Diamond, W. (1950), 'The Industrial Development Bank of Turkey', Middle East Journal, 4, 349-51.
39. Chapman, A.S. (1957), 'The Economic Regions of Turkey as Characterised by Railway Shipments', Northwestern University Studies in Geography, 2, 71-75; Kerwin, R.W. (1950), 'The Turkish Roads Programme', Middle East Journal, 4, 196-208; Kolars, J.F. and Malin, H.J. (1970), 'Population and Accessibility: An Analysis of Turkish Railroads', Geogrl. Rev., 60, 229-46.
40. Hershlag, Z.Y., Turkey: The Challenge of Growth, Leiden, 1968, 157-68; Hirsch, E., Poverty and Plenty on the Turkish Farm: An Economic Study of Turkish Agriculture in the 1950s, Middle East Insitute, Columbia, New York, 1971.
41. Alexander, A.P. (1960), 'Industrial Entrepreneurship in Turkey: Origins and Growth', Economic Development and Cultural Change, 8, 349-65.
42. Hinderink, J. and Kiray, M.B., Social Stratification as an Obstacle to Development: A Study of Four Turkish Villages, New York and London, 1970.

43. Robinson, R.D. (1958), 'Turkey's Agrarian Revolution and the Problem of Urbanisation', Public Opinion Quarterly, 22 quoted by Rivkin, op. cit., 104.
44. Rivkin, op. cit., 98-100.
45. Hershlag, Z.Y., Turkey: The challenge of Growth, Leiden, 1968, 139-40; Hiltner, J. (1962), 'The Distribution of Turkish Manufacturing', J. Geogr., 61, 251-58; Rivkin, op. cit., 114 -115.
46. Hershlag, Z.Y., Turkey: The Challenge of Growth, Leiden, 1968, 139-40; Rivkin, op. cit., 115.
47. Rivkin, op. cit., 115.
48. Hiltner, op. cit.
49. Rivkin, op. cit., 115-117
50. Rivkin, op. cit., 115.
51. Dodd, C.H., Politics and Government in Turkey, Manchester, 1969, 24-39.
52. Hershlag, Z.Y., Economic Planning in Turkey, İstanbul, 1968; Poroy, I.I. (1972), 'Planning with a Large Public Sector; Turkey (1963-1967)', Int. J. Middle East. Stud., 3, 348-60.
53. Poroy, Ibid
54. Wagstaff, J.M. (1966), 'Turkey's Association with the European Economic Community', Geogrl. Rev., 56, 591-93
55. Beeley, B.W. (1975), 'Investment and the Spatial Pattern of Development in Turkey', Fig. 4, unpublished paper, Dept. of Geography, University of Aberdeen.
56. Ministry of Reconstruction and Resettlement, The Elâzığ-Keban Region, Ankara, 1965.
57. Tümertekin, E. (1961), 'L'activitié industrielle à Istanbul', Rev. Geogr. Inst. Univ. Istanb., 7, 35-52.
58. Rivkin, op. cit., 128.
59. Keleş, R., Urbanisation in Turkey, Ford Foundation, New York, 1972, quoted by Beeley, op. cit., 14.
60. State Planning Organisation, First Five Year Development Plan, 1963-1967, Ankara, 1963, 425.
61. Erinç, S. (1950), 'Climatic Types and the Variation of Moisture Regions in Turkey', Geogrl. Rev., 40, 224-35.