

THE ROLE OF BRITISH CAPITAL IN THE ECONOMIC
DEVELOPMENT OF WESTERN ANATOLIA 1850-1913

Ph.D.

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ABSTRACT

The study of British capital in Western Anatolia shows that export-oriented industries absorbed the greater portion of British private investment in that region in the second half of the XIX Century. There was also a tendency, especially in the manufacturing sector, towards establishing import-substitution industries. The introduction of advanced methods of production and organisation in agriculture, industry, mining, and commerce was due to the British who, in close collaboration with the Greek, Armenian, and Jewish businessmen, played an important role in transforming Western Anatolia's economy to a highly commercial one to such an extent that Western Anatolia became extremely sensitive to changes in export markets abroad. The Smyrna-Aidin Railway also contributed to this process of commercialization by facilitating the flow of commodities between Smyrna and the interior.

The decline of the economic supremacy of the British in Western Anatolia and the replacement of the British by the Germans in almost every sphere of economic life was the result of the changes in British foreign economic policy as well as of the special conditions prevailing in Turkey. The study also shows that the British, by repatriating their capital and profits in Western Anatolia, transferred abroad an amount equal to their total investment in the Ottoman Empire.

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CHAPTER I

INTRODUCTION

The impact of capital exports on underdeveloped economies is the subject of many economic and historical studies. In the past as well as in the present resources of a group of countries have been used in financing a variety of projects in another group of countries. In each case the methods and the pattern of foreign investment show many differences depending on the social, economic, and political characteristics of the borrowing and lending countries which also determine the course and the ultimate outcome of the investment process.

In a majority of cases in the past, especially in the second half of the XIX Century, the dominant method of investment in a foreign country was through the formation of joint stock companies which offered to their shareholders a rate of return on investment higher than normally available in the home country (1). The activities of these companies covered a very wide range from government finance to plantations.

Throughout the XIX Century Britain was the largest supplier of funds to foreign countries. In its earlier periods the movement

(1) In 1878 in France the average rate of return on French securities was 4.12% compared with the 5.5% on foreign securities. In 1903 and 1911 these rates were, respectively, 3.13% vs. 4.2%, and, 3.4% vs. 4.62%, see, H. Feis, Europe, the World's Banker 1870-1914, New York, 1965, p.36. In Britain an investor could expect to earn 4.7% in dividends and 1.8% in principal from British railway preference stocks whereas he could earn 5% in dividends and 1.79% in principal from foreign railway shares, see, A.K. Cairncross, Home and Foreign Investment, Cambridge, 1953, pp.230-231.

of British capital showed a marked preference for the governmental loan business but, later, investment in railways and mines held the first place and by 1913 Britain had had more than £1,500m invested in railways abroad, about one tenth of this amount in commercial establishments and industrial concerns with an additional £273m in mining (2).

The geographical distribution of British foreign investment shows that although the movement of capital into countries within the British Empire was responsible for a greater part of the total investment, South American countries, the U.S., Russia, Egypt, etc., had also had their share of British capital exports.

BRITISH CAPITAL IN TURKEY

The estimates of the amount of British capital invested in Turkey differ widely. While the highest estimate puts it at £32m (3) another valuation is as low as £18.7m (4). Two other estimates, on the other hand, agree that it was not more than £24m, and probably a little lower (5). About £10m of this total represented the balance on the loans contracted by the Turkish government, about half

(2) Feis, op.cit., pp.27-29.

(3) J.Aulneau, La Turquie et la Guerre, Paris, 1916.

(4) G.Paish's estimate quoted by Feis, op.cit., pp.23-24

(5) Ibid., p.23; V.Eldem, Osmanli Imparatorlugunun Iktisadi Sartlari Hakkinda bir Tetkik, (A Survey of the Economic Conditions of the Ottoman Empire), Ankara, 1970, p.191, hereafter referred to as Tetkik.

as much went into railways, and the rest was invested in banking, industry, and mines.

The governmental loan business has been examined in detail by various authors (6) but there is no systematic study concentrating on British capital in private ventures in Turkey. The exact magnitude of this form of investment is very difficult to ascertain but an idea can be formed from the number of companies established in London with the purpose of opening merchant houses, factories, mines etc., in Turkey. A cursory look at the Board of Trade records reveals that in the second half of the XIX Century at least 166 companies, with capitals ranging from £10,000 to £1,000,000, were formed to operate in Turkey (7). Besides, numerous private companies, both in Britain and in Turkey, were organised to fill the vacuum created by the dissolution of the Levant Company which had held the

- (6) The only available, and perhaps the best, work in English is, D. Blaisdell, European Financial Control in the Ottoman Empire, New York, 1929.
- (7) The Index of Companies in the Register of the Board of Trade, 4 vols., London, n.d., contains the names of more than 300,000 companies incorporated under the Joint Stock Companies Act. The obvious impossibility of checking all the names confined our search among those companies with names suggestive of their geographical location. Thus, under Asia Minor we found 14 companies, under Anatolia 9, under Constantinople 13, under Smyrna 14, under Ottoman 22, under Turkish 16, etc., etc. With some exceptions this method does not take into account those companies with names like Anglo-Eastern, Levant, Oriental, etc., which might have had business connections with Turkey. It also excludes companies bearing the names of their founders or shareholders such as T. Bowen Rees & Co. Ltd., MacAndrew & Forbes Ltd., Abbott's Emery Mines Ltd., etc., which had extensive interests in Turkey.

the monopoly of Anglo-Turkish trade for two and a half centuries.

The purpose of this study is to examine the extent of British portfolio and direct investment in Western Anatolia and to assess its role in the economic development of this region between 1850 and 1913. In this instance Western Anatolia is loosely defined as the area coming under the jurisdiction of the British Consulate in Smyrna which included the whole of Aidin province, the southern part of the Brussa province, and the extreme south-west corner of the Konia province around Adalia (Map 1). This definition also closely approximates the "British Zone of Influence" in the Ottoman Empire (8). In the following chapters the terms "Western Anatolia" and "Smyrna region" will be used interchangeably.

THE ROLE OF MINORITIES

With the exception of Constantinople, Western Anatolia was the most cosmopolitan region of the Ottoman Empire. There were large Greek, Armenian, and Jewish communities in Smyrna and in the interior, and various European nations had established mercantile colonies in Smyrna where the city itself had been divided into four economically and socially different residential areas. The European community lived and worked in the prosperous and fashionable Frank quarter in the west of the city between the seafront and the Arme-

(8) L. Dominian, The Frontiers of Language and Nationality in Europe, New York and London, 1917, p.255.

nian quarter while the Greeks occupied the northern part. The Jews lived in the area adjoining the southern borders of the Frank and Armenian quarters and the Turkish quarter was distinguished by its numerous minarets behind the Jewish quarter in the extreme south. The Turkish population of Smyrna never exceeded one third of the inhabitants of the city and this fact gave way among the peoples of the Empire to the reproachful appellation "Gavur Izmir" meaning "Smyrna the Infidel" (9).

The Jewish, Armenian, and Greek minorities, which constituted the overwhelming majority of the population of Smyrna and between 25% and 85% of the population of the towns in the interior, were economically and financially very powerful. They controlled a major portion of retail trade, finance, small industry, and coastal trade (10). The Jews were the financiers and engaged in the buying

(9) Les Paquebots du Levant, Paris, 1853, p.99

(10) A.Galante, Histoire des Juifs d'Anatolie: Les Juifs d'Izmir, 2 vols., Istanbul, 1937-1939, is the most complete account of the economic, cultural, and social role of the Jewish community in Western Anatolia. Union Micrasiatique de Smyrne, Etude sur l'Avenir Economique de l'Asie Mineure, Paris, 1919, is a propaganda work but sheds useful light on the economic power of the Greek community. E.D.Demirzakis, "ΒΙΟΜΗΧΑΝΙΚΗ ΠΑΡΑΓΩΓΗ ΝΟΜΟΥ ΑΙΔΙΝΙΟΥ," (Industrial Production of Aidin), ΜΙΚΡΑΣΙΑΤΙΚΑ ΧΡΟΝΙΚΑ, vol.xiii, 1967, pp.9-50, analyzes the development of Greek small industry in the XIX Century. (Mr. M.Buck of the Institute of Classical Studies kindly supplied a translation of this article). The Armenians of Smyrna have not been the subject of any investigation.

and selling of foreign exchange. Almost every retail shop, even in the remotest villages, was owned by Greeks or Armenians who were also street peddlars, flour-mill owners, blacksmiths, etc. There was not a single branch of economic life requiring manual and mental dexterity and some education in which Greeks and Armenians did not distinguish (11). As will be seen later, their intimate knowledge of the country, its customs, and the language elevated them to the position of business partners with European merchants. Their experience, skill, and shrewdness in commercial matters made them indispensable to the European interests as they were the only link connecting the mercantile community in Smyrna to the Turkish producers in the interior from whom exportable products were bought and to whom imported European manufactures were sold.

Behind the deceptively peaceful looking social and economic relations between these ethnic groups there was an atmosphere of intense competition, jealousy, and hatred occasionally resulting in inter-communal strife in many forms the mildest being the ex-communication of any person doing business with members of another ethnic group (12). Greeks and Armenians resented the Jews who, in

(11) For the prominent role played by Greeks and Armenians in the economic and political life of Turkey, see, for example, E.G.Mears, Modern Turkey, New York, 1924, pp.31-97.

(12) PRO,FO 195/1732, Holmwood to White, no.103, 24th Dec., 1891. In 1896, acting on information received from Armenians the local authorities discovered a plot by the Turks against the European community which, if successful, would result in the wholesale massacre of the "Franks." Later, Turks and Jews conducted punitive expeditions into the Armenian quarter resulting in deaths and extensive damage to property, see, PRO,FO 195/1946, Holmwood to Currie, no.7, 22nd June, 1896.

turn, were very critical of the European merchants. Apart from the daily, even hourly, occurrence of quarrels and fights between individuals, there were frequent reports of street fights involving hundreds of people, and large scale pogroms in which the Jews were almost always at the receiving end. In one particular occasion Greeks, aided by Armenians, invaded the Jewish quarter of the city, ransacked shops and houses, and killed and injured many people. They then laid siege around the Jewish quarter which lasted 57 days during which numerous Jews were starved to death (13).

The progress of the Greek community outstripped the development of all other groups. Between 1864 and 1890 the number of Greeks in Smyrna (both Ottoman and Hellenic subjects) was estimated to have increased from 75,000 to 107,000 with an additional 168,000 in the interior. During this period the Turkish population of the city increased from 43,000 to 52,000 while the increases in Jewish and Armenian populations were, respectively, 6,000 and 4,200. The increase in Greek population was accompanied by a similar improvement in the number of institutions catering for the spiritual and cultural needs of the enlarged community. The number of Greek-Orthodox churches reached 12 (7 in 1864) and Greek schools spurted from 12 to 28 with a corresponding rise in the number of students from 2,550 to 8,110 (14).

- (13) PRO,FO 195/1009, Cumberbatch to Rumbold, no.22, 8th June, 1872; PRO,FO 78/2244, Cumberbatch to Granville no.31, 4th May, 1872; no.47, 22nd June, 1872. Turks were generally sympathetic to the Jews and tried to protect them from Greek harrassment. This may explain why during the Turkish War of Independence many Jews took up arms with the Turkish nationalists against the Greek armies.
- (14) PRO,FO 195/1693, Holmwood to White, no.35, 21st Nov., 1896.

BRITISH INVESTORS IN WESTERN ANATOLIA

Joint stock companies played a very important role in channeling the savings of the British public into the Smyrna region. The construction of the Smyrna-Aidin Railway and its extensions, the development of industry and mining, and the expansion of foreign trade owed much to the activities of London-based companies but no less important a role was also played by the descendants of the factors of the Levant Company, who chose to make Smyrna their home following the dissolution of the company in 1825, and other but numerically smaller Britons who migrated to Turkey (15). Their investments were mainly directed to the purchase of land, mining concessions, and industrial establishments to be operated by family firms but they also contributed to the share and loan capital of the British companies doing business in Turkey.

British investors in Western Anatolia were not always born and bred Britons. There was a large group of naturalized British subjects consisting of Greeks, Armenians, Jews, and even Turks. Between 1844 and 1913 more than 700 Ottoman nationals were granted naturalization certificates and became British subjects (16). In 1901 the number of

- (15) A.C.Wood, A History of the Levant Company, London, 1964, ch.xii, and, H.Clarke, History of British Colony at Smyrna, Constantinople, 1860, contain detailed information about the life of the British subjects in Smyrna.
- (16) Certificates of Naturalization Granted etc., 3 vols., London, 1908-1916. Some of these naturalized British subjects also changed their names, for example a Costi Stefan became Charles Stevens, which makes it exceedingly difficult to trace their original nationality. Hellenic subjects who were granted temporary naturalization are not included in the total number of naturalizations.

naturalized British subjects registered with the British Consulate in Smyrna was 209 while a similar number was thought to have preferred not to register (17). Also, some Hellenic subjects obtained British nationality when they were in Greece and afterwards migrated to Turkey. Home Office documents classified them under the heading of "Naturalized Greek Subjects," and, therefore, they are not included in the above total unless they were specifically mentioned in consular reports.

FORMS OF BRITISH INVESTMENT IN THE SMYRNA REGION

The main theme of this study, which is the interaction of British investment with the surges of local economic activity, was best illustrated by the construction of the Smyrna-Aidin Railway.(18). The construction and the operation of the Aidin Railway meant, firstly, a massive dose of investment injected into the economy of the Ottoman Empire at a scale never seen before. It also meant the importation of the most modern technology available in Europe, and the creation of a large scale organisation and management. The Aidin Railway, by efficiently and cheaply connecting Smyrna with its rich hinterland and thereby stimulating the production of exportable crops

(17) PRO,FO 195/2112, Cumberbatch to O'Connor, no.4, 6th Feb., 1901.

(18) The Aidin Railway was the first of its kind in Asiatic Turkey. Other attempts soon followed but most of them failed. See, for example, J.H. Jensen, and, G.Rosegger, "British Railway Builders along the Lower Danube, 1856-1869," Slavonic and East European Review, vol.xlvi, 1968; O.Kurmus, "Britain's Dependence on Foreign Food and Some Railway Projects in the Balkans," METU Studies in Development, vol.1, 1971.

and encouraging the growth of imports as well as increasing the mobility of the agricultural labour force, represented a necessary infrastructure investment required for the further development of Western Anatolia. When it was supplemented with another infrastructure investment, the construction of the Smyrna harbour by the French capital, the British became increasingly attracted by the profitable areas of investment opened to them in farming, industry, mining, and import-export business.

In the following chapters the construction and the subsequent operation of the Smyrna-Aidin Railway will be treated as the most singularly important factor contributing to the progress of the region and providing the psychological factor of security so essential for the inflow of foreign capital. It was not the only railway built by the British, who also built the Mersina-Adana and the Haidarpasa-Ismidt Railways, but it was the only railway which remained under British management for any period of time, the other two having been sold to the French immediately after completion. Neither in Cukurova where the first railway was situated nor in the Kocaeli peninsula where the second one was, were the British involved in any activity slightly reminiscent of the scale and the extent of their undertakings in the Smyrna region. They were extremely proud of the technical perfection and the efficiency of the Aidin Railway with

which they identified the superiority of the British Empire over "the ignorant and backward" Oriental nations. They always referred to it, with a certain air of reverence and pride, as "this great enterprise," or, "this great undertaking of British ingenuity and skill."

The most prominent member of the British colony in Smyrna, James Whittall, whose merchant house grew into a second empire within the Ottoman Empire and who was subsequently knighted for his services to British trade and commerce (19), foresaw the results of the British railway construction in Turkey when he declared :

"...the first step is to make railways. They will be constructed, and owned, and worked by Englishmen. They will be enormously profitable; and they will render productive provinces now uncultivated. The railway companies will become little republics" (20).

These hopes were realized by the construction of the Aidin Railway which, literally, became a "little republic" with complete independence in managing its own affairs without accepting and arrogantly protesting against the slightest interference from the Turkish government. Its administrators in Smyrna refused to recognise the jurisdiction of Turkish courts in commercial and criminal matters

(19) W.A.Shaw, The Knights of England, vol.ii, London, 1906, p.403.

(20) N.W.Senior, Journal Kept in Turkey and Greece, etc., London, 1859, pp.206-207.

and sought, and obtained, the right to refer its cases to the British Consular Courts in Smyrna and Constantinople (21). It was for these reasons that the Smyrna region was politically accepted as the "British Zone of Influence" in Turkey. The British merchants of Smyrna would probably derive the same economic benefits from the railway even if it were under the management of another European nation but they would, or at least they thought they would, lose their social and economic prestige which, they maintained, was entirely due to the Aidin Railway, constructed, owned, and operated by their compatriots. In 1899, when as a result of the growing economic and political influence of Germany in Turkey the Turkish government brought pressure on the Aidin Railway Company to sell the line to the German-owned Anatolian Railway Company, the British colony in Smyrna literally went berserk under the impending threat of losing their position to the Germans. They petitioned every con-

(21) An example of its defiance of Turkish law was its refusal to hand over to the Turkish authorities any member of staff tried and found guilty in local courts. In exceptional cases, when the authorities became irate enough to order the forceful arrest of the culprit, the management insisted that he should serve his sentence not in a Turkish prison but in the "detention" room of the British Consulate in Smyrna. In one case, when a Maltese engine driver was found guilty of "willful and premeditated murder" and sentenced to six month's imprisonment by the Turkish court in Denizli, the management refused to hand him over to the police. The local population became extremely angry and riots were started. The management, faced with the threat of destruction of its property, gave way and consented to send the engine driver to the Denizli prison on condition that the prison authorities should give him a private room "furnished and fitted by the company" for his exclusive use; see, PRO,FO 195/2090, Cumberbatch to O'Connor, no.30, 18th May, 1900.

ceivable public office and numerous influential people protesting "with feelings of the most profound astonishment and dismay against the contemplated transfer" of the line (22).

Socially important as it was to the British community, the Aidin Railway also provided them with the economic benefits of modern transportation. The reduction in transport costs constituted the financial basis of the British predominance in trade, industry, and mining. Savings accruing from the fall in freight rates were used in financing British enterprises in Western Anatolia and elsewhere. It is this belief, that the operation of the railway laid the foundations of British economic and political power in Western Anatolia, that led to our quantification of the social saving created by the Aidin Railway (see Chapter v).

The development of cotton culture under the stimulus of the British (see, Chapter iv) is discussed separately from the development of British investment in agriculture firstly because it differed from the latter by being a product of a large scale campaign organised by the Lancashire cotton manufacturers rather than owing its beginnings to the individual and often uncoordinated efforts of private persons. Similarly, it was, with the exception of railway construction, the only form of foreign investment in Turkey that

(22) See, for example, PRO,FO 195/2065, Petition to Lord Rathmore, 15th Apr., 1899.

enlisted the active and wholehearted support of the Turkish government. Lastly, it offers a good example of how land use patterns change as a result of changes in market prices of agricultural products.

The discussion of direct investment by private persons and joint stock companies in agriculture, industry, and mining is largely based on the information extracted from the British sources and is liable to be an underestimation of the extent of the British involvement in these areas because these sources, because of their nature, refer to the problems connected with British interests in Western Anatolia only so far as they concern consular matters. Therefore, a British investor in the Smyrna region is very likely to remain unknown if he was not involved in a law suit in the Smyrna Consular Court or if he had not any business with the British Consulate deserving a mention in the dispatches.

CHAPTER II

ANGLO-TURKISH TRADE AND SMYRNA

EARLY DEVELOPMENTS

British merchants were officially recognized in Constantinople in 1579. Two years later the Levant Company was formed. In 1799 a decree of the Sultan opened the Black Sea to the British, and, in 1809, with the Treaty of the Dardanelles, which also confirmed the past Capitulations, the British obtained the same rights and privileges as the French who had been, until then, treated as the most favoured nation (1). This boosted Anglo-Turkish commercial relations.

The foreign economic policy of Britain, which was directed to finding new areas of expansion in relatively backward overseas regions, was another factor contributing to the development of Anglo-Turkish trade. France, Austria, and Switzerland, the main suppliers of manufactured goods to Turkey before the Napoleonic Wars, were unable to compete with Britain in the Turkish market because of the continuous fall in British prices. More efficient methods of production, brought about by the advances in British industry, resulted in lower prices which enabled Britain to have a more competitive position and thus to maintain control of new markets (2).

Britain's trade with other European countries did not go up proportionately as British prices fell. In order to protect their own industrial development European countries either prohibited the importation of manufactures from Britain or levied very high duties

- (1) L.Hertslet, A Complete Collection of Treaties, etc., London, 1840, vol.ii, pp.346-347, pp.409-411; vol.vii, p.1021
- (2) The Gayer-Rostow-Schwartz index of British commodity prices shows a fall from 168.9 in 1813 to 100 in 1826, and to 84.5 in 1835. Similarly, Silberling's index is 187, 111, and 99, respectively.

on them. Consequently, Britain directed her energy towards those countries where there were not many barriers to trade. Turkey, with an import duty of 3% and with all the facilities afforded by the Capitulations, was one of those countries into which Britain's exports of manufactures could be poured.

ANGLO-TURKISH TRADE

From 1827 to 1838 Turkey imported from Britain unprecedented quantities of manufactures. Turkey's declining industry could not offer any resistance to the cheap products of Britain. The following tables summarize the development of exports to Turkey (3).

Table 1
British Exports to Turkey 1827-1838

Years	Value of British Exports to Turkey (£)	As Percentage of Total British Exports
Average of 1827-32	743,437	1.90
Average of 1833-38	1,542,727	3.06

Source: See Appendix 1

In twelve years the value of exports increased 100.1% and their share in total British exports increased 61%. During this time the value of British exports to Turkey increased much faster than the value of total British exports. The former doubled itself between 1827 and 1838 while the latter increased 29%. This was an indication that Turkey was becoming more and more important as a customer for British manufactures.

(3) The Board of Trade statistics valued the exports in two ways: The so called official values were arrived at by multiplying the volume of exports by the late XVII century prices. The declared value system, on the other hand, was based on current prices. Both methods of valuation are unsatisfactory for making comparisons over time. We adjusted the declared values by the corresponding values of the Gayer-Rostow-Schwartz index. The resulting figures represent each year's exports at the monthly average of 1821-25 prices. The percentages are the geometric means of six years.

The Treaty of Commerce of 1838 increased the duty on goods exported from Turkey from 3% to 12% and the duty on imports into Turkey from 3% to 5%, the additional 9% and 2% were in lieu of all internal duties abolished by the Treaty. Another feature of the Treaty was the removal of all monopolies in selling and buying of exports and imports (4).

Table 2 shows the development of British exports after 1838.

Table 2
British Exports to Turkey, 1839-1850

Years	Value of British Exports to Turkey (£)	As Percentage of Total British Exports
Average of 1839-44	2,174,277	3,57
Average of 1845-50	3,768,515	4,91

Source: See Appendix 1.

A comparison of the 1833-38 period with 1839-44 shows that British exports to Turkey increased by 41%, with an overall growth of 17.7%. Considering the increases in British prices during this period, which was on the average 1.4%, a fall rather than a rise should be expected. However, the negative effects of higher prices were outweighed by the abolition of internal duties and their replacement by lower uniform rates. The removal of monopolies, by eliminating monopoly profits, would have contributed to a larger volume of imports from Britain but their remnants lingered for a while and some years had to pass before their complete disappearance.

(4) Hertslet, op.cit., vol.v, pp.514-535.

In the years 1845-50 exports to Turkey increased 73% over the last period. This was probably due to the fall in British prices, 10% on the average, and to the fact that virtually no monopoly existed in the way of larger exports.

In composition, exports were largely dominated by five commodities. Cotton manufactures, sugar, iron and steel, woollens, and tin commanded, on the average of 24 years, 92% of all exports. Among them the cotton manufactures reigned supreme, about 80%. It was followed by sugar, 4.3%; iron and steel, 3.8%; woollens, 2.4%; and tin, 1.2%. (See Appendix 2). The high price elasticity of Turkish demand for manufactures in general and textiles in particular may, to a certain extent, explain the relatively enormous growth of imports from Britain (5).

Imports from Turkey mainly consisted of agricultural produce and raw materials. Turkey, from 1840 to 1850, supplied 65% of Britain's annual imports of madder root and 85.5% of valonia (6). From 1817 to 1850 Britain obtained 8.9% of her annual raw silk imports from Turkey. (See Appendix 3). Until 1846 Turkish wheat could not be exported to Britain in large quantities because of the Corn Laws. After 1846 Turkey started to send to Britain important quantities of wheat which averaged

- (5) "A feather turns the scale. A few paras more or less in the price of of the pike will make the difference of purchasing from abroad or of manufacturing at home," D.Urquhart, Turkey and its Resources, London, 1833, p.202.
- (6) F.E.Bailey, British Policy and the Turkish Reform Movement, Cambridge, Mass., 1942, Appendix II, tables 11-13.

about 9% of annual grain imports of Britain (7). Turkish exports, being of agricultural origin, were subject to fluctuations in weather conditions and, therefore, could not be depended upon as a reliable source of supply. Costs of transportation between producing districts and points of shipment were high due to primitive means of communication. This was an important factor hampering the potential development of Turkish exports. Moreover, the stagnant nature of the British silk industry made it impossible to increase the imports of Turkish silk, and, the late 1850's witnessed the substitution of synthetics for madder root and valonia. It seems that Turkey's performance as an exporter of agricultural produce and raw materials was not very good. However, with the introduction of new methods of production and more modern means of transportation Turkey could be made a significant source of supply for some goods which were demanded in large quantities by Britain.

SMYRNA'S PLACE IN ANGLO-TURKISH TRADE

A very large part of the Turkish foreign trade was carried out through five ports. While Trebizond, Salonica, and Constantinople were the centres for imports, Samsun and Smyrna were largely engaged in exports. Having a very convenient harbour and being the sole outlet of an extremely

(7) "Statistical Abstract of the United Kingdom," Accounts & Papers, 1854-1855, vol.1, p.306.

rich hinterland Smyrna attracted an important share of Turkey's foreign trade. Between 1700 and 1790, when France occupied an important place in Turkey's foreign relations, 33% of all Turkish exports to France was shipped from Smyrna. Between 1750 and 1790, 27% of imports from France came to Smyrna (8). As Britain gradually replaced all other countries in the trade with Turkey, France's importance grew smaller through time. The following table shows this decline as it was reflected in the number of French ships at Smyrna.

Table 3
French shipping at Smyrna

Years	In (Tons)	Out (Tons)	Total Tonnage
1834	5,105	8,303	13,408
1835	5,672	4,852	10,524
1836	5,221	4,360	9,581
1837	7,664	7,073	14,737
1838	5,080	5,254	10,334

Source: "Commercial Tariffs and Regulations,..., Part VIII, Ottoman Empire," Accounts & Papers, 1843, vol.lvii, p.593.

The figures suggest that with the exception of 1837, which was a low year for Anglo-Turkish trade, the share of French trade in Smyrna exhibited a falling tendency. Britain was fast to drive France out of the Turkish market, except in the case of woollens where the Carcassonne woollens, selling at the same price as the British manufactures, were dyed and manufactured to suit the Turkish taste better than the British fabrics. Thus, in 1839, Smyrna's foreign trade showed the following struc-

(8) D.Georgiades, La Turquie Actuelle, Paris, 1892, p.218

ture:

Table 4
Foreign Trade of Smyrna in 1839

Country	Exports to Smyrna (£)	Share in Smyrna's Total Imports	Imports from Smyrna (£)	Share in Smyrna's Total Exports
Britain	242,208	35.5%	433,512	30%
France	45,376	6.7%	306,372	21.4%
U.S.A.	132,924	19.5%	174,432	12.2%
Russia	46,984	6.9%	56,756	4%
TOTAL	467,492	68.6%	971,072	67.6%

Source: See Table 3. (Percentages supplied).

The above four countries, out of twelve, constituted 68% of Smyrna's total foreign trade, Britain having the greatest share of 32%. With the exception of Egypt all countries had an excess of imports from Smyrna over exports thereto.

The composition of Smyrna's imports shows £176,480 worth of cotton manufactures, £84,000 of which came from Britain; £129,840 worth of coffee, 62% of which from the U.S.A.; £51,132 worth of woollens, entirely from France and Austria; £50,676 worth of iron and steel, £33,720 of which supplied by Britain; £18,220 worth of hardware and cutlery, £11,320 of which was British made, and 16 other articles.

Smyrna's exports consisted of 15 items. Valonia and other dyestuffs amounted to £276,536, more than half of which was exported to Britain. In six other goods, cotton thread, dried fruits, corn, silk, sponges, and carpets Britain had the leading share.

The extent of Smyrna's trade with Britain can be seen in the number and tonnage of British merchant ships visiting Smyrna. Between 1840 and 1845, 64% of all British vessels employed in Anglo-Turkish trade, constituting 54.2% of total tonnage, was sailing between Britain and Smyrna. The crop failure of 1846 brought down the number of British ships to 216 (40%) and tonnage to 39,600 (38.4%). Next year an unprecedented number of vessels under the British flag were seen in Smyrna harbour, 416 ships of 74,543 tons. In 1849 the number increased to 494 and tonnage to 80,808. In the six years beginning from 1840, Smyrna had attracted more than half of total Anglo-Turkish trade. In these years Smyrna's trade with Britain increased both absolutely and relatively. From 1846 on although it increased in terms of the number of ships and tonnage, its share in total volume of trade decreased. Thus, in 1847 this share fell to 22% and in 1850 it was almost half of what it had been in 1842. (See Appendix 4).

This fact, that Smyrna had an absolutely increasing but relatively falling level of commerce with Britain in an evergrowing Anglo-Turkish trade, was the product of a number of factors. Firstly, Constantinople, as a result of its growing population and as a result of the demands of the Imperial Palace, grew into a centre of imports which required not only more ships but also the re-allocation of existing shipping routes. As a result, for example, between 1848 and 1851 the number of British ships at Salonica decreased from 48 to 30 and imports from £144,576 to £78,444 (9). Secondly was the growing importance of the Danubian Principalities, still under the Ottoman rule, as sources of supply

(9) E.H. Michelsen, The Ottoman Empire and its Resources, London, 1854, pp.198-202.

of grain. While the number of British vessels loaded with grain departing from Galatz and Ibrail was seven in 1843, it increased to 128 in 1848 and to 132 in 1849. In the bumper crop year of 1847 this number was 394 (10). Apart from these two external factors Smyrna itself possessed some disadvantages which were responsible for the relative fall in its share in total trade with Britain.

In 1840, Huseyin Pasha, the Governor-General of Smyrna, contrary to the stipulations of the 1838 Treaty of Commerce and despite the protests of Smyrna merchants, ordered the partial retainment of the old rates of internal duty system whereby the native and foreign merchants were obliged to pay an additional sum on merchandise transported between Smyrna and the interior and vice versa (11). This arbitrary practice continued until the late 1840's when Huseyin Pasha was replaced by Kamil Pasha. The latter adopted the official rates of internal duty but started the illegal process of farming out monopolies (12). The British Consulate at Smyrna was flooded with protests from British merchants whose interests were severely damaged by the re-appearance of monopolies. Almost all complaints were about the illegal seizure of merchandise by the police on the pretext that the goods in question were in the monopoly

- (10) "Correspondence with the Russian Government respecting Obstructions to the Navigation of the Sulina Channel of the Danube," Accounts & Papers, 1852-1853, vol.cii, pp.579-587.
- (11) "Correspondence Relative to the Continuance of Monopolies in the Dominions of Turkey," Accounts & Papers, 1840, vol.xliv, pp.541-619. "Correspondence Respecting the Operation of the Commercial Treaty with Turkey," Accounts & Papers, 1842, vol.xlv, pp.261-296.
- (12) PRO, FO 195/350, Brant to Redcliffe, no. 19, 20th March, 1850; no. 81, 8th Nov., 1851.

of some person and no one else could deal in them (13). The Consul repeatedly protested against these vexatious incidents but the practice did not stop (14). In the case of exports, the profit-maximizing monopsonist bought from the producer a smaller quantity at a price lower than it would have been in the absence of a monopsony thus reducing the potential money income of the producer. In turn, he sold the goods to the exporter as a monopolist at a higher price fixed by himself. Thus he made a unit profit equal to the difference between the selling price and the buying price. In the case of imports, the monopsonist bought a smaller quantity of merchandise from the importer, usually a British house, at a lower price preventing the importers from selling a larger quantity at a higher price.

The free interaction of supply and demand forces would have permitted producers and importers to sell larger quantities at prices higher than they received from the monopsonist, and, exporters and natives to buy larger quantities at prices lower than they had to pay to the monopolist. In 1840, when all monopolies were abolished the proprietors of valonia received for their produce 5s. per cwt. Before the operation of the Treaty of Commerce they had been forced to sell to the privileged buyers at half this price. Likewise the exporters of sheep's wool paid 15s.8d. per cwt instead of 29s.1d. which they had had to pay to the monopolist (15). Obviously, the restoration of monopolies was an important

- (13) PRO,FO 78/868, Wilkin to Brant, 6th Nov., 1851; PRO,FO 195/389, Purdie to Brant, 27th March, 1852; Offley to Brant, 6th May, 1852; Routh to Brant, 31st Aug., 1852.
- (14) PRO,FO 78/868, Brant to Redcliffe, no.81, 8th Nov., 1851; PRO,FO 195/389, Brant to Redcliffe, no.17, 18th March, 1852; no.42, 3rd June, 1852; Brant to Rose, no.48, 25th June, 1852; no.78, 17th Dec., 1852.
- (15) "Correspondence Respecting the Operation of the Commercial Treaty with Turkey," Accounts & Papers, 1841, session 2, vol.viii, pp.485-516.

factor limiting the potential development of Smyrna's trade. However, these restrictive practises were gradually abolished and the year 1858 witnessed their complete removal with the exception of an extra duty of 1.2% on exports which was required from those merchants who kept a running account at the Customs House (16).

Among all the factors that caused a relative fall in Smyrna's trade the most important of all, perhaps, was the extreme lack of modern means of transportation between Smyrna and the interior. This was equally true for all parts of Asia Minor. In 1857, when Erzurum had a bumper crop the price of wheat per quarter fell to 13s, whereas it was £2 in Diyarbakir, 72s.8d. in Urfa, and 81s.9d. in Aleppo, the respective rates of carriage per quarter from Erzurum being 24s., 36s., and 54s. Yet with such ample margin for profit wheat could not be delivered at any of these places as animals were wanting and no roads for wheeled carriages existed (17). Even in 1878, except those in private hands, there were no roads in all Asia Minor, which made the British Ambassador complain bitterly that "all reforms, which would be introduced in Anatolia are useless, as long as no means of communications are established" (18).

(16) PRO,FO 195/527, Blunt to Redcliffe, no.21, 27th Oct., 1857; PRO,FO 195/610, Blunt to Alison, no.8, 31st March, 1858; Blunt to Bulwer, no.40, 10th Aug., 1858.

(17) B.M. Add.MSS. 38994, Layard Papers, vol.lxiv, ff.82-87.

(18) B.M. Add.MSS. 39054, Layard Papers, vol.cxxiv, f.233.

SMYRNA'S COMMUNICATIONS WITH THE INTERIOR

Almost every article of commerce consumed or shipped at Smyrna was grown on the lands adjoining two unnavigable rivers, the Hermus and the Meander, and their tributaries. After the produce was collected from the grower it was brought down to the towns and a certain portion was retained for local consumption. The excess, then, was transported to Smyrna on camels and mules. The journey was tedious and long. As everything was carried in hair bags, except fresh grapes which were carried in large baskets, and as the bags were removed from the camels' backs every night and put upon the ground a considerable portion of the contents perished during the journey. The freight rates charged by the camel owners varied depending on the length of the journey and the type of the cargo. The following table shows the average freight rates between different localities and Smyrna.

Table 5
Freight Rates between Smyrna and Towns in the Interior, 1855

Districts	Distance to Smyrna (Miles)	Camel Rate per ton of Grain	Camel Rate per ton of General Produce
Magnesia	30	24s.8d.	30s.1d.
Aidin	70	69s.0d.	87s.0d.
Oushak	140	120s.	149s.11d.
Koniah	330	220s.	275s.

Source: PRO,FO 195/460, Wilkin to Redcliffe, 9th July, 1855.

A comparison of freight rates with the prices of imported and exported articles (See Table 6) may give an idea about the geographical limits within which trade was profitable. When one ton of iron was transported from Smyrna to Magnesia its price increased by 13.6%. When it was taken to Aidin it increased by more than 39%, at Oushak by 68%, and at

Koniah it cost £24.16s, more than 124% of its import price. These percentages were smaller for coffee and sugar due to their higher prices. However, when their perishability during the journey is taken into account, we can assume that their prices also increased considerably.

Table 6
Smyrna Retail Prices, 1850-1851

Articles	Price per ton
Madder Root	£35.16s. (Weekly average of April-June 1850)
Cotton Thread	£74.13s. (" " " " " ")
Valonia	£ 9. 3s. (" " " " " ")
Wheat	£ 5. 1s. (" " " " " ")
Coffee	£44.10s. (Weekly average of January-March 1851)
Sugar	£29.14s. (" " " " " ")
Iron Sheets	£11.1s. (" " " " " ")

Source: PRO,FO 78/832, Brant to Palmerston, no.29, 22nd July, 1850;
no.31, 8th Aug., 1850;
PRO,FO 78/868, Brant to Palmerston, no.17, 30th Apr., 1851;
no.18, 21st May, 1851.

When profit margins of various intermediaries and other charges such as storage costs, etc. were added to these already inflated prices then the difference between import price and selling price became still larger. This meant that, given an elastic regional demand, the quantity of imports sold varied inversely with the distance between the market and Smyrna.

In the case of exportable products, the question whether they should be sent to Smyrna was mainly determined by the magnitude of the difference between the local price and the price it fetched at Smyrna. If the

difference was large enough to yield an acceptable margin of profit after meeting the cost of transport and other charges then the produce was sent to Smyrna. This required that the price of, for example, wheat should be as low as £3.15s. at Magnesia and £1.10s. at Aidin. Oushak and Koniah wheat could never be sold at the prevailing Smyrna price. In view of the fact that the average price of wheat in Turkey in the early 1850's was about £4.10s. per ton it can be concluded that neither Magnesia nor Aidin was able to send its surplus wheat for exportation unless the local price fell considerably. Such a fall was quite unlikely given an almost equally fertile land and the same level of technology all over the region. In the case of madder root and valonia which, to a very large extent, were produced for exportation, the former was transported from long distances and still offered a profit, but the latter ceased to be profitable when brought from beyond Oushak. Other exportable products on account of their low prices were confined to an area smaller than in the case of madder root and valonia.

If it is assumed that all exports originated in equal distances from Smyrna then the effect of transport costs on any good becomes a function of the price of the good, its weight, and the number of units to be transported and sold. With the single exception of attar of roses, which had a very high price and a very small bulk, all exports consisted of those articles where bulk buying and selling was involved. As a result the incidence of transport costs on exportables was determined by the ratio between weight and price. If this ratio was comparatively higher for a good then the average transport cost was also higher.

Imports, on the other hand, consisted of manufactured products which were sold in small units. Consequently the total cost of transport was.

spread over a large number of units. This difference between average transport costs hindered the exportation of Turkish produce in a degree much greater than it checked the importation of foreign manufactures.

APPENDIX 1: British Exports 1827-1850

Years	Declared Value of all British Exports (£)	Declared Value of British Exports to Turkey (£)	Computed Value of British Exports to Turkey (£)
1827	37,181,335	531,734	535,452
1828	36,812,756	185,542	192,782
1829	35,842,628	568,684	593,616
1830	38,271,597	1,139,616	1,205,942
1831	37,164,372	888,654	932,481
1832	36,450,594	1,019,604	1,150,794
1833	39,667,347	915,319	1,000,349
1834	41,649,191	1,207,941	1,396,463
1835	47,372,270	1,331,669	1,575,939
1836	53,368,572	1,808,684	1,899,878
1837	42,070,744	1,163,426	1,233,749
1838	50,061,737	1,955,550	1,999,539
1839	51,308,740	1,430,221	1,371,257
1840	51,545,116	1,387,416	1,353,576
1841	47,284,988	1,682,038	1,721,635
1842	52,206,447	1,865,377	2,100,649
1843	58,534,705	2,331,908	2,925,856
1844	60,111,082	2,897,428	3,572,660
1845	57,786,876	2,878,486	3,455,565
1846	58,842,377	2,405,926	2,797,588
1847	52,849,445	3,226,194	3,332,845
1848	63,596,025	3,400,599	4,157,150
1849	71,367,885	3,219,459	4,356,507
1850	74,448,722	3,315,907	4,511,438

Sources: Accounts & Papers, 1838-1855. The fourth column is computed on the basis of explanation given in footnote 3.

APPENDIX 2: Composition of British Exports to Turkey, 1827-1850
(Computed Values £)

Years	Cotton Goods	Iron & Steel	Sugar	Tin	Woollens
1827	407,223	21,649	42,116	22,185	5,782
1828	146,314	9,942	12,449	7,119	2,413
1829	453,104	35,006	55,244	8,161	5,705
1830	1,003,076	40,106	61,516	13,567	21,132
1831	721,745	52,566	43,043	14,650	19,200
1832	768,175	42,860	43,239	25,304	30,414
1833	951,179	41,914	56,490	14,939	22,688
1834	1,088,469	62,258	128,970	7,357	33,918
1835	1,257,728	69,781	99,127	2,243	49,368
1836	1,637,486	19,720	107,224	14,533	33,904
1837	1,011,159	43,422	47,199	22,872	15,292
1838	1,642,518	81,179	108,694	2,035	26,069
1839	1,136,864	60,839	21,011	16,052	22,482
1840	1,104,543	56,829	63,051	8,061	26,404
1841	1,435,379	43,751	68,254	16,496	21,990
1842	1,786,789	55,596	59,300	26,369	40,992
1843	2,433,816	83,836	83,883	18,617	83,829
1844	3,151,501	61,021	54,309	17,455	109,443
1845	2,917,358	93,235	36,079	12,164	148,238
1846	2,133,446	92,733	89,059	21,774	75,692
1847	2,482,251	172,214	65,097	49,195	117,449
1848	3,179,943	160,688	86,444	23,692	133,007
1849	3,152,634	163,050	102,659	41,953	205,171
1850	3,344,949	156,257	88,048	33,727	210,283

Sources: Original declared values from, Accounts & Papers, 1829-1852.
Computed on the basis of explanation given in footnote 3.

APPENDIX 3: Raw Silk Imports of Britain 1827-1850

	Average of 1827-34	1835-1842	1843-1850
Total Raw Silk Imports (lbs)	3,848,247	n.a.	5,402,690
Raw Silk Imports from Turkey (lbs)	434,137	612,672	491,750

Sources: Accounts & Papers, 1829-1852.

n.a.=not available

APPENDIX 4: British Ships Employed in Anglo-Turkish Trade 1840-1850

Years	Total Number of British Vessels	Total Tonnage	British Vessels at Smyrna	Total Tonnage
1840	327	60,900	233	35,616
1841	406	78,794	248	38,138
1842	461	87,228	275	43,447
1843	474	91,140	274	41,520
1844	465	87,407	328	56,127
1845	649	126,682	413	73,083
1846	537	103,136	216	39,600
1847	1,808	340,614	416	74,543
1848	998	198,982	n.a.	n.a.
1849	1,272	269,066	494	80,808
1850	1,235	271,919	337	69,172

Sources: Accounts & Papers, 1842-1852; E.H.Michelsen, The Ottoman Empire and its Resources, London, 1854, pp.208-209.

CHAPTER III

THE SMYRNA-AIDIN RAILWAY: FINANCE, CONSTRUCTION AND EARLY ACTIVITIES

THE CONCESSION

The lack of modern transportation facilities did not prevent Smyrna from developing into a centre of profitable trade. In the early 1850's merchants of 20 different nationalities were carrying on trade and 17 of them were represented through their consulates. Russians, Austrians, and the French were enjoying the benefits of special freight rates charged by their own steamship companies. Although the Bibby Line of Liverpool operated a service between England and Smyrna there is no indication that special low rates were made applicable to British merchants (1). However, the number of British merchants in Smyrna increased from 202 in 1849 to 919 in 1855, and to 1,061 in 1856 (2). They were mainly engaged in import-export trade, importing almost exclusively from Britain and selling through their own establishments, and buying from local producers for exportation purposes. Most of them were the descendants of the agents of the former Levant Company and had a very good reputation in business circles on account of their long-established profession (3).

The business community was fully aware of the possibility of increasing the volume of trade and profits if the interior were connected to Smyrna with proper means of transport. However, neither

- (1) G.Chandler, Liverpool Shipping, London, 1960, pp.83-89.
- (2) PRO,FO 78/832, Brant to Palmerston, no.10, 6th March, 1850;
PRO,FO 78/1209, Brant to Clarendon, no.21, 22nd March, 1856;
PRO,FO 78/1307, Vedova to Clarendon, no.15, 20th Apr., 1857.
- (3) H.Clarke, History of British Colony At Smyrna, Constantinople, 1860, passim.

the Ottoman government with its precarious financial position nor any other country, except Britain, which was at a superior technical and industrial level, was able to undertake the highly technical and costly job of building railways.

In July 1855 R. Wilkin, a Smyrna merchant, representing four other British merchants resident in Smyrna, petitioned the Ottoman government for a concession to build a railway between Smyrna and Aidin. He also requested the help of the British Ambassador in their favour (4). The concession was granted in September 1856. It stipulated that returnable caution money of 3.3% of the proposed capital of the company had to be deposited with the Ottoman government, and the first section of 45 miles be finished by September 1860. On the other hand, the Ottoman government guaranteed an annual profit of 6% on capital for 50 years to take effect from the opening of the first section. Should the railway produce a profit of over 7% the excess had to be shared equally between the company and the government. At the end of 50, 75, and every subsequent 20 years the government would have the right to purchase the railway upon agreed terms. The importation of materials for constructing, working, and renewing the railway would be exempt from import duties. Government lands and materials could be taken and made use of by the company gratuitously. The company, on payment of a fixed royalty, would obtain the power to work all coal mines within 30 miles of any part of the line. Furthermore, the Ottoman government would not, under any

(4) PRO, FO 195/460, Wilkin to Redcliffe, 9th July, 1855; 1st Feb., 1856.

circumstances, interfere with the management of the company and no concession would be granted to any competing railway (5).

After obtaining the concession Wilkin and his associates immediately sold it to a group of people in England who, in May 1857, formed a company under the name: The Ottoman Railway from Smyrna to Aidin of His Imperial Majesty the Sultan (6).

The company as a first step sent a number of engineers and surveyors to Smyrna to determine the route of the railway. After a preliminary survey it was decided that the whole project should be divided into three sections. The first section of 45 miles was through a perfectly flat country from Smyrna to Mt. Saladin Dagh. The second section consisted of a tunnel through the mountain into the plain of Meander, and the third section extended from Saladin Dagh up the valley of Meander to Aidin (7) Detailed plans were drawn and submitted to the Ottoman government upon which the latter permitted the commencement of works on 22nd September 1857 (8). The Board of Directors had entered into a contract with T. Jackson for the completion of the entire works, including the purchase of land, the erection of wharves, jetties, stations, the telegraph network, the supply of rolling stock, and providing for every possible contingency, for the sum of £1,030,000 (9).

- (5) PRO,FO 195/460 contains two drafts (French) of the concession. It is printed in, R.M. Stephenson, Railways in Turkey, London, 1859, pp.80-89.
- (6) Ottoman Railway Company, Statutes of the Company, London, 1856. All documents relating to the formation of the company, i.e., articles of association, lists of shareholders, etc., are supposed to be in the files of dissolved companies in PRO, BT 31. However, they have been destroyed by PRO due to a shortage of storage space.
- (7) PRO,FO 195/527, Blunt to Redcliffe, no.6, 8th Sept., 1857.
- (8) Times, 13th Oct., 1857.
- (9) Directors' Report, 22nd Sept., 1858.

The payment was to be half in money and half in the shares of the company (10). The contractor, therefore, was placed in the position of having to provide a considerable portion of the capital. This must have been quite an unusual way of finance, for the Stock Exchange, as soon as informed of the situation, removed the name of the company from its official list (11).

THE SHARE CAPITAL

The accounts of British railway companies, kept before the Regulation of Railways Act of 1868 which standardized the methods of keeping accounts, do not lend themselves to a systematic treatment. It is very difficult, if not impossible, to make any sense out of them. Therefore, any attempt to describe or analyse the financial affairs of the Aidin Railway Company is inevitably confined to those magnitudes which appeared fairly regularly in the company's published reports.

In 1857 the issuance of 60,000 shares of £20 each coincided with a severe crisis in the money market. The rate of discount at the Bank of England was raised to 10%, many banks suspended operations, a large number of bankruptcies was recorded, and the actual difficulties of the crisis were greatly aggravated by the prevailing panic (12).

(10) H. Clarke, The Imperial Ottoman Railway, London, 1861, p.6.

(11) Directors' Report, 28th March, 1859.

(12) Annual Register, vol.xcix, 1858, p.199; D.M.Evans, The History of the Commercial Crisis 1857-1858, London, 1859, passim. Other railway companies trying to start projects in Turkey were very badly hit by the crisis. The Rustchuk-Constantinople Railway Company, for example, went bankrupt, see, B.M., Add.MSS. 39054, Leyard Papers, vol.cxxiv, ff.19-24.

The shares were offered to the public upon payment of £1 deposit, the remainder being payable in nine installments of £2 each and a tenth one of £1. Of all shares, 25% was reserved for the Ottoman government as required by the concession. The company's expectations about the number of subscriptions were not fulfilled and the anticipated number of shares was not sold. Consequently, the burden of calls fell upon a small group of shareholders who became wearied of responding to the demands made upon them. The calls fell into arrears and the directors did not feel morally justified in enforcing a forfeiture for non-payment.

The Ottoman government, in order to dispose of the shares reserved for it, chose the method of sending lists to civil servants in various parts of the country and asking them to sign the list if they were prepared to buy shares. The universal unwillingness of civil servants, arising from the indubitable fact that their salaries were just enough to cover their subsistence and that they were not paid regularly, was partially overcome by the precedent created by the Sultan when he bought 500 shares. Partly acting on patriotic feelings and partly as a result of administrative pressures, the civil servants bought the remaining shares (13). However, they were unable to respond to the calls made by the Board of Directors, and, consequently, the Turkish shares fell into arrears. This was going to constitute a bad example for the British shareholders. Table 1 shows the distribution of shares as of 28th September, 1859. The geographical distribution of shares shows that 34,926 shares representing £698,520 were taken in England, while

(13) Times, 9th March, 1858.

15,598 shares of £311,960 were subscribed in Turkey, making a total of 50,524 shares of £1,010,480. Since the contractor did not have to pay anything for his shares, the actual sum subscribed was £495,480. While the total amount of arrears on call on 31st December, 1858 stood at £45,398, more than 80% of which was in Turkey, it rose to £72,206 at the end of 1859 (14).

Table 1
Distribution of Shares: 1859

Subscriber	Number of Shares	Amount Subscribed (£)
R.Crampton (Contractor)	25,750	515,000
Turkish Civil Servants	14,500	290,000
British Public	9,176	183,520
Turkish Public	598	11,960
The Sultan	500	10,000
Unappropriated	9,476	189,520

Source: Directors' Report, 28th Sept., 1859.

In September 1860 the Board of Directors had to acknowledge that the company was not in a creditable situation because out of 44,119 shares, on which deposits were paid, there were only 15,231 shares upon which the calls had been paid, leaving nearly 30,000 shares in arrears (15). The Board proposed to take immediate steps to forfeit them (16) and after some prolonged discussions the company declared the forfeiture of all shares upon which £7 or less had been paid and which did not respond to the fourth and fifth calls. These shares were re-issued at £11 each which was equal to the amount

(14) Directors' Report, 28th March, 1859; 27th March, 1860.

(15) Directors' Report, 26th Sept., 1860; Half Yearly Meeting, 29th Sept., 1860.

(16) Directors' Report, 27th March, 1861; Half Yearly Meeting, 29th March, 1861.

paid by those shareholders who had responded to all calls (17). The subsequent calls were generally well responded to probably as a result of the forfeiture. Thus, the amount due on calls, after the eighth call, decreased to £60,256, about 95% of which was on Turkish shares (18).

THE LOAN CAPITAL

One of the most important sources of finance for British railway companies was money borrowed on loans. In this way they obtained large amounts of money without letting the lenders have control of the administration. There were three principal methods of raising money on loans, namely, pre-payment of calls, issuing mortgage debentures, and borrowing on debentures secured by the assets of the company (19). The success of the first method depended on the capacity and confidence of a restricted number of shareholders which, in the case of the Smyrna-Aidin Railway Company, was almost non-existent. The second method required that the company should have a certain mileage of line open to traffic which, in this specific instance, was also non-existent. The third and the only method open to the company was to raise money on redeemable debentures bearing a certain rate of interest and backed by some liquid or current assets. Railway companies usually showed the unpaid portion of share capital as security, in the belief that the calls would be promptly paid. However, the past experience of

(17) Directors' Report, 25th Sept., 1861.

(18) Half Yearly Meeting, 30th Sept., 1862.

(19) S. Broadbridge, Studies in Railway Expansion and the Capital Market in England 1825-1873, London, 1970, pp.80-89.

the Aidin Railway Company had proved that they could not depend on the promptness of shareholders.

Consequently, when the directors decided to raise £250,000 on debentures to enable the company to pay the contractor, an unusual guarantee, the net receipts of the line and the annual Government guarantee of £72,000, was proposed for the yearly interest payments and final redemption (20). Although the Ottoman Government sanctioned the issue of debentures without delay (21) the company had to wait until they were reinstated in the Stock Exchange list, which took place, after lengthy correspondence, in April, 1861 (22). The Board appointed an obscure firm, Messrs. Hutchinson, Knight & Coleman, as brokers (23). The necessary arrangements took some time and the debentures were issued in April 1862, redeemable at par in May 1866 and bearing an annual interest of 6%. This is especially noteworthy because the prevailing market rate of interest was only 2.4%. What was more, the bonds were offered at a price far below their par value, at a discount of 14% (24). Under normal circumstances bonds are offered at a discount only when the rate of interest on them is below the market rate. The net result of the higher interest rate and the discount was that the company had to pay 11% interest instead of the promised 6%, i.e., nearly five times higher than the market rate (25). As the difference between the

(20) Directors' Report, 27th March, 1860; Half Yearly Meeting, 29th March, 1860.

(21) Half Yearly Meeting, 29th Sept., 1860.

(22) Times, 20th Apr., 1861.

(23) Times, 18th May, 1861.

(24) Times, 9th Apr., 1862.

(25) The 11% rate of interest is calculated as follows: Upon maturity a £100 bond, sold at £86, could be redeemed at £124, equal to the sum of the principal and the £24 interest for four years. This means that the company paid £9.9s. annual interest for every £86 borrowed which gives an annual rate of interest of 11%.

market and actual rates of interest must reflect the financial standing of the firm, it can be concluded that the company was not in a sound position.

THE NEW CONCESSION

Faced with financial and technical difficulties, the company failed to construct the first section of 45 miles within the prescribed period of time. The Ottoman government, instead of using its right to step in, take everything out of the hands of the company, and confiscate the caution money, conceded an extension of three years (26). This help, while removing an impending threat to the company, did nothing to solve the financial difficulties. The company had been overspending its money since 1861, as can be seen in Table 2.

Table 2
Capital Account 1861-1863

Years	Revenue (£)	Expenditure (£)	Balance (£)
1861	600,295	635,360	-35,065
1862	779,400	821,404	-42,004
1863	870,866	919,812	-48,946

Source: Directors' Report, 25th Sept., 1861; 26th Sept., 1862; 25th Sept., 1863.

The need for supplementary sources of finance was apparent. The Board requested from the Ottoman government a revision of the terms of the concession (27). The negotiations took over three months and in June 1863 a new concession was granted according to which the company reserved all the

(26) Half Yearly Meeting, 29th Sept., 1860.

(27) Directors' Report, 27th March, 1863; Half Yearly Meeting, 31st March, 1863.

rights recognized by the old concession plus an additional guarantee of £40,000, making a total of £112,000 per year. Furthermore, the limit beyond which profits would be shared with the Ottoman Government, was raised from 7% to 8%. Another feature of the supplementary concession was the reduction of share capital to £892,000, represented by 44,600 shares of £20 each, and the authorization to issue debentures to the amount £892,000. This meant that the total capital of the company was raised from £1,200,000 to £1,784,000. The reduction in the number of shares would be made by the withdrawal, cancelation, or commutation of shares unissued, or issued but partly paid up. The debentures would be divided into two parts. A redemption fund of £304,000 would be set aside for the £250,000 debentures already issued and due 1 May 1866. The remaining £588,000 would be applicable to the general purposes of the company (28). The debenture stock, bearing 6% interest, was offered to the public at a discount of 28%. The market rate of interest, at the time of emission, was 4.3% which shows that the actual rate of interest was again much higher than the officially announced rate. An annual provision of £4,960 was made for a sinking fund to redeem the whole issue of debentures in 42 years, commencing in 1866, by annual drawings which would be paid off at par.

The emission of debentures and the Porte's confidence in the company, shown by the granting of a new and more favourable concession,

(28) Directors' Report, 25th Sept., 1863.

improved the company's financial standing. In late 1864 it was reported that the capital account, after making up for the accumulated deficit, showed a surplus of £154,975 (29). Six months later, the shareholders, once so reluctant to pay the calls, started to press the Board of Directors to dispose of the unissued shares on the condition that they should be offered, in the first instance, to the shareholders in proportion to the number of shares they held. A resolution was adopted to this effect (30) and the shares, 13,175 in all, were completely appropriated in a relatively short period of time (31).

The company's financial position until the end of 1865, taken as a whole, does not seem to have been very sound. The small magnitude of payments in anticipation of calls, annual increases in calls in arrears, and the efforts to raise money with exorbitantly high interest rates indicate that neither the present nor the prospective shareholders and creditors had a favourable impression of the company. A slight improvement was recorded in late 1863 as a result of the new concession and the issuance of debentures. However, this was only temporary because the company had to pay an additional £53,520 per annum as interest on loan capital. The future of the company was, therefore, clearly dependent on the opening of the line and the volume of traffic that would be carried. (The receipts and expenditures on capital account, 1858-1865, are given in Appendix 1).

(29) Directors' Report, 29th Sept., 1864.

(30) Special Meeting, 22nd Apr., 1865.

(31) Directors' Report, 25th Sept., 1865.

THE CONSTRUCTION

Initial surveys on the route had been carried on by engineers hired by the concessionaires. When they sold the concession to the company the latter had another detailed survey made by its own team of engineers and technicians to determine the exact route. After the route had been decided on, necessary machinery and tools for excavations were imported. Some of the rails were brought from Crimea where they had been laid down between Balacclava and the allied camp during the war (32).

The chief engineer and his assistants arrived at Smyrna in the middle of September, 1857 (33), and the works started with a public ceremony on the 28th of the same month (34). Within four weeks more than a mile of deep cutting through lime stone rock was finished and ground was levelled for temporary line (35). At the same time more than 500 workers were occupied in sinking shafts in the second section, comprising a tunnel between the two sides of Mt. Saladin Dagh.

Soon after, the delays in payment of calls obliged the company to suspend all activity until November 1858. When the operation were resumed, the line had already reached the Valley of St. Anne where a deep cutting of more than 35 ft had to be made. The work proved to be very difficult and took more than five months. In marking the line through this valley the engineers of the company had been warned by the local Turks that the slope of the mountain was not very solid and if any deep cuttings were made there

(32) The Oxford History of England, vol.xiii, Oxford, 1962, p.285.

(33) PRO,FO 195/527, Elunt to Redcliffe, no.36, 8th Sept., 1857.

(34) PRO,FO 78/1307, Elunt to Clarendon, no.39, 28th Sept., 1857.

(35) PRO,FO 195/527, Elunt to Clarendon, no.49, 9th Nov., 1857.

would be a slip. This opinion had also been confirmed by the officials in charge of the water courses of Smyrna, who had asserted that the earthen water pipes were continually displaced and broken by the slipping of the slopes. No heed was given to these warnings, and there was a slip in consequence, which filled up the whole cutting and compelled the engineers to make a diversion (36).

The chief engineer, on the other hand, was sending reports to the Board of Directors giving the impression that the first section would be opened by the spring of 1860. The correspondent of the Times and the British Consul sent home numerous reports trying to expose the illusions contained in the reports of the chief engineer. According to them, the whole of the rails would probably be laid down by next spring but the line would not be available for traffic because the six principal bridges had already given way, both in the foundations and the arches; the embankments were not solid; the Boudjah and Seidikeui stations, to which the chief engineer referred as completed, had not yet been commenced. The tunnel works were in a worse situation. In sixteen months they had not been able to sink a single shaft (37). Consequently, the credit of the company was at such a low level that neither the bankers nor the merchants in Smyrna would take any bills connected in any way with the company or the contractor (38).

(36) PRO,FO 78/1447, Elunt to Russell, no.62, 10th Sept., 1859.

(37) PRO,FO 78/1447, Elunt to Russell, no.74, 19th Nov., 1859; Times, 29th Feb., 1860.

(38) PRO,FO 195/646, "Report on Smyrna for the Quarter ending 31st March, 1859."

In a suit in the Smyrna Consular Court, Taylor v Hutchinson, it came out in evidence that on one occasion a certificate of £500 had been granted by the chief engineer to the contractor for work done to the value of only £50, and, on another occasion a certificate of £1,000 for no work at all (39). The Board of Directors, after inquiring into the matter, relieved T.Jackson of his position and offered R.Crampton, who had built the East Kent Railway, to take over the construction on the same terms as the ex-contractor. At the same time, the chief engineer G.Meredith was replaced by E.Purser (40).

Dissatisfied with the progress of construction in general and the complete failure of the tunnel works in particular, the shareholders, in the third half yearly meeting, demanded that the consulting engineer of the company should be sent to Smyrna and prepare an impartial report on the real state of the construction (41). In his report to the Board of Directors, the consulting engineer confirmed the allegations that the first section could not possibly be finished at the termination of the prescribed time period and demanded immediate measures. He convinced the Board that the idea of a tunnel through Mt.Saladin Dagh had to be abandoned. His proposal was to get over the mountain by inclined planes (42). The new contractor, having in mind a diversion of the route around the mountain, promptly objected to this plan and the ensuing disagreement brought the works to a complete halt except for the employment of a few workers sufficient to prevent the Porte from nullifying the concession.

- (39) PRO,FO 78/1447, Elunt to Russell, no.75, 14th Dec., 1859.
 (40) Directors' Report, 28th Sept., 1859.
 (41) Half Yearly Meeting, 1st Oct., 1859.
 (42) PRO,FO 78/1447, Elunt to Russell, no.75, 14th Dec., 1859.

The chairman of the company, Sir R.M. Stephenson, was immediately sent to Smyrna to take the general supervision of the works and to remove the difference of opinion between the Board and the contractor (43). The argument was settled and an application to cross the mountain by means of inclined planes was made. The Porte appointed a committee to give an opinion on the subject which categorically rejected the idea on the grounds that it was dangerous (44). So the company had to accept the deviation originally proposed by the contractor.

While fresh surveys were being made for the diversion, a considerable number of workers were employed to repair the damage done by the exceptionally bad weather. Heavy rains had carried away most of the bridges and several embankments had been so heavily injured that the locomotives could not pass over them. Moreover, about five miles of rails were under nearly six feet of water (45).

By June 1860, three months before the end of the time allowed to complete the first section, only 19 miles of temporary line had been laid and the walls of some stations had been raised. There were more than 25 miles to the limit of the first section, and five miles of temporary line was still under three feet of water, making it impossible

(43) PRO,FO 195/610, Stephenson to Muammer Pasha, 21st Jan., 1860; PRO,FO 78/1533, Blunt to Bulwer, no.2, 23rd Jan., 1860.

(44) PRO,FO 78/1533 Blunt to Russell, no.21, 24th March, 1860.

(45) PRO,FO 195/646, "Report on Smyrna for the Quarter ending 31st March, 1860." At that time, to assist the operations, ten 4-4-0 locomotives were being used on the line, E.L.Ahrons, The British Steam Railway Locomotive 1825-1925, London, 1925, pp.138-139.

to work on that part during summer and autumn because of the malaria that would inevitably be produced by the stagnant water (46).

Nineteen miles of temporary rail, some incomplete station buildings, and a pier at the Smyrna terminus, which did not appear very solid under a ballast wagon weighing five tons and which was supposed to support the weight of a locomotive weighing more than 20 tons, had swallowed more than £321,000 out of a total expenditure of £413,000 (47). In a general meeting serious doubts were expressed about the company's ability to complete the undertaking and it was proposed to wind up the company (48).

An extension of the time limit by the Ottoman government gave a fresh impulse to the operations and on 24th December, 1860 the Smyrna-Torbali section of 27 miles was opened to traffic. Another ten miles from Torbali to Celadkahve was completed on 9th September, 1861 and hopes were expressed that in six weeks four more miles would be ready for opening (49). An outbreak of malaria caused some delays and on 14th November the remaining four miles, making a total of 41 miles costing £656,726, were opened (50). To inspect the line and see if it conformed to the standards, a Governmental Committee was set up which, after inspection, expressed its satisfaction and sanctioned the refund of the caution money.

- (46) PRO,FO 195/610; PRO,FO 78/1533, Blunt to Russell, no.38, 9th June, 1860.
 (47) Bradshaw's Shareholders Guide, London, 1861, pp.318-319.
 (48) Half Yearly Meeting, 29th March, 1860.
 (49) Directors' Report, 25th Sept., 1861.
 (50) Directors' Report, 25th March, 1862.

The tunnel having been avoided, the line was now to be constructed through a flat country where there were no engineering obstacles. Under these favourable circumstances, only 7¼ miles of temporary rail was laid down in 10 months (51). The reason, in the words of the British Consul, was the "glaring abuse" and the "constant plunder" of the company's funds by the contractor and his agents (52). Fortunes were known to be made by the contractor and sub-contractors through misappropriation of funds and making up false certificates far above the value of work done. An Armenian youth, who, just before the railway started, had been fired by the Lloyd Steam Company for stealing 20 piasters and who had become the interpreter of a sub-contractor, became the owner of numerous houses and warehouses in four years. If a boy in his capacity could do that, the British Consul concluded, it was not very difficult to guess what the others made out of the affair.

Despite incessant reports on the subject nothing effective was done by the Board of Directors and the construction progressed very slowly (53). An outbreak of cholera in the early 1865 caused many deaths in the region and the entire operations had to be abandoned (54). The death toll in the construction site included 44 native workers as well as 14 British engineers and technicians (55). This meant that the works

(51) Directors' Report, 26th Sept., 1862.

(52) B.M. Add.MSS. 39106. Layard Papers, vol.clxxvi, ff.29-33, ff.295-297; also see, PRO,FO 626/4/179(568), Eichstoff v Crampton, 1862; PRO,FO 626/4/180(767), Maltass v Crampton, 1862-1864; PRO,FO 626/4/183(667), Fotherby v Clarke, 1862.

(53) PRO,FO 195/797, Vedova to Bulwer, no.18, 11th June, 1864; PRO,FO 78/1831, Cumberbatch to Russell, no.14, 8th Sept., 1864.

(54) PRO,FO 78/1888, passim.

(55) Directors' Report, 25th Sept., 1865.

had to be suspended until the cholera subsided and new engineers and technicians arrived from England. The line, traversing a distance of 81 miles between Smyrna and Aidin, was finally finished in July, 1866.

The records of the company show that about £1,350,000 was spent on the line and auxiliary facilities. The cost per mile was about £16,600, considerably below the average cost of British railways which was estimated to be about £50,000. Relative cheapness of labour power, land, locally available materials like sleepers, and the very cheap supply of used rails from Crimea materially contributed to this result. Had the engineers taken into account the warnings by the local population, unnecessary delays, costly diversions and waste would have been avoided and the average cost would have been still lower.

The Board of Directors on every occasion acknowledged the encouraging attitude of the Ottoman government, which had its beginnings in the application of the law of expropriation against some landholders who refused to sell their land through which the railway was to run (56). The government's co-operation in selling shares and collecting, though not very successfully, the installments were other examples of this encouragement. When, in the early 1860's, the Governor General of Smyrna

(56) Times, 9th March, 1858.

failed to show sufficient zeal in helping the construction, the Porte removed him without hesitation and appointed another Pasha who was duly instructed to co-operate in every possible manner. Another example was the unlawful help from the Turkish government. While the tunnel works were going on the workers, acting on instructions given by the chief engineer, destroyed some vineyards and a small forest belonging to an Armenian banker who requested compensation for the damage. The case was to be presented at a civil court but the government stepped in and set up a commission including a Turkish engineer who was in the pay of the company. The commission took a very long time to reach the decision that no indemnity had to be allowed (57). Finally, the extension of the time limit and the granting of a new concession which increased the government's guarantee from £72,000 to £112,000 a year, showed that the Ottoman government had a deep interest in the undertaking.

One of the reasons behind this wholehearted support was that the Smyrna region had always been and still was a place of continual unrest and turbulence. In towns, commercially rival Greek, Armenian, and Jewish communities restlessly fought each other and almost every year pogroms were reported (58). The countryside was the playground of Zeibeks, Yoruks, and Circassians who, organised in gangs numbering

(57) PRO,FO 78/1447; PRO,FO 195/610, Blunt to Bulwer, no.48, 6th Sept., 1859.

(58) PRO,FO 195/758; PRO,FO 195/883, passim. See also notes 12-13 in Chapter I.

from 50 to 100, made an easy living by storming the caravan routes and villages. These incidences were seriously affecting the commerce of the region. The railway would help to deploy a larger number of troops in a quicker way and the revolts and outlaws would easily be suppressed. In later years the same motive, this time against an external enemy, played an important role in the construction of the Balkan and the Hedjaz railways.

The government also realized that the line would contribute to the public treasury by making it possible to collect a larger tax revenue on trade and production. This long-run policy was confirmed to be correct in the last two decades of the century when a 114% increase in agricultural taxes was observed in those districts where railways were operating in contrast to the 63% increase in other regions where there were no railways (59).

TRAFFIC RECEIPTS, WORKING EXPENSES, AND "DIVIDENDS"

Gross traffic receipts of a railway can provide a useful picture of the economic state of the region where the railway operates. Increased production of agricultural crops leads to a similar increase in the receipts of the railway and whenever a crop failure occurs receipts fall accordingly. However, in order this to be true the railway must be

(59) Eldem, Tetkik, pp.152-153.

free from competition from another railway. If two companies compete with each other, they, assuming an elastic demand for their services, might decrease their rates in order to control a larger share of the traffic. Under these circumstances, even if the volume of traffic increases as a result of the reduced rates, gross traffic receipts, depending on the numerical value of the elasticity of demand, ~~may fail~~

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coast almost equidistant from both. Consequently, the lines were confined to the respective sides of the mountain range, having virtually nothing to compete about.

Gross traffic receipts of the Aidin Railway exhibit a very discernible trend, they rise very rapidly (See Appendix 2). They are almost always on the increase and even when they register a fall it is immediately followed by a recovery. There are no two consecutive periods of falling traffic receipts. One of the factors that determine

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free from competition from another railway. If two companies compete with each other, they, assuming an elastic demand for their services, might decrease their rates in order to control a larger share of the traffic. Under these circumstances, even if the volume of traffic increases as a result of the reduced rates, gross traffic receipts, depending on the numerical value of the elasticity of demand, may fail to reflect this increase.

There was, in fact, another railway in the region, the Cassaba line. The two lines had their termini in Smyrna and they ran into the interior almost parallel to each other, the Cassaba line being 40-50 miles north of the Aidin line. It might be supposed that the two companies would engage in fierce competition by offering cheaper rates for their services. The geographical characteristics of the region did not allow this competition to take place because the two lines were kept firmly apart by a mountain range running all the way through to the coast almost equidistant from both. Consequently, the lines were confined to the respective sides of the mountain range, having virtually nothing to compete about.

Gross traffic receipts of the Aidin Railway exhibit a very discernible trend, they rise very rapidly (See Appendix 2). They are almost always on the increase and even when they register a fall it is immediately followed by a recovery. There are no two consecutive periods of falling traffic receipts. One of the factors that determine

their magnitude is the mileage open to traffic. A railway might operate with constant or slightly increasing receipts to mileage ratio until the line hits a really rich source of traffic; the additional one or two miles make all the difference and the receipts, both total and average, increase enormously (60). This is exactly what happened as the line was pushed through to Aidin and then further into the interior.

Until the end of the first half of 1863, passenger traffic constituted more than 50% of the receipts (61). The main reason was that the line had not yet intercepted the caravan route between Smyrna and Aidin. When the railway met the caravans about half way at Kosbounar and took their cargoes on to Smyrna a slight improvement was recorded which became more marked as the company hired a traffic agent who made contracts with the camel owners to feed the line regularly. When the completion of stations, warehouses, and piers in Smyrna was added to this, average receipts per mile increased to £204 in 1864 and to £253 in 1865. The real boom came in 1867 when the line was completed and necessary arrangements were made with businessmen in Smyrna and Aidin to send or receive their merchandise by the railway. The receipts soared to £452 per mile only to be followed by a fall to £274 which

(60) See Chapter X, Appendix 2. From 15th September, 1862 on there is no information about the mileage open to traffic. In calculating receipts per mile, therefore, it was necessary to assume that in each six-monthly period an equal mileage, 4.6 miles, was constructed and opened to traffic.

(61) Directors' Report, 25th Sept., 1863.

was caused by the government's prohibition of imports and exports of some commodities. The company suspended or reduced some services until the prohibition was removed in April 1868 (62). The recovery was quick and in 1869 the receipts were at the same level as 1867.

An interesting feature of the traffic receipts is that the fluctuations in the six-monthly figures for a given year have a definite pattern, the first figure is always smaller than the second one. This can be explained by the fact that the second half of the year is harvest time and exports from the interior, most of which were agricultural products, increased accordingly. On the other hand, when the produce was sold in Smyrna the incomes of producers increased, stimulating their demand for manufactured goods from abroad. Therefore, as an approximation it can be said that the intensity of inward traffic was at its strongest in the first half of the year and that of outward traffic in the second half.

The expenditure figures are not very meaningful because the directors' reports contain indications of expenses charged to this account while they ought to have been charged to capital account. It seems that until the end of 1864 the company employed a correct method of distributing expenses between different accounts. From 1864 on this correct procedure was abandoned.

(62) PRO,FO 195/910, Cumberbatch to Elliot, no.22, 11th Apr., 1868.

The relatively high expenditure figures for the last six months of 1863 and the whole of 1864 are explained by the high cost of repair of the permanent line damaged by heavy rains. The gap for 1865 and 1866 is followed by a high figure for the first period of 1867 containing £4,174 investment in rolling stock which has no place in this account (63). Similarly, the following figure is exceptionally high and invites suspicion about its components.

With a low annual average profit and the working expenses consuming 91% of traffic receipts, the overall performance of the company between 1861 and 1869 seems very disappointing. However, it is very interesting to note that between 1858 and 1863 the company managed to distribute about £84,000 in dividends (See Appendix 3). This was achieved through declaring dividends from capital account and not, as it should be, from profit account. It is true that the company, during these years, was going through a difficult time and every effort had to be made to attract the attention of prospective shareholders, but from an accounting point of view this practise was wholly unjustified if not fraudulent (64).

The rate of return on capital invested by shareholders is given by the ratio between dividends and paid up capital. As the company's records

(63) Bradshaw's, 1869, p.364.

(64) Distribution of dividends out of capital account creates the impression that the company is a profitable proposition even if it is making losses. This method, however, was very fashionable in the early 1860's in England, see, Broadbridge, op.cit., p.38.

slightly exaggerate the amount of capital paid up, the rates of return given in Appendix 3 are somewhat underestimated; these figures should be taken as 5% to 10% higher than they are, assuming that the company's records inflated the amounts actually paid by this coefficient. It is known that this ratio was higher in the years between 1858 and 1861 than it was between 1861 and 1863. It appears that the company, without a single mile of permanent way open to traffic, distributed a dividend of about 4% in 1858, and 5% in 1859. These percentages compare favourably with the average rate of return produced by the Lancashire & Yorkshire Railway. This company, which had an average paid up capital of more than £11m, distributed 5.3% in dividends between 1842 and 1873 (65).

As the constructed parts of the line were opened to traffic and as the company's financial position improved on account of the revenue through the forfeiture and the re-sale of nearly 30,000 shares, and the emission of the first series of debentures, the urgency of the need for advertising the profitability of the company disappeared and dividends gradually decreased, reaching 0.5% in 1862.

(65) Ibid., p.67.

APPENDIX 1: Smyrna-Aiûin Railway Company, Capital Account 1858-1865

Year	Paid Up Capital (£)	Expenditure (£)	Balance (£)
I-VI 1858	142,147	112,934	29,213
VII-XII 1858	204,548	175,158	29,390
I-VI 1859	269,979	244,816	25,163
VII-XII 1859	352,723	n.a.	n.a.
I-VI 1860	437,832	413,421	24,411
I-VI 1861	600,295	635,360	-35,065
VII-XII 1861	730,808	716,507	14,301
I-VI 1862	779,400	821,404	-42,004
VII-XII 1862	854,781	869,709	-14,928
I-VI 1863	870,866	919,812	-48,946
VII-XII 1863	1,057,071	961,267	95,804
I-VI 1864	1,175,864	1,020,890	154,974
VII-XII 1864	1,235,096	1,084,479	150,617
I-VI 1865	1,405,493	1,326,545	78,948
VII-XII 1865	1,304,449	1,212,209	92,240

Source: Directors' Reports, 1858-1866.

n.a. - not available

APPENDIX 2: Gross Traffic Receipts and Working Expenses 1861-1869

Year	Gross Receipts (£)	Working Expenses (£)	Profits (£)	WE/GR %	Receipts per mile (£)
I-VI 1861	3,930	4,585	- 655	111.0	96
VII-XII 1861	5,544	5,498	46	99.1	135
I-VI 1862	n.a.	n.a.	-6,189	n.a.	n.a.
VII-XII 1862	8,728	7,257	1,471	83.0	178
I-VI 1863	9,257	7,962	1,295	86.0	173
VII-XII 1863	11,862	11,510	172	98.5	200
I-VI 1864	9,651	11,144	- 1,493	115.8	154
VII-XII 1864	13,749	11,973	1,776	87.1	204
VII-XII 1865	19,399	n.a.	n.a.	n.a.	253
I-VI 1867	17,296	19,357	- 2,061	111.9	214
VII-XII 1867	36,634	22,092	14,542	60.3	452
I-VI 1868	22,217	20,432	1,785	91.9	274
VII-XII 1868	31,477	23,552	7,925	74.8	389
I-VI 1869	36,530	27,695	8,835	75.8	451

Sources: Directors' Reports; Bradshaw's Shareholders Guide.

APPENDIX 3 : Dividends Declared, 1858-1863.

Year	Dividends (£)	Rate of Return % (Dividends/Paid up Capital)
I-VI 1858	2,178	1.5
VII-XII 1858	4,830	2.4
I-VI 1859	6,324	2.4
VII-XII 1859	8,685	2.5
I-VI 1860	10,532	2.4
VII-XII 1860	11,476	n.a.
I-VI 1861	11,200	1.9
VII-XII 1861	7,721	1.1
I-VI 1862	4,199	0.6
VII-XII 1862	4,685	0.5
I-VI 1863	6,043	0.7
VII-XII 1863	12,947	1.2

Source: Bradshaw's, 1865, pp.361-362. percentages supplied.

CHAPTER IV

TRANSPORT RATES, EXPORT DEMAND AND ECONOMIC DEVELOPMENT IN THE
SMYRNA REGION

ZONES OF PROFITABLE TRADE

In Chapter II a preliminary attempt has been made to show the role of relative distances between Smyrna and towns in the interior in determining the profitability of intraregional trade. It was pointed out that, depending on price differences, there is a maximum distance beyond which buying in the interior and selling in Smyrna will cease to be profitable. This conclusion can now be substantiated with the use of average wheat and barley prices, and cost of camel transportation in 1850. These can be incorporated into a formula which will show the limits to which a merchant would be prepared to go for buying with the purpose of selling in Smyrna. In other words, assuming a suitable profit margin, it can be shown that there is a unique set of prices in towns which allows grain to be transported to and sold in Smyrna at a profit. This is another way of saying that the distance between Smyrna and a town in the interior is decisive in determining the maximum wholesale price in that town if grain is to be sent to the sea coast.

In 1850, the retail price of wheat in Smyrna varied between £1 and £1.14s.8d. and that of barley between 9s.9d. and 12s.11d. a quarter (1). These give an average price of £5.9s.4d. and £2.6s.2d. a ton, respectively. If the grain merchant wanted a minimum profit of 10% on retail price, the total cost of wheat to him should not have exceeded £4.19s.5d. per ton, and that of barley £2.2s.

(1) PRO, FO 78/832, Brant to Palmerston, no.20, 22nd Apr., 1850; no.29, 22nd July, 1850; PRO, FO 78/868, Brant to Palmerston, no.3, 6th Feb., 1851.

Table 5 in Chapter II indicates that camel owners charged 9d per ton-mile for grain and 11½d per ton-mile for everything else. These rates applied only in good seasons, i.e., when roads were relatively free of mud and passable. In rainy seasons rates were much higher. Also, a decrease in the number of camels, whether as a result of camel disease or expropriation for government use, pushed the rates above their normal level (2). Therefore, 9d per ton-mile for grain should be interpreted not as an average but as a minimum prevailing under special conditions.

The general formula for grain, then, takes the following form:

$$p_1/1+r = 9m+p_2 \dots\dots\dots(I)$$

Where,

p_1 = Smyrna retail price,

r = Minimum rate of profit in grain trade,

m = Distance in miles,

p_2 = Price in the interior.

Rearranging gives: $m = p_1 - p_2(1+r)/9(1+r) \dots\dots\dots(II)$

Substituting £5.9s.4d. = 1,312d = p_1 for retail wheat price at Smyrna, and assuming $r = 10\%$ we obtain, $m = 1193 - p_2/9$ for wheat, and $m = 504 - p_2/9$ for barley. Giving different values to m , a set of maximum prices, which a merchant would be willing to pay for one ton of wheat or barley, can be calculated. For example, if a town is 78 miles away from Smyrna, the merchant would buy wheat at that town only if the price was as low as £2.1s.

(2) PRO,FO 78/1209, Brant to Clarendon, no.51, 12th July, 1856.

per ton. In this case his profit-loss account would be as follows:

Cost of buying one ton of wheat = £2.1s.

Cost of transportation over 78 miles = £2.18s.6d.

Total cost = £4.19s.6d.

Market price at Smyrna = £5.9s.4d.

Total profit = 9s.10d., which is exactly 10% of total cost.

If the price of wheat was more than £2.1s. per ton in that town, it would be irrational for the merchant to buy, transport, and sell that wheat while he could employ his capital more profitably elsewhere, assuming that the merchant regarded 10% as the minimum rate of profit in wheat trade. At the other extreme, if a town was 8 miles away from Smyrna, the merchant could afford to pay as much as £4.13s.5d. for one ton of wheat, making exactly the same amount of profit. The linear relationship between the price of wheat and distance is shown in fig.1 It is clear that the position of the curve depends on the rate of profit assumed initially. If, instead of 10% a profit rate of 15% was assumed the curve would be lower, nearer to the origin. The graph shows that for each distance there is a unique local price of wheat, which is a maximum limit, which will enable the merchant to make 10% profit if he buys at that distance from Smyrna.

Transferred on a map, these price-distance pairs will form a set of concentric circles showing the area of profitable wheat trade (Map 2). The map indicates that a merchant could buy wheat at Manisa at a price slightly higher than £4 per ton and make a profit of 9s.10d. by selling it at Smyrna at £5.9s.4d. per ton. Likewise, the price should be as low as about £3 per ton at Aidin in order to enable the merchant to make 10% profit.

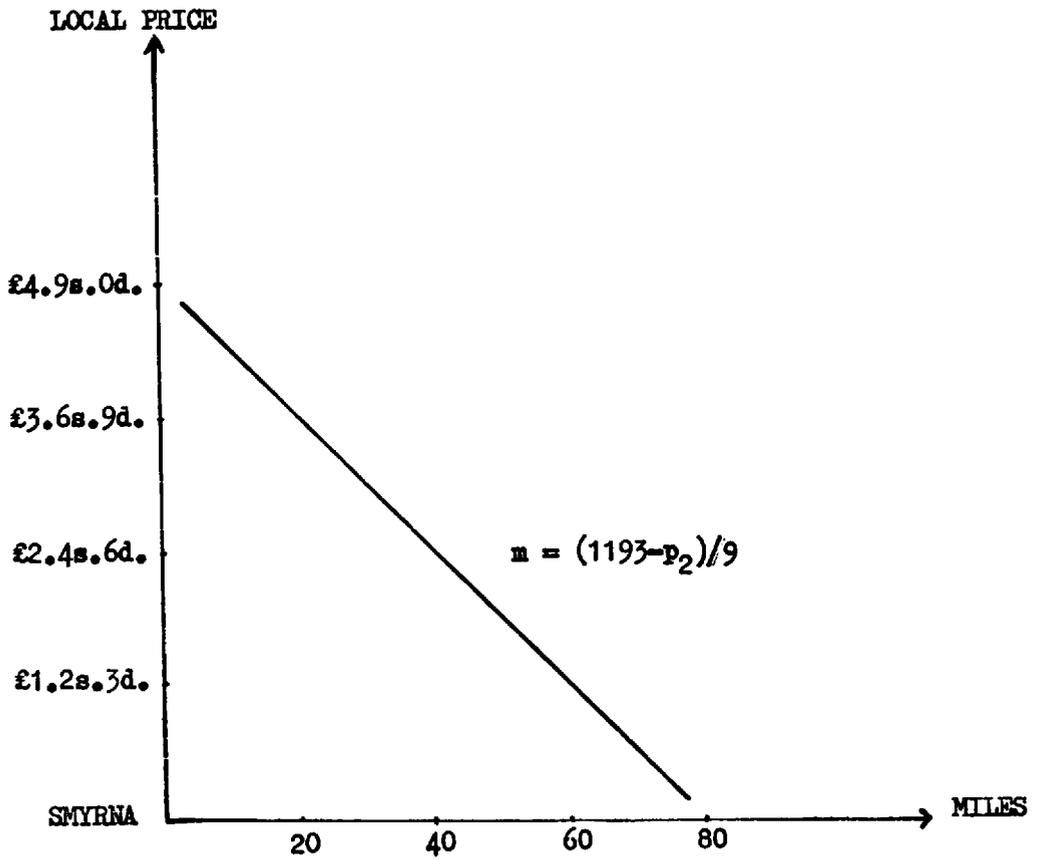


Figure 1. Price-Distance Relationship for Wheat (10% Profit Margin).

The zones of profitable wheat trade, based on the Smyrna retail price of £5.9s.4d. per ton, a minimum rate of profit of 10%, and 9d per ton-mile transport cost, expand or contract with changes in these variables. If, for example, the price at Smyrna increases, ceteris paribus, there will be an expansion and some areas which were previously unprofitable to trade with, will become profitable and enter into trade with Smyrna. Similarly, if caravan rates increase, the zones will contract and some areas which were trading with Smyrna, will cease to be profitable enough to be included in trade.

Equation II is a simple decision making rule with which a merchant, facing a set of different prices at Smyrna and in the interior, and having a minimum profit margin in mind, decides about buying or not buying from a specific market. It, however, excludes an important element, the length of journey. The latter enters into the merchant's calculations in two ways. Firstly, the merchant, in order to maintain a steady flow of sales in Smyrna, must keep a certain amount of stock which is a direct function of the length of journey. The longer it takes to transport one unit of any merchandise from the hinterland to Smyrna, the larger should be the stock per unit of sales. Consequently, larger sums of money should be tied up in stocks and the merchant incurs a cost in the form of interest lost. Hence, the cost of time lost in transit is equal to the cost of keeping the required level of inventory, assuming zero storage costs. If the cost of stock carrying is included in eq.II, this will decrease m and narrow the zones of wheat trade depicted in Map 2. In June 1850 it was estimated that the ratio of

wheat sales to stocks in Smyrna was 2:1 (3). During that month 2,000 tons of wheat were sold and merchants had 1,000 tons in stock. The average price in June was £5.1s.6d. per ton, giving a total stock value of £5,055. At the current rate of interest of 12% p.a. this meant that the Smyrna merchants lost £56 in June on interest alone. Naturally, stocks were larger during the winter making the loss greater.

Secondly, the merchant should take into account the value of merchandise perished during transit which is also a function of the transit time. Calculated in monetary terms, these factors must have limited the already narrow area of profitable trade to a still narrower region. One of the net results of the primitive and costly method of camel transportation was, therefore, the confinement of the intraregional market to a very limited area. This, in turn, had some important consequences:

- i) Production units in the interior, from the point of view of intraregional trade, remained almost self-sufficient, producing mainly for their own needs and sending a negligible surplus to towns if there was sufficient means of transport and if it paid to do so. There were numerous examples of surplus wheat being left to rot either because there were no camels to take it to towns or because, even if camels were available, the price it fetched in the market was not enough to cover costs of production and transport.

(3) PRO,FO 78/832, Brant to Palmerston, no.31, 8th Aug., 1850.

- ii) The limited nature of the market essentially meant a low level of demand. Having a meager prospect of selling his produce the farmer was not interested in improving the methods and technology of cultivation.
- iii) Although there were vast areas of arable land capable of being brought under cultivation, as long as demand remained low, there was no point in extending the existing boundaries of cultivation.

Consequently, the poor state of transportation facilities and the accompanying factors limited the size of the market and, in consequence, checked the potential growth possibilities of agriculture.

When the American Civil War broke out the world faced with an acute shortage of cotton supplies. The price of cotton went up in all markets especially in England. In Western Anatolia the effects of higher cotton prices were accompanied by lower transport costs as the Aidin Railway pushed into the interior. The combined results of increased cotton prices and lower transport costs were such that land use patterns changed in favour of cotton, and previously uncultivated lands were brought under cultivation in response to the changes in export markets (4).

- (4) The effects of the changes in product markets and transport rates on existing land use patterns are discussed in, E.M.Hoover, The Location of Economic Activity, New York, 1948, pp.90-102; M.Chisholm, Rural Settlement and Land Use, London, 1968, pp.11-32

ATTEMPTS TO REGENERATE TURKEY AS A SUPPLIER OF COTTON

The foundation of the Manchester Cotton Supply Association (MCSA) in 1857 was the result of an explicit recognition that the heavy dependence of the Lancashire cotton industry on supplies from the USA was potentially dangerous in that any disruption of this supply would jeopardize the industry. Among many other countries MCSA considered Turkey as a potential source of cotton imports. This consideration was not unfounded because during the XVIII Century British cotton manufacturers had experienced a regular and large supply of cotton from the Ottoman Empire. Table 1 shows the quantity of Turkish cotton imported into England.

Table 1
British Cotton Imports from Turkey
1725-1789

Years	1725	1755	1775	1785	1787	1789
Cotton	667,279	738,412	2,175,132	2,190,027	3,227,964	4,406,892
(lbs)						

Source: B.M., Add.MSS. 38376, Liverpool Papers, vol.clxxxvii, ff.55-126

In addition to cotton wool Turkey had also supplied England with large quantities of cotton yarn. In 1697 England bought 483,136 lbs of cotton yarn from Turkey; in 1725, 146,340 lbs; and in 1735, 106,760 lbs.

Smyrna was the chief exporter of Turkish cotton. During 1785-87 almost 95% of Turkish cotton exports originated from Smyrna. Also, in these years Smyrna had exported more than 57m. lbs of cotton wool and about 5,000 bales of cotton yarn to France. That is why the chairman of MCSA described Smyrna as the New Orleans of the XVIII Century (5).

(5) MCSA, Cotton Culture in New or Partially Developed Sources of Supply: Report of Proceedings, Manchester, 1862, p.30.

The beginning of the XIX Century witnessed a fall in the quantity of cotton imported into England from Smyrna. Two factors operating simultaneously were responsible for this fall. Firstly, Smyrna was eclipsed by American cotton which was better in quality and cheaper in price (6), and, secondly, the Levant Company, which had been the main importer of Turkish cotton, was prohibited from buying Turkish cotton unless it was exchanged in payment for British goods exported to that country (7). Thus, in 1817 the value of cotton wool imports from Turkey were as low as £799 (8). There was a considerable fall in cotton prices in Turkey and it ceased to be profitable to grow cotton except for local needs (9).

The earliest indication of the revival of interest in Turkish cotton can be seen in the leading articles of a newspaper published by an Englishman in Constantinople. For two months the newspaper tried to propagate the idea that Turkey had all the requirements for the successful cultivation of cotton and that there was a ready market for cotton in Europe, especially in England, which could absorb practically unlimited quantities (10).

After the formation and dissolution of the unsuccessful Asia Minor Cotton Company in 1856 (11), a more systematic approach was adopted by MCSA in 1857. The Association, through the Foreign Office, sent a questionnaire to all British diplomatic agents in Turkey and asked them to

(6) Ibid., p.52.

(7) B.M., Add.MSS, 38350, Liverpool Papers, vol.clxi, ff.21-22.

(8) A.C.Wood, A History of the Levant Company, London, 1964, p.193

(9) B.M., Add.MSS, 38350, Liverpool Papers, vol.clxl, f.12 contains a list of cotton prices in various countries which shows that Turkey had the lowest price. On ff.39-40 a table shows the relative profitability of cotton growing in these countries and concludes that it was not profitable to export cotton from Turkey given the low market price.

(10) (Ceride-i Havadis), 31st July, 1840; 25th Sept., 1840.

(11) PRO, BT 31/206 (629c).

report on the present and potential state of cotton growing in their districts (12). One of the most promising replies came from Smyrna (13). It was stated that the diminished cultivation of cotton was capable of great expansion if the producers were supplied with American seed and practical help. It was also pointed out that the present state of camel transportation was pathetic and the newly started Smyrna-Aidin railway would be of utmost importance to the extension of cotton culture. Irrigation was not usually employed because it was generally unnecessary. Even with the very inferior native seed, and a very rude plough which did not open the ground more than three inches, average yield per acre never fell under 500 lbs of clean cotton. The processes of cleaning, pressing, and packing were carried out with extremely primitive technology. There was not a single gin in the region. One man, using a hand roller, was capable of turning out a mere 7 lbs of clean cotton a day which, in turn, was pressed into bags by foot pressure.

MCSA found the situation in Smyrna very promising and decided to start a campaign aimed at the encouragement of cotton (14). The first step was to ensure that the producers should substitute good quality American seed for native seed because, it was pointed out, in its present state Smyrna cotton could only be classed with the inferior Indian cotton (15). Sixty bags of good seed were shipped from Liverpool and on arrival at Smyrna were immediately forwarded to the interior (16). Although the larger part of the crop was destroyed by locusts, it was reported that there was an extension of land under cotton and total production was said to be about 330,000 lbs. In 1859, the output increased to 7.5m lbs and more American seed was sent (17).

(12) Accounts & Papers, 1865, vol.lvii, pp.787-827

(13) PRO,FO 78/1307, Blunt to Clarendon, no.59, 5th Dec., 1857.

(14) PRO,FO 195/610, Blunt to Alison, no.15, 29th Apr., 1858.

Encouraged by its initial success the Association sent an agent to Smyrna to organize and coordinate a more effective movement. In his reports the agent recommended three important measures. He drew attention, first of all, to the fact that under the existing tithe system it was unrealistic to expect a considerable increase in the output of cotton. Either the tithe on cotton should be abolished altogether (18), or a method should be initiated under which cotton growers should be exempt from taxation in alternating years (19), or the Turkish government should be persuaded to abolish the tithe on cotton in exchange for higher duties on cotton manufactures imported from England (20). Secondly, if cotton growing in Turkey was expected to develop on a scale commensurate with the urgency of the wants of England, "demand, to be effective, must be backed by money invested in creating the required supply" (21). So, MCSA must send competent instructors to teach the practical aspects of cotton culture, American seed must be furnished in abundance without delay, and publications of MCSA must be extensively distributed.

Thirdly, the beneficial effects of the Smyrna-Aidin railway on the revival of cotton cultivation were emphasised. The early completion of the line would reduce transport rates considerably, and merchants would be able to establish an efficient network of trade and communication. Also the

(15) MCSA, op.cit., p.7

(16) PRO,FO 78/1391, Blunt to Malmesbury, no.24, 20th Apr., 1858.

(17) PRO,FO 78/1533, Blunt to Russell, no.34, 30th Apr., 1860.

(18) W.Sandford, On Cotton Growing in Turkey and Syria, London, 1862, pp.4-8; (Ceride-i Havadis), 14th Feb., 1861.

(19) Cotton Supply Reporter, 15th March, 1862.

(20) B.M., Ann.MCS. 39111, Lazard Papers, vol.clxvii, ff.207-208.

(21) Sandford, op.cit., p.25.

improved machinery necessary for the cultivation and cleaning of cotton would be conveyed to the interior more efficiently. Therefore, the report went on, the railway should be encouraged and supported to the utmost extent. A vigorous support, a strong pull was all that was needed to finish the line. This strong pull was to take the form of more Lancashire names and capital in the company (22). Whether a coincidence or not, it is to be noted that, starting from 1861, there is a noticeable improvement in the financial position of the company. Not only was the company reinstated in the Stock Exchange list, but also a large number of forfeited shares were sold at full value, and all calls on shares were unusually well responded to (23).

In Constantinople an equally interesting development was taking place. The British owned newspaper Ceride-i Havadis rigorously continued its campaign which was as diversified in its form as its content. Starting from the imminent danger of a civil war in the USA (24), it went on to explain how profitable it was to grow cotton (25), then gave free advice to the Porte on the methods and forms of support to be given to cotton producers (26), and finally taught the producers the modern methods of cotton growing and ways of fighting cotton diseases (27).

The Smyrna-Aidin railway company was also doing its share in promoting cotton culture. By special arrangement, a delegation, comprising of

(22) Ibid., pp.10-25.

(23) See chapter III.

(24) (Ceride-i Havadis), 13th Feb., 1861.

(25) (Ceride-i Havadis), 10th-12th March, 1861.

(26) (Ceride-i Havadis), 14th March, 1861.

(27) (Ceride-i Havadis), 9th Sept., 1861.

some Smyrna merchants and officials of the company, set off for Constantinople and explained to the government how beneficial it would be if the government, alongside its encouragement of cotton, gave special assistance to the railway (28). The company also played an active role in the formation of an association at Smyrna aimed at the dissemination of information about cotton (29). The directors of the company published a supplementary report on the two-sided relationship between cotton and the railway stating that the support given to cotton was futile unless the same encouragement was extended to the railway (30). The secretary of the company "did all in his power to make the issue known in Manchester and elsewhere by the circulation of reports, and by correspondence with several Chambers of Commerce" (31).

Gradually, these efforts bore fruit and in late 1862 an Imperial Command granted the following privileges to cotton growers (32):

- i) Any piece of crown waste land could be taken gratis for the purpose of cotton cultivation;
- ii) Such land would be exempt from taxation for five years;
- iii) All kinds of cotton would pay the same export duty which was fixed on the basis of lowest quality cotton;
- iv) Tools and machinery to be used in cotton growing and cleaning would be exempt from import duty;

(28) Directors' Report, 27th March, 1861.

(29) Half Yearly Meeting, 29th March, 1861.

(30) Directors' Report, 9th May, 1861.

(31) Half Yearly Meeting, 28th Sept., 1861; Half Yearly Meeting, 30th Sept., 1862.

(32) Türk Ziraat Tarihine Bir Bakış, (A Survey of Turkish Agricultural History), Istanbul, 1938, pp.128-129.

- v) The government would distribute free cotton seed, and provide free instruction and literature.

In April 1863, the government distributed nearly 295 tons of seed in Anatolia (33). In May, in Smyrna, 311,715 lbs of seed were given away to prospective producers (34). In 1862 this amount was only 47,040 lbs (35). The first part of the MCSA campaign, the substitution of American seed for native seed, was apparently successful. However, reports by the agents of the Association produced serious doubts about the credibility of the intentions of the Turkish government to encourage cotton growing. It was alleged that the abolition of tithes and other exemptions had not in fact taken place but existed only on paper (36). The Association, after investigating the allegations and having found that their intelligence was correct, acted immediately and passed resolutions to the effect that the Porte should stick to its promises and carry out the announced measures (37). The reaction of the Porte was very harsh. If the Association, it was said, did not want to damage its reputation, it should stop making "extravagant and preposterous demands" on the Turkish government (38). Having apparently failed in fulfilling its promises, the Turkish government later resorted to the use of ineffectual incentives in the form of silver and gold medals to producers who met certain production requirements (39).

(33) (Ceride-i Havadis), 12th Apr., 1863.

(34) PRO,FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863.

(35) PRO,FO 78/1760, Blunt to Russell, no.28, 23rd May, 1863.

(36) B.M. Add.MSS. 39114. Layard Papers, vol.cxxxiv, ff.33-36

(37) Manchester Guardian, 12th Aug., 1864.

(38) Cotton Supply Reporter, 1st March, 1865

(39) (Takvim-i Ticaret), 10th Feb., 1866.

In England, Lancashire cotton manufacturers formed three companies "for the purpose of encouraging the growth of cotton in Asia Minor". The Asia Minor Co., the largest of the three with a capital of £500,000, sent three of its directors to Smyran to investigate the possibility of increasing Western Anatolia's cotton output (40). The other two companies, the Ottoman Cotton Co.Ltd., and the Asia Minor Cotton Co.Ltd., arranged practical courses on modern methods of cotton growing and especially on the extra care that had to be given to the fragile American cotton (41).

RESULTS

Total cotton output in 1861 was estimated to be about 9.7m lbs, and it was the general opinion that more land would be brought into cultivation in the following year (42). Subsequent reports showed that the total area under cotton had increased four times in 1862 compared with 1861 (43). Near Aidin, while in 1862 there were 4,500 acres under cotton, in 1863 some 13,000 more acres were brought into cultivation. A farmer, near Nazilli, boasted of growing cotton on 4,400 acres. The vicinity of Torbali, where the railway was passing, had set aside 3,800 acres in 1862, which increased to 8,700 acres in 1863. At Baindir, near Torbali, 1,050 acres had originally been devoted to cotton in 1862, another 1,850 acres were added in the following year (44). Even in Denizli, where the railway was to be extended in the future, land under cotton increased by

(40) PRO,FO 78/1780, Company to Russell, 24th Feb., 1863.

(41) See, Times, 31st March, 1863; Prospectus of the Asia Minor Co.Ltd., Manchester, 1863; PRO,BT 31/778(424c), The Ottoman Cotton Co.Ltd.; PRO,BT 31/737(230c), The Asia Minor Co.Ltd; PRO,BT 31/819(629c), Asia Minor Cotton Co.Ltd.; London Gazette, 7th March, 1882.

(42) PRO,FO 78/1687, Blunt to Russell, separate, 26th July, 1862.

(43) PRO,FO 78/1760, Blunt to Russell, no.28, 23rd May, 1863.

(44) PRO,FO 78/1760, Blunt to Russell, no.31, 23rd June, 1863.

1,600 acres in 1863 (45). Towards the end of 1863 it became clear that the total output of cotton within the Smyrna Consular District was not less than 45,000 bales, an equivalent of 31.5m lbs of clean cotton (46). The high price of cotton persisted in 1864 and unprecedented quantities were produced and exported (47). As should be expected, the overwhelming majority of plots brought under cotton were in the immediate neighbourhood of the railway (48). In 1864 cotton cultivation was enlarged to such an extent that fears were expressed about the possibility of a deficient grain harvest. Producers were reported to have discovered that the lands best suited to the growth of cotton had until then been used for grain. So, they started sowing cotton instead of grain (49). During 1865 cotton production suffered from a temporary setback on account of the hard state of the ground in the spring. It was reported that the quantity of seed sown in 1865 was at least 25% less than in 1864 (50).

The low level of technology in cotton cleaning and pressing had always been a great hindrance in the past. Exporters' requirements were that cotton should be free of seeds and any exogenous material, and that the bales should be pressed and packed properly (51). "Some of the more intelligent and wealthy merchants gave their full attention" to this fact and, starting from 1862, set up small factories for cleaning and preparing the raw product for exportation (52).

- (45) PRO,FO 78/1760, Biliotti to Blunt, 29th June, 1863. According to, G.B. Ravndall, Turkey, A Commercial and Industrial Handbook, Washington, DC., 1926, p.97, between 1861 and 1865 land under cotton in Western Anatolia increased by 10 times.
- (46) PRO,FO 78/1760, Blunt to Russell, no.63, 21st Nov., 1863.
- (47) PRO,FO 78/1831, Cumberbatch to Russell, no.12, 3rd Sept., 1864.
- (48) PRO,FO 195/797, Mallouf to Vedova, 30th May, 1864; PRO,FO 78/1831, Vedova to Russell, no.27, 14th June, 1864.
- (49) PRO,FO 78/1888, Cumberbatch to Russell, no.34, 27th May, 1865.
- (50) PRO,FO 78/1888, Cumberbatch to Russell, no.48, 8th June, 1865.
- (51) PRO,FO 78/1687, Blunt to Russell, separate, 26th July, 1862.
- (52) PRO,FO 78/1760, Blunt to Russell, no.28, 23rd May, 1863; PRO,FO 195/797, Memorandum of Cumberbatch, 6th May, 1865. (See Chapter VII).

One of them even claimed to have invented a revolutionary mechanism with the use of which 20 gins could be attended by a single person enabling the factory to increase its output by 28%, a saving of £50 a day (53). By the early 1870's there were 34 factories, all in railway towns, employing more than 700 gins (54). Table 2 gives the value of cotton exports from Smyrna. There is a general lack of data showing the share of exports to England in total cotton exports from Smyrna. The only available figure shows that in 1864 England imported £866,952 worth of cotton from Smyrna which was approximately 50% of the total value of Smyrna cotton exports (55).

It is quite difficult to pass a judgement on whether the efforts of MCSA were successful in reviving cotton culture in Turkey. This will involve a comparison of the results obtained at various countries where similar measures were introduced. The Association itself was not completely satisfied with Turkey's performance. It was observed that "the Ottoman Empire has not made such progress as a cotton growing country as there seemed reason to anticipate" (56). The blame was put on the Turkish government because it had failed to fulfil its promises. In Turkey another culprit was found: peasants. It was claimed that they, despite the warn-

(53) PRO,FO 195/797, Vedova to Cumberbatch, 16th July, 1866; Cumberbatch to Lyons, 17th July, 1866.

(54) C.D.Scherzer, La Province de Smyrne, Vienne, 1873, p.104.

(55) PRO,FO 78/1788, Cumberbatch to Russell, no.40, 8th June, 1865.

(56) W.O.Henderson, The Lancashire Cotton Famine, 1861-1865, Manchester, 1934. pp.46-47. Later investigations showed that the climatic conditions and the composition of soil in Western Anatolia were not suitable for the growth of thin and long-fibred American cotton. Although native cotton, which had an average fibre length of 1.1 inches and a fibre diameter of 0.0008 inch, could be grown in abundance it would not be possible to use it in Lancashire mills which had been designed for spinning the fine American cotton, see, "Report on Agriculture in Asia Minor with Special Reference to Cotton Cultivation, by Professor W.Dunstan, M.A., L.L.D., F.R.S., Director of the Imperial Institute", Accounts & Papers, 1908, vol.cvii, pp.1-22.

Table 2
Cotton Exports from Smyrna 1863-1877

Years	Value of Cotton Exports (£)	Value of Total Exports (£)
1863	1,674,536	4,832,979
1864	1,267,920	4,046,338
1865	2,076,086	3,842,285
1866	521,600	3,606,240
1867	1,187,358	4,455,170
1868	321,270	4,632,270
1869	461,320	4,540,350
1870	431,750	3,620,450
1871	216,800	4,043,280
1872	770,000	4,866,800
1873	81,000	4,499,000
1874	631,730	3,940,000
1875	520,000	3,896,000
1876	655,751	4,630,000
1877	423,754	4,687,491

Sources: PRO,FO 78/3070; PRO,FO 83/395; "Statistical Tables Relating to Foreign Countries, pt.ix," Accounts & Papers, 1864, vol.lx, p.325.

ings of instructors sent by the Porte, tilled the land exactly the same way as they tilled it for wheat or barley, and, did not plant the seeds until June whereas they should have planted them in early April (57).

Another line of explanation ran in terms of the psychological attitude of farmers. A contemporary writer asserted that "the majority of peasants regarded these measures as another means of government deception. 'We cannot afford to accept these favours' they said 'because at the end the government will come up with something which will make us regret what we have done'" (58).

(57) Turk Ziraat Tarihi, pp.136-137

(58) Ibid., p.131, quoting from N.Kemal in, (Hurriyet), 20th July, 1868. For the distrust of Turkish peasants of the government see, J.E.Pierce, Life in a Turkish Village, New York, 1964, p.84; E.M.Rogers, "Motivation, Values, and Attitudes of Subsistence Farmers," in, C.R.Wharton, (ed.), Subsistence Agriculture and Economic Development, London, 1970, pp.111-135 According to A.Bonne, the Middle Eastern peasant shows a profound distrust and disgust towards any kind of Governmental activity; "Every action of the Government is regarded by him as a trick to extort more taxation or to attain some other malicious end," see his, "Some Aspects of the Recent Socio-Economic Changes in the Middle East", Journal of the Royal Central Asian Society, vol.xxvii, 1940, pp.286-300.

The extent to which the aspirations of MCSA were fulfilled is not of chief interest here. What is more important is the issue of what the re-introduction of cotton precipitated as far as the economic development of the region is concerned. First of all, it meant a large scale transition to a cash-crop economy. It was true that the Smyrna region had already been more commercialized than many areas, with the possible exception of Constantinople. The efforts to revive cotton culture and the consequent expansion in the volume of trade led to the organization of commerce on such a scale and rate that the Smyrna region by far surpassed the rest of the Empire with its highly sophisticated and technical handling of commercial affairs.

The transportation and warehousing of cotton was an hazardous affair as the bales were very likely to catch fire on the slightest occasion. The merchants had long been yearning to see an insurance company in Smyrna. In 1863, the London Sun Insurance Company opened an agency in the city, the first of its kind in Turkey. Although the rates were considered very high, almost all warehouses were insured against fire (59). Two banks, the Imperial Ottoman Bank and the Ottoman Financial Association, were established in 1864 (60). The former immediately opened branches in the interior and specialized in long-term loans, especially to small farmers. The Ottoman Financial Association, on the other hand, limited its activities to Smyrna and its immediate vicinity specializing in financing merchants who required short-term loans in their business routine (61). The operation of the banks was widely acclaimed especially

(59) PRO,FO 78/1760, Blunt to Russell, no.67, 26th Dec., 1863.

(60) PRO,FO 78/1888, Cumberbatch to Russell, no.40, 8th June, 1865.

(61) PRO,FO 195/797, Mallouf to Vedova, 25th May, 1864.

by foreign merchants who had been threatened with being shut out from the interior trade as a result of the activities of wealthy natives who started purchasing the produce from growers beforehand and selling it to the merchants with large profits (62). The banks enabled foreign merchants to borrow at relatively low rates of interest and compete against native speculators. They also helped small producers by freeing them from the usurers.

The increased volume of trade necessitated a new type of local administration. New and more sophisticated services had to be offered to the inhabitants; more stringent measures had to be taken to secure the regularity of trade; and relations between merchants were to be based on a more controlled and sounder basis. In as far back as 1860 the government was petitioned by a number of Smyrna merchants "who were most anxiously desirous that the Porte should grant permission for a municipality in Smyrna" (63). In fact, there was already a municipal organization in the city. What the petitioners wanted was one exactly similar to the municipality of Constantinople (64). Behind this move was the desire for representation in municipal and other councils, and thus to gain a fair amount of control in the administration of the city, especially in the regulation of trade. From 1864 onwards, when the municipality was re-organized on the same footing as Constantinople, the British merchants continually asked the Porte for more powers in the running of the province (65).

- (62) PRO,FO 83/337, Cumberbatch to Granville, no.1, 4th Nov., 1870.
- (63) PRO,FO 195/646, Report on Smyrna for the Quarter ended 31st March, 1860.
- (64) PRO,FO 78/1533, Petition to Mehmed Rustu Pasha, 14th Dec., 1859;
PRO,FO 195/610, Blunt to Bulwer, no.5, 17th Feb., 1860.
- (65) PRO,FO 195/910, Cumberbatch to Elliot, no.44, 10th June, 1868;
PRO,FO 195/1161, Smyrna Merchants to Reade, 24th Oct., 1878.

The opening of underwater telegraph communication with Europe (66), and overland with the rest of the Empire (67); the enlargement of the existing and the opening of new commercial courts; the establishment of the English daily Smyrna Mail, "advocating the commercial interests of the city" (68); the building of a new and modern quay at the harbour which was a smaller model of Liverpool quays (69), must also be mentioned as examples of different kinds of developments which were taking place.

All these were indications that Smyrna was undergoing a tremendous transformation compared with the rather stagnant economy of the Empire. It would be misleading to attribute all these developments to the efforts of Lancashire cotton manufacturers. After all, Smyrna was not the only region where similar measures were introduced. Salonica, Adana, Mersin, the Syrian coast, and Eastern Turkey also caught the eyes of Lancashire manufacturers, but none of them exhibited the progress recorded by Smyrna (70). The Cukurova region, where Adana and Mersin were situated, was known to possess the best soil suitable for cotton growing, but until the 1880's these two cities did not show any remarkable progress. Yet, when they were connected with a railway traversing the fertile Cukurova (71) their development became spectacular.

The main impact of the Smyrna-Aidin railway was first felt on transport rates. Camel owners faced a very strong competitor which offered to carry goods faster, more safely and most important of all, more cheaply. As

- (66) PRO,FO 78/1447, Blunt to Hammond, 20th Aug., 1859;
- (67) PRO,FO 78/1888, Cumberbatch to Russell, no.50, 22nd July, 1865.
- (68) PRO,FO 78/1606, Blunt to Russell, no.7, 18th May, 1861; PRO,FO 195/687, Tuson to Bulwer, 24th Oct., 1861.
- (69) PRO,FO 195/910, Ali Pasha to Lyons, no.16611/17, 17th May, 1866; PRO,FO 195/797, Cumberbatch to Lyons, no.22, 15th June, 1866.
- (70) See the reports by British consular agents in these regions in, PRO,FO 83/337; PRO,FO 83/395; and, PRO,FO 83/415.
- (71) PRO,FO 78/3525, "Communique of the Turkish Embassy", 20th Jan., 1883.

a result, camels were relegated to the position of feeders to the railway. Cheaper transport rates essentially meant an enlarged area of profitable trade. The price-distance curve in fig.1 became about six times flatter. The zones of profitable trade in Map 2 accordingly shifted their boundaries outwards. Many towns, which had previously been unable to send their produce to Smyrna because of high camel rates, came into contact with the main market. As "production for the market" became the principal target, cash crops were substituted for traditional ones. Existing land-use patterns started to change under the pressure from the market. Distribution of land between different uses changed considerably and existing boundaries of cultivation expanded, bringing waste land under cultivation. To sum up, a forceful movement started towards an expanded and integrated regional market.

Without the joint efforts of the Turkish government and Lancashire manufacturers to revive cotton culture, these developments could have taken place but at a slower rate. Cotton played the role of an active catalyst accelerating the ongoing process. In other words, the American Civil War and the ensuing scarcity of cotton in the world market represented a strong push in the direction of market expansion and accelerated development in Western Anatolia.

CHAPTER V

THE SOCIAL SAVING

On 4th October, 1888, the Ottoman Government sanctioned the replacement of the provisional tariff of the Smyrna-Aidin Railway with a new schedule of rates (1). The new tariff charged an average rate of 1.84d per ton-mile of grain, and 2.92d per ton-mile of other commodities. Compared with the average caravan rates of 9d and 11½d, the new rates represented substantial savings in transport costs. The new mode of transportation provided a regular and faster supply of commodities at Smyrna and at the market towns in the interior. One of the results was the fall in the amount of inventories. Another consequence of the fast railway service was the decrease in the value of commodities perished or damaged in transit. The quantification of these cost-saving effects of the railway is important from the point of view of the railway's contribution to the development of the regional economy.

THE NETWORK OF CARAVAN TRADE

The natural hinterland of Smyrna consists of the nearly rectangular area defined by the Smyrna Bay in the north-west, the southern shores of the Scala Nuova Bay in the south-west, the plain of Yalvach in the north-east, and the southern extreme of the Lake Egerdir in the south-east. The region is surrounded by high mountains; the Tmolus range in the north, the Lycia and Pamphylia mountains in the south, and the Phrygian heights in the north-east and east. The

(1) The new tariff was, in fact, the same as that of the Anatolian Railway; G.Young, Corps de Droit Ottoman, vol.iv, Oxford, 1905, pp.206-207.

Messogis range occupies the west central part of the region and continues to the north-east to join the Tmolus range just north of Nazilli. Throughout history, the two river valleys between these mountains, the Cayster and the Meander, had always been the main arteries of trade between the sea coast and the central plateau of Asia Minor.

In the second half of the XIX Century, the main caravan route started from Smyrna, crossed the Messogis mountains near the Scala Nuova Bay, turned to the east and followed the Meander valley to Saraikeui, took a slightly south-easterly direction and then turned sharply to the north on to Dinair. From there a branch continued north-east to Chai and then to the central plateau. Another branch connected Dinair with the rich Yalvach plain in the east, eventually ending in a cul-de-sac of mountains (2).

Chivril, an important gateway to the central plateau just north of Dinair, was connected to the Meander valley through a conglomerate of roads of secondary importance. Another cluster of secondary roads occurred east of Dinair and west of Yalvach, within the triangular area defined by the towns of Uluborlu, Isparta, and Burdur. From the latter an important branch emerged and continued westwards following the northern rim of the Pamphylian mountains and ended at Aidin. In the Cayster valley, the secondary roads, continued in the great corridor formed by the Tmolus and the Messogis ranges, ran in the direction of Torbali in

(2) Sketch Map Showing the Feeding Districts of the Cassaba and Aidin Railways, 1857 (?), B.M. Map Room, 46986. (1), and 46986.(2).

the west where they joined the north-west part of the main route.

It appears that the XIX Century network of caravan routes revolved around the main axis of Smyrna-Aidin-Dinair road. The physical features of the region did not permit the development of a network of secondary roads in the south whereas the north-east enjoyed the benefits of the level plain south of the Phrygian range (Map 3).

The primary and the secondary roads were all unfit for wheeled traffic. Bridges were frequently lacking, having in some cases never been built, in others having been swept away by floods. Travellers practically never saw a carrier-wagon plying between two market towns. Almost everything was carried on camels which were frequently combined in caravans. A camel's load varied between $2\frac{1}{2}$ and $4\frac{1}{2}$ cwts. and the average speed was about 18 miles a day. The main drawback of caravan transportation was the helplessness of camels in crossing deep streams. There were usually ferries across the rivers at much frequented points. Otherwise, where there were no ferries or bridges, the streams had to be forded, and it usually happened that traffic was interrupted for weeks during the rainy season (3).

Aidin, Nazilli, and Denizli were the most important market towns in the interior. The former, in fact, was the seat of the provincial

(3) Admiralty Intelligence Department, Handbook of Asia Minor, vol.ii, London, 1919, p.127; vol.iii, pt.2, London, 1919, pp.41-54; Notes on the Geography of Asia Minor, London, 1916, pp.15-51.

government until 1851. Their importance was mainly due to their favourable location on the Meander valley caravan road. They received imported European goods from Smyrna and distributed them among the surrounding centres of settlement. In return, they collected and sent to Smyrna the agricultural produce of the region. A greater part of the opium crop from Afion Karahissar found its way to Smyrna through Dinair and Aidin (4). The whole valley of Aidin, 18 miles westwards from Nazilli to the sea, produced figs of finest quality which were sent to Smyrna for exportation to Europe, and to Scala Nuova for exportation to the Greek Islands. Raisins, valonia, olive oil, wheat, barley, and beans were the other articles of commerce mainly produced for exportation. It was estimated that the Aidin district alone, i.e., that part of the country lying between the Scala Nuova Bay and the Ortaxi area mid-way between Aidin and Nazilli, employed about 10,000 camels and more than 500 mules for transportation (5).

THE EXTENSION OF THE RAILWAY

The Smyrna-Aidin Railway Company secured two concessions in 1879 and in 1888 for extending the line beyond Aidin into the interior (6). The first extension from Aidin to Kuyujak (Map 4) was opened for traffic in August 1881, and from Kuyujak to Saraikeui in July 1882. A branch line from the main line at Torbali, along the fertile Cayster valley, by Bain-

- (4) Smyrna's importance as an opium exporting port in the first half of the XIX century is explained in, C.C.Stelle, "American Trade in Opium to China," pt.1, The Pacific Historical Review, vol.ix, 1940; pt.2, vol.x, 1941.
- (5) M.Stephenson, Railways in Turkey, London, 1859, p.36.
- (6) A.du Velay, Essai sur l'Histoire Financiere de la Turquie, Paris, 1903, p.595.

dir, on to Tireh was opened in September 1883 (7). The additional lines sanctioned under the concession of 1888 totalled 137 miles, comprising an extension from Saraikui to Dinair, with branches to Chivril, to Denizli, and to Odemish. The Odemish branch of 18 miles was opened in December 1888. Of the 90-mile Saraikui-Dinair extension, the first section (32½ miles from Saraikui to Kizilkaklik) was finished in early 1889, thence to Appa in July of the same year; and the final section was opened throughout to Dinair on October 13, 1889. The 19-mile branch to Chivril was opened in December 1889. Another branch of 13¾ miles to Sokia was opened in January 1890 (8).

The company purchased as from 1st January, 1902, the branch line of 1½ miles from Paradiso to Boudja, a residential suburb of Smyrna. This line had been worked by the company under agreement with the concessionaires since 1870. Its last extension was that from Dinair to Egerdir, which was not opened throughout for traffic until November 1912 (9).

- (7) N.Verney, G.Dambmann, Les Puissances Etrangères dans le Levant, Paris, & Lyon, 1900, pp.233-234.
- (8) B.M. Add.MSS. 39021, 39022, Layard Papers, vols.xci-xcii; PRO, BT 31/2582 (13453), Aidin Railway Extensions Co.Ltd. Also see, W.P.Pickering, The Ottoman Railway, London, 1867; Ottoman Railway Company, Report of the Committee of Investigation, London, 1867; A.Onur, Turkiye Demiryollari Tarihi 1860-1953, (A History of the Turkish Railways 1860-1953), Istanbul, 1953, pp.49-51; O.Conker, Les Chemins de Fer en Turquie et la Politique Ferroviaire Turque, Paris, 1935, pp.173-177; and, M.S.Marghetitch, Etude sur les Chemins de Fer de l'Empire Ottoman, Bruxelles, 1894, p.69ff.
- (9) Railway Gazette, vol.lxi, 1935, pp.1073-1074

This brought the total length in operation to $379\frac{1}{4}$ miles on the standard 4ft. 8 $\frac{1}{2}$ in. gauge. The route followed by the railway was exactly the same, except for a stretch of about 10 miles west of Dinair, as the ancient caravan route (10).

When the first part of the line to Aidin was opened in 1866, a process of transformation started in the caravan road network. The company established agencies at nearby towns off the line for the collection and conveyance of the local produce to the nearest railway station. A cobweb system of secondary roads developed around the towns where agencies were located, and the secondary caravan roads assumed primary importance (Map 5). Thus, the old caravan road connecting Odemish to Torbali became a main road and two new caravan roads came into operation between Tireh and Balachik, and, Tireh and Aidin. Odemish was connected to Kelesh and Beydaghi agencies in the east, and to Birghi and Bozdagh in the north, etc.

By the completion of the railway to Chivril in the late 1880's, this process had nearly come to an end. There were about 255 miles of caravan roads, which were either non-existent or of secondary importance before, connecting towns off the line with railway stations (11). The resulting system of roads resembled a large tree with main and smaller branches. This was an important stage in the development of

(10) H. Picot, Railways in Western Asia, Proceedings of the Central Asian Society, London, 1904, p.9.

(11) F. Rougon, Smyrne, Situation Commerciale et Economique, Paris & Nancy, 1892, p.155.

the regional economy for it marked the transition from a self-sufficient economy to a market oriented one (12). Terminal towns (primary markets) located at the extremities of main caravan roads specialized in the collection and distribution of goods carried by the railway. In 1895 there were 23 primary markets. Of the railway towns (secondary markets), which numbered 49, some were small stations which did not equal others in importance. One measure of their prominence was the length of side-lines on which empty carriages waiting for cargo were parked. Hence, Balachik, an important junction west of Aidin, had side-lines for 699 carriages, Aidin for 247, and Ayasouluk for 216, etc. The number of secondary markets which had side-lines for 100 or more carriages was 14.

SAVINGS IN TRANSPORT COSTS

In 1895, The Smyrna-Aidin Railway carried a total of 290,945 tons of goods (13). Given sufficient data, the cost of transporting this bundle of commodities from producing districts to primary markets, from there to secondary markets, and between secondary markets, can be calculated (14). Similarly, the alternative cost of carrying exactly the same amount of commodities in exactly the same pattern without the railway, can be determined. The difference between these two costs is the social saving created by the railway. (In fact, it is one of the three components of the social saving. The other two will be discussed later).

- (12) I. Tekeli, The Evolution of Spatial Organization in the Ottoman Empire, paper submitted to the 21st Annual Near East Conference, 1970, pp.19-26.
- (13) Rapport et Etats des Comptes, Constantinople, 1896.
- (14) In the absence of data on the exact destination of commodities shipped from secondary markets, it is usually assumed that they were consumed in or exported abroad from secondary markets; R.W. Fogel, Railroads and American Economic Growth, Baltimore & London, 1964, pp.17-19.

The concept of social saving is designed to measure the value of the railway to the economy, by asking what would be the cost of its absence. Without the railway more factors of production would be employed in the transportation sector to produce a given output of services. These additional inputs would be drawn from other sectors and, assuming full employment of resources, reduce the productive capacity of the economy to that extent. It is, therefore, a comparison of two economies one of which is the actual historical economy which had access to the innovation that social saving tries to measure, and the other is an hypothetical one which never actually existed. The latter is exactly the same as the former with the single exception that it is denied the use of the innovation (15).

An obvious drawback of this method of measurement is that it imposes upon the relatively technologically backward economy of the pre-railway period an amount which could not be transported at the given high caravan rates. In other words, the 1895 railway tonnage is treated as if it could have been transported by the mid-XIX Century caravan system. It, therefore, contains an upward Paasche bias.

Another source of error is the length of the time period between the introduction of the railway and the measurement of its effects. Given sufficient time, through the interaction of income effects, the

(15) G.Gunderson, "The Nature of Social Saving," Economic History Review, 2nd series, vol.xxiii, 1970, p.209. In other social saving studies, the postulated economy which does not benefit from the innovation, is really hypothetical. In the case of the Aidin Railway, it materialized on 18th August, 1908, when the railway personnel went on strike in support of higher wages, and, again in 1922, when, for nine months the greater part of the line came to a complete standstill because of the fierce fighting between the

(continued)

transport demand curve shifts outwards making the quantification of social saving meaningless. In order to have a reliable measure, the time period should be as short as possible. If the linkages through which the first-round effects of the railway (direct savings in transport costs) are transmitted to the other sectors of the economy, are not very well established, the shift in the demand curve may not be too large to render the whole exercise totally futile (16). The Aidin Railway was completed in the early 1890's and the first set of detailed data on transportation was made available in 1895. We assume that the demand curve did not shift outwards during this period.

Figure 2 shows the demand and supply situation in the transport market before and after the railway. The demand curve D' is downward sloping, more being transported as the freight rate decreases. It has an intercept with the vertical axis showing that if the freight rate exceeds a maximum it would be unprofitable to transport that commodity because the sum of wholesale buying price and the transportation cost would be greater than the market price. There were numerous examples of surplus grain being left to rot or used as fuel because the price it fetched at the market was not enough to cover the costs of production and transportation (17).

Nationalists and the Greek Army. In both cases, which coincided with the harvest season, camels and mules had to be employed to transport the entire produce.

(16) A. Fishlow, American Railroads and the Transformation of the Ante-Bellum Economy, Cambridge, Mass., 1965, pp.23-32.

(17) PRO,FO 78/3070, Tamwaco to Fawcett, no.13, 20th Dec., 1878. This report indicates that the local authorities at Yozgat, a city in Central Anatolia, gave up the idea of buying wheat from the neighbouring province of Sivas because the cost of transport alone was greater than the Yozgat market price of wheat. In the same year, when the railway had not yet reached Kuyujak, two years' harvest of wheat and valonia was still waiting in the interior; PRO,FO 78/3070, Reade to Layard, no.38, 22nd Oct., 1878. A similar situation prevailed in Western Rumeli; PRO,FO 78/3525, Baker to Kennedy, 8th May, 1883.

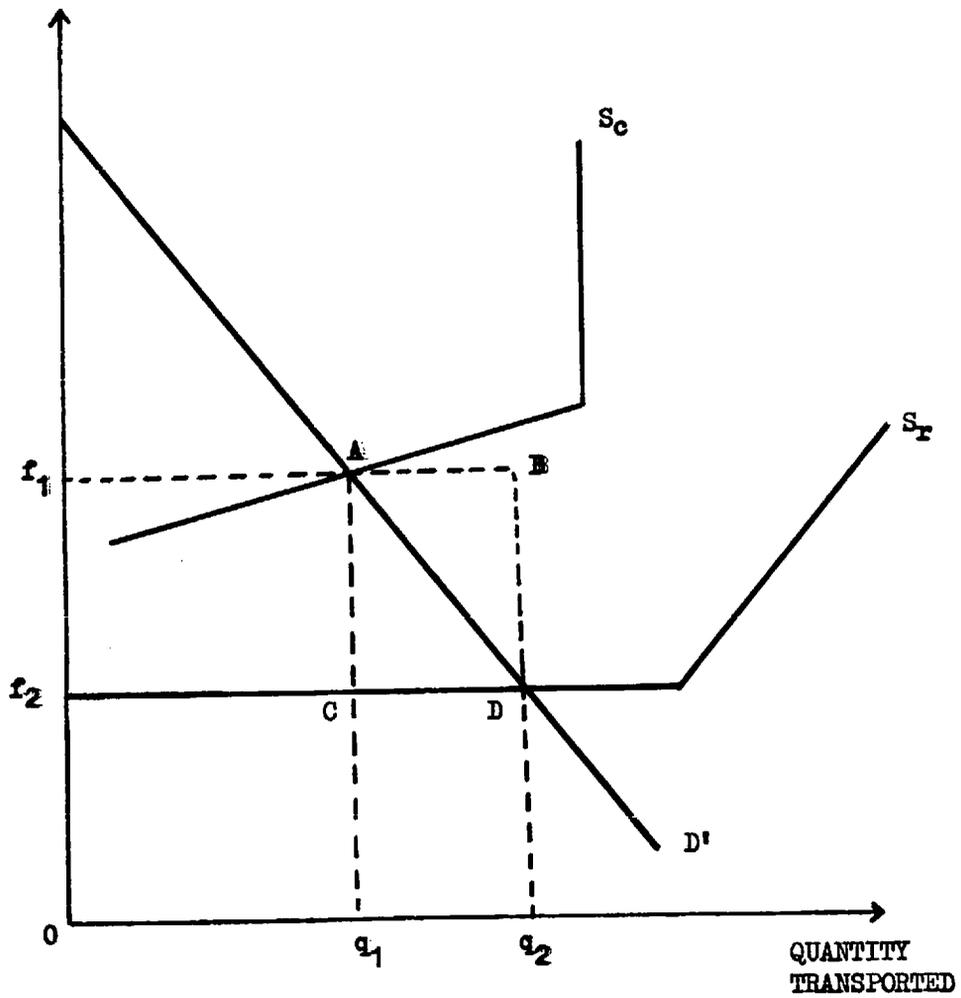
FREIGHT RATE
PER TON-MILE

Figure 2. Demand and Supply Situation in the Transport Market

The supply of transport services was dependent on the availability of camels. In the late autumn, winter, and early spring the rates went up as the camels were sent to the southern coast where there was less rainfall and more business. Furthermore, camel transport sometimes became very difficult to obtain either because of camel disease or expropriation for government use. During these periods transport was unavailable beyond a certain point no matter how high the rates were. This is shown by the completely inelastic portion of the supply curve S_c .

The curve S_r represents the supply of transport services by the railway. The horizontal part is the result of fixed freight rates and the absence of any quantity rebates. The inelastic part explains the difficulty encountered in enlarging the carrying capacity of the railway. Between 1895 and 1909, the average number of carriages employed by the company was 1,150, and for nine consecutive years the number remained stationary at 1,128 (18). The capacity could not be increased any further by increasing the frequency of trains. There was already serious congestion on the line due to the inadequate length of sidings and looplines. Every year about one fifth of the total mileage was wasted to give way to oncoming trains (19). As the number of camels checked the carrying capacity of caravans, the availability of carriages and the inadequacy of auxiliary facilities limited the capacity of the railway.

(18) Rapport et Etats des Comptes, Constantinople, 1896-1910.

(19) Along the whole length of the line there was accommodation for 3461 carriages on sidings, and for 1863 carriages on looplines.

The measurement of social saving is similar to the measurement of the consumers' surplus of a commodity on which a relatively sizeable proportion of income was spent and whose price fell in a rapid fashion. When the supply curve of transport services shifted from S_c to S_r , a new equilibrium was reached where q_2 was transported at a price of f_2 per ton-mile. The social saving per mile is equal to the area f_1ADf_2 , i.e., the area under the demand curve lying between the two equilibrium prices (20). It is made up of two components, f_1ACf_2 which is equal to $q_1(f_1-f_2)$, and ACD which is equal to $\frac{1}{2}(f_1-f_2)(q_2-q_1)$. The first component represents the gains accruing from the fall in the cost of transportation. It accrues to the shippers of commodities on the existing traffic. The second component represents the benefits from the induced traffic attracted to the road by the improvement in transportation facilities (21).

When treated in this manner, the social saving measures the extent to which the Aidin Railway increased the production potential of the economy. Without the railway more factors of production would be absorbed by the transportation sector to produce a given quantity of services. The railway decreased the amount of these factors without making them unemployed and thus contributed to the productive capa-

(20) The literature on social saving is unanimous in agreeing that this is the most desirable method of measurement. In these studies, however, the lack of data made it imperative to equate social saving with the area f_1Bdf_2 , thus leading to an overestimation equal to ABD ; Fogel, *op.cit.*, p.20; Fishlow, *op.cit.*, p.31.

(21) H.G.van der Tak, A.Ray, The Economic Benefits of Road Transport Projects, Baltimore and London, 1971, pp.6-7. The assumption behind this method of measurement is that the consumers' and producers' surpluses can be added and subtracted. It also assumes that the economy could easily adjust to a non-rail situation, i.e., if the railway stopped its services the economy would not have any difficulty in finding an alternative method of transport such as canals, highways, etc.

city of the region. The company entered into contracts with camel owners to employ them as feeders to the railway. In 1865, it was estimated that the number of camels in the region was slightly higher than it was in 1857 (22). Also, the quantity of goods carried on camels' backs increased by almost 30% (23), which shows that there was no loss to the economy in the form of redundant camels and camel drivers.

The calculation of the area f_1ADf_2 depends on the availability of data on freight rates and the volume of transportation before and after the railway. The two pioneering works in this field by Fogel and Fishlow could only measure the area f_1Bdf_2 as they did not have the pre-railway volumes of transportation at their disposal. This inevitably resulted in an overestimation of social saving by the area ABD (24). Similarly, the absence of data on post-railway volume of transportation can lead to an underestimation (a downward Laspeyres bias) whereby the social saving is equated with the area f_1ACf_2 , an understatement of ACD. This means that the consumers are not allowed to adjust their market baskets in favour of the commodity whose price has relatively fallen. This method does not take into consideration the more favourable opportunities made available by the railway and it treats q_1 as an optimum solution under the new system of transport.

(22) Half Yearly Meeting, 30th Sept., 1865.

(23) Selahaddin Bey, La Turquie a l'Exposition Universelle de 1867. Paris, 1867, p.232; "Commercial Reports". Accounts & Papers, 1867-1868, vol.lxviii, p.229.

(24) Fogel investigated the effects of the American railways on the level of GNP in the XIX Century. An overestimation did not matter much when it was established that the social saving created by the railways constituted an insignificant percentage of the GNP.

Four sets of data (which we assume to be equilibrium values) on f_1, f_2, q_1, q_2 exist in the case of the Aidin Railway and there is no problem of over or under estimation.

EXPECTED DISTANCES

The estimate of the direct benefits discussed in the preceding section is an indication of the amount of savings that could be made if all commodities entering into the calculation travelled over a distance of one mile. In reality, commodities were transported over various distances. The reports of the company do not give any information about the source and the destination of shipments. There are various methods of estimating distances in a defined area and the method adopted here is one of the theoretically most accurate (25).

The area over which the railway had its impact felt was chiefly determined by topographical conditions. The surrounding mountain ranges helped to confine the railway's zone of influence into a roughly rectangular area. A more accurate picture of this zone can be drawn if the geographical distribution of the railway agencies is taken into consideration. These agencies, located on the roads running in the direction of the railway, represented the boundaries beyond which the influence of the railway increasingly lost strength and eventually waned. A glance at the map shows that all these agencies were situated within the surrounding mountain ranges (Map 5). For example, the Pamphylian heights

(25) S.Eilon, C.D.T.Watson-Gandy, N.Christofides, Distribution Management: Mathematical Modelling and Practical Analysis, London, 1971, pp.151-164.

start immediately south of the two southern agencies Kharayouk and Khayadibi, and in the east, Yalvach is situated on the western skirts of the Phyrigian range. The area defined by the mountains and the nine railway agencies describe an almost perfect rectangle of 60 by 215 miles. All movements of cargo took place within this zone of influence which serves as the basis of the calculation of expected distances.

In 1895, the Aidin Railway transported 14 different commodities weighing nearly 300,000 tons (Appendix 1). 16% of this total was classified under the heading "miscellaneous" which, presumably, consisted of numerous items too small to be individually enumerated. Five items made up 68% of total shipments. The table below shows their shares in the 1895 shipments and their average share in total shipments between 1895 and 1909.

Table 1
Composition of Shipments

Commodity	% of 1895 shipments	Average % of 1895-1909 shipments
Wheat	4.54	11.13
Barley	36.89	26.61
Beans	6.05	4.39
Valonia	13.58	12.66
Raisins	6.96	7.86
TOTAL	68.02	62.65

Source: Rapport et Etats des Comptes, Constantinople, 1896-1910.

The social saving will be calculated on the basis of these six items. Although this method underestimates the true social saving, it, nevertheless, has its merits. Firstly, by reducing the number of commodities from 14 to 5 it helps to overcome the purely technical problem of performing a large number of arithmetical operations. Its second and more important advantage is that the five commodities in question were those which were grown in every part of the region. Therefore, they represent the movement of cargo better than any other combination of commodities.

Of these five, wheat, barley, and beans were consumed within the region. There were strict regulations controlling the sale of grain to foreign countries and most of the time grain exports were prohibited. Valonia and raisins, on the other hand, were grown almost exclusively for exportation.

The movement of the first group of commodities was in the direction of market towns like Denizli and Aidin, and a large part of shipments was destined to Smyrna where a large population of urban dwellers had to be fed. One method of calculating the expected distances over which wheat, barley, and beans travelled would be to divide the region into sub-regions on the basis of the relative importance of secondary markets and proceed as if each secondary market was supplied exclusively by its sub-region. The length of the side and loop-lines can serve as a criterion for dividing the region into smaller units. Then, the sum of expected distances in each sub-region will give the total expected distance

in the region as a whole. The difficulty with this method is that, although it shows the relative area of each sub-region, it does not specify any particular shape for the area serving the secondary market. If any one of these areas turns out to be concave, then the problem becomes insoluble. In fact, an attempt has been made to divide the area into smaller units according to the above criterion and it appeared that five sub-regions, out of a total of 14, had a concave shape. (A concave area is defined as one where a line segment joining any two points of the set is not entirely contained within the set).

The alternative method of calculation assumes that the primary and secondary markets are uniformly distributed in the defined area. The resulting pattern of transportation is one of a very large number permutations. Each of the 23 primary markets can send its produce to any one of the 14 secondary markets which, in turn, can send it to one or more of the remaining railway stations. If each pattern of distribution has the same probability of occurring, i.e., if the probability of the primary market A sending its produce to the secondary market B via C is the same as the probability of the primary market D sending its produce to the secondary market E via F, and so on, then the problem reduces to finding the expected (in a sense average) distance between two random points within the defined area.

Map 4 shows that the railway traversed the region almost in the middle dividing it into two equal parts and the railway agencies were situated on the roads running vertical to the railway. The distance

between a primary market and a secondary market, therefore, consisted of two portions, one vertical and one horizontal. These distances (expected rectangular distance) can be measured along the X and Y axes, and are more realistic than a straight-line measure which ignores the topographical conditions (26). It can be shown that the sum of the horizontal and vertical distances between two random points in a given rectangle is equal to one third of the sum of the height and the width of the rectangle (27). In this specific case it is equal to $(60+215)/3$ miles, which is approximately 92 miles.

In the case of valonia and raisins the problem is to find the expected rectangular distance between a random and a fixed point. Since these two commodities could originate from any primary market in the region one of the points must be a random one. On the other hand, they all were sent to Smyrna, a fixed point, for exportation abroad. In this case, the distance is equal to $(x_0^2/a) + (y_0^2/b) + \frac{1}{2}(a+b) - (x_0 + y_0)$ where, x_0 and y_0 are the co-ordinates of the fixed point, and, a and b are the dimensions of the rectangle (28). It can be observed that (Map 4) Smyrna is at the top left-hand corner of the rectangle, and, therefore, can be considered as located at the point of origin of the co-ordinate system. This means that x_0 and y_0 are both equal to zero, and, accordingly, the

(26) The straight-line distance between two random points in a rectangle is given by, $E(d) = (1/a^2b^2) \int_0^a \int_0^a \int_0^b \int_0^b \sqrt{(x_1-x_2)^2 + (y_1-y_2)^2} dx_1 dx_2 dy_1 dy_2$, where a and b are the sides of the rectangle, and x_1, y_1 , and x_2, y_2 are the co-ordinates of the two random points. The results of the integration are too complex and $E(d)$ can only be found by simulations for different values of a and b: ibid., pp.159-160.

(27) Ibid., p.164.

(28) Ibid., p.163.

last and the first two terms of the expression disappear giving $E(d) = \frac{1}{2}(a+b)$, which is equal to 138 miles.

The only piece of information about q_1 , the pre-railway volume of transportation, is given in a report prepared by F. Wakefield (29). The report was aimed at raising support for the idea of the colonization of Western Anatolia. The figures it contains cannot be very dependable, for the author could have inflated them to present a picture of abundance and wealth. On the other hand, the report covered $\frac{3}{5}$ of the area under consideration in this chapter. Assuming that these irregularities cancel out each other, a measure of social saving can be calculated. The results are given below.

Table 2
Savings on Transportation Costs in 1895

Commodity	Pre-railway quantity (tons)	1895 quantity (tons)	Savings on existing traffic (£)*	Savings on induced traffic (£)**	Total savings (£)
Wheat & barley	87,062	120,535	238,955	45,936	284,981
Beans	2,500	17,595	6,862	20,708	27,570
Raisins	16,339	20,244	80,609	9,604	90,213
Valonia	5,692	39,503	28,081	166,806	194,887
TOTAL			354,507	243,054	597,561

Sources: Column 2: M. Stephenson, *op.cit.*, p.35;

Column 3: *Rapport et Etats des Comptes*, Constantinople, 1896.

* $E(d)q_1(f_1-f_2)$ ** $\frac{1}{2}E(d)(f_1-f_2)(q_2-q_1)$

This calculation assumes that the pre-railway tonnage was more or less the same throughout the period in question, which is another way

(29) F. Wakefield, Report upon Smyrna and its Producing Districts in 1857, reproduced in, M. Stephenson, *op.cit.*, pp.30-37.

of saying that the intersection point of the demand and supply schedules in Figure 2 remained the same during the period between the introduction of the railway and 1895.

Merchants saved £355,000 on their previous existing shipments as a result of the fall in transportation costs. Although the 1895 tonnage was about 84,000 tons larger than the pre-railway tonnage, induced benefits were 50% less than the savings on existing traffic. If the 1895 quantities had been twice as large as they were, the two components would have been approximately equal. Induced benefits would be larger in relation to the savings on the existing volume of traffic the larger is either the elasticity of the transport demand curve, or $(q_2 - q_1)$ to q_1 , or $(f_1 - f_2)$ to f_1 .

The demand schedule in Figure 1 is directly derived from the volume of trade. The latter reflects the demand and supply conditions in the region under the constraints imposed by transportation facilities. The slope and the elasticity of transport demand curve depend, therefore, on the specific commodity demand and supply functions in the region (30). The ratio between the benefits derived from attracting additional traffic and the benefits accruing to the shippers on the pre-existing volume of traffic is an increasing

(30) This result remains substantially unchanged regardless of the number of regions introduced in the model. A proof is given in, H.G. van der Tak, A.Ray, op.cit., pp.10-13.

the percentage reduction in transport costs and the elasticity of demand for transport services.

Although the percentage reduction in transport costs was quite large, the reason why this ratio was as low as $\frac{1}{2}$, was the relative insensitivity of the transport demand curve to changes in transport costs. If the elasticity of the demand curve were higher, the 1895 quantities would be larger giving a larger saving on induced traffic.

The essential difference between the savings on existing traffic and the savings on induced traffic was that while the former was actually saved by the wholesale merchants because of lower freight rates, the latter only reflected the extra cost that they would have to incur if they were to send their shipments at the pre-railway rates. Although savings on induced traffic never found their way into the pockets of wholesalers and commodity dealers they, nevertheless, represented an economic gain accruing from the operation of the railway. Considering that the price of coal was £1.12s. per ton, and best butter cost less than 1s. per lb in 1893 (31), the £600,000 saved by the mercantile community was a very significant sum of money in the sense that it was made available for use in any way they could choose.

SAVINGS ON INVENTORY COSTS

The second component of the social saving consisted of the extra

(31) PRO, FO 626/17/748, Maltass, Administration, 1894.

cost of time lost in shipping by camels and the extra cost of being unable to use the caravan roads for five months each year. The slowness of camel transportation inevitably resulted in an increase in the amount of inventories held by merchants. To bridge the gap between sales and deliveries, they carried large stocks in order to maintain a steady flow of sales. In this way some of their capital which could be employed more profitably somewhere else was tied up in the form of inventories.

Assuming that the average distance covered by a caravan in one day was 18 miles, and the average speed of a cargo train was 10 miles per hour (32), it can be seen that with the introduction of the railway the average journey time for wheat, barley, and beans, which travelled over an average distance of 92 miles, was reduced from 120 hours to 9 hours, and, for raisins and valonia, which travelled over a distance of 138 miles, from 185 hours to 14 hours. This 92% reduction in the average journey time caused a fall of equal proportions in the amount of stocks held (33). Given a stocks-sales ratio of 1:2 (Chapter IV) an amount equal to 46% of total sales was released through the fast and uninterrupted operation of the railway. In the absence of the railway, the limited season of transportation and slow caravans would have required an increase in the value of inventories of about 46% of total

(32) In 1896, the average speed of a New York-Chicago freight train was 12 miles per hour; Fogel, *op.cit.*, p.44n. The locomotives used on the Aidin Railway were modern and powerful but due to the lack of auxillary facilities they could not possibly exceed 10 miles per hour; A.E.Durrant, The Steam Locomotives of Eastern Europe, Newton Abbot, 1966, pp.72-89.

(33) Here it is assumed that sales were uniformly distributed over a period of 12 months.

annual sales.

The total value of the five commodities carried by the Aidin Railway in 1895 was £1,560,000 (34) giving a total inventory value of £758,000 which would be tied up in the form of stocks in the absence of the railway. The greater speed and the regularity of the railway reduced this amount by £697,000 to £61,000 (35). These savings derived from the reductions in inventories could be re-invested elsewhere yielding an annual flow of income determined by the rate of interest. Assuming that capital earned on the average 6% in 1895 (36), the alternative cost of the investment in additional inventory would have been £42,000.

SAVINGS ON CARGO LOSSES

The savings made in the value of commodities perished during transit constitute the third component of the social saving. Before the railway, everything was carried in hair bags, except fresh grapes which were carried in large baskets. As the bags were removed from

- (34) This figure is obtained by converting the wholesale prices (pts. per kg.) given in, Eldem, Tetkik, pp.199-215; at the rate £1 120 pts; PRO,FO 626/16/692, Whithall v. Ganzuch, 1890.
- (35) On January 25, 1901, traditionally a period of high stocks, A.E.Warren & Co. was reported to have 13 tons of valonia and 666 tons of raisins in stock. However, the company did not have any difficulty in carrying its export business although these amounts were "nothing in comparison with the past levels." PRO,FO 626/19/831 (1-56), Brady, Rosenthal & Co.v.A.E.Warren & Co., 1901. In 1907, Warren, Barkshire & Co., dealers in barley, raisins, figs, and carpets, boasted of carrying practically no stocks. They gave evidence in the court that the fast and regular service of the Aidin Railway enabled them to conduct their business with minimum stocks; PRO,FO 626/24/954, Union Bank v Warren & Co., 1907.
- (36) The local newspaper, La Reforme, 31st May, 1906, argued that an interest rate of 6% was excessively high and that it could only be found in the 1890's.

the camels' backs every night and put on the ground, it may be imagined that some of the contents were partially spoiled. It was estimated that during a journey of four days (70 miles), approximately 5% of the value of goods was lost in this way (37).

With the opening of the railway camels were reduced to the role of the feeders to the railway. This meant that they only had to travel between primary markets and railway stations in contrast with the past when they had had to connect secondary markets as well as connecting primary markets with secondary ones. The consequent reduction in the average duration of journeys enabled camel drivers to abandon the old method of removing the bags from camels' backs, preventing a substantial loss in the contents of the bags.

In the 1890's insurance companies charged against risks of fire and spoilage a premium of $\frac{1}{2}\%$ of the value of the merchandise transported by the railway (38). The difference of $4\frac{1}{2}\%$ between the old and the new spoilage rates represents the savings accruing from the fall in the amount of goods perished during transit. Calculating on a total merchandise value of £1,560,000, the shippers saved about £70,000 on account of the relatively spoilage-free transportation provided by the Aidin Railway.

(37) H. Clarke, *The Imperial Ottoman Railway*, London, 1861, pp. 33-34.

(38) PRO, FO 626/15/656c, *Queen Insurance Co. v Gout*, 1887-1891. The rate quoted was the average charged by the North British and Mercantile, Royal, and Sunfire insurance companies.

THE SOCIAL SAVING

The above calculations show that the Aidin Railway generated a saving of £710,000 in 1895. Exactly half of this total was contributed by the savings on pre-existing traffic. One of the most important factors that limited the amount of savings on induced traffic was the relative inelasticity of the transport demand curve. Although the Aidin Railway was instrumental in bringing down the average freight rate per mile, it was, nevertheless, ineffectual in increasing the volume of transportation as much as had been predicted by its promoters who had dreamed of millions of tons (39).

In spite of the development of a system of caravan roads, the railway, in order to bring primary and secondary markets still closer, needed more carriage roads penetrating into the interior. This would make the producers more sensitive to the changes in markets and stimulate agricultural enterprises (40). It would also help dealers to establish agencies in the remotest parts of the country. Smyrna grain merchants, who were always complaining about the bad effects on their trade of the difficulty of reaching the producers, were appearing before the Consular Court on charges of breach of contract (41).

(39) The largest amount carried by the railway was 321,992 tons in 1905.

(40) PRO, FO 78/3070, Reade to Layard, no.38, 22nd Oct., 1878.

(41) PRO, FO 626/17/760, Aperio v Honischer, 1895. The defendant claimed that the difficulties experienced by Smyrna grain merchants in communicating with their agents in the interior, frequently meant the loss of a sizeable contract. In most cases the agents were unable to send large consignments to the nearest railway station because of the imperfect state of secondary roads.

Table 3 summarizes the results of the preceding sections:

Table 3
The Components of Social Saving
in 1895

Savings on Existing Traffic	£ 355,000
Savings on Induced Traffic	£ 243,000
Savings on Inventory Costs	£ 42,000
Savings on Cargo Losses	£ 70,000
TOTAL SAVINGS	£ 710,000

The total shown above is an underestimation. Firstly, it does not include the savings on the remaining 32% of the commodities carried by the railway. If they were included in the calculations the second item, savings on induced traffic, would be bigger. For example, two new commodities, petrol and coal with a total weight of 10,316 tons and which had not entered the pre-railway trade, would inflate the savings on induced traffic by about £26,000. In the following years still more new commodities including timber, bricks, glassware, tobacco, etc., were carried by the railway. After 1902, emery stones occupied an important place in the regional trade as a result of the development of the quarries in the interior. The average annual amount of emery stones transported by the railway was 18,000 tons which would further increase the savings on induced traffic by £39,000.

Secondly, the estimate of social saving neglects the difference between the pre- and post-railway costs of storage. The 92% fall in the amount of inventories must have resulted in a fall in the total cost of hiring or buying the necessary warehouse space.

In 1860 the daily cost of storage for one ton of raisins was 8s. (42). If it is assumed that these rates persisted until 1895, the amount saved on warehouse fees was as much as £66,000 (43). A more realistic estimate of the social saving which would include the items neglected by the first estimate, is £840,000.

The total annual tonnage carried by the railway, although it fluctuated considerably from year to year, can be said to have a stationary trend during the 15-year period under consideration. The regression equations (See Appendix 2) show that the total tonnage increased by an annual increment of 800 tons. This was relatively unimportant in comparison with the large initial value of over 278,000 tons. The equations for barley, beans, and valonia show that these three commodities had a slightly falling trend over time. Again, the annual increments are so small in relation to the relatively large initial values that they can be neglected. Wheat exhibits an increasing trend, doubling its value in every seven years. Raisins, on the other hand, can be assumed to have remained constant at about 20,000 tons.

On the basis of the estimated trend equations it can be shown that, with the exception of wheat, the average amount of commodities

(42) PRO, FO 626/1/12, Bonifacio, Estate, 1859-1860.

(43) This figure is also underestimated. It is unrealistic to assume that the cost of storage remained the same while rents and property values increased considerably between 1860 and 1890. This assumption, however unjustified, is retained because of the general lack of data on post-railway storage charges.

transported by the railway was more or less the same between 1895 and 1909. (The year 1898 is excluded from the calculations because of its unusually low value). Assuming that the wholesale commodity prices, the level of stocks, and the ratio of the value of perished goods to the total value did not show any significant variations during this period, it can be inferred from the data that the social saving generated by the Aidin Railway in 1895 represented the annual average of the period 1895-1909.

The relative importance of each item's contribution to the social saving changed with the passage of time. This change was most apparent in the case of wheat and barley. While the amount of wheat transported increased on the average by about 2,200 tons a year, the amount of barley decreased by slightly more than 3,000 tons a year. Their common contribution to the social saving, therefore, decreased each year by an amount equal to the social saving on 850 tons.

The annual average fall in the total quantity of beans and valonia was also about 850 tons. Deducting from this the 470 tons annual average increase in raisins, the net annual decrease becomes 1,230 tons. Whether this fall in the social saving was compensated for was determined by the variations in the quantities of other commodities which were excluded from calculations. It seems that emery stones and timber, whose respective quantities annually grew by 1,250 and 580 tons, more than offset the fall in the social saving.

APPENDIX 1: Smyrna-Aidin Railway, Composition of Shipments

Commodity	1895		Average of 1895-1909	
	Weight (tons)	As % of Total	Weight (tons)	As % of Total
Wheat	13,202	4.54	32,109	11.13
Barley	107,333	36.89	76,098	26.61
Beans	17,795	6.05	12,829	4.39
Other grains	3,688	1.26	4,994	1.73
Oleaginous seeds	4,270	1.47	3,602	1.25
Cotton	4,706	1.62	3,988	1.38
Valonia	39,503	13.58	35,391	12.66
Raisins	20,244	6.96	22,612	7.86
Madder root	7,035	2.42	4,836	1.71
Timber	-	-	8,839	3.12 (1)
Coal	7,180	2.47	5,434	1.91
Colonials	-	-	8,284	2.96 (1)
Petrol	3,136	1.08	4,097	1.45
Salt	4,300	1.48	4,176	1.64
Melons	2,089	0.71	2,107	0.75
Manufactures	-	-	4,082	1.43 (1)
Flour	-	-	3,482	1.27 (1)
Bricks	-	-	1,093	0.41 (2)
Carpets	-	-	1,578	0.56 (3)
Iron	-	-	2,045	0.72 (4)
Sacs	-	-	3,108	1.11 (4)
Glassware	-	-	552	0.19 (5)
Other	47,709	16.40	39,072	13.80

- (1) 14 years
(2) 8 years
(3) 13 years
(4) 12 years
(5) 6 years

Source: Rapport et Etats des Comptes, Constantinople, 1896-1910.

APPENDIX 2: Estimated Regression Equations, $Y = a + bt$

Y	a	b	r	t = 1
Total tonnage	278,394	799.8	0.714	1895
Barley	100,592	-3,061.7	0.640	1895
Beans	16,501	- 459.1	0.781	1895
Valonia	38,551	- 395.1	0.632	1895
Wheat	14,446	2,207.8	0.574	1895
Raisins	18,841	471.2	0.775	1895
Emery stones	12,726	1,252.2	0.877	1902
Timber	4,512	576.8	0.843	1896

All coefficients are significant at 0.025 level of confidence.

CHAPTER VI

THE DEVELOPMENT OF AGRICULTURE

The first phase of the agricultural revolution that took place in Europe in the late XVII and early XVIII Centuries did not have any considerable effects on the Turkish agriculture. In Turkey vast areas remained as uncommercialized and self-sufficient units, no organisational and biological changes were recorded in husbandry, and there was a general absence of the cultivation of forage and cleaning crops. The second phase which took place in the early XIX Century also bypassed Turkish agriculture without bringing any significant progress in the use of better hand-tool technologies and fertilizers.

The organisation of pre-XIX Century Turkish agriculture was very similar to the "lord-and-peasant system" of Europe. The Lord-and-peasant system (the corvee economy) was characterised by the cultivation of the lord's land by the peasants using their own implements. In return, the peasants either performed labour services for the lord, or paid rents in kind, or shared the crop with the lord (metayage), or paid money rents (1). Although all these methods of payment were in existence all the time, the trend was towards the last method. The difficulties associated with the exactment of labour service and with the assessment of the exact shares of the parties, especially when there was a diversification of crops, facilitated the adoption of a simpler form of payment, the money rent. There were also other important factors which speeded up this development, such as the Black Death and its uneven incidence in different localities, the decrease in the money value of labour services, etc.

(1) The lord-and-peasant system is discussed, from an economist's point of view, in, J.Hicks, A Theory of Economic History, Oxford, 1969, ch.vii, especially pp.101-108.

The lord-and-peasant system presupposed the existence of a body of peasants dependent on the lord. This dependence took a variety of forms the most common being the protection of peasants by the lord against raiders and thieves. It also required that the peasant population should be bound to the land without much freedom of leaving it. The rights and duties of each side were determined by custom or, as in Turkey, by a very elaborate system of laws (2).

The transition from the lord-and-peasant system to commercialized agriculture (characterised by the employment of wage labour) took place under different conditions in different countries. In the Smyrna region the transitional period started in the first quarter of the XIX Century, gradually accelerated and gained full momentum towards the end of the third quarter of the century. In Turkey, as in all other countries, the transitional period was a very complex one because the two systems existed together in large areas and even on individual plots where on one part the peasants cultivated the lord's land paying rent in various forms and on another part wage labour was employed.

EFFECTS OF POPULATION PRESSURE

Before considering the role of the Smyrna-Aidin Railway and of the foreigners in the transition from a corvee economy to a capitalist one,

- (2) O.L.Barkan, Osmanli Imparatorlugunda Zirai Ekonominin Hukuki ve Mali Esaslari, (The Legal and Financial Foundations of the Agricultural Economy of the Ottoman Empire), Istanbul, 1941; and, H.Tuncer, Osmanli Imparatorlugunda Toprak Kanunlari, (Land Laws in the Ottoman Empire), Ankara, 1965.

it is important to specify the general trend governing the growth of the labour force in relation to land. It is now generally accepted that the growth of population is not a totally dependent phenomenon strictly determined by the capacity of agriculture to feed additional mouths. It is also an independent factor influencing the speed and the extent of changes in agriculture (3).

The transition from the lord-and-peasant system to the labour-hire economy and the resulting changes in land tenure, technology, and cropping methods depended to a very large extent on whether the labour force increased at a faster or slower rate creating an abundance or shortage of labour in relation to land. If the rate of growth of population is higher than a critical minimum, Boserup argues, the frequency of cropping changes from long-fallow to short-fallow and with further increases in population the latter is replaced by annual or multi-cropping methods depending on the intensity of population growth (4). This, in turn, requires changes in technology, irrigation methods, and so on. In this system population growth is regarded as a major factor determining the course of agricultural development. Examining the problem from the angle of commercialization of agriculture, Professor Hicks argues that when labour is abundant relative to land, the lord-and-peasant system gradually gives way to tenant farming under which peasants' perpetual tenancy rights are replaced with rental agreements of relatively short duration (5). In both

(3) E. Boserup, The Conditions of Agricultural Growth, London, 1970, pp. 15-27.

(4) Ibid., p. 11

(5) Hicks, op.cit., pp. 108-114.

analyses the conclusion is that the higher the rate of growth of population the faster the changes in agriculture.

The development of agriculture in the XIX Century in Europe was influenced by intermittent scarce labour crises which made themselves felt mainly in the form of a shortage of harvest labour. Starting with the Napoleonic Wars harvest labour scarcities reached very large dimensions in 1875 but gradually eased off and a relative balance between the labour force and land was reached in the last quarter of the century. The role of wars in the European labour shortages cannot be ignored but the main cause was the process of urbanization going hand in hand with rapid industrialization (6).

In Turkey, on the other hand, the relative depopulation of the countryside was a result of incessant wars which put heavy demands on the young and most able bodied members of the population (7). In times of mobilisation and war the Porte issued lists containing the number of conscripts required from each province. In this way the Aidin province supplied 45,000 soldiers for the Crimean War in 1853 (8). Comparatively few of this total returned home and those who did "were no longer fit for their previous occupations" (9). In the years preceding the Russian War of 1877, the Smyrna region supplied more than 100,000 troops for the front (10), and in November 1880 more than 6,000 soldiers left for European

(6) E.J.T.Collins, "Labour Supply and Demand in European Agriculture, 1800-1880," in, E.L.Jones, S.J.Woolf, (eds.), Agrarian Change and Economic Development, London, 1969.

(7) W.W.Ramsay, The Intermixture of Races in Asia Minor, London, 1916,p.41.

(8) PRO,FO 195/389, Brant to Redcliffe, no.26, 17th June, 1853.

(9) PRO,FO 195/646, Report on Smyrna, 30th June, 1859.

(10)PRO,FO 195/1161, Reade to Layard, no.5, 20th Oct., 1877.

Turkey (11), to be followed by 18,000 more in February 1881 (12). These three examples alone show that the demands of the central authority on the male population of the Empire deprived the Aidin province of at least 100,000 men in a period of less than three decades. The process of depopulation of the countryside was also observed in other provinces where population grew very slowly if it did not actually stagnate or decrease. The sporadic census results show that the population of the Aidin province, which was the most populous province in the Empire, was on the decline as can be seen in Table 1.

Table 1
Population of Aidin Province

Year	1884	1897	1901	1910	1913
Population ('000)	1,329	1,478	1,566	1,544	1,525
Net Increase ('000)		149	88	-22	-19

Source: Eldem, Tetkik, pp.52-57.

As a result of changes in administrative boundaries the area of the Aidin province increased from 42,400 sq.kms. to 55,600 sq.kms in 1900 which can explain part of the 88,000 increase in population between 1897 and 1901. Also responsible for the absolute decline of population after 1901 were the periodic outbreaks of cholera and malaria which took their heaviest toll from among the peasantry (13).

(11) PRO,FO 195/1307, Dennis to Goschen, no.52, 12th Nov., 1880.

(12) PRO,FO 195/1378, passim. The drain of troops continued in the following years. In 1885 out of 90,079 troops who left for Salonica only 15,734 returned, see PRO,FO 195/1518 and 1547. Between 1891 and 1896 Western Anatolia sent 27,934 soldiers to the wars in Crete and Yemen from where only 4,230 came back, see PRO,FO 195/1732 and 1946. The number of the Western Anatolian casualties in the 1897 Turco-Greek War was estimated to be not less than 17,000, see PRO,FO 195/1990 and 2030.

(13) See, for example, PRO,FO 83/395; PRO,FO 195/797; and, PRO,FO 78/1888.

Under conditions of fully commercialized agriculture a scarcity of labour would result in a rise in wages. When agriculture was no more than semi-commercialized or on the eve of commercialization, the effect was different. As a result of the reduction in the number of farm hands large tracts of land were left uncultivated (14) and the landlords increasingly became aware of the fact that their rent incomes decreased in a manner parallel to the decrease in the number of their dependent peasants.

DIRECT FARMING BY NATIVE LANDLORDS

In order to overcome their financial difficulties the Turkish landlords tried different methods to increase their revenue from land. The first method was the gradual abolition of tenancy rights and its replacement by direct farming by the landlord himself. This meant that the landlords, who used to live in cities and towns and periodically visited their estates to collect their shares or rents (15), had to give up their life in cities and live on their holdings personally supervising the operations. Direct farming was not a complete solution to a shortage of labour but was better able to stand up to it than the old system where peasants were almost free to decide where, when, and how to work and what to produce. If the landlords decided to take up direct farming it was unlikely that sufficient labour for the cultivation of the estate would be obtainable from the old direct services. Labour would have to be wage

(14) PRO,FO 83/334, Cumberbatch to Elliott, no.62, 3rd Dec., 1869.

(15) PRO,FO 83/337, Cumberbatch to Granville, inclosure no.1, 4th Nov., 1870.

labour, and with the labour market beginning to be competitive, the wage that would have to be paid had to be relatively high. The idea behind the establishment of direct farming in the place of the old lord-and-peasant system was that estates could be managed more easily and that high-paid labour could be more efficient. High wages were a spur to efficiency and improvements that made for efficiency could be more easily introduced on an estate that was managed directly by the landlord himself on commercial principles than on the custom-ridden plots of dependent peasants (16).

Apart from being a completely new and perhaps a hostile idea to the landlords, direct farming and its counterpart wage labour presented difficulties for the traditional organisation of the Turkish agriculture. First of all the landlord had to make arrangements for a sufficient supply of wage labour which involved the procurement of farm workers willing to work at the wage offered by the proprietor. After this the landlord had to enter into a contract on a daily, weekly, or monthly basis with the workers and had to see that the contract was strictly observed. This was quite difficult given the fact that the workers were all dependent peasants formerly and they used to work according to their own time-tables. When they were employed as wage workers it was only natural that they did not pay much attention to the daily routine the landlord wanted them to adhere to. As a result the landlord had to employ a body of overseers who had to be paid and who would act as the representatives of the landlord on the farm, ensuring that the workers worked as they were expected to work.

(16) Hicks, op.cit., p.111.

Secondly, the introduction of wage labour would mean that the landlord had to supply the workers with farming implements and renew them as they wore out or, if he was not prepared to buy the implements, he had to pay some extra money to the workers for the use of their own implements. Likewise the landlord had to provide seeds for cultivation which until then had been the responsibility of peasants.

Other factors that were against the adoption of direct farming and wage labour by the landlords were that the farmer had to make a series of complex decisions about the timing and methods of production, the disposal of the output, and the size of the enterprise. He had to combine day-to-day decisions with longer-term policy decisions if he wanted to run his farm according to commercial principles. This was not an easy task to accomplish for some one who had not been accustomed to a time horizon longer than that needed to fulfil his immediate or short-term objectives. Furthermore, given the risky nature of all agricultural operations undertaken under the vagaries of the climate and the market, the farmer had to have some liquid capital in reserve to meet emergencies.

Evidence suggests that the Turkish landlords did not take a lively interest in transforming the lord-and-peasant system into a capitalist one through the replacement of labour service by wage labour. It appears that they were more attracted by other alternatives open to them to alleviate their financial difficulties.

SLAVE LABOUR

The second method was the employment of slave labour. Slave trade in Turkey was officially abolished in 1846 but it continued for a long time in a more or less open fashion. Female Circassian and Georgian slaves were demanded in large numbers by the Imperial Palace, government officials, and wealthy households where they were employed as domestic servants or concubines (17). The demand for African slaves, on the other hand, was "based upon reasons far above fashion and fancy," it was founded "on pecuniary advantages." (18).

The traffic in African slaves was the exclusive monopoly of the pilgrims who annually visited the holy cities of Mecca and Medina and bought slaves from Arab dealers in the slave markets of Medina and Hodeida (19). The slaves were then smuggled into Turkey on board pilgrim ships and sold at prices between £20 and £30 each. In 1864, the number of negro slaves in the vicinity of Constantinople was estimated to be 30,000, about 800 of them working in the government shipyards and the rest employed in agriculture (20). One of the peculiarities of slave labour in Turkey was that their number dwindled very quickly if new slaves were not imported from Africa. Malnutrition, hard work, and very poor living conditions all militated against an increase in the number of slaves but it seemed that the main reason was their inability to reproduce beyond a certain point. For some

(17) PRO, FO 83/395, Report on Trebizond, 14th Nov., 1872.

(18) F. Millingen, Slavery in Turkey, (Proceedings of the Anthropological Society of London), London, 1870, p.3, and, p.6.

(19) PRO, FO 195/942, passim.

(20) F.W. Chesson, Turkey and the Slave Trade, London, 1877, pp.4-16.

unknown reason their progeny became extinct in the first or second generation (21).

The majority of African slaves landed at the islands off the coast where they remained and rested for some time to improve their condition. Then, in small inconspicuous boats they were sent to the mainland and driven into the interior and sold there. Another way was to land them at Antalya on the south coast and then sent to the upper Meander valley. These two methods were quite safe for the slave traders who, although never prosecuted by local authorities, were continually harassed by the zealous consular officials (22). The slaves brought into Turkey in this manner were not discovered and liberated. Consular reports alluded to these incidences but lacked essential details. For example, in July 1869 it was learnt that large numbers of slaves were sold at the slave markets in Aidin and Tireh but there was no other information (23). It was estimated that every year about 10% of the slaves landed openly. Mostly on the initiative of foreign consulates these slaves were promptly liberated and given a document legally and religiously prohibiting their enslavement in the future. Table 2 shows the number of slaves liberated between 1869 and 1876.

Table 2
Slave Trade in Aidin Province

Period	Number of Slaves Liberated	Source
June-Dec.1869	429	PRO,FO 84/1305
Jan.-Dec.1870	104	PRO,FO 84/1324
Jan.-Dec.1871	238	PRO,FO 84/1341
Jan.1872-Dec.1874	406	PRO,FO 195/1009
Feb.-Sept.1875	83	PRO,FO 195/1075
Jan.-May 1876	60	PRO,FO 195/1075

(21) Millingen, *op.cit.*, p.9

(22) For example, the British Consulate employed a full-time person who kept a continuous watch on the incoming pilgrim ships, PRO,FO 84/1305, Cumberbatch to Clarendon, no.41, 26th Aug., 1869.

(23) PRO,FO 84/1305, Cumberbatch to Clarendon, no.32, 26th July, 1869.

The British Consul in Smyrna made numerous complaints about the illegal slave trade but the Governor General of Aidin made it clear that he would not interfere when slaves were sold privately. He had been instructed to obstruct only those sales in the market concluded openly (24). The keen efforts of the British Consul in dealing with slave traders met with the disapproval of the British Ambassador in Constantinople who stated that he did not wish to be pestered with telegrams about slaves because "these telegrams tended to excite ill feeling" among the high-placed officials (25). From that date onwards consular reports excluded all information about slave trade which, undoubtedly, continued.

A wage worker, paid on piece work, would certainly tend to be more efficient than a slave who had no such incentive. However, a slave, if offered a bonus of some kind or driven very hard, could be almost as efficient as a wage worker. Assuming equal efficiency of both forms of labour, the landlord's choice between the two was dictated by considerations of cost per unit of time. The cost of slave labour to the owner, per unit of time, consisted of maintenance (which included short-term maintenance and longer-term maintenance directed towards future productive capacity when replacement through the market was expensive or less readily available) and interest on capital cost. In the case of wage labour the cost was the wage plus interest on the cost of implements. (Here it is assumed that the cost of employing overseers is the same in both cases). The landlords' manifest unwillingness to adopt

(24) PRO, FO 84/1324, Cumberbatch to FO, no.10, 20th July, 1870.

(25) PRO, FO 195/1075, Elliott to Joly, 12th May, 1876.

the wage labour system and the large number of slaves imported (judging by the number of slaves liberated which was estimated to constitute only 10% of the total number of slaves) indicate that the cost of employing slave labour was less than the cost of hiring free workers. The use of slave labour, which represented a social and economic system far more backward than the lord-and-peasant system, was an important obstacle to the commercialization of agriculture.

SALE OF LAND TO FOREIGNERS

The third alternative open to the Turkish landlords was the sale of all or part of their estates. However, if lands changed hands at lower prices than formerly this would not be a solution and the new landlord would eventually have to sell his land for exactly the same reason the previous landlord had had to sell it. The problem was, therefore, to find a buyer who, through the use of modern methods of management and production, would not experience the same difficulties. The mercantile community of Smyrna was an obvious candidate. They possessed the necessary capital, experience, and the potential to introduce improvements into the Turkish agriculture.

Until the early 1850's agriculture had not attracted much attention from the foreigners. European merchants, perhaps with the exception of the descendants of the Levant Company, had not taken a permanent interest in the country, and the Christian and Jewish subjects of the Empire had contented themselves with acquiring house property in towns or small orchards in the immediate neighbourhood. Transportation difficulties, primitive agricultural methods resulting in low yields, and, above all, the laws prohibiting foreigners from owning agricultural land had created a more or less strict

division of labour between different ethnic groups whereby the Turks were almost entirely engaged in agriculture and the foreigners and the non-muslim subjects were engaged in commerce. The relaxation of the prohibitions gradually enabled foreigners to acquire real estate. The movement following the 1838 reforms towards enlarged property rights, and the growing economic strength of foreigners accompanied by pressures on the Porte to grant property rights to foreigners resulted in the enactment of a law in 1866 which recognised the right of foreign subjects to hold land of every description.

In Western Anatolia, notably in the fertile Meander Valley, the foreigners, in addition to their small holdings in the vicinity of Smyrna, had started to buy land in the early 1840's (26). In the following years the extent and the speed of buying land in the interior reached very high levels. In this respect a report by the British Consul in Smyrna is worth quoting at length:

"...the general condition of the province is daily improving, an improvement however, which is more generally to the advantage of the Christian races, who are, if I may be excused the expression, buying up the Turks.

The general improvement commenced with the reforms introduced by the Gulhane Hatti Sheriff. The Christians then came forward as cultivators and their numbers increased by new comers... All Turkish proprietors ... after serving their

(26) For instance, W. Williamson bought 630 acres of land and 7,500 mulberry trees in 1840; PRO,FO 195/447, Williamson to Brant, 9th July, 1855; PRO,FO 626/1/25, Aldridge v Williamson, 1861-1862; PRO,FO 626/5/275, Williamson v Gout, 1863.

time with the Army returned home to find the whole feature of their native place changed; the predominant Turkish population replaced by Christians...and if by chance any of them desired to resume their former agricultural pursuits they usually fell into the meshes of some Christian usurious banker to whom the whole property or estate soon sacrificed; they who return without any taste for their old pursuits dispose of their land for what they can get and the purchasers are either Armenians or Greeks; several estates under these circumstances have been purchased by Franks, amongst the latter there are seven British subjects who have purchased large farms in the interior and are cultivating them with success. In the more immediate vicinity of Smyrna very few Turkish landed proprietors remain, and at the principal villages nearly all of the Turkish proprietors have disposed of their property." (27)

Some British merchants, who had previously declined offers of land, were induced to buy estates after the plans for the Smyrna-Aidin Railway were drawn up. The facilities the railway line offered drew "the attention of mercantile men to the agricultural resources of the country, and the value of land as investment." They also discovered that while agriculture had "contributed to create a mercantile capital, that capital has not been re-applied; and what is of more importance, the enterprise and knowledge of Western improvements possessed by the mercantile body have not been made available for agriculture" (28). European merchants were also influenced by the relative cheapness of the rich and easily irrigated land

(27) PRO, FO 78/1533, Blunt to Bulwer, no.23, 28th July, 1860; A.H.Layard, The Condition of Turkey, London, 1863, p.39 reproduces parts of this report. It is also printed in, Accounts & Papers, 1861, vol.lxvii, pp.31-34. Some examples of how Turkish landlords lost their estates to Greek and Armenian usurers can be found in, PRO, FO 195/1518, Joly to White, no.22, 8th Aug., 1885.

(28) H.Clarke, The Imperial Ottoman Railway, etc., London, 1861, pp.34-35, and, pp.37-38.

which could be bought at prices between 20s. to 30s. per acre and which, with minimum care and attention, was capable of producing very satisfactory crops (29). Another contributing factor was the particular eagerness of some Turkish proprietors to sell their land situated near the railway line. Their "ignorance and prejudice against what is termed Christian innovations led them to dispose of their lands for any price" (30). The process of buying up land for cultivation purposes was speeded up by the law of 1866 and by the end of the decade reached so large a dimension that at least a third of all agricultural land surrounding Smyrna was concentrated in the hands of foreigners (31). The Turkish government was seriously thinking of passing a law which would enable local authorities to levy a tax on the current value of the real property held by foreigners (32).

In the following years, especially after the 1877 Russian War, the British increased their purchases of land and in 1878 could claim that half of all agricultural land around Smyrna belonged to 41 British merchants (33). Merchants of other nationalities were also interested in agriculture. For example, Charles Van Lennep, owner of a Dutch company, bought a farm near Aidin and advertisements to buy "suitable farms" frequently appeared in local newspapers (34).

Table 3 shows the approximate value and the area of land bought

- (29) PRO,FO 83/337, Cumberbatch to Granville, inclosure no.1, 4th Nov., 1870.
 (30) PRO,FO 78/1391, Blunt to Malmesbury, no.15, 2nd Apr., 1858.
 (31) PRO,FO 195/910, Cumberbatch to Elliott, no.44, 10th June, 1868.
 (32) PRO,FO 195/910, Cumberbatch to Elliott, no.48, 18th June, 1868.
 (33) PRO,FO 195/1161, Memorandum to Reade, 24th Oct., 1878.
 (34) La Reforme, 20th March, 1879.

by British merchants between 1857 and 1892:

Table 3
Land Bought by British Merchants

<u>Name</u>	<u>Purchase Value (£)</u>	<u>Area (acres)</u>	<u>Location</u>
1) A.O.Clarke	18,000	-	Scala Nuova
2) G.Meredith	3,000	-	Aidin
3) J.H.Hutchinson	389	-	Torbali
4) W.G.Maltass	30,648	-	-
5) F.Whittall	4,717	-	Tireh
6) G.Minardo	2,200	-	-
7) R.Wilkin	32,557	-	-
8) A.S.Perkins	3,490	-	Bournabat
9) D.Baltazzi	20,000	-	-
10) M.Wolff	4,000	-	-
11) A.Edwards	20,000	-	Boudja
12) H.Abbott	18,868	-	-
13) Smyrna Vineyards and Brandy Distil- lery Co.Ltd.	5,000	-	-
14) E.Purser	500	-	Aziziyeh
15) Asia Minor Cotton Co.	9,206	-	Nazillih, etc.
16) J.B.Paterson	-	11,870	-
17) A.S.Perkins	-	600	-
18) D.Baltazzi	-	41,750	-
19) A.Castor	-	1,500	-
20) J.Rees	-	7,500	-
21) J.Aldrich	-	1,500	Aidin
22) C.Gregoriades	-	1,290	Ayasooluk
23) Smyrna Vineyards	-	1,300	-
24) E.Lee	-	760	Smyrna
25) S.J.Hadkinson	-	510	-
26) M.Baltazzi	-	20,500	Bergama

Note: Land purchased by the Armenian, Greek, and Jewish merchants was registered in the Smyrna Land Registry and did not appear in the correspondence and records of the British Consulate in Smyrna unless the owners were involved in a law suit coming under the jurisdiction of the Smyrna Consular Court. Although it is difficult to ascertain the value and the area of land bought by the non-muslim subjects of the Empire, a rough estimate would be that their holdings were about four to five times as large as the British merchants'. In the case of British merchants and merchants of other nationalities, data about their holdings are available in so far as they were mentioned in the dispatches of the British Consulate and the files of the Smyrna Consular Court.

Sources:

- 1) PRO, FO 195/527, Clarke to Blunt, 7th July, 1857; PRO, FO 626/17/714, Clarke, Probate, 1892.
- 2) PRO, FO 626/1/14, Abro v Meredith, 1861.
- 3) PRO, FO 626/1/11, Taylor v Hutchinson, 1859; PRO, FO 626/6/337(134), Pacmedion v Bullock, 1865.
- 4) PRO, FO 626/1/4, Maltass, Bankruptcy, 1859.

Table 3: Sources (continued)

- 5) PRO,FO 626/3/108(List E), 1861; PRO,FO 78/1787, Osman Pasha's Memorandum, 7th July, 1861.
 6) PRO,FO 626/2/86, Minardo v Caligharis, 1861.
 7) PRO,FO 626/4/145(642), Anthony v Wilkin, 1862-1863
 8 and 17) PRO,FO 626/5/260, Constantinidis v Perkins, 1863-1864.
 9,16,18,and 19) PRO,FO 626/7/339(9-72), Giraud v Paterson, 1865-1866; PRO,FO 626/27/1288, Memorandum, 1889.
 10,20,and 21) PRO,FO 626/9/404(167-236), Wolff, Bankruptcy, 1868-1870.
 11) PRO,FO 626/17/715, Edwards, Probate, 1892.
 12) PRO,FO 626/27/1298, Indenture, 1891.
 13 and 23) PRO,BT 31/1655/5791.
 14) PRO,FO 626/23/946, Purser, Administration, 1906.
 15) PRO,FO 195/1417, Dennis to Dufferin, no.44, 14th Oct., 1882.
 22) PRO,FO 626/24/959, Karamanoli v Gregoriades, 1907; PRO,FO 626/27/966A, Gregoriades, Bankruptcy, 1907.
 24) PRO,FO 78/2152, FO to Cumberbatch, no.1, 22nd June, 1870.
 25) PRO,FO 626/25/1078, Hadkinson v Hadkinson, 1912.
 26) PRO,FO 195/1693, Holmwood to White, no.40, 20th Dec., 1890.

Table 3 does not reflect the full extent of the purchase of land by British merchants but gives an approximate idea of the changing pattern of ownership in agriculture. Although some estates were mentioned in the records neither the value nor the acreage was specified and these estates had to be excluded from the table. Some examples are the two farms belonging to J.J. Werry and J.T.Smith (35), three farms and two vineyards belonging to R.Wilkin, two farms owned by F.G.Vedova and C.E.Tebbitt (36), and J.H. Hutchinson's second farm near Torbali (37). Most important of all, vast areas of land owned by the Giraud family were not mentioned anywhere (38). Calculating on the basis of an average purchase price of £1 per acre and allowing for the

- (35) PRO,FO 626/10/462, Werry, Probate, 1871; PRO,FO 626/12/528, Smith, Estate, 1876-1892.
 (36) PRO,FO 626/12/523, Smith v Vedova, 1876; PRO,FO 626/16/691, Mazade v Tebbitt, 1890-1891.
 (37) PRO,FO 626/6/337(134), Pacmedion v Bullock, 1865.
 (38) The Giraud family, now of Turkish nationality, was and still is one of the largest land owning families in Turkey. They bought very large areas of land from the Turkish family of the Karaosmanoglous in the 1860's. The latter, in spite of their reduced holdings as a result of sales to the Girauds and others, still owns very large tracts of land. The head of the Karaosmanoglou family was usually referred to as the Prince of Aidin because he literally owned the whole province. In 1815 he possessed 62,500 sq. miles of land, see, T.O.Hanson, "Recollections of Smyrna", MIKPAEIAATIKA XPONIKA, vol.xiii, 1967, pp.435-520; also see, Admiralty Intelligence Department, Handbook of Asia Minor, vol.ii, London, 1919, p.565.

estates unaccounted for in the Foreign Office records, an estimate of the area owned by the British would be between 600,000 acres and 700,000 acres. To this figure must be added the area owned by the Greek, Armenian, Jewish merchants and merchants of other nationalities. The final estimate of all land bought from the Turkish landlords by the European and non-muslim merchants gives a figure of not less than three million acres.

AGRICULTURE UNDER BRITISH LANDLORDS

The British found it quite difficult to institute a capitalistic system on their holdings. When they bought their estates from the native proprietors they also acquired the backward character of everything connected with agricultural operations. They were dismayed by the extremely primitive methods of ploughing, weeding, harvesting, threshing, and storage which had not changed for centuries. At least three of them gave up all hope and sold their farms after a period of four years (39). Also, periodic outbursts of brigandage, disturbing life in large areas and causing a suspension of work in fields for weeks, were the subject of serious complaints by the British (40).

At the beginning of their farming career British merchants adopted

(39) PRO,FO 626/7/339(9-72), Evidence of N.Shakir.

(40) In 1854 the countryside was so much infested with brigands that the government dispatched 800 troops to the area, PRO,FO 195/447, Brant to Redcliffe, no.15, 18th Aug., 1854. Again in 1860 and in 1867 there was widespread brigandage in the Meander Valley, PRO,FO 78/1533, Blunt to Bulwer, no.12, 19th May, 1860, and, PRO,FO 195/883. In 1880, when raids on farms were very frequent, a British farmer had to employ 43 guards to protect his property, PRO,FO 195/1307, MacAndrews to Dennis, 29th May, 1880. In the following year the raids intensified and the British Ambassador warned the British subjects that those who were already resident and those who might take up their residence in the countryside "did so at their own risk," PRO,FO 195/1378, Dufferin to Dennis, telegram, 24th June, 1881. In 1883 the Governor General of Aidin was dismissed by the Porte because of his failure in suppressing brigandage, PRO,FO 195/1454, Dennis to FO, no.24, 25th May, 1883.

the old method of share-cropping and momentarily tried to exact labour service from the resident peasants. When J.B.Paterson bought his farm from Karaosmanoglou Husein Effendi he was told that he was entitled to the right of peasant labour. Each peasant living on his farm was supposed to perform six days' annual labour for him with a pair of oxen, two days in sowing, two in harvest, and two in ploughing. When Paterson demanded his right the peasants refused on the grounds that they were not liable to perform their duties if the owner of the farm was an "infidel." Paterson estimated that the peasants' refusal cost him about £350 every year (41). D. Baltazzi's demands on peasants were also met with resistance and he had to announce that he "abolished obligatory labour."

Share-cropping, on the other hand, continued for quite a while. One of the principal reasons for this type of agreement between the British landlord and peasants was that the land was too large for the proprietor to introduce wage labour at the very beginning. Another reason was that the proprietor, having bought the estate, realized that his commercial activities in towns would not allow him to engage actively in agriculture. These two reasons can explain why share-cropping was observed only in very large farms and in farms belonging to merchants who had important commercial establishments in towns (42). D.Baltazzi, for example, employed wage labour on only 4,000 acres of one of his farms, the remaining 38,000 acres were worked in joint account with peasants (43).

(41) PRO, FO 626/7/339(9-72), Evidence of Paterson.

(42) PRO, FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863. Merchants like Maltass, Abbott, and Whittall were known to have entered into share-cropping agreements with peasants. According to, F.Rougon, Smyrne, Situation Commerciale et Economique, Paris & Nancy, 1892, pp.73-74, direct farming by the landlord was dominant on smaller farms up to 500 acres. Larger farms, with some exceptions in the Scala Nuova region, were tilled by peasants on a share-cropping basis.

(43) PRO, FO 626/7/339(9-72), Evidence of Baltazzi.

The share-cropping agreements concluded between peasants and British farmers were subject to change through time, the trend being towards money rent. In the late 1860's the British usually required one half of the crop from their tenants who were more or less free to decide on the crop they wanted to produce. Later, the British began to dictate the terms of the share-cropping agreement (44). They allowed peasants to cultivate their land only when the peasants accepted to grow exportable industrial crops. They also brought new clauses into the agreements to the effect that whatever the volume of production was the share-cropper had to hand in a fixed quantity of the crop per acre cultivated. However, this method was soon replaced by money rent because if the crop was affected by adverse weather or plant disease the proprietor was deprived of his revenue and having no legally binding document in his hand was unable to obtain compensation. When there was a shortage of labour eviction was obviously an unsatisfactory solution.

Under the money rent agreement the peasant was required to sign a document pledging to sell a certain amount of the crop to the proprietor and to pay his debt plus interest if, for one reason or another, he failed to fulfil the terms of the contract. If he was still unable to meet his debt in the following harvest, the proprietor had the right to make him work without any payment until the debt was paid off. The money rent agreement, which became very widespread, was the result of the connection

(44) PRO, FO 83/337, Cumberbatch to Granville, inclosure no.1, 4th Nov., 1870

between the proprietors' agricultural and commercial interests. As merchants, who had to fulfill their export contracts, they relied on the produce they expected to receive from their share-croppers. The old method of fifty-fifty sharing was no longer suitable for them because if the harvest failed they lost their prospective shares of the crop and were left without any indemnity. By imposing money rents they guaranteed that even if the harvest did not come up to their expectations they at least obtained some form of compensation. One of the British merchants who still adhered to the old method of share-cropping went bankrupt when he was compelled to pay a large sum for breach of contract owing to the failure of tobacco crop (45).

WAGE LABOUR UNDER BRITISH LANDLORDS

The transition to a labour-hire economy required the emergence of a class of people who could, at least potentially, organise agriculture on the same lines as any other commercial or industrial enterprise. It also required that peasants should be dispossessed of all their freehold or leasehold land so that they would have to offer their services as wage workers. This second condition was very difficult to realize; hundreds of thousands of peasant families could not be forced to sell their small holdings or terminate their leasing agreements at once. As long as they had enough land they would concentrate their efforts on making a living out of it and offer their labour only when land was no longer sufficient to support the family. Alternatively, some members of the family could

(45) PRO,FO 626/24/966A, Gregoriades, Bankruptcy, 1907.

work as wage earners while the remaining members worked on the family land. In either case the possession of land by peasants was an obstacle to the large scale introduction of labour hire. The purchase of land by foreigners had undermined the foundations of the lord-and-peasant system but it was still strong. Just as the labour hire economy could not emerge at once, the corvee economy could not disappear at once.

The only possible system of land tenure was a transitional one combining the essential features of both the capitalist and the corvee systems. Thus, while share-cropping and money rent agreements were in full operation on parts of their estates the British established wage systems on other parts. The wages they paid were high in comparison to what the native proprietors, who had introduced wage labour, paid to their workers. In 1856 the average daily wage of a farm worker working for a British proprietor was 1s (46). Seven years later it became 2s near Smyrna and 1s.6d. in the interior (47). In 1869 the British could boast that they were paying the highest wage rate in the Ottoman Empire (48). The increase in wages stopped in 1870 and they stabilized at around 1s.8d. a day (49). Although there is no information about the number of workers employed by the British farmers at least one of them is known to have employed 135 workers throughout the year (50).

(46) PRO,FO 78/1419, passim.

(47) PRO,FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863.

(48) PRO,FO 83/334, Cumberbatch to Elliott, no.62, 3rd Dec., 1869. This claim seems unjustified because wages in Brussa were fractionally higher.

(49) PRO,FO 83/337, Cumberbatch to Granville, inclosure no.1, 4th Nov., 1870.

(50) PRO,FO 626/3/108, List G.

The British farmers did not have much difficulty in finding the necessary number of workers even in times of extreme harvest labour shortage. The high wages they paid attracted seasonal migratory labour from beyond the Yalvach plain in the east. These migrant workers first made their way to the coast where crops ripened earlier. They then worked their way back taking up weekly or fortnightly jobs on British farms (51).

The facilities afforded by the Smyrna-Aidin Railway in the form of cheap and fast travel were an important factor increasing the spatial mobility of the agricultural labour force. The number of passengers carried by the railway increased from 672,278 in 1897 to 1,667,968 in 1909, an average annual increase of nearly 77,000. The annual increase in the number of third class passengers between 1902 and 1909 was about 72,500 while it was less than 6,000 in the case of first class passengers - there was no second class. (The number of first class passengers increased from 93,816 in 1902 to 141,346 in 1909. The corresponding increase in the number of third class passengers in the same period was from 945,468 to 1,526,612). In the second half of each year, which coincided with the harvest and ploughing season, there was a considerable increase over the first half of the year both in the number of passengers and in the total distance travelled. Table 4 shows the progress of railway travelling between 1897 and 1909.

(51) PRO, FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863. In 1868 half of the fig crop was left to rot on trees because of the insufficient supply of migratory labour, "Commercial Reports," Accounts & Papers, 1870, vol.lxiv, pp.78-87. In 1910 when there was an especially acute shortage of harvest labour, the British were able to procure enough farm hands by paying a daily wage of 3s, Foreign Office Annual Series, no.4809, (Cd.5465), 1911, p.12. In the following year they offered to pay an incredible 6s a day to men skilled in the gathering and preliminary processing of tobacco, Foreign Office, Anatolia, London, 1919, pp.69-70.

Table 4
Aidin Railway Passenger Statistics

Years	Total Passengers	First Class Passengers	Third Class Passengers	Total Mileage
Jan.-June 1897	299,310			483,116
July-Dec. 1897	372,968			596,359
Jan.-June 1898	322,921			460,136
July-Dec. 1898	381,899			414,016
Jan.-June 1899	312,395			325,647
July-Dec. 1899	385,659			490,516
Jan.-June 1900	313,445			377,963
July-Dec. 1900	390,027			485,868
Jan.-June 1901	343,310			367,826
July-Dec. 1901	497,707			459,184
Jan.-June 1902	462,031	46,730	415,301	344,815
July-Dec. 1902	577,253	47,086	530,167	424,183
Jan.-June 1903	527,192	48,460	478,732	332,440
July-Dec. 1903	629,471	47,745	581,726	444,655
Jan.-June 1904	552,537	53,226	499,311	347,666
July-Dec. 1904	668,447	52,093	616,354	479,053
Jan.-June 1905	540,875	51,612	499,263	377,184
July-Dec. 1905	666,836	53,264	613,572	476,253
Jan.-June 1906	601,783	54,544	547,239	347,416
July-Dec. 1906	705,171	58,013	647,158	487,915
Jan.-June 1907	663,074	61,418	602,656	393,505
July-Dec. 1907	772,364	66,489	705,875	476,153
Jan.-June 1908	696,457	65,550	630,907	365,840
July-Dec. 1908	782,042	62,388	719,654	422,182
Jan.-June 1909	746,956	67,302	679,654	378,591
July-Dec. 1909	921,012	74,044	846,958	466,058

Source: Rapport et Etats des Comptes, Constantinople, 1898-1910.

The half-yearly fluctuations in the number of third class passengers suggest that the less well-to-do classes gained a high mobility by using the railway. A comparison of mileage and passenger statistics shows that for every additional passenger in the harvest season there was an increase of slightly more than a mile of railway service. This seems to indicate that the additional passengers used the railway only for short journeys between their homes and fields, and between different fields.

In order to attract workers some British farmers offered free season tickets to travel on the railway but this practise was not generally adopted because workers were involved in dangerous accidents as they tried to jump off the train when they approached the fields they were going to work (52).

Farm workers were hired on a daily, weekly, or monthly basis. If the work contract was on a yearly basis the worker was either paid an annual wage of £12 in cash in advance or £6 plus free board, lodging, and clothes (53). Light work like hoeing and weeding of cotton fields was usually carried on by woman and child labour who were paid between 5d. and 9d per day in 1863 (54) which increased to between 6d and 1s in 1870 (55). Hours of work were from sunrise or sometimes from daybreak to sunset with an allowance of about one hour for meals. The working day varied according to the season between 8½-9 hours and 14½-15 hours. Due to numerous public and religious holidays the year usually consisted of 260 days but there were cases of 304 working days in some areas (56).

AGRICULTURAL CREDIT

The British merchants' interest in agriculture was not confined to the direct purchase and cultivation of land alone. They often provided credit to their share-croppers and to independent farmers for operations

(52) PRO,FO 626/2/70, Sulali v Ferguson, 1861.

(53) PRO,FO 83/334, Barron to Clarendon, no.150, 28th Dec., 1869.

(54) PRO,FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863.

(55) PRO,FO 83/337, Cumberbatch to Granville, inclosure no.1, 4th Nov., 1870.

(56) PRO,FO 83/415, Casdani to Elliott, 10th Dec., 1872.

with high liquid capital requirements such as the weeding of cotton fields where the workers must be paid immediately. The credits extended to small producers were generally used to meet current expenses whereas large landowners borrowed considerably greater sums to introduce improvements and for large scale operations. The involvement of the British in agricultural credit arrangements was closely related to their commercial activities. A good and healthy crop was very important for the export business and it was natural that the British took steps to ensure good quality supplies.

The earliest record of a credit agreement between a British merchant and native producers belongs to 1839 when J.A.Werry started to extend 5,000 pts annually to valonia producers at a very low rate of interest but with the exclusive right of buying the whole output (57). Later, C. Wood, himself a landlord, opened annual credits to Turkish proprietors at 12% rate of interest. The total amount of money he lent every year was claimed to be 650,000 pts (58), or about £5,500. J.Purdie's credits, mostly to his tenant farmers, amounted to £4,250 a year (59).

With the coming of the railway and the accompanying increase in the scale of agricultural activity the credit requirements of all types of producers became larger. The establishment of agricultural credit banks

- (57) PRO,FO 195/128, Werry to Charnaud, 19th Sept., 1839.
(58) PRO,FO 195/447, Wood to Brant, 27th Apr., 1855.
(59) PRO,FO 195/447, Purdie to Brant, 8th Sept., 1855.

somewhat eased the problem of obtaining loans but it never provided a permanent solution. In 1898 agricultural credit banks in Turkey advanced £546,125 to 90,536 recipients, an average of £6 per person (60). On the other hand, the sums advanced by British merchants and farmers were in the region of £200-£300 per person (61). The rate of interest they charged was exorbitantly high, sometimes as much as 24% per annum (62). Despite the high cost of borrowing many farmers preferred to be financed by private creditors mainly because they were able to supply larger loans at a shorter notice and without much formality. The borrowers were required to sign a bond and nothing else. In exceptional cases where the loan was quite large an extra precaution was taken and the title deeds of the farm was transferred to the creditor as collateral.

INTRODUCTION OF ADVANCED HAND TOOL TECHNOLOGIES

The process of the adoption of new agricultural tools by native and foreign farmers was closely connected with the existing pattern of land use. Evidence suggests that bush-fallow cultivation was practised on a very large scale up to the 1860's. Under this system forests were cleared of trees and the land thus gained was cultivated for a period of time varying between one and eight years. Then, land was left to fallow for six to ten years (depending on whether the landlord owned other farms which he could cultivate while that particular field lay fallow) during

(60) Board of Trade Journal, vol.xxxviii, 1902, pp.610-611.

(61) PRO,FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863.

(62) PRO,FO 78/1391, Fraser to Malmesbury, 8th July, 1858. The Ottoman Bank charged 12% interest but demanded a collateral equal in value to the amount of the loan; see, "Commercial Reports", Accounts & Papers, 1870, vol.lxiv, pp.78-87. In 1884 the agricultural tax rate was increased from 10% to 11.8% and the difference was used to finance the loans made by the agricultural banks; see, PRO,FO 195/1488, Nashid Pasha to Dennis, 14th June, 1884; Foreign Office Annual Series, no.67, (c.3673), 1886, pp.431-454.

which a thick bush grew on the land. When the fallow period ended the bush was cleared and the cycle re-started. In this way the Smyrna region was deprived of its forests up to a height of 3,000 ft (63). In the Erythrean Peninsula, extending for about 50 miles from the plain of Djumavasi in the east to the Strait of Chios in the west, practically all forests had disappeared. At the western end of the Tmolus and Messogis range the situation was almost the same. Eastwards where the Tmolus and Messogis ranges unite the fine forests which had existed before, almost entirely vanished by the middle of the XIX Century. (64).

In some areas, especially in the relatively heavily populated Meander Valley, short-fallow (grass-fallow) cultivation was predominant. Under this system land was cultivated for one year and left to fallow for one or two years during which it was covered with grass. The shift from bush-fallow to short-fallow depended firstly on the degree of commercialization of agriculture and secondly on the intensity of population pressure. An almost stagnant population and the absence of an entrepreneurial spirit on the part of the Turkish landlords were the chief factors responsible for the slow transition from long-fallow systems to short-fallow.

The dominance of bush-fallow cultivation essentially meant that there was not much need for the use of relatively advanced hand tools such as the iron plough and the scythe. In fact, the iron plough and its more

(63) Admiralty Intelligence Department, op.cit., p.83.

(64) Ibid., pp.87-88

advanced versions were unsuitable for bush-fallow cultivation. The planting stick and the hoe worked more successfully than the plough in a field full of the trunks of felled trees and other litter. Similarly, the predominant use of the sickle was the result of considerations of low transport costs, storage space, and the fact that there was not much cattle to be fed on the hay that would be produced by the adoption of the scythe. Obviously, the productivity gains from adopting the scythe were quite large (65), but the farmers stubbornly continued to use the sickle. There were cultural as well as economic factors preventing the introduction and the large scale use of the scythe. Firstly, the sickle had critical advantages over the scythe in reducing the cost of transporting the harvested grain from the field to the farmstead. When the grain was harvested with the sickle the straw was left in the field and only the heads were carried to the storage sheds (66). The straw had little value until farm animals became important and stall feeding was required.

Secondly, the amount of storage space required was much less when the crop was harvested with the sickle. Thirdly, when using the sickle the grain was freer of weeds because the heads were as a rule above the undergrowth of weeds (67).

- (65) Collins, op.cit., pp.82-83, shows that in England, France, and Germany the use of the scythe represented a labour saving potential of 35%-40% in the harvesting of wheat, and 50% in the harvesting of barley and oats.
- (66) In order to make any considerable saving in transport costs the straw had to be compressed to a fifth or sixth of its original size. This required large forage compression machines the use of which was profitable only when the amount of straw to be compressed was fairly large, Board of Trade Journal, vol.xlv, 1904, pp.60-61.
- (67) The same considerations were also relevant in the European agriculture, as discussed in, T.W.Schultz, "New Evidence on Farmer Responses to Economic Opportunities," in, C.R.Wharton, (ed.), Subsistence Agriculture and Economic Development, London, 1970, pp.105-110.

The low level of technology in planting and harvesting was, therefore, the result of the system of land use which was based on the infrequent cropping of the fields. The latter, in turn, was the result of very low population pressure. The adoption of more advanced tools and implements also depended on the size of the holdings, the availability and cheapness of the implements, and the ease with which broken tools could be repaired. The fragmented nature of holdings and the predominance of small allotments, which were outstanding characteristics of the lord-and-peasant system and which also continued in the transitional period, made investment in better technology an unprofitable venture. The size of peasants' allotments varied between 3 and 12 acres which militated against the adoption of the relatively costly iron plough instead of the planting stick and its more advanced version of the rude wooden plough (68). Another factor was the strong prejudices of ignorant peasants against what was termed "European inventions." In some areas the Turkish landowners attempted to introduce advanced technology into their farms but "they found the opposition of their farm hands an insurmountable obstacle" (69). Difficulties of the same nature were also experienced by the foreigners but they usually managed to persuade the dissidents. For example, when C.S.Hanson tried to introduce the English plough on his farm his bailiff and men "most strenuously objected to it." After two years of continuous ploughing with the English plough Hanson's men were convinced that "the foreign implement was not mischievous and was an improvement" (70). The Board of Trade, in its campaign

(68) PRO,FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863; PRO,FO 83/334, Barron to Clarendon, no.150, 28th Dec., 1869; PRO,FO 83/337, Cumberland to Granville, inclosure no.1, 4th Nov., 1870.

(69) Board of Trade Journal, vol.xxvi, 1899, p.26.

(70) Clarke, op.cit., p.38. For a discussion of the advantages possessed by primitive agricultural implements in the arid zones of the Middle East over the European implements, which were designed specifically for the moist European soil, see, A.Bonne, State and Economics in the Middle East, London, 1948, pp.158-161.

to promote British agricultural implements in Turkey, drew the conclusion that the Turkish farmers should see these implements not in illustrated catalogues but at work. Only in this way they could be persuaded to adopt new methods of cultivation (71).

AGRICULTURAL MACHINERY

Under conditions of fully commercialized agriculture a shortage of labour would lead to a substitution of agricultural machinery for labour. In the Smyrna region the inability of the Turkish landlords to transform the traditional system into a commercial one and the relative success of the foreigners in establishing a relatively advanced agriculture meant that it was the latter who would be the main agent of mechanization in agriculture (72).

The cultivation of cereals and cotton by the foreigners had been important in the past but by the third quarter of the century their importance was decreasing as the cultivation of exportable crops increased. The British concentrated their energy on the production of raisins, tobacco, figs, madder root, olives, valonia, and opium. None of these crops required heavy use of agricultural machinery. Vineyards needed more care

- (71) Board of Trade Journal, vol.xxxviii, 1902, p.448. In 1910 a special train, chartered by British merchants, ran on the Aidin line stopping at each station for practical demonstrations of agricultural machinery; see, Foreign Office Annual Series, no.4809, (Cd.5465), 1911, pp.17-62.
- (72) In some regions where commercial agriculture was more advanced the Turkish landlords were the pioneers of mechanization. In Cukurova, for example, they were buying large numbers of steam-power threshers and harvesters. An American firm sold annually 25 steam threshers, 800 steam ploughs, 1200 harvesters, and several thousands of sowing machines, Board of Trade Journal, vol.xxx, 1900, pp.231-232; vol.xxxiv, 1901, pp.418-419. In Edirne, about 1,500 German ploughs were sold annually, Journal of the Board of Agriculture, vol.xvii, 1910-1911, p.325. Agricultural machinery on Turkish estates in Western Anatolia was first seen in 1885; see, Foreign Office Annual Series, no.67, (c.3673), 1887, p.451.

than the others in the form of fertilizers and pesticides but valonia and madder root grew almost wild and did not need much attention from the farmer. In the case of figs and opium the soil had to be opened to a depth of 6½ inches and this required advanced iron ploughs because the traditional ploughs used by the natives could only reach to a depth of 3 inches. The cultivation of tobacco was not considered very profitable although there was a large demand for it in export markets. The reason was that in 1881, with the establishment of the Ottoman Public Debt Administration, the government granted monopoly rights to a Franco-German consortium (the Regie) in the production and marketing of tobacco. The Regie had the exclusive right of buying the entire output of tobacco at prices fixed by its administrative council (73).

Many foreign firms opened branches in Smyrna and in the interior with the purpose of selling agricultural machinery but only three of them scored any significant success. The machinery imported and sold by these three firms, two British firms from Ipswich and Wexford and a German firm, were light and easily transportable over mountainous terrain, very simple to use, and worked by horse-power. All three firms offered credit facilities and carried repair work gratis (74). An Austria-Hungarian firm (Die Ungarische Bank and Handels Aktiengesellschaft) was also making good progress on account of its periodic demonstrations of agricultural machinery

(73) H. Feis, Europe, the World's Banker, 1870-1914, New York, 1930, pp.332-335.

(74) Board of Trade Journal, vol.xvii, 1894, pp.70-71; vol.xxviii, 1900, pp.6-7; and, vol.xxxviii, 1902, p.448. The Aidin Railway Company ordered its station masters to keep a supply of fittings and spare parts for certain standard machines which would be repaired by the company's mechanics at a nominal charge: see, Anatolia, pp.79-80.

on its own model farm (75).

It was noted that the overwhelming majority of agricultural machinery was employed by foreigners. They purchased, for example, 19 very advanced combined harvesters in one year and agreed to buy 10 more in the following year (76). Charles Van Lennep was using steam ploughs in his farm under the supervision of an English engineer (77). Frederick Whittall spent about £1,000 in 1860 and £484 in 1861 to buy machinery for use on his farm near Tireh (78). J. Paterson was spending an annual average of £700 on "improved machinery and implements," and D. Baltazzi boasted of investing £10,000 in machinery and improvements in two years (79). F.G. Vedova's purchases of steam engines (80), and J.T. Smith's annual expenditure of £750 on machinery (81) were further examples of mechanization. Individual examples can be extended further but it is clear even at this point that there was a movement towards mechanization on farms belonging to foreigners.

In 1880 the total area under irrigation in the Aidin province was about 550,000 acres which increased to 1,025,000 acres in 1893 (82). Part of this irrigation work was undertaken by the government but the

- (75) O. Makai, Grundungswesen and Finanzierung in Ungarn, Bulgarien, and der Turkei, Berlin, 1916, p.318.
- (76) N. Vernay, G. Dambmann, Les Puissances Etrangeres dans le Levant, Paris and Lyon, 1900, p.472; Union Micrasiatique de Smyrne, Etude sur l'Avenir Economique de l'Asie Mineure, Paris, 1919, p.25.
- (77) PRO, FO 195/910, Cumberbatch to Elliott, no.31, 16th May, 1868.
- (78) PRO, FO 626/3/108 (Lists E and G).
- (79) PRO, FO 626/7/339(9-72), Giraud v Paterson, 1865-1866.
- (80) PRO, FO 626/12/523, Smith v Vedova, 1876.
- (81) PRO, FO 626/12/528, Smith, Estate, 1876-1892.
- (82) Programme du Ministere des Travaux Publics, Constantinople, 1909, pp.97-98, and, p.101.

rest was done by individual farmers. Although there is no information about the foreigners' share in this increase in the area under irrigation, with the exception of C.E.Tebbitt's purchases from a Manchester firm of three pumping engines for deep wells with capacities of 1,000, 1,200, and 1,600 gallons per hour, and C.Van Lennep's irrigation works on 2,000 acres of his estate (83), it is very likely that the figures on investment in machinery which are quoted above include expenditure on improvements such as fencing, new buildings, and irrigation. It is very probable that a considerable part of Baltazzi's claim of an annual investment of £5,000 was spent on such improvements.

USE OF FERTILIZERS UNDER DIFFERENT SYSTEMS OF CULTIVATION

The transition from bush-fallow to grass-fallow cultivation and gradually to annual cropping essentially meant a shortening of the fallow period and gave rise to the problem of preserving or regaining the fertility of land. Under bush-fallow the ashes left after the burning of the natural vegetation were sufficient to maintain a given level of fertility but under grass-fallow and annual cropping where the period of fallow was much shorter, fertilization was to be provided by manure from the droppings of draught animals and other livestock.

In the Smyrna region the dry summer season prevented the development of meadows except in the most moist areas which were subject to the flooding of rivers, especially the Hermos in its lower reaches, or in a number

(83) PRO,FO 626/16/691, Mazade v Tebbitt, 1890-1891; PRO,FO 195/1620, Van Lennep to Dennis, 17th Feb., 1888.

of upland valleys such as those of the Tmolos system. Even these meadowlands were too limited in extent to alter the general character of stock-raising in the region. It was not possible to make hay in any considerable quantity, and chopped straw, grain fodder, and cultivated fodder plants were sufficient only for the feeding of draught animals and not for ordinary stock. Consequently, the stall feeding of the latter was impossible and the herds remained throughout the year in the open so far as the climate allowed it. They found their sustenance in pasture on fallow and stubble fields and also on the uncultivated plains which served almost universally for stock-pasture. Since the scanty and sparse grass vegetation of these plains were renewed only once a year, comparatively larger areas were necessary for the feeding of the herds and the animals had to move about and exchange the districts on which the pasture had been eaten down for others which had not been used in the same year. This was generally done by migrating from the lowland to the upland pastures. The result was that stock-raising assumed an extremely nomadic character which prevented the establishment of a close economical and functional connection between stock-raising and agriculture as well as the large scale use of animal manure in farming.

In Europe the introduction of artificial fertilizers dates back to the early 1850's when phosphate and superphosphates were first applied in agriculture. In France heavy fertilizer and lime application followed the construction of a railway network during 1850-1880 and produced a rise of 50% in wheat yields between these dates (84). In Turkey the need for fer-

(84)C.P.Kindleberger, Economic Growth in France and Britain, 1851-1950, Cambridge, Mass., 1964, pp.211-213.

tilizer application was not felt very acutely in areas where bush-fallow was dominant. In other areas where more advanced agricultural methods were employed there was a growing awareness of the need for preserving the fertility of land. In 1891 J.Hadkinson, owner of a farm on the south bank of the Meander, wrote to his son, who was in school in England, asking him to learn as much as he could about the application of chemistry to agriculture. He bitterly complained about the decreasing fertility of land and the prohibitively high price of artificial fertilizers which put them beyond the reach of farmers like himself (85).

There is not much evidence suggesting a large scale use of artificial fertilizers in the Aidin province. High import prices further inflated by import duties were one of the factors preventing their widespread use (86). The only available data about the importation of artificial fertilizers into Smyrna show that the total amount imported in 1912-1913 was 124,428 kgs which decreased to 91, 760 kgs in 1913-1914 (87).

The development of vineyards, especially after the destruction by drought of the Greek crop in 1887, seems to be one of the most important factors determining the use of chemicals as pesticides (88). There was

(85) PRO,FO 626/25/1078, Hadkinson to Hadkinson, 18th Aug., 1891.

(86) All agricultural implements and machinery with the exception of iron scythes were admitted into Turkey duty free. Artificial fertilizers were subject to duty, Board of Trade Journal, vol.xxxv, 1901, p.342.

(87) Makai, op.cit., pp.319-320. The small quantity of chemicals imported could also result from a developed domestic production of artificial fertilizers satisfying the home market. This is a doubtful assumption but the Board of Trade Journal, vol.ix, 1890, pp.575-576, mentions that there was a well-organised sulphuric acid trade in Western Anatolia. Sulphuric acid is an essential ingredient in the production of superphosphates.

(88) Board of Trade Journal, vol.iii, 1887, pp.278-279

a ready market for Turkish raisins in France where the black raisins of Tireh and Scala Nuova were in high demand. In 1888, for example, France imported 44,000 tons of these raisins. The Turkish government very actively encouraged the exportation of raisins by abolishing the 1% ad valorem export duty and by granting an 8% bounty on the value of exports. Another factor contributing to the growth of raisin exports to France was the rupture of the Franco-Italian Treaty of Commerce in 1888 which deprived France of a long-standing supplier of raisins (89). In 1893 it was claimed that the great majority of vineyards in the Aidin province was owned by foreigners who had introduced "European systems of cultivation" by importing American vine plants and using pesticides (90).

In the following years the Smyrna raisin trade suffered from two very serious blows. Firstly, the phylloxera hit the vineyards at such a destructive scale that thousands of vineyard owners uprooted the vines to make way for the cultivation of other crops. In order to prevent a total collapse of viticulture the Turkish government abolished all taxes on vineyards for ten years. This move stopped the destruction of vineyards by the owners but only after considerable damage had been done. (91). The outbreak of phylloxera coincided with a considerable rise in the French import duties on raisins. Exports to France went down by 50% and raisin prices fell from 180 francs per ton in 1892 to 50 francs at the end of 1894 (92). The fall in the price of raisins relative to the price of fer-

(89) Ibid., vol.v, 1888, pp.555-556.

(90) Ibid., vol.xiv, 1893, pp.532-534. In 1910 an agricultural school was opened in Seidikeui where annually 300,000 vine shoots were prepared and distributed to producers; see, Foreign Office Annual Series, no.4809, (Cd.5465); 1911; p.29.

(91) Ibid., vol.xvi, 1894, p.470

(92) Ibid., vol.xix, 1895, p.327.

tilizers checked the growth of the application of fertilizer and pesticide application until the beginning of the XX Century when prices of mass produced chemicals fell and raisin prices recovered from their low levels.

HIGHER FORMS OF ORGANISATION IN AGRICULTURE

By the end of the century there had emerged four different types of farmers in agriculture. Firstly there was the traditional Turkish landlord who still adhered to the rules of the lord-and-peasant system. He demanded and got obligatory labour service and rent in various forms from his tenants. Although he had found it necessary to give up some of his privileges and sell large areas of arable land to the more enterprising farmers he still possessed vast estates and enjoyed enormous social status. In the second category were the majority of the Turkish landlords and some foreigners who had felt the necessity of introducing improvements on their estates but, for a variety of reasons, failed to establish fully capitalistic relations. The farmers in this category were the most numerous and they represented the transitional stage between the labour-service and the labour-hire systems. On their estates could be found, in varying degrees, a mixture of the two systems and they either reverted to the old system or joined the capitalist farmers of the third category which almost exclusively consisted of foreigners and mostly of the British. These were small in number but they commanded a considerable

amount of resources. They linked their commercial and financial activities with agriculture, undertaking and financing the production of such crops as they would like to export through their commercial establishments in Smyrna. Unlike the farmers in the second category their position was a relatively stable one in the sense that they, with all the ingenuity and experience they had accumulated, were very unlikely to go back to a position where they would have to adopt the prosaic methods of the lord-and-peasant system.

The most advanced elements of the third group, together with some London, Liverpool, and Manchester merchants and industrialists, made up the fourth category: the joint-stock companies. Some of these companies were founded and owned by the British merchants in Smyrna who, at the same time, were the directors or managers of other companies whose majority shares were sold in Britain. Thus, J.B.Giraud was the biggest shareholder and the general manager of the Smyrna Vineyards and Brandy Distillery Company. The Smyrna Fig Packers Ltd. was controlled by the Giraud and Whittall families who owned about 60% of the shares (93). This large company had an almost complete monopoly of the fig trade. It had bought, in return for goodwill shares, the entire businesses of many fig producers and fig merchants who bound themselves, under heavy penalties, not to work independently in the fig business for a period of 20 years (94).

(93) PRO,FO 626/26/1137, Giraud v Company, 1914; PRO,FO 626/26/1140(A), Missir v Company, 1914; PRO,FO 626/26/1175, Whittall, Probate, 1920.

(94) PRO,FO 626/27/1329, Company v Hamparzum, 1919.

The Levant Trading Agency Company, controlled by three Greek farmer-merchants, acquired about 5,000 acres of vineyards and other property (95).

Table 5 shows the names and the capital of some of these companies:

Table 5
British Joint-Stock Companies in Agriculture

<u>Company</u>	<u>Capital (£)</u>
1) Smyrna Vineyards and Brandy Distillery Co.Ltd.	20,000
2) Smyrna Dried Fruit Importers Association Ltd.	n.a.
3) Asia Minor Tobacco Co.Ltd.	30,000
4) Ottoman Cotton Co.Ltd.	100,000
5) Asia Minor Co.Ltd.	500,000
6) Asia Minor Cotton Co.Ltd.	100,000
7) Smyrna Fig Packers Ltd.	150,000
8) Ottoman Oil Co.Ltd.	30,000
9) Levant Trading Agency Ltd.	50,000

Sources:

- 1) PRO,BT 31/1655(5291).
- 2) PRO,BT 31/11655(90120).
- 3) PRO,BT 31/13787(119380).
- 4) PRO,BT 31/778(424c).
- 5) PRO,BT 31/737(230c). n.a. = not available.
- 6) PRO,BT 31/819(629c).
- 7) PRO,BT Registration No.119667
- 8) PRO,BT 31/19811(113608).
- 9) PRO,BT 31/9276(68939).

These companies differed from ordinary commercial companies, which merely bought and sold commodities, in that they controlled every stage of the trade from the planting of the crop to the retailing of the final product. They produced figs, raisins, olives, cotton, tobacco, valonia,

(95) PRO,FO 626/21/886, Company v Antonopoulo, 1904; PRO,FO 626/21/888, Company v Atlas Assurance Co., 1904.

and opium on their own farms, processed and exported them to Europe, especially to Britain, and sold them at their own establishments in London and Liverpool. All of them owned processing plants where cotton was ginned and pressed into bales, and, figs and raisins underwent chemical treatment to withstand the long journey to Europe. The Ottoman Oil Company had two oil mills and a refinery, built at a cost of £14,800, where olive oil was extracted from the olives grown on the company's own trees (96). With the exception of the Asia Minor Company, which, despite its difficulties finally leading to voluntary liquidation, operated in the cotton business for 19 years, all of these companies were immensely successful.

(96) PRO,FO 626/26/1138, Mazieres v Company, 1913.

CHAPTER VII

BRITISH CAPITAL IN INDUSTRY

In historical and contemporary literature there is a general lack of information concerning the structure and organisation of Ottoman industry in the second half of the XIX Century. The effects of the 1838 Treaty of Commerce on industry have received some attention (1) but there is no systematic study covering the period up to 1913 when the first industrial census was taken (2). In this chapter an attempt will be made to fill this gap in order to determine, as far as possible, the role of British capital in the industrial progress of Western Anatolia.

Before proceeding any further it is useful to review some of the problems which the Ottoman industry faced in the XIX Century. In this way it will be possible to form a better understanding of why developments in industry took a particular course and did not exhibit the vigour and the success which were the characteristics

- (1) The 1838 Treaty of Commerce is thought to have caused large scale damage to the Turkish industry, see: O.C.Sarc, "Tanzimat ve Sanayiimiz," (Tanzimat and Industry), in, Tanzimat, Istanbul, 1940, pp.423-440; J.V.Puryear, International Economics and Diplomacy in the Near East, London, 1935; F.E.Bailey, British Policy and the Turkish Reform Movement, Cambridge, Mass., 1942; O.Koymen, "The Advent and Consequences of Free Trade in the Ottoman Empire," Etudes Balkaniques, vol.vii, no.2, 1971, pp.47-55. For an earlier account of the disintegration of the Turkish industry see: A.Ubicini, Lettres sur la Turquie, 2 vols. Paris, 1853-1854.
- (2) The census covered the cities of Smyrna, Magnesia, Ouschak, Brussa, Izmidt, Kharamursal, Panderma, and the province of Constantinople. The results were published in 1917 and an abridged version has been transcribed into modern Turkish by A.G.Okcun, Osmanli Sanayii, (The Ottoman Industry), Ankara, 1970, henceforth referred to as Sanayi.

of the industrial development of the XIX Century Europe. The review is confined to a small number of problems not because they were the most decisive causes of the Ottoman phenomenon but because there is no adequate information on other pertinent questions such as the size and the structure of the domestic market, productivity and profitability of enterprises, etc.

OUTLINE OF SOME OF THE PROBLEMS FACING OTTOMAN INDUSTRY

Firstly there was the fact that the working of the Ottoman economy was largely geared to the needs of an enormous war machine. Between 1804 and 1913 the Ottoman Empire was involved in 13 major wars not counting the numerous insurrections by the various nationalities under Turkish rule and other internal disturbances. The turbulent political situation both at home and abroad required the maintenance of a large army stationed at far flung outposts in three continents as well as necessitating the establishment of a mechanism which could muster as many troops as possible at very short notice. For example, in 1873, a year of no apparent belligerence, the standing army numbered 878,329 and it was estimated that, if the occasion arose, about half a million reserves could be called under arms in a matter of weeks (3).

(3) (Suavi Effendi), (Turkiya sene 1290) (Turkey in 1873), Paris, 1873, p.87.

In order to cope with the advances in contemporary warfare, which were generally originated and applied by the European Powers very much to the detriment of the Turkish armies, the Ottomans, starting from the late XVIII Century, undertook a series of measures to modernise their outdated war machine (4). It might be imagined that, under suitable circumstances, the practical results of these measures, which included the education and training of engineers and the establishment of large iron works and factories, could have acted as an engine to start off an industrialization movement. However, the difficulties encountered by the private sector in recruiting the army-trained engineers and the technical and institutional barriers preventing the diffusion of government-originated technologies effectively checked the spread of modern methods of production.

The output of the state-owned factories exclusively consisted of war material such as guns, gun powder, cartridges, clothing, and foot-gear for the armed forces. These were not produced in sufficient quantities and the government frequently interfered with the private sector by expropriating their output or by taking over private factories and converting them for military use. Private entrepreneurs were never quite sure when their properties would be taken away from them and, if ever, returned back. The resulting uncertainty must have

(4) Some of these measures adopted under the auspices of the French are discussed in, B.Lewis, "The Impact of the French Revolution on Turkey," in, G.S. Metraux, and, F.Crouzet, (eds.), The New Asia, New York, 1965, pp.31-59; and, B.Lewis, The Emergence of Modern Turkey, 2nd ed., Oxford, 1968, pp.40-73, and, pp.80-86.

discouraged the flow of investment into industry except, perhaps, for the essential renewal of depreciated tools and implements. Also, there was a general unwillingness on the part of private persons to develop new techniques and methods the application of which would mean that the particular establishment which had introduced the new technology would inescapably be the first in the government's list of expropriations on account of its relatively greater efficiency.

Secondly, there was the problem of the retention of the medieval institutions of corporate guilds and gediks. The guilds, which had a fixed membership determined by the guild-masters, controlled the quality and the quantity of goods to be produced, fixed the prices in conjunction with the local judges, and, under the sanction of physical and financial retribution, ensured that no competition took place between the members of the guild (5). The restrictive influence of the guild system gradually became more intensive as the guild-masters turned into corrupt characters who could be bribed into ordering the dismissal of a member to make room for some one they favoured.

As far as the foreigners were concerned the main problem was, first, to get accepted into a guild. This was not always granted as illustrated by the following example. In 1841 the Corporation of Fruit Box Makers in Smyrna consisted of 35 Turkish and Greek carpenters. Some

(5) B.Lewis, "The Islamic Guilds," Economic History Review, 1st Series, vol.viii, 1937-1938, pp.20-37.

British subjects, who were engaged in fruit exports, complained about the bad quality and the high price of the fruit boxes made by the Corporation, and applied for membership. In this way they themselves would have manufactured the boxes in which they exported fruit and saved money. The Corporation denied them entry and, through the Governor of Smyrna, warned them that any attempt to manufacture fruit boxes outside the guild would be punished very heavily (6). After getting accepted into the guild the second problem facing the foreigners was to preserve their position against the demands of various official and private bodies. Again in 1841 in Smyrna some British subjects were faced with the problem of either having to pay the altogether illegal taxes levied on their profits or being dismissed from the guild. They chose the first alternative because they thought that "exclusion would be their ruin." (7).

The gedik system started in the early XVIII Century. Under this system the spatial distribution of a particular profession was restricted and all members of a particular craft in a town were required to work in a specific place. The tools and the machinery were the common property of the gedik members who used them alternately. In the gedik only the members could work and they, in turn, were not allowed to run an independent business outside.

(6) PRO,FO 195/177, Cartwright to Brant, 21st June, 1841.

(7) PRO,FO 195/177, Ponsonby to Brant, 23rd July, 1841.

The guild system and to a certain extent the gediks were present in the early stages of the industrialization of the European countries and it was through the merchant capitalists' defiance of the corporations by giving out work to the country that most of the industrial enterprises of Lancashire were started (8). The inelastic structure of the guild system contained, in a sense, the seeds of change. The situation in Turkey was somewhat similar and when the foreigners increasingly felt the necessity of breaking up the rigid shell of the guild system they chose to pierce it at its weakest point. This will be discussed later.

Thirdly, the vexatious and arbitrary taxes and the numerous local dues, introduced and withdrawn almost at random intervals and without any advance warning to tax payers, were creating an atmosphere of uneasiness and uncertainty. To the existing and prospective entrepreneurs this caused considerable difficulty in decision making and planning. The list of aggravations caused by tax problems is too long to enumerate but some examples should be mentioned in order to show the magnitude of the issues involved.

In 1859 the Turkish government levied a license fee on the British subjects in Smyrna which fell "heavily on the exercise of operative trades and on the establishments worked by machinery as flour

(8) C.R.Fay, Great Britain from Adam Smith to the Present Day, 5th ed., London, 1962, p.127; M.Dobb, Studies in the Development of Capitalism, London, 1967, p.123.

and saw-mills all of which are conducive to the convenience of society and the progress of mechanic arts in Turkey." (9). As a result a considerable number of establishments were forced to close down because they were not able to pay the high fee. In 1874 it was calculated that any British subject who was planning to open a textile factory worth between £6,000 and £7,000, should be prepared to pay annually a minimum of £1,700 in the form of various taxes and dues irrespective of the volume of production and profits (10). Six years later an Englishman, Robert Hadkinson, had to submit to the demands of the local authorities when they tried to extort a high tax on the machinery and the buildings of his new olive oil mill in Mitylene. The tax was partly illegal as it could only be levied on buildings and not on machinery. Hadkinson was told that if he refused to pay the tax his factory would be forced to stop production pending appeal which could take years costing him more than what he would pay if he gave in. He bitterly complained that "the Turkish authorities attempt to throw every obstacle in the way of any new industry, instead of giving it every encouragement and support." (11).

In 1881 the British firm of MacAndrews & Forbes were told that the local authorities had decided to raise the tax on their liquorice paste output by 167%. What was worse, the tax was to be applied ret-

(9) PRO,FO 195/646, Report relating to the District of Brussa for the First Quarter of 1859.

(10) The report concluded that "the incidence of taxation in general is fatal to industrial development." See, PRO,FO 195/1009, Maling to Elliott, no.2, 30th Sept., 1874.

(11) PRO,FO 78/1378, Hadkinson to Dennis, 17th Nov., 1880.

respectively starting from 1879 and the firm was presented with a tax demand of £40,000 to be paid immediately. When the company filed an appeal the authorities ordered the suspension of all production in the company's factories. (12). The proceedings took more than two months during which large losses were incurred by the company and had it not been for the personal intervention of the British ambassador MacAndrews & Forbes would have never succeeded in obtaining a favourable verdict (13).

Yet another problem connected with taxation was the 8% internal duty on raw materials purchased for domestic manufacture. When the raw material was converted into manufactured goods the producer had to pay another 8% on the value of goods if they were destined for consumption in Turkey. But if the produced articles were exported abroad the tax was only 1% and the producer obtained a rebate on the 8% he had previously paid when he bought the raw material. Under these conditions production for home market was not as attractive as production for export. A consular report commented that "the fiscal

(12) PRO, FO 195/1378, Company to Dennis, 2nd July, 1881.

(13) PRO, FO 195/1378, Dennis to Dufferin, no.42, 11th Sept., 1881. In 1888 the tax on liquorice paste exports was illegally doubled. MacAndrews & Forbes refused to pay the additional tax and the Governor of Smyrna ordered the suspension of all liquorice paste exports until the matter was settled in a higher court in Constantinople. The verdict of the higher court was in favour of the British but in the meantime 33,780 tons of liquorice paste belonging to MacAndrews & Forbes perished whilst waiting shipment. PRO, FO 195/1620, Barnham to White, telegram, 19th June, 1888.

regulations are suicidal to native industry," but with some imagination and resourcefulness profits could always be increased (14).

Finally, the shortage of skilled and semi-skilled labour seriously hindered the attempts to set up industrial establishments requiring skills beyond a certain point. The natives could be taught to handle simple tools and implements but in a country where the wheel-barrows used in the construction of the Aidin Railway were regarded as very advanced examples of European ingenuity (and consequently stolen and sold in the interior at ludicrously high prices) the skilled labour to operate complex machinery had to be imported from abroad (15). J.Gout, a wealthy Englishman, could not find any natives to operate the latest steam driven cotton gins in his factories and had to employ a German engineer in his Smyrna factory for the incredibly high salary of £15 a month. In his Menemen factory there were five English engineers, and at Baidir one Italian and two English engineers (16).

In the early 1890's the Aidin Railway Company annually recruited 400 young people and carefully trained them in their large workshops

(14) PRO,FO 83/337, "Report on Industrial Classes in Smyrna," Cumberbatch to Granville, 4th Nov., 1870.

(15) J.Wilson, a master brickmaker employed by the Aidin Railway Company to supervise the manufacture of bricks by the natives for the Saladin Dagh tunnel, was very much dismayed by the performance of the Turkish brickmakers and invited his mates in London promising them high wages and long-term employment; PRO,FO 626/10/426, Wilson to Percy, 1st May, 1859.

(16) PRO,FO 626/7/340(8-143), Gout, Bankruptcy, 1866-1868.

as engineers, mechanics, and engine drivers (17). The Company did not need so many skilled people every year but out of the original 400 only a small number remained at the end of the training period, the majority having transformed themselves into small entrepreneurs in the country. This injection of highly skilled manpower into the economy bore some very beneficial fruits as will be discussed later.

The supply of managerial skills was even more inadequate. A contemporary writer complained about the "non-existent arts of accounting and book-keeping" (18) and the industrial census of 1913 discovered that only one third of the industrial establishments covered by the census had been using some sort of book-keeping. In one factory, where more than 100 workers were employed, it was found that all accounting and production records had been written on one of the walls of the administration office (19).

Starting from 1856 the influence of corporate guilds decreased and with the promulgation of the Law of Provinces in 1864 this influence was reduced to a minimum. However, even in their last years the guilds were powerful enough to prevent foreigners from trespassing into their fields. An example of this was given by the forced closure of a British muslin printing factory in Smyrna. In February 1861 Mrs.

(17) Foreign Office, Anatolia, London, 1919, p.70.

(18) Suavi Effendi, op.cit., p.74.

(19) Sanayi, p.7.

Helen Abbott, a member of the Abbott family which had extensive interests in mining, opened a factory in Smyrna for the printing of imported muslins which had a large market in Turkey. A group of Armenians who held a major share of the muslin printing business came forward and maintained, and subsequently proved, that the system of printing employed in Mrs. Abbott's factory was more advanced than their system and, therefore, was capable of driving them out of the market. Under the regulations of the Corporation of Muslin Printers this was not permissible (20). Mrs. Abbott was ordered to close down the factory and her appeal against the closure was unsuccessful (21).

Under the unfavourable conditions outlined above the choices open to British investors were quite narrowly defined. Obviously, the British had to give some preference to the investment opportunities in those areas where the influence of corporate guilds was not felt very heavily. In the developed market towns of Smyrna, Aidin, and Nazilli the guilds were still able to exert some pressure and in Magnesia they were so powerful that until the 1890's they illegally controlled all industrial activity and barred foreigners from opening factories within town limits (22). Secondly, the high taxes on raw

(20) PRO,FO 195/687, Blunt to Bulwer, no.16, 20th Apr., 1861.

(21) PRO,FO 78/1787, Ali Pasha to Bulwer, 13th May, 1861. Eight years later all muslin printers in Smyrna went bankrupt when large quantities of cheap printed muslins were imported from India; see, Suavi Effendi, op.cit., p.37. Indian muslins dominated the market until 1903 when they were driven out by cheaper German muslins, Board of Trade Journal, vol.xlii, 1903, p.103.

(22) (Ali Cevad), (Memalik-i Osmaniyyenin Tarih ve Cografya Lugati), (Historical and Geographical Dictionary of the Ottoman Empire), Dersaadet, 1313, (1896), vol.ii, pp.764-767.

materials and on finished products destined for domestic consumption, the cheapness and the consequent competitiveness of imported European manufactures made export oriented industries an attractive field of investment for British capital. Further, the shortage of skilled labour had to be compensated for by employing techniques demanding lower skill levels. Lastly, foreign capital could be profitably employed in public utilities where the Ottoman government was particularly enthusiastic to grant concessions to foreigners (23).

The development of British-owned industry in Western Anatolia closely followed the above pattern. Looking at this development from another angle two main trends were discernible. Firstly, there was the growth of the export oriented industries which included carpet making, cotton processing, and liquorice paste production (24). Carpet making passed through the putting-out, manufactory, and factory stages while the other two industries started as factory production. In the following sections the carpet industry will be analyzed from the point

- (23) Public utilities in Turkey were usually operated by French companies. In Smyrna, however, a British company obtained a concession to build a gas factory in 1862. The construction work was given to Laidloux & Sons of Glasgow who took two years to complete it. The company had a fully paid-up capital of £100,000 divided into 20,000 shares. In the early XX Century it supplied gas to 1,200 customers and 1,500 street lamps. See, PRO, BT 31/31742(2751); PRO, FO 195/797, Vedova to Bulwer, no.18, 11th June, 1864; PRO, FO 78/1831, Vedova to Russell, no.27, 14th June, 1864; E.Pech, Manuel des Societes Anonymes Fonctionnant en Turquie, Paris, 1902, pp.166-7; Annuaire Oriental, vol.xviii, 1902, p.267
- (24) The tobacco processing factory in Smyrna was a joint British-French-German venture. It employed more than 1,500 workers and very advanced machinery but since it was not exclusively owned by the British it is not included in the present analysis. See, Sanayi, pp. 71-73.

of view of its development through various stages while the others will be treated as examples of large scale organisation and production.

The second trend was towards the establishment of import substitution industries. These included, among others, tannin extraction, woollens, machinery production, and olive oil extraction. The inclusion of olive oil extraction among import substitution industries may, at first sight, seem incongruous. Although Turkey was one of the principal olive growing countries she lacked the necessary facilities to turn olives into oil. Thus, she exported olives in the form of olive cakes and imported olive oil for culinary and lubrication purposes (25). The development of the import substitution industries was not as fast and as comprehensive as the development of export promotion industries yet they played an important role in relieving the home market from its unconditional dependence on foreign manufactures.

THE DEVELOPMENT OF THE PUTTING-OUT SYSTEM

One way of avoiding the control of corporate guilds was to give out work to unorganised producers in towns and in the country. Even after the power of the guilds was restricted, this practise was so widespread that at the beginning of the XX Century in Constantinople

(25) See, A.Martineau, Le Commerce Francais dans le Levant, Paris, & Lyon, 1902, pp.285-288.

there were 6,045 tailors and nearly 3,000 shoe-makers working for merchants on piece rate (26). In 1870 in Smyrna the number of shoe makers working on the ~~same~~ basis was estimated to be between 1,000 and 1,100; there were also 600 tailors taking piece work from the British, French, and Greek merchants (27). At the end of the XIX Century the putting-out system in shoe-making was controlled by six merchants, two of them British, who supplied material to 15 "organisers" who, in turn, distributed them to about 1,500 shoe-makers working at their homes (28).

The putting-out system was most widespread in carpet weaving and it was in this area that the British showed their greatest interest. Traditionally, carpet making was a household industry through which peasant families supplemented their meagre earnings from agriculture. The demand for Turkish carpets abroad was big and the weaving process did not require any particular skills except that the weavers should preferably be teenagers who could tie more knots in a given area than adults who generally had thicker fingers. (29). Because of its geographical distribution carpet weaving could not be controlled by corporate guilds.

(26) Sanayi, p.104, and, p.137

(27) PRO, FO 83/337, "Report on Industrial Classes in Smyrna," Cumberbatch to Granville, 4th Nov., 1870.

(28) Annuaire Oriental, vols.ix-xviii, 1889-1902

(29) The techniques of carpet weaving in Turkey have been examined in detail in, M.Pretextat-Lecomte, Les Arts et Metiers de la Turquie et de l'Orient, Paris, 1902.

In the early 1860's the carpet weaving industry in Western Anatolia was controlled by a small number of Turkish merchants. A certain Hadji Ali Effendi, for example, gave out work to more than 3,000 households around Aidin and his annual carpet exports amounted to 84,000 sq metres (30). The first signs of the penetration of British capital into carpet weaving were seen in 1864 when it was reported that three merchants started to give out work to carpet makers near Ouschak (31). Their progress was slow but sound and by the mid-1880's they had established a virtual monopoly in the field. Six large British merchant houses in Smyrna controlled carpet weaving from its initial stages to the final shipment for export (32).

These merchant houses created a large organisation of brokers, spinners, and dyers. Through their agents they first bought wool from villages which was subsequently given to individual spinners or to more sophisticated spinning mills which spun it into a thick and short yarn (33). The yarn was then given out to dyers. In Smyrna alone there were 15 dyeing factories, all owned by Greeks, working for the British merchants and there was a "most modern" dyeing factory in Demirdji belonging to a British subject (34). These factories

(30) Salahaddin Bey, La Turquie a l'Exposition Universelle de 1867, Paris, 1867, pp.41-46.

(31) PRO,FO 78/1888, Cumberbatch to Russell, no.40, 8th June, 1865.

(32) Annuaire Oriental, vol.ix, 1889, pp.663-710.

(33) The spinning was largely carried out by peasant families working at their homes but there were also spinning mills belonging to Armenians in Cassaba and in Demirdji, ibid., vol.xvi, 1900, p.1205
C.Offley, himself a carpet merchant, owned a wool mill in Akhisar, ibid., vol.xv, 1898, p.1066.

(34) ibid., vol.xvi, 1900, p.1364.

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were using aniline colours imported from Germany and Belgium. In 1888 they suffered a temporary crisis when the Governor of Smyrna ordered them to use nothing but the native vegetable dyes (35). The dyers around Koulah exclusively used vegetable colours even after the ban on aniline dyes was lifted. According to them, and the British also agreed with this view, the combination of the mountain streams of Koulah and the native vegetable dyes did away with the necessity of subjecting the wool yarn to chemical treatment (36). Consequently, the fibres retained certain natural oils and the finished carpets were of a very superior quality.

The next step was the distribution of coloured yarn to numerous villages in the interior. The merchants' agents called at the villages and instructed their sub-agents there (usually the head of the village) about the size and the quantity of carpets required by the exporters. In 1890 the British discovered that ordinary carpets with European patterns would fetch a higher price in England. New patterns were imported and the weavers were told to abandon the traditional Turkish patterns except on high quality carpets (37). Another discovery was that if carpets were woven with a cotton backing they lasted longer and had almost uniform sizes. Immediately three fac-

(35) Board of Trade Journal, vol.v, 1888, p.551

(36) Ali Djevad, op.cit. vol.i, p.548.

(37) Board of Trade Journal, vol.ix, 1890, pp.60-61; Sanayi, p.135.

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(37) Board of Trade Journal, vol.ix, 1890, pp.60-61; Sanayi, p.135.

tories were opened in Magnesia, Aidin, and Nazilli where cotton was spun into a coarse fibre to be used for this purpose. Later, a French spinning mill was opened in Smyrna (38).

Completed carpets were collected by the village headmen and surrendered to the merchants' agents who paid the weavers according to the area woven and the number of knots tied in a given area. The number of weavers working on a loom depended on the width of the carpet. For good quality carpets, which required more knots in a given area, usually one worker was employed for every 67 cms of the carpet whereas for ordinary carpets one worker for every 84 cms was enough (39). A skilled weaver could tie 5,000-6,000 knots a day for which he was paid an average wage of 6d (40). It was asserted that it was this very low wage that attracted the attention of the British as well as prohibiting any competition from other countries with the exception of Persia where the level of wages was probably lower (41). In 1884 the total carpet production in Western Anatolia was estimated to be about 155,000 sq metres (42) which, under the stimulus of the British, increased to 367,876 sq metres in 1893 (43).

(38) Anatolia, p.97.

(39) E.Dutemple, En Turquie d'Asie, Paris, 1883, p.222; F.Rougon, Smyrne, Situation Commerciale et Economique, Paris, 1892, p.240

(40) V.Cuinet, La Turquie d'Asie, vol.iii, Paris, 1894, p.407.

(41) N.Vernay, and, G.Dambmann, Les Puissances Etrangeres dans le Levant, Paris and Lyon, 1900, p.479. In 1894 the average f.o.b. price was 15s.6d. per sq. metre which gives an idea about the profits made by the British merchants.

(42) D.Georgiades, Smyrne et l'Asie Mineure, Paris, 1885, p.64.

(43) Cuinet, op.cit., p.408.

During this period exports showed a similar increase from 3m. francs to more than 7½m. francs in 1889 about 70% of which was absorbed by England.

At the beginning of the XX Century the British, who had monopolized the carpet trade for nearly 30 years, were faced with a serious competitor. An Austrian firm (Keun & Co.), attracted by the high profits in the carpet industry, opened a factory near Ouschak where annually 12,000 sq. metres of carpet were manufactured by 80 workers. Others followed suit and within one year 15 Turkish, Greek, Armenian, and Jewish companies were formed. With some exceptions these companies were small and did not have as large an organisation of brokers, spinners, dyers, etc., as the British did. Consequently they could operate only in those areas where the British had not extended their network. Furthermore, since they had to rely on the wool spun and dyed by the establishments belonging to or working for the British, their manufacturing costs were often 50% higher (44). Nevertheless, they represented a threat to the supremacy of the British and had to be eliminated.

The six British merchant houses immediately took action and formed the Oriental Carpet Manufacturers Ltd. with a capital of £400,000 (45). The first steps taken by the company were aimed at

(44) PRO,FO 626/24/973, Keun v LaFontaine, 1908.

(45) The company was registered in London (Board of Trade Registration no. 96,091) and according to the Register of Defunct and Other Companies, London, 1960, was still active in 1960.

the centralization of the spinning and dyeing of wool yarn. For this purpose two wool spinning and two dyeing factories were built in Smyrna with machinery and technical staff imported from Austria and Germany. The company also opened a design office where British and French designers prepared patterns suitable to the European taste. The organisation of the putting-out system was revised and agencies were established in 14 towns. Unlike the old brokers, who were paid on a percentage basis, these agents were paid regular salaries plus a bonus if they fulfilled their quotas. The culmination point of the company's expansion was the establishment of six factories in Western Anatolia. (46). The extra capital required for expansion was provided by raising the share capital to £1,000,000 which made the Oriental Carpet Manufacturers the largest company in Turkey outside the railways (47).

The organisation of the company on a larger basis and the efficiency of machine production soon made their effects felt when the competitors began to disappear. In one year their number decreased from 15 to seven, the other eight companies had gone bankrupt because

(46) Sanayi, p.136. There is no information available about the working conditions in these six factories except that wages were as low as 4½d. per 5,000 knots. An eyewitness account of the very bad conditions in the company's two other factories in south-central Anatolia can be found in, W.J.Childs, Across Asia Minor on Foot, London, 1917. In 1922 the average daily wage in the company's Hamadan factory in Persia was only 1½d. See, "A Railway Engineer's Journey in Persia," Journal of the Royal Central Asian Society, vol.ix, pt.2, 1922, pp.60-80.

(47) Eldem, Tetkik, pp.122-123

they were unable to obtain the raw materials they needed (48). In 1913 the Oriental Carpet Manufacturers regained their supremacy as the only carpet manufacturing and exporting firm in Turkey (49).

During 1910-1913 the company established 11 more factories (three in the Smyrna region and eight in south-central and south-eastern Turkey) bringing the total number of its factories to 17. Table 1 shows the details of the company's activities in the Smyrna region in 1913.

Table 1
Carpet Production by the Oriental Carpet Manufacturers

Area	No. of looms	No. of workers	Area woven (000 sq.m)	Value (£)
Ouschak	1,175	5,500	150	153,636
Simav	380	1,120	23	16,363
Ghordes	800	2,700	60	61,818
Demirdji	600	1,356	31	34,545
Koulah	1,500	3,800	35	42,727
Isparta	2,160	6,481	117	100,256
Eghridir	500	1,500	15	11,819
Burdur	800	2,400	22	20,417
Bhuldan	250	400	3	13,637
TOTAL	8,165	25,257	456	455,218

Source: Eldem, Tetkik, pp.142-143. Value figures in Eldem converted at £1 = 110 pts.

- (48) PRO,FO 626/24/954, Union Bank of Trieste v Warren, Berkshire & Co., 1908, contains details of the difficulties encountered by the Greek, Armenian, and Turkish carpet merchants. The evidence given in the court pointed out that "everything came contrary to their expectations and they lost the good moral opinion of their creditors." The number of carpet producing and exporting firms is taken from, Catalogue General Officiel de la Section Ottomane, Bruxelles, 1910, pp.14-22.
- (49) H.W.Schmidt, Auskunftsbuch für den Handel mit der Türkei, Leipzig, 1917, pp.119. Only two small wool yarn factories in Ouschak, owned by Turks, had averted the disaster by agreeing to sell their entire output to the company.

In that year the total area of carpets woven was estimated to be 1,087,000 sq metres which included the carpets woven in the company's other factories. It appears that the carpets woven for the company on the putting-out system in Western Anatolia alone amounted to 42% of all production. In addition to the carpets produced through the putting-out system the company had also £100,000 worth of merchandise on looms in its Western Anatolia factories (50). Taking all these facts into account a rough estimate would be that the Oriental Carpet Manufacturers Ltd. was responsible for at least 75% of all carpet production in 1913.

The looms in the company's factories were all hand-operated and for this reason they were excluded from the coverage of the 1913 industrial census which took into account only those establishments with motive power. As far as the company's other factories are concerned more information is available in the census. Out of the six wool yarn factories three belonged to the company, two in Smyrna and one in Panderma in north-west Anatolia on the Marmora coast. The two Turkish factories in Ouschak were relatively small and the third in Constantinople was probably smaller because of its remoteness to the main carpet producing centres. The Ouschak factories could only produce thick and untwisted yarns which did not require as many spindles and as much steam power as the production of thin and twisted

(50) PRO, FO 626/26/1156, Pears to Company, 9th Sept., 1913. The total number of factory and household workers working for the company was estimated to be not less than 60,000 in 1919, Anatolia, p.97.

yarns did. The British factories, on the other hand, were capable of producing a very wide range of twisted and untwisted yarns with thicknesses varying between no.4 and no.23 (51). Table 2 below is constructed on the assumption that the combined productive capacity of the three British factories was four times as large as the other wool yarn factories in Ouschak and Constantinople.

Table 2
Machinery, Employment, and Production in the Oriental
Carpet Manufacturers' Wool Yarn Factories and other
Industrial Establishments in Western Anatolia and
Turkey (1913)

	OCM Factories	Western Anatolia	Area Covered by the Census
Horse power BHP per establishment	298.3	133.5	101.8
No. of workers per establishment	320	73	73
Value of Annual production per establishment (TL)	73,703	52,820	48,227
Value of Annual Production per worker (TL)	230.3	723.6	660.6
Value of Annual Production per BHP (TL)	247.1	395.7	473.7

Source: Based on the data given in Sanayi.

(51) Sanayi, p.132.

It can be seen that the company's factories had, on the average, more powerful machinery and employed more workers. Furthermore, the average value of production was much higher than the national and regional averages (respectively 52.8% and 39.5% higher). But the average productivity of labour and machinery was considerably lower. The explanation lay in the fact that the company's factories were not utilising their full capacity, some steam engines and about half of the spindles were lying idle. When the factories were first set up the company had imported old and secondhand machinery from England which was later replaced by new German machines which were more powerful and had a considerably higher spinning speed. The weak fibres of the native wool could not stand this high speed and snapped very easily (52). Consequently, some machines had to be laid off and the speed of the remaining ones had to be reduced. In 1913 the six factories produced about 1,675 tons of yarn for carpet making which completely satisfied the home demand (53). Out of this total more than 1,340 tons were produced by the Oriental Carpet Manufacturers' three factories working at half capacity.

(52) PRO, FO 626/26/1156.

(53) Sanayi, p.145.

DEVELOPMENT OF COTTON GINNING INDUSTRY

The effects of the American Civil War on cotton cultivation in Western Anatolia have been examined in Chapter IV where the main emphasis was put on the developments in agriculture. It was shown that the area under cotton had increased nearly ten-fold under the influence and the organisational efforts of the British, and that the extension of cotton cultivation had facilitated the transition from a traditional economy to a market-oriented one. The large scale expansion in cotton growing also affected the industrial development of towns where cotton was cleaned, packed, and exported abroad.

In the early 1860's the cleaning and packing of cotton were carried on under very primitive conditions. The clumsy cotton gins, owned by Turks and Greeks, were powered by animals or, where available, by water turbines. An average gin could turn out 12-14 lbs of clean cotton a day and the factory owners charged anything between 4s.-4s.5d. for cleaning 120 lbs of cotton. When the price of cotton increased in 1864, the cleaning charge also increased to 10s.9d. per 120 lbs (54). Cleaned cotton was pressed into bales by foot pressure with the result that no two bales of equal weight were of the same dimensions and that the bales occupied more room than they would have, had they been pressed by powerful mechanical devices (55).

(54) PRO, FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863.

(55) Georgiades, op.cit., p.13

The inconveniences arising from the lack of modern machinery in cotton processing were first recognised by two British merchants, J.B.Gout and J.Aldrich, who petitioned the local authorities for permission to erect cotton gins in Smyrna, Baindir, and Tireh (56). The permission was readily granted upon which the two British merchants ordered 70 gins from England and started arrangements for the construction of factory buildings. In the following year they were joined by another British merchant, T.B.Rees, who owned 7,500 acres of land on which he grew cotton. In a short period of time the number of British merchants investing in cotton ginning and pressing increased to six. The new comers were Hadkinson, Merrylees & Co., which owned a pressing mill in Smyrna equipped with a large number of hydraulic presses (57); R.Wilkin, who opened a cotton cleaning factory in Baindir which was claimed to be worth £1,200 (58); and, H.Vedova, in whose factory in Aidin there were £3,000 worth of machinery consisting of "22 Platts A.A. gins, a first class horizontal high pressure engine, a cornish boiler, an independent feed engine, and heating apparatus" (59). No further information on any of these establishments, with the exception of J.B.Gout's, is available. The latter was exasperated by the crisis in 1865 and declared his insolvency. The records of his bankruptcy proceedings are in the files of the Smyrna Consular Court (60).

(56) PRO,FO 78/1760, Blunt to Russell, no.28, 23rd May, 1863.

(57) PRO,FO 195/1240, Reade to Layard, no.8, 10th Feb., 1879.

(58) PRO,FO 626/4/145(642), Anthony v Wilkin, 1862-1863.

(59) PRO,FO 626/6/277(782), Vedova v Vedova Bros. & Co. 1863-1868.

(60) PRO,FO 626/7/340(8-143), Gout, Bankruptcy, 1866-1868.

J.B.Gout started his industrial career by setting up his first cotton ginning factory in Smyrna in a large building called Dholma Khan where he installed machinery worth £15,000. He also bought five warehouses (valued at £11,700) near the Aidin Railway terminal at the Point (61). As soon as the factory was finished "it was maliciously set fire to because the chimney resembled the minaret of a mosque" (62). Almost all the machinery were destroyed by the fire and the authorities, adding insult to injury, prohibited its reconstruction without a special permission from the Porte and only on the condition that the new chimney should not resemble a minaret. Gout quickly raised the money (63) and the new factory was finished in four months with "cotton gins of the most approved principle from both England and America" installed in it. The cost of ginning in Gout's factory was 10s. per 120 lbs which was 9d. cheaper than anywhere else and the cleaned cotton was far superior to the cotton cleaned by the native ginning establishments.

Gout opened his second factory in Magnesia in January 1863. An American mechanical engineer, S. Whiteman, was specially brought from England to supervise the building and the maintenance of the factory. F.Velasti, the British Consular Agent in Magnesia, was appointed manager and in order not to attract the hostility of the

(61) PRO,FO 195/797, "Statement by Consul Cumberbatch on the Bankruptcy of J.Gout," 6th May, 1866.

(62) PRO,FO 195/771, Blunt to Bulwer, no.28, 1st Aug., 1863.

(63) He might have had the financial support of some Manchester cotton manufacturers who were very interested in his enterprise, see, Cotton Supply Reporter, 1st Dec., 1863.

local gin owners the factory was registered in the name of an influential Turk, Mehmed Karamizraki Effendi. In April-May 1863 Gout bought land in Aidin and Menemen for £1,795 and built two more factories. The Aidin factory was also registered in the name of an influential local person, this time an Armenian. In the second half of the same year Gout opened two factories in Tireh and another factory and a pressing mill attached to it in Baidir bringing the total number of his factories to eight (64). In September 1863 he bought his second factory in Aidin from an Armenian for £1,280 which was followed by his third factory in Tireh for which he paid £1,200.

In August 1863 the Menemen factory was enlarged to accommodate a flour mill with five pairs of stones driven by the same steam engines which powered the cotton gins. When the cotton season ended the flour mill started to work and continued until the first arrival of cotton in the following year. It was a remarkably good mill which, on the average, turned 91% of the wheat delivered into flour whereas the overall average for Turkey was only 78% (65). Gout thought that if the mill had its own source of power it would not have to stop when the cotton season began and could work throughout the year. He did not consider steam engines a good source of power and decided

(64) D.Fraser, The Short Cut to India, London & Edinburgh, 1909, p.19, argues that the steam-driven ginning machines in southern Anatolia made their first appearance in 1864 in the Tarsus and Adana factories of the Greek firm of Trypani Brothers. Evidence shows that the enterprising Mr.Gout had already opened three factories in 1863 in Adana, Mersina, and Tarsus. These factories employed 90 gins, two 20 BHP steam engines, two hydraulic presses, and two water turbines.

(65) Sanayi, p.45

to produce electricity by using a generator which would be powered by a water turbine in the stream flowing by the factory. The necessary machinery and five electric engines were imported but all attempts to produce electricity failed because the stream was not powerful enough to drive the turbine and the generator connected to it.

Like other merchants, J.Gout made large purchases in the sowing season. He employed 16 full-time brokers who called in the villages and advanced money to peasants on the condition that they only would have the right to buy their entire output. In the harvest season the brokers again visited the villages and arranged the transport of cotton to the nearest railway station. The average brokerage fee was $\frac{1}{2}\%$ of the value of the cotton delivered to the factory.

In Gout's ten factories in Western Anatolia there were 266 ginning machines powered by ten steam engines capable of producing 298 BHP, four hydraulic presses, and five water turbines. Jobs requiring very little or no skill, such as the washing of cotton and feeding it into the machines, were carried out by locally recruited labour. The technical aspects of production were entirely in the hands of British engineers who supervised and, when necessary, repaired the machinery. They were paid very high salaries, between £8-£15 a month, and according to the entries in Gout's journal they fully deserved it. For example, S.Turnbull, one of the engineers in the Menemen factory, singlehandedly attended the boilers, the steam engines, and the cotton gins when the other four engineers fell ill with fever in August 1864.

An average ginning machine in Gout's factories turned out about 115 lbs of clean cotton a day. Compared with the average 13 lbs produced by other factories this was a very remarkable advance in cotton cleaning. Thus, steam-driven machinery enabled Gout to expand his business and capture a sizeable share in Smyrna's cotton exports. This can be seen in Table 3:

Table 3
J.Gout's Share in Smyrna Cotton Exports

Years	Cotton Cleaned and Exported by Gout (bales)	Cleaned Cotton Exported from Smyrna (bales)
1862	2,418	34,000
1863	5,336	33,720
1864	7,775	35,615

Sources: PRO, FO 626/7/340, Goods Account, 1st Jan., 1862-31st Dec., 1864; PRO, FO 78/1760; PRO, FO 195/610; C.D.Scherzer, La Province de Smyrne, Vienna, 1873, Appendix A.

His share increased from 7.1% in 1862 to 15.8% in 1863 and, then, to 21.8% in the following year. Very much encouraged by his success he decided to open three more factories in Smyrna, Aidin, and Tireh. Detailed plans were drawn up for the construction of the factories and £8,043 worth of machinery were bought from the London firm of T.Middleton & Co. The partial failure of the crop in 1865 hit Gout hardest. Very little cotton came to his factories from the areas where his agents had bought the entire output in advance. The factories remained idle and he was unable to collect the money owed to him by the cotton producers. He was forced to declare his bankruptcy and the factories were sold to another Englishman, H.Lubbock, to reimburse the creditors.

LIQUORICE PASTE PRODUCTION

One of the oldest established British joint stock companies in Turkey was MacAndrews & Forbes Co.Ltd. (66) which was engaged in the production and exportation of liquorice root used in the manufacture of chewing and smoking tobacco and for flavouring confectionery and beer imitations. The local people regarded liquorice roots, which grew in abundance in cultivated fields, as a pest and worthless.

In 1854 MacAndrews & Forbes opened their first factory in Aidin which was followed by three more factories, with "efficient machinery," in Sokia, Khuschakli, and Nazilli (67). They made contracts with landowners to dig up the liquorice roots growing in their lands and hired workers to dig them up. In this way the company claimed to have given employment to thousands of families who could find a spade and a sack to dig up and carry the roots. In the factories the roots were cleaned, processed, and pressed into bales using steam power. In 1875 the company had £50,000 worth of machinery in its four factories (68).

In nineteen years company's liquorice paste exports increased by 12 times and the taxes it paid by ten times. In 1875 an Armenian firm, Abacioglou & Co., established two factories in Sokia and Aidin and

(66) Board of Trade Registration No.99,807.

(67) PRO,FO 195/1161, Company to Reade, 29th Jan., 1878.

(68) PRO,FO 195/1161, Reade to Hamdi Pasha, 11th Oct., 1878.

succeeded in diverting some of the liquorice root supplies destined to the British factories by offering twice the price paid by the British company. Since the roots did not legally belong to the company no legal action could be taken. MacAndrews & Forbes decided to offer a merger which was refused by the Armenians. The British thought that if they could drive the Armenians from the export markets then there would be no need to increase their buying price which would certainly be needed if they wanted to ensure steady supplies of liquorice roots. The company undertook a major revision of their marketing organisation in Europe. The distribution network was improved which resulted in faster and more frequent deliveries at prices lower than previously, and some credit facilities were also arranged. In order to cope with the larger amount of orders placed by customers in Europe the factories were enlarged and £30,000 worth of new machinery were set up. A large factory was opened in New York where roots shipped from Smyrna were converted into liquorice paste. The rival Armenian company soon found it too difficult to obtain export orders and went bankrupt (69).

In 1879 the Turkish government removed the export tax on liquorice paste (70) which provided the stimulus for a new expansion drive by the company. A second factory was opened in Aidin (valued at £20,000) and two very experienced Armenians were recruited as brokers. An Englishman, W.A.Urquhart, was made the manager of the

(69) PRO,FO 195/1240, Company to Reade, (?) Feb., 1879; "Commercial Reports", Accounts & Papers, 1883, vol.lxxiii, p.1057.

(70) PRO,FO 195/1241, Reade to Layard, no.42, 2nd Aug., 1879.

factory and a local lawyer, Sami Effendi, was hired to represent the company in numerous disputes arising from land problems. At that time, according to the Company's own estimation, about 12,000 people were engaged in supplying the factories with liquorice root (71).

In 1865 and 1872 the company obtained two concessions from the Ottoman government to work the lignite mines at Nazilli and Sokia. The mines annually produced 1,000 tons of very bad quality coal which was used in meeting the factories' fuel needs (72).

In 1886 a German company established a factory in Aidin and leased some land for a period of nine years. Its exports were exclusively shipped to Germany where MacAndrews & Forbes had not been able to create a good organisation. The impending danger of losing the German market moved the British company to apply to the British Ambassador in Constantinople with the request that "the German competition must be counteracted otherwise it will be prejudicial to British interests" (73). Exactly two weeks later 200 armed men of "unknown identity" surrounded the German warehouses, broke in, and destroyed the entire stock of liquorice paste, killing two and injuring 11 guards in the process (74). That was the end of the Ger-

(71) PRO,FO 195/1307, Chumarian to Dennis, 3rd March, 1880; PRO,FO 195/1378, Dennis to Dufferin, no.42, 11th Sept., 1881.

(72) "Report on the Mining Industries and Forestry in Turkey," Accounts & Papers, 1903, vol.lxxvi, pp.46-47.

(73) PRO,FO 195/1547, Dennis to White, no.33, 17th Dec., 1886.

(74) PRO,FO 195/1586, Dennis to White, no.36, 3rd Jan., 1887.

man company which never recovered from the blow. MacAndrews & Forbes were left unrivalled in the liquorice business, and by the end of 1887 increased the amount of land under lease to the company to more than 120 sq. miles (75).

After suffering a heavy loss in 1888 the company recovered slowly only to face the competition of Russian liquorice exports from Caucasia (76). In order to protect its position in export markets the company renewed some of its machinery as well as employing an "expert" from Liverpool to advise on the feasibility of opening new factories elsewhere in Turkey. The expert made an extensive tour of Asiatic Turkey and reported that south-eastern Anatolia was very promising from the point of view of its potential liquorice root output and the extremely low level of wages prevailing there. He then returned to Sokia where he took charge of the company's factory in that town (77). Following his advice the company opened two factories in Alexandretta and leased large tracts of land in Kilis and Urfa in the east.

Although the company preserved its monopolistic position in Turkey (78) in markets abroad it faced increasing competition first

- (75) PRO,FO 195/1620, Barnham to White, no.17, 3rd May, 1888. In 1900 the company's leases covered practically the whole of the Meander and Lycus valleys from Kaklik to the sea. Annual wage bill of the company amounted to £275,000, see, PRO,FO 195/2090, Company to Cumberbatch, 14th Apr., 1900.
- (76) PRO,FO 195/1770, Holmwood to Ford, no.45, 1st Oct., 1892.
- (77) PRO,FO 626/18/783, Caven, Administration, 1897.
- (78) Annuaire Oriental, vol.xvi, 1900, p.1193; Board of Trade Journal, vol.xxxiii, 1901, p.457.

from German companies and, then, from the American Tobacco Trust and gradually lost importance (79).

GROWTH OF IMPORT SUBSTITUTION INDUSTRIES: FLOUR MILLS

If the relatively trivial progress of carbonated drinks production (80) is ignored it can be said that developments leading to import substitution took place in flour mills, olive oil and tannin extraction, woollens, and engineering goods production.

Although Turkey was a predominantly agricultural country where the production of cereals constituted a very large proportion of total agricultural output, she imported flour from Russia and from the Danubian Principalities for the simple reason that flour mills in Turkey were not so developed as to supply home market with flour made out of locally grown wheat (81). Supply of wheat in Western Anatolia was plentiful but flour imports were still necessary because the numerous mills in the interior were all dependent on water power which was almost unavailable in the dry season. Smyrna, for example, needed as much as 25% of its flour imported from abroad. Under these circumstances there was an opportunity for the British to put up flour mills and grind the locally available wheat.

(79) Board of Trade Journal, vol.xli,1903,p.471

(80) The English Hygenic Syphon Company was established in Smyrna in 1895 and monopolized the production of carbonated drinks, see: Annuaire Oriental, vol.xiv, 1896-1897.

(81) The annual average of flour imports in 1878-1882 was 34,416 tons which increased at an increasing rate and reached 161,545 tons in 1908-1913, see, Turk Ziraat Terihine Bir Bakis, (A Survey of Turkish Agricultural History), Istanbul, 1938, Appendix V.

The first British flour mill in Smyrna was opened in 1850 with a capital of £30, 000 divided into 1,200 shares. Steam engines, stones, etc., worth £25,000 were imported from England and a building was erected outside the town (82). The shares were bought by the British and French subjects resident in Smyrna (83). The mill worked until late 1853 when the Turkish government requisitioned all grain supplies as an emergency measure. The company decided to close the mill until the end of the Crimean War. When the war ended the Turkish government bought all the French and the great majority of the British shares and the mill ceased to be a British concern (84).

In the following decades the British opened numerous flour mills both in Smyrna and in the interior. Only eight (not counting Gout's mill in Menemen) of these mills employed steam power and none of them was as big as the first mill established in 1850. They were, in chronological order, W. Williamson's mill in Smyrna (85), D. Metaxa's mill near the Aidin Railway terminal (86), T. B. Rees' mill (87),

(82) PRO, FO 195/910, Liddle to Bulwer, 1st July, 1864.

(83) There were 306 British subjects holding 950 shares, PRO, FO 195/797, Browning to Cumberbatch, 11th Jan. 1866.

(84) PRO, FO 195/687, Blunt to Bulwer, no. 19, 8th May, 1858. The mill was subsequently bought by the French firm of Cousinery & Pittaco, see, Annuaire Oriental, vol. ix, 1889-1890, pp. 663-710, and, Vernay, op. cit., p. 462.

(85) Williamson who was a farmer opened this mill with the intention of grinding his own wheat. When he switched to cotton he rented the mill to J. W. Aldridge for £220 a year. The mill had four pairs of stones, PRO, FO 626/1/25, Aldridge v Williamson, 1861-1862, also see, PRO, FO 626/3/101(3).

(86) D. Metaxa's accounts show that the annual net profits of the mill was about £1,900, PRO, FO 626/4/167(522), Zimbubli v Metaxa, 1862.

(87) PRO, FO 626/8/348(114), Rees v Rose, 1865. T. B. Rees & Co. Ltd. Board of Trade Registration number 86,825.

the British Eastern Agency mill in Boudja which was powered with a 10 BHP steam engine (88), and F.Smith's mill in Kilisekeui which was valued at £1,624 in 1912 (89). Also there were three steam flour mills in the area between the Customs House and the Aidin Railway terminal (90). In 1894 these mills were producing about 75 tons of flour a day which was more than half of the daily flour production of the 22 steam driven flour mills in Western Anatolia (91).

OLIVE OIL EXTRACTION

In the first half of the XIX Century the British merchants in Smyrna had made several attempts to expand their businesses to the coast north of the Bay of Smyrna which had been known as "olive country" since time immemorial. What held them back, they claimed, was the absence of a British consular agent in that district without whose help and influence they would be harassed by the local Turkish and Greek interests (92).

- (88) The British Eastern Agency was owned by J.Cowley & Son of Hyde. In 1894 it merged with an Italian firm under the name of Anglo-Italian Stores, see, PRO,FO 626/17/738, Cowley v Gout, 1894.
- (89) PRO,FO 626/18/770, Leoni v Smith, 1896, also, PRO,FO 626/25/1071, Smith, Probate, 1912.
- (90) PRO,FO 198/43, "Etablissements situes dans la zone directe de l'action de la Douane de Smyrne et qui s'affranchissent des droits de quai," 1881. Later these three mills were acquired by Paterson & Co., Annuaire Oriental, vol.xiv, 1896-1897
- (91) Cuinet, op.cit., p.410; Board of Trade Journal, vol.xvi, 1894, pp.596-597.
- (92) They repeatedly petitioned the Foreign Office requesting the appointment of a representative of the British government in the island of Mtylene who would be responsible for looking after the British interests on the coast stretching from the north of the Bay of Smyrna to the Gulf of Adramid in the north west, see, PRO,FO 195/177, British Merchants to Aberdeen, 5th Apr., 1842.

Following the appointment of a Vice-Consul in Mtylene several British merchants established trading houses in coastal towns. Some set up small factories for olive oil extraction and soap making. Among them was the young and brilliant R.Hadkinson who was running a small merchant house in Smyrna. His main interest lay in the application of scientific findings to production. In 1875 he sold all his property, borrowed some money from his farmer uncle and opened an oil press in Aivali where he put up £1,500 worth of machinery and equipment (93). He gradually expanded his business and established numerous small mills in coastal towns (94).

In July 1886 Hadkinson entered into a partnership with Whittaker, Sons, & Co. of Woodly, Cheshire whereby the latter supplied custom made machinery for a factory in Aidin for extracting oil from cotton seed and Hadkinson contributed his knowledge, experience, and the land on which the factory was erected (95). The partnership became a spectacular success mainly due to the ingenuity of Hadkinson in designing a special boiler which could burn the refuse cotton seed left after the extraction process. In a slightly modified form the system was also used in his olive oil factories.

(93) PRO,FO 626/14/617, Haycroft & Co. v Hadkinson, 1884.

(94) PRO,FO 195/1307, Dennis to Layard, no.2, 31st Jan., 1880;

PRO,FO 195/1378, Hadkinson to Dennis, 17th Nov., 1880.

(95) PRO,FO 626/22/912, Hadkinson v Whittaker, Sons, & Co., 1906.

In his new factories where oil was extracted from sunflower seeds and sesame the refuse was fed into the boilers supplying the factories with steam power. When the amount of refuse was too much for use as fuel the surplus was sold to peasants who used it as animal fodder.

His second wave of success came in 1891 when he employed a chemical engineer, W.L.Lewendon, to advise him on more scientific methods of oil extraction. Lewendon taught him the use of chemical solvents and especially the use of sulphide of carbon at various stages of production. Hadkinson bought large quantities of chemicals from his brother in England who was a chemical manufacturer (96). Until then the traditional method of oil extraction consisted of the pressing of olives until an edible oil was obtained and a further process of extraction which produced a lower quality oil used as lubricant. With the application of chemical solvents Hadkinson was able to obtain three different grades of edible oil and two grades of lubrication oil (97). If the extraction process was stopped after the second stage the resulting substance could be used in the manufacture of good quality soaps. After the third stage the substance was still usable in soap making but the quality of soaps was inferior. Thus, Hadkinson began to sell olive pulp to R.Rose who

(96) PRO,FO 195/1732, Wratislaw to White, no.31, 1st June, 1891.

(97) PRO,FO 195/1770, Holmwood to Ford, no.45, 1st Nov., 1892.

owned a soap factory in Smyrna. Two years later Rose went bankrupt when the market was inundated by cheap and better quality soaps made by the Migone & Co. of Milan, and by soaps of British make such as Pears, Windsor, and Sunlight (98).

In 1895 Hadkinson suffered a temporary setback when a court decision put some of his factories under the possession of his Greek managers in whose names the factories had been registered (99). He quickly got the decision reversed and registered all his factories in his own name.

By 1900 he had become the undisputed leader in all fields of oil extraction. He owned two sunflower seed, four sesame, six cotton seed, and ten olive oil factories (100) in various towns in Western Anatolia. The industrial census of 1913 regretted that none of his factories was situated in Smyrna and that it was impossible to include them in the census (101).

The Samolda Cotton Seed Oil Factory in Smyrna was also set up by a British company but immediately sold to a Greek firm in 1910. It was, by far, the largest oil extraction establishment in Turkey

(98) Annuaire Oriental, vol.xii, 1892-1893, p.899; Sanayi, p.188

(99) PRO,FO 195/1899, Fitzmaurice to Currie, no.45, 23rd May, 1895. A similar incident had happened in 1880 when his factory in Kemer was given over to his agent G.Mandamathiotis who refused to return it to Hadkinson. Mandamathiotis was subsequently killed under suspicious circumstances, see, PRO,FO 195/1307, Dennis to Layard, no.2, 31st June, 1880.

(100) Annuaire Oriental, vol.xvi, 1900, p.1193

(101) Sanayi, p.188

employing 110 workers and four steam engines which produced 515 BHP. It was capable of processing 20,000 tons of cotton seed annually and of producing 2,800 tons of refined oil which constituted 35% of the estimated domestic consumption (102). In 1910 British merchants established an oil factory at Mersina on the south coast. H.O. Whittall and R.J. Whittall, representatives of Whittall & Co., which was the largest merchant house in Turkey with its headquarters in Smyrna, were the largest shareholders owning 920 shares out of a total of 1,400 which represented a fully paid-up capital of £14,000. In May 1911 the capital of the company was increased to £28,000 by issuing 1,400 new shares which were sold immediately. The Whittalls bought 765 new shares increasing their control to over 60% of the shares. The company was finally wound up in May 1931 (103).

The last British oil factory in Smyrna was established in 1912 as a joint stock company with a capital of £30,000 (104). Land was bought at Cordelia for the construction of buildings and a small pier was planned to accommodate the small vessels carrying cotton seed from across the Bay of Smyrna (105). The British shareholders expressed their desire that the factory should represent the latest in architectural design and production technology. The factory build-

(102) Sanayi, pp.192-195

(103) PRO, BT 31/19857(110947), Mersyna Oil Mill Co.Ltd.

(104) PRO, BT 31/19811(113608), Ottoman Oil Co.Ltd.

(105) PRO, FO 626/25/1075, *Andreades v Company*, 1912.

ing alone consumed more than 452 cubic metres of timber and about 90 tons of iron. Machinery worth £16,000 were installed and when it was opened in 1913 it was the most modern and "finest looking" factory in Turkey (106). However it stopped its operations after working 61 days when the Turkish government expropriated it as enemy property (107). After the war it resumed production with an annual processing capacity of 40,000 tons of cotton seed which was equal to 5,600 tons of refined oil (108).

TANNIN EXTRACTION

Another field of factory production where the British were completely dominant was tannin extraction. The raw material for tannin was the acorn cups of the oak tree (*quercus Oegilops*) which grew wild in the interior. In the XVII and XVIII Centuries when the Turkish leather industry was at its zenith there were thousands of small establishments for tannin extraction. In the early XIX Century the Turkish leather industry suffered from the competition of the Rumanian, South American, and Indian leather goods and entered into a period of rapid decline which also affected tannin industry by decreasing the demand for crystal and liquid tannin. Tannin production decreased while exports of acorns to leather manufacturing countries increased sharply.(109). In 1893, for example, Western

(106) PRO,FO 626/26/1138, Ledger F, ff.396-452.

(107) Sanayi, p.192

(108) G.B.Ravndall, Turkey, A Commercial and Industrial Handbook, Washington D.C., 1926, p.169.

(109) Sanayi, pp.101-105; Eldem, Tetkik, p.135.

Anatolia exported 55,000 tons of uncrushed acorn cups which was about 95% of total output (110). The best quality crop with the highest tannin content, called "superior Trieste," was sent to Italy and the other grades called "screened" and "natural" with a minimum tannin content of 22%, were bought by the German, Austrian, and French leather manufacturers. Thus, the leather goods producers who had withstood foreign competition and the newly established State factories became dependent on tannin imports from countries to where Turkish acorns were exported (111). In 1891 and 1909 the British established two tannin factories in Smyrna. The Turkish government granted privileges and tax exemptions for the importation of necessary machinery and equipment.

One of the factories was owned by the merchant company of Whittalls and the other was a joint stock company. Together they employed 140 workers and machinery capable of producing 130 BHP. They were both designed to work continuously 250 days of the year during the long valonia season. The rest of the year was devoted to the cleaning of the extraction, drying, and grinding apparatus which became heavily impregnated with tannin. Whittall's factory was supplied with locally grown acorns as well as the entire output of the Adalia region where the company had bought the exclusive

(110) Board of Trade Journal, vol.xv, 1893, p.197

(111) Some small tanneries were known to have used inferior substitutes instead of imported tannin. These substitutes could only be used in the treatment of thin skins which were used in making cheap footgear.

right of purchasing the acorns produced by the government-owned oak tree forests (112). In 1913 the two factories produced 2,911 tons of best quality tannin which, after satisfying the domestic demand, left a surplus of 1,084 tons for exportation (113).

BRITISH CAPITAL IN WOOLLENS PRODUCTION

In the early XIX Century cheap and good quality British woollens and worsteds were commanding a sizeable share of the Turkish market. However, as a result of the German, Austrian, and French competition and the increasing importance of cotton goods in British exports, the British gradually lost their dominance in woollen imports into Turkey. The falling trend of the imports of British wool textiles continued in the second half of the XIX Century and was still observable in the first years of the XX Century by which time the continental countries had become responsible for 75% of all wool textile imports into Turkey (114).

Having captured a considerable portion of the Turkish market the continental countries gradually became less interested in the composition of their woollen exports to Turkey and concentrated on fashionable semi-luxury fabrics mainly intended for the consumption of better off classes. Consequently, a gap developed between the

(112) PRO, FO 195/1732, Holmwood to White, no.8, 2nd Apr., 1891.

(113) Sanayi, pp.199-200.

(114) From 1869 to 1893 wool textile exports of Britain to Western Europe fell from 142m yards to 57m yards. Exports to the U.S. and South America showed a similar decrease. British woollens and worsteds were replaced by German, Austrian, and French textiles in overseas markets, see, S.M.Saul, Studies in British Overseas Trade 1870-1914, Liverpool, 1960, p.19.

supply and the demand for coarse woollens which were called aba and used by common people and which, in the past, had been supplied by the woollen mills of Bradford and Huddersfield. This opportunity was seized by the Turkish government which opened a new factory and converted an old cotton mill for the production of coarse woollens. Private persons, too, were interested in woollen production and a number of wool mills were opened in a short period of time. Among these entrepreneurs there were five British merchants in Smyrna who established the Ottoman Cloth Co.Ltd. in 1910.

The company issued 16,000 ordinary shares of £5 each and 24,000 founders' shares of 1s each, all of which were sold in less than 20 days (115). British merchants in Smyrna bought 4,400 ordinary and 2,150 founders' shares while the remaining shares were taken up in London, Marseilles, Paris, and Constantinople. Land and buildings to the value of £21,906 were bought and modern machinery worth £24,422 were imported from England and Germany. The company enjoyed a steady demand for its products and secured a contract from the Turkish government for the supply of coarse woollens to the army. In 1912 its fine blankets and other products were so much in demand that an extension was built to the existing factory and new machinery costing £28,364 were bought. In the following year the expansion continued with the purchase of new spindles and power looms for which

(115) PRO, BT 31/19568(110751), Ottoman Cloth Co.Ltd.

the company paid £12,290. When the war broke out the factory was expropriated by the Turkish government (116).

According to the industrial census of 1913 the output of the Ottoman Cloth Co.Ltd. and of the five other companies, which came into existence between 1907 and 1911 to exploit the insufficient supply coarse woollens, amounted to 1,388,304 metres valued at £333,705. In the same year domestic consumption stood at 2,787,759 metres which meant that in six years the six woollen factories had succeeded in winning nearly 50% of the market from foreign imports (117). The exact share of the British mill in total production is not known but a rough estimate would be that it was not less than 20%.

PRODUCTION OF ENGINEERING GOODS

The secular growth of factory production in various branches of industry led to the development iron foundries and engineering works where simple repairs to broken down machinery could be made and makeshift parts could be produced to replace worn out or broken parts until proper spares arrived from Europe. Among 16 such engineering works in the mid-1880's six British establishments were the largest (118).

(116) In 1924 the Ottoman Cloth Co.Ltd. was taken over by the Oriental Carpet Manufacturers Ltd. which bought all founders' and 15,400 of the ordinary shares.

(117) Sanayi, pp.144-145

(118) They were owned M.Rankin, S.Watkins, G.J.Papps, J.Clarke, Rice Brothers and D. Issigonis who was a naturalized British subject.

The oldest established British engineering firm in Smyrna was J.G.Papps & Co. which held a major share in the importation of machinery and spare parts. Its principal partner, J.G.Papps, a mechanical engineer, was an unscrupulous man who, in his dealings with customers, made alterations in f.o.b. and c.i.f. quotations and pocketed the difference without the knowledge of his partners (119). His low business ethics were the source of constant complaints among the budding industrialists of Western Anatolia who, in 1890, decided to pool their resources for the establishment of an ironfoundry near the Aidin Railway terminal. They approached M.Rankin with the proposal that if he was prepared to contribute 50% of the capital they would supply the rest and buy land for the erection of the factory (120). Rankin immediately agreed and the industrialists bought 3,357 sq. metres of land on which a factory was built in the following year (121). D.Issigonis, on the other hand, had secured the support of Greek and Armenian factory owners and a cut throat competition started between the two engineering firms. They both sent their agents into the interior to establish contact with cotton ginning factories and flour and oil mills. The agents were also instructed to lure the

(119) In a law suit in 1912 J.G.Papps admitted having made such alterations for at least 20 years. An example he gave showed that when in 1893 his firm entered into an agreement with the local councils in Nazilli and Aidin to bring drinking water to the towns from nearby springs, he quoted a Liverpool f.o.b. price of £478/15/6 for 1,000 metres of pipe whereas the c.i.f. price was £406. On top of the higher f.o.b. price he charged £52 freight, £2 insurance, and 3% commission. See, PRO, FO 626/25/1073, W.A.Colley Ltd. v Papps, 1912.

(120) PRO, FO 626/21/898, Keyser v Rankin, 1904.

(121) Smyrna Land Registry, Book IV, f.57.

the skilled mechanics who had been trained by the Aidin Railway Company and who had established their own workshops in the interior. Almost all of them accepted the offers made to them and took up jobs in the factories (122).

Both firms started off with relatively simple tools and equipment and their work mainly consisted of repairs and production of replacement parts. The demand for their services and products was so great that in four years they undertook several extensions and the number of workers in each factory increased from 50 to about 200 with a corresponding increase in motive power from 45-50 BHP to 150 BHP (123).

They both claimed to be "the oldest established, the greatest, and the most perfect mechanical establishment in the Orient" (124). To some extent this claim was justified by the long list of their products which included "two-cylinder-triple-expansion internal combustion engines with or without condensers, generators for energy systems, hydraulic pumps and presses of all descriptions, tanks, automatic machinery for olive, flour, and sawing mills, complete factory installations, and special workshops for harvester repairs."

(122) Rougon, op.cit., p.262; Foreign Office Annual Series, no.3921, (Cd.3727), 1907, p.840.

(123) Sanayi, p.207.

(124) Annuaire Oriental, vol.xviii, 1902, pp.1340-1342.

They also had facilities for nail making and type casting for local printing presses. For simple jobs they used scrap metal as raw material but for the manufacture of precision tools and parts, iron and steel imported from Belgium, Germany, and England were used.

Rankin's factory could manufacture steam engines up to 200 BHP while Issigonis' factory was famous for its internal combustion engines (125).

The latter was the general agent and distributor for the German AEG firm and Rankin had secured the exclusive rights to import the high powered steam engines made by R. Proctor & Co. of Lincoln (126).

With the breaking out of war they shared the same fate as other British factories and were expropriated by the Turkish government (127).

The industrial census of 1913 mentions the names of the British engineering works in Smyrna (128) but does not give more information on any of them. However, for each industry it gives a list of machinery and equipment manufactured by Rankin and Issigonis. According to these lists the two British engineering firms in Smyrna produced the following steam engines:

Table 4
Steam Engines Made by British Firms in Smyrna (1891-1913)

Industry	Number	Capacity (BHP)
Flour Mills	5	440
Confectionery	19	250
Other	3	82
TOTAL	27	772

Source: Sanayi, pp.40-127.

For footnotes 125-128 see next page.

In addition to the steam engines listed in Table 4 the two British establishments also supplied 107 various machines for flour mills (129), 11 hydraulic presses for macaroni making, and six machines for horse carriage making. All the machinery and equipment in the two confectionery factories in Smyrna, which produced halvah, Turkish delight, and other sweets, were supplied by Rankin. These machinery were completely automatic and sweets were produced in a hygienic manner without being touched by human hands. The output of these two confectionery factories constituted 93.3% of the total halvah production.

The steam engines manufactured by Rankin and Issigonis was equal to 4.93% of all steam power available in Turkey and 9.64% of all steam power in Western Anatolia. The five steam engines used in flour mills represented 7.6% of all steam power employed in flour mills in Turkey and 17.9% of the steam power in mills in Western Anatolia.

- (125) Sanayi, p.209. In 1912 Rankin won a contract for the design and manufacture of a 38 BHP steam engine for a local factory but lost another contract to Issigonis for making a vacuum chamber for the Ottoman Oil Company. Rankin proposed to make it of cast iron and deliver in a fortnight while Issigonis came out with the offer of wrought iron one to be delivered in a week and guaranteed to stand the required vacuum pressure for as long as desired, see, PRO,FO 626/26/1152, Dracapoli v Ottoman Oil Company Ltd., 1914.
- (126) This company was one of the most successful promoters of British steam engines in foreign countries, see, R.Graham, Britain and the Onset of Modernization in Brazil 1850-1914, Cambridge, 1972, p.133.
- (127) The third largest British engineering firm belonging to Rice Brothers was also expropriated without compensation, Sanayi, p.206.
- (128) Sanayi, pp.205-206.
- (129) The two steam engines made by Rankin for two flour mills in Smyrna could produce 150 BHP each which meant that they were the most powerful engines in all flour mills in Turkey, see, Sanayi, p.40.

CHAPTER VIII

BRITISH INTERESTS IN MINING

Until the beginning of the second half of the XIX Century the mining industry of the Ottoman Empire was governed by the rules of the religious law. Following the promulgation of the Land Law of 1858, which made all mines state property, a new mining regulation came into force in 1861 and foreigners were given the right to participate in mining companies owned by Ottoman nationals. In 1867 foreigners were granted the right to acquire immovable property, except in the holy province of Hedjaz, and, as a sequel, the Mining Regulation of 1869, which was based on the French Mining Law of 1810, put them in a position similar to that of Ottoman subjects in regard mine prospecting and working.

LICENSES AND CONCESSIONS

The minimum requirement for working a mine was the acquisition of a license from the Mining Department which was issued as a temporary authority to enable the discoverer of a mine to carry on his business until the proper concession in the form of an Imperial Edict (Firman) was granted by the Sultan. The license was valid for a comparatively short period of time (three to four years) and could be withdrawn if the application for a concession was turned down. The Mining Department could also issue a similar license to anyone who challenged the original applicant's claim to the mine in which case the conflict was solved in a special court. Although the second applicant did not have the right to stop production in the mine he could always

get sequestration orders prohibiting the licensee from selling the output until the court reached a decision. A concession, on the other hand was effective between 49 and 99 years and gave the concessionnaire the exclusive right to work the mine without any interference from outsiders. The object of a prospective miner was, therefore, to get a concession as soon and with as little publicity as possible. Since all concessions emanated from the Imperial Palace in Constantinople, an applicant, in order to be successful, had to be able to exert some influence through his highly placed acquaintances among the Palace officials, especially the Private Secretary of the Sultan who submitted the proposals for ratification, or, if he was a foreigner, he had to enlist the support of his embassy. A certain amount of bribery was also very useful in securing success (1).

The person who was granted a concession was free to transfer or sell it to somebody else and this opportunity gave rise to the highly profitable business of "concession-hunting" which consisted of obtaining concessions and selling them to parties interested in undertaking business ventures in Turkey. Two Constantinople merchants, for example, were granted a Firman to work the copper and argentiferous lead mines near Trebizond on the Black Sea, which they sold to a British company for £22,000 (2). The Imperial Ottoman Mining

(1) Some aspects of concession-hunting have been described in, C.L. Smith, The Embassy of Sir William White at Constantinople 1886-1891, Oxford, 1957, pp.109-118, and, pp.164-167; also see, B.M. Add. MSS, 39135, Layard Papers, vol.ccv, ff.32-33; E.G.Mears, Modern Turkey New York, 1924, pp.354-383.

(2) PRO, BT 31/1530(4839), Mines Investment Association of Turkey Ltd.

Company had to pay as much as £40,000 to buy a concession for a mine near Ismidt from its recipient (3). The Mediterranean Steam, Coal & Iron Company, on the other hand, paid £80,000 to two Smyrniots for the concession of a coal mine near Smyrna (4) and the Asia Minor Mining Company bought a concession from the German firm of Orienta-lische Bergbau Gessellschaft for the argentiferous lead mines of Si-vas for the sum of £51,600. The German firm was also recognised the right to nominate one of the seven directors of the British company (5). Concession-hunting required a good deal of energy, intrigue, and bri-bery to push matters through the bureaucratic maze of the Porte and it paid very handsome profits and even led to the formation of com-panies whose object was "to acquire any valuable mining or other con-cessions or Imperial Grants solely in view of making the same over to companies in the U.K." (6). The impossibility of carrying on a successful mining project without first obtaining a concession was illustrated by the quick failure of a number of companies which were

- (3) PRO,BT 31/1470(4468), The Imperial Ottoman Mining Co.Ltd.
 (4) PRO,BT 31/9274(68930), The Mediterranean Steam, Coal & Iron Co.Ltd.
 (5) PRO,BT 31/2792(15263), The Asia Minor Mining Co.Ltd. Also see, PRO,FO 78/3305; PRO,BT 31/15225(36191), and, PRO,BT 31/7105(50099). The last two companies were founded following the voluntary liqui-dation of the Asia Minor Mining Company and they had the same name.
 (6) PRO,BT 31/9276(68939), Levant Trading Agency Co.Ltd., Articles of Association; also see, PRO,FO 626/21/888, Levant Trading Agency Co.Ltd. v Atlas Assurance Co., 1904.

formed with the intention of securing concessions through their own means. British companies soon realised that concession-hunting was a real expert's job and that they had to pay for the special talents displayed in getting Firmans and licenses (7). Table 1 below shows the distribution of Firmans granted between 1870 and 1911.

Table 1
Distribution of Mining Concessions Among
Different Nationalities, 1870-1911

<u>Years</u>	<u>Turkish Subjects</u>	<u>Minorities</u>	<u>Foreign Subjects</u>	<u>Total</u>
1870-1881	8	18	25	51
1882-1891	9	7	34	50
1892-1901	14	13	18	45
1902-1911	76	29	32	137
TOTAL	107	67	109	283

Source: A.G.Okçun, "XX.Yuzyıl Başlarında Osmanlı Maden Üretiminde Türk, Azınlık ve Yabancı Payları," (The Shares of Turks, Minorities, and Foreigners in Ottoman Mining at the Beginning of the XX Century), in, Abadan'a Armagan, (Essays in Honour of Y.Abadan), Ankara, 1969, p.809; hereafter referred to as, Maden Üretimi.

(7) PRO,BT 31/9074(67165), Asia Minor Exploration Syndicate Ltd. was founded by six Leeds businessmen who could not obtain a concession which resulted in bankruptcy, London Gazette, 26th Dec., 1902. Similarly, the Ottoman Mining Association Ltd., PRO,BT 31/2801(15337), was not granted a concession and was dissolved, London Gazette, 22nd June, 1894. Also, the Asia Minor Exploring Syndicate Ltd., PRO,BT 31/13194(108982), despite having an Ottoman Prince on its Board, was unsuccessful in acquiring a concession. The concessionaires were not always very good in guessing the real value of their assets. A.Edwards of Smyrna, for example, sold his concession for the establishment of gas works in Smyrna to a British company for only £7,000 half of which was paid in cash and half in shares of the company, see, PRO,BT 31/31742(2751), Ottoman Gas Co.Ltd.

The number of concessions granted to Turkish subjects shows a rapid increase towards the end of the period but the total is still smaller than the number of concessions obtained by foreigners. Furthermore, there are grounds to suspect that some of the Greeks, Armenians, and Jews, who were classified as "minorities" by the official mining statistics on which Okcun's work is based, were in fact foreign nationals because the only criterion used by the Mining Department in determining nationality was the name of the concessionaire (8).

Out of the 53 mining concessions in the Smyrna region 26 belonged to the British, 22 to Turkish subjects and the rest to the French and the minorities who could be naturalized subjects of European countries. The Turks worked only nine deposits in contrast to the British who worked 30. The British also held licenses for working 22 mines in Western Anatolia and six Ottoman licensees had transferred their mining rights to the British bringing the number of mines worked by the British to 58. Table 2 shows the details of the Firmans and licenses held by the British in Western Anatolia in 1902.

(8) Maden Uretimi, p.806, n.13 indicates that the true nationality of the concession holders cannot be determined unequivocally by referring to the classification employed by the Mining Department.

Table 2
Mines Worked by the British in
Western Anatolia in 1902

Mineral	Worked Under Concession	Worked Under License	License Transferred to British	Total
Emery	12	12	4	28
Chrome	11	3	-	14
Manganese	3	-	2	5
Antimony	1	1	-	2
Other	3	6	-	9
TOTAL	30	22	6	58

Source: "Report on the Mining Industries and Forestry in Turkey,"
Accounts & Papers, 1903, vol.lxxvi, pp.257-314; hereafter
referred to as: Report.

In the following years the British obtained seven more concessions for working emery and chrome deposits, and bought the license rights of ten other mines (9).

COAL, MANGANESE, AND ANTIMONY MINING

Western Anatolia was well endowed with metallic minerals such as manganese, antimony, arsenic, and chrome. There were also large emery and lignite deposits near Sokia and Nazilli. The British were most active in emery and chrome mining as well as having a share in the extraction of manganese, antimony, and coal.

(9) Union Micrasiatique de Smyrne, Etude sur le Avenir Economique de l'Asie Mineure, Paris, 1919, pp.16-17

British interests in coal mining were represented by MacAndrews & Forbes, the liquorice paste manufacturers; the London firm of Mediterranean Steam, Coal & Iron Company; and, by D. Manolopoulos who was a naturalized British subject. MacAndrews & Forbes held two 99-year Firmans for working the lignite mines near their liquorice factories in Nazilli and Sokia. The output of these mines were regulated according to the requirements of their steam-powered factories and operations in the mines were suspended when the factories were closed every year at the end of the liquorice root season (10). The Mediterranean Steam, Coal & Iron Company's mines at Keramos, south-west of Smyrna, covered 640 acres and were miles away from the nearest village which made it very difficult for the local manager, Mehmet Sait Bey of Miletus, to recruit workers and persuade them to stay on the barren piece of land where the mines were situated. In order to attract workers and keep them from leaving, the company had bought a herd of 75 cattle to supply the workers with fresh meat, which was a considerable improvement over the local diet, and engaged J. Tantiras & Co. of Smyrna to supply other provisions every week. This arrangement worked successfully until 1902 when the company's monthly payments to Tantiras fell into arrears and the weekly supply

(10) According to Report, p.263, in the early XX Century the yearly output of these mines was 1,000 tons. After World War I their output greatly increased under the management of an American company and they supplied coal to the two Smyrna railway companies, the British owned gasworks in Smyrna, and some local factories, see, Foreign Office, Anatolia, London, 1919, pp.87-88.

of provisions was stopped for two months as a result of which the entire labour force deserted the mines and the company went bankrupt (11). Manolopoulos' lignite mines covered 1,485 acres which had an estimated yearly output of 1,000 tons. They were connected to Plaka, the port of shipment south of Scala Nuova, with a narrow gauge railway of five miles (12).

Manganese extraction in Turkey was almost entirely in the hands of foreigners who, in 1902, were responsible for 92% of all manganese production. This share steadily increased and from 1909 onwards foreigners became the only producers of manganese in Turkey all of which was exported abroad (13).

The first British manganese miner in Western Anatolia was J. Jackson who, in 1882, entered into a partnership with a Turkish concession-holder to work the Hassan Tschaoushlar deposits near Tireh. Jackson supplied the necessary capital and technical knowledge, and the profits were divided equally between the partners. The low metallic content of the ore led to diminished export orders and the mine was closed after three years during which 4,500 tons of manganese had been exported (14). The other British manganese

(11) PRO,FO 626/21/871, Tantiras & Others v Company, 1903; PRO, BT 31/9274(68930), Mediterranean Steam, Coal & Iron Co.Ltd.

(12) Report, p.263

(13) Maden Uretimi, tables xxviii and xxxvi.

(14) The manganese peroxide content of the mines worked by the Anglo-German Syndicate, and MacAndrews & Forbes were, respectively, 52% and 78%. Jackson's mine's metallic content never exceeded 43%, see, Report, p.263, and, PRO,FO 626/18/786, Dalziel v Bliss & Others, 1898.

producers in Western Anatolia were the Anglo-German Mining Syndicate of London, which served the U.S. market, and MacAndrews & Forbes but there is no information about their activities.

If the short-lived partnership between R.Hadkinson and the Exploratie Maatschappij Klein Azie of Amsterdam to work the arsenic mines of Oren was ignored (15) the only branch of mining where the British were as active as they were in emery and chrome mining was antimony extraction. The first discoverer of antimony in Western Anatolia was J.W.Wilkinson who obtained a Firman to work the Djinli Kaia deposits near Odemish covering an area of nearly 20,000 acres. It appears that Wilkinson was a poor man and he was unable to raise the necessary funds to hire workers for two years. In 1889 he borrowed some money from Whittall & Co. and from other Smyrna merchants, and started production on a limited scale (16). In 1890 he sold his mining rights over 2,280 acres of land to the Anglo-Swiss firm of Sturzenegger & Rees who, in turn, transferred half of their rights to the newly formed Smyrna Antimony Company of London (17) which completely took over the Anglo-Swiss concern in 1913.

(15) PRO,FO 626/19/816, Stacchini v Hadkinson, 1900.

(16) PRO,FO 626/19/825, Radaelli v Wilkinson, 1901; PRO,FO 616/26/1144, Boscovich & Others v Wilkinson, 1914.

(17) PRO,FO 626/26/1131, Keyser v Smyrna Antimony Co.Ltd., 1914.

The Smyrna Antimony Company had a capital of £100,000 divided into 10,000 shares. The founders of the company, three Englishmen in England and two in Smyrna, had bought 5,106 shares (18). The ore was excavated in 200 metres long galleries and the management had built three blocks of dormitories and two houses near the mine to accommodate the gallery workers who were very difficult to find. The company was wound up in 1931 and all its assets were sold to another British firm. (19).

EMERY MINING

Anatolian emery occurred in kidney shaped grayish lumps up to 6 inches in diameter embedded in a reddish-brown clay and calcereous crystalline which was the predominant geological formation in Western Anatolia. When ground into a coarse powder emery was used as an abrasive in engineering industries for polishing and grinding metal and other hard substances. Its abrasive properties were reduced in proportion to its magnetite content. Emery was in very high demand in the industrial countries of Europe until the beginning of the XX Century when the increased supply of artificial abrasives such as carborandum and corundum brought prices down and made them available on a larger scale (20).

- (18) PRO, BT 31/21751(131492), Smyrna Antimony Co.Ltd.
(19) Odemish Mining Co.Ltd., Board of Trade Registration No.137285.
(20) Although the carborandum wheel used in precision grinding was employed in some large factories in the early 1890's it was not adopted at a large scale because its production required the use of electric furnaces resulting in high production costs making it more expensive than emery stones.

Until 1844 the Greek island of Naxos in the Aegean Sea was the world's only supplier of emery stones. Early that year the Greek government monopolized all emery mines and increased the export prices. George Hiller, the owner of one of the largest emery importing companies in London, was persuaded by his customers to look for an alternative source of supply of emery in Turkey. In November 1844 Hiller discovered an emery deposit near Gemlikh on the Marmora Sea but he did not consider it suitable for grinding purposes because of the high magnetite content of the ore. He continued his search and in June 1845 and November 1846 found two very good emery mines in the Smyrna region near Kulah and Scala Nuova. He obtained licenses to work these mines but transferred them to the American firm of O.A.Langdon & Co. who, in turn sold them to Ernest F.Abbott of Smyrna (21). With subsequent discoveries of emery Western Anatolia eclipsed the Naxos Island and became the most important supplier of emery in the world.

Almost all emery deposits discovered until 1867 were acquired by E.F.Abbott who paid large sums of money to the discoverers and bought their licenses (22). In 1867 the British merchant house of Paterson & Co. started to compete with Abbott for buying the working rights of emery mines and in some cases outbid the latter and

- (21) PRO,FO 195/846, Hiller Family to Clarendon, 11th Feb., 1869. G.B.Ravndall, Turkey, A Commercial and Industrial Handbook, Washington, D.C., 1926, pp.143-145 argues that emery was first discovered in Turkey in 1850 by J.L.Smith, an American mineralogist.
- (22) PRO,FO 78/2164, Paterson to Elliott, 17th July, 1869.

obtained the right to work the Yenikeui deposits. Abbott, who was determined not to relinquish his monopoly of emery extraction, got sequestration orders prohibiting Paterson from exporting the output of his mines (23). In 1868-1869, for example, Abbott exported more than 5,000 tons of uncrushed emery while Paterson & Co. had 3,000 tons of ore waiting in their depots which could not be shipped by virtue of the court order (24). Paterson soon found it very difficult to compete with Abbott and concentrated his efforts in the field of chrome mining. Abbott, on the other hand, improved his image in the eyes of the Ottoman government by offering to increase the rate of royalty he paid from 5% to 20% to be paid either in cash or, if the government preferred, in kind delivered to the nearest port of shipment. He was thus able to obtain licenses for deposits discovered by other people who could not afford to pay the high rate of royalty offered by him. In this way he secured several concessions and licenses for the deposits situated in government lands in the Smyrna region (25). In 1875 he was granted a concession for an area covering 2,500 acres near Tireh and obtained a valuable contract from the Levant Mining Company of London to supply all its emery imports from Turkey (26).

(23) PRO,FO 78/2164, Memorandum by Paterson & Co., 29th June, 1869.

(24) PRO,FO 78/2164, Paterson & Co. to Clarendon, 26th Nov., 1869.

(25) PRO,FO 195/985, Caseloni to Elliott, 19th Dec., 1873.

(26) PRO,FO 198/40, Abbott to Elliott, 22nd Oct., 1875, and, 29th Jan., 1876.

Meanwhile, other parties interested in emery mining had been organised threatening Abbott's supremacy in the field. With the financial backing of German industrialists a German company had been formed; an Englishman, J. Charnaud, had obtained £30,000 credit from the Ottoman Bank with the intention of spending it on developing some emery deposits he had discovered (27); and, most important of all, the British merchant house of Whittall & Co. had been challenging Abbott's rights on two lucrative mines near Sokia. The conflict between Abbott and Whittall was referred to the British Supreme Consular Court in Constantinople which seemed to favour the case put forward by Abbott. The influential Whittall, sensing that he would lose the case because he had so little to substantiate his claims, requested the support of the British Ambassador in Constantinople. He argued that while the cost of emery was below £10 a ton (c.i.f. Liverpool) the Levant Mining Company, Abbott's largest customer, was selling it at more than £20 per ton because of its monopolistic position. If, he continued, Abbott won the case this would mean that he would have a complete monopoly of emery mining in Turkey which would aggravate the situation in England. This

"is seriously detrimental to the interests of certain trades in Sheffield and elsewhere which will be greatly stimulated if other people were allowed to compete. In accordance with the usual laws of supply and demand competition will bring down the price of emery powder to a commercial basis in contradistinction to the excessive prices which the present virtual monopoly imposes on consumers." (28).

- (27) PRO, FO 195/985, Ottoman Bank to Locock, 22nd Jan., 1874. The deposits discovered by Charnaud covered 138 acres, see, V. Cuinet, La Turquie d'Asie, vol. iii, Paris, 1894, p. 364.
- (28) PRO, FO 198/40, Whittall to Elliott, 28th Sept., 1876.

It seems that the British Ambassador was not interested in Whittall's economic analysis because Abbott won the case (29). By 1902 Abbott had become the largest emery producer in Western Anatolia with 19 mines in different localities, eight of which, covering 38,180 acres, were worked under Firmans and the remaining 11 were worked under license (30). Besides, he had brought the right, but not the license, to work four emery deposits discovered by Ottoman subjects. In 1898 the Ottoman government conferred upon him the Order of the Medjidieh (3rd Class) in recognition "of the services rendered in connection with the discovery and working of emery mines and development of the emery trade" (31).

The high prices charged by Abbott and his associates in London were the cause of widespread complaints among industrialists not only in England, who were completely dependent on supplies from Western Anatolia, but also in the United States. While the British manufacturers of engineering products were busy in persuading Whittall & Co. to renew their complaints against Abbott's monopolistic position as well as encouraging the discovery and working of new emery deposits, the American Emery Trust was financing expeditions near Denizli on the Aidin Railway where, according to a local Greek, there were large deposits of emery. These efforts came to a relatively suc-

(29) PRO, FO 198/40, Fawcett to Jocelyn, 26th March, 1877.

(30) Report, pp. 270-272

(31) PRO, FO 195/2030, Abbott to Cumberbatch, 15th June, 1898.

cessful end when Whittell & Co. obtained a Firman and a license for two deposits near Mughla, and the American Emery Trust discovered a rich vein in the area where explorations were being made under the supervision of E.A.Magnifico, who had supplied the original idea and who, subsequently, became the general manager of a company supplying the U.S. market (32).

The competition between these three largest emery producers did not last long. In 1911 they "decided to combine their interests in order to avoid competition and place the working of the (emery) business on a more economical footing," and formed Abbott's Emery Mines Ltd. with a capital of £25,000 divided into 5,000 shares (33). All the Firmans and licenses belonging to the Whittalls and Magnifico were transferred to the company and Abbott contributed the mining rights of his two less important deposits while retaining the right to work his remaining mines independently. He also bought 1,236 shares of the company and was appointed a director of the board for 24 years (34). The company kept the export prices at their previously high levels until its worldwide monopoly was ruined by the fall in the price of artificial abrasives.

(32) PRO,FO 195/2090, Memorandum by Cumberbatch, 14th Apr., 1900.

(33) PRO,BT 31/20111(116660), Abbott's Emery Mines Ltd.

(34) He gradually increased the number of shares he held to 1851. When he died in 1920 each £5 share was worth £20 in London, see, PRO,FO 626/26/1172, Abbott, Probate, 1920. In 1921 the company went into voluntary liquidation only to be re-established under the same name three months later, see, PRO,BT 31/168274.

One of the most important problems besetting the mining industry in Turkey was the shortage of skilled labour. The open pits where the ore was extracted with pickaxes, were not seriously affected by the insufficiency of skilled workers but in those mines where gallery work was involved there was always a great demand for experienced miners capable of opening and maintaining shafts and tunnels. Gallery work was

"too severe and strenuous for a Turk, who, furthermore, has a rooted objection to leaving his native place and settling down elsewhere. Mine owners have in consequence to rely almost entirely on Christian labour, especially for work underground." (35)

The shortage of skilled miners reached critical dimensions in the early XX Century when large numbers of Greeks and Armenians left Turkey for the U.S. and South America. In 1910 alone 8,000 young Greeks, "the pick of the country," emigrated to the U.S. in order to avoid conscription from which they had been exempt until 1908. In 1901, long before the mass emigration of the minorities who constituted the bulk of the skilled labour force in every branch of economic life, the mine owners were very apprehensive about the future prospects because in addition to the problem of finding the necessary skilled workers at the right time and in sufficient quantity there was also the problem of diverting the skilled Italian and Greek miners, who had been attracted by the high wages for skill-

(35) Anatolia, p.71. Similar observations can also be found in, Ravndall, op.cit. pp.128-129.

ed gallery workers, from going to Abbott's mines. On arrival at Smyrna or at Scala Nuova all foreign workers were told that E.F. Abbott was the richest, if not the only, mine owner in Western Anatolia, and, naturally, they made their way to Abbott's quarries and pits. For example, the Kuluk Mining Syndicate of London, which had obtained a Firman to work a very rich emery deposit at Kozaghadj, suspended all activity when the vein was exhausted and the engineers decided to cut a new gallery but were unable to find a single gallery worker. By contrast, one of Abbott's mines, which was two hundred yards away, was full of foreign miners (36).

Starting in 1902 the shares of the Turkish nationals and the minorities in emery production showed a decline while the share of the British increased. This can be seen in Table 3 below:

Table 3
Emery Production and Exports

Year	Total Production (tons)	Production by British (tons)	Share of British %	Exports from Smyrna
1902	14,826	5,068	34.2	14,153
1903	19,465	6,859	35.2	19,326
1904	16,879	6,734	39.9	12,221
1905	23,012	11,785	51.2	23,498
1906	23,895	12,298	51.5	23,794
1907	26,362	12,836	48.7	26,352
1908	24,475	22,362	91.4	24,466
1909	24,899	21,932	88.1	25,299
1910	27,657	23,805	86.1	27,657
1911	29,813	23,580	79.1	29,430

Source: Maden Uretimi, pp.867-881. The classification of mine owners by the Mining Department refers to all non-Ottomans as foreigners. In the case of emery production the foreigners were all Englishmen with the exception of J.Pittace, the agent of the American Emery Trust.

(36) PRO, FO 626/21/866, *Carmines v Kuluk Mining Syndicate*, 1903; Anatolia, p.91.

Although there is no evidence explaining the sharp increase in the share of the British in 1908, two reasons might have played an important role. Firstly, the emigration of minorities might have affected the Ottoman mine owners more drastically than the British resulting in forced closure of mines or reduced production. Secondly, the discovery of chromium ore in New Caledonia in 1908 caused a fall in world chrome prices which increased the demand for chrome and emery which were complimentary inputs in machine tool manufacturing. It might be that the British, because of their better organisation abroad, were very quick in seizing this opportunity to increase their share of the export market. The fact that the share of the British did not fall below 80% in the following years may be an indication of their success in partially driving the Turkish mine owners out of the market.

The largest importer of Turkish emery was England. In 1898 one third of all Turkish emery exports went to England while the U.S. and Germany absorbed about half of the total (37). In 1899-1901 England increased her share to an average of 62% while the shares of the U.S. and Germany stood at 16.2% and 9.5% respectively. Table 4 shows the destination of emery stones exported from Smyrna.

(37) N.Vernay, and, G.Dambmann, Les Puissances Etrangeres dans le Levant, Paris & Lyon, 1900, p.639.

Table 4
Emery Exports from Smyrna (tons)

Country	<u>1899</u>	<u>1900</u>	<u>1901</u>
U.K.	10,108	10,143	10,250
U.S.A.	3,478	2,008	2,500
Germany	888	2,533	1,150
Other	1,671	2,088	2,400
TOTAL	16,145	16,792	16,300

Source: Report, p.274.

The port of Kulluk, south of Smyrna, also exported about 3,000 tons of emery each year which was equally divided between the U.K., the U.S., and Germany. Emery stones exported from Smyrna were transported on the Aidin Railway. The ore was conveyed to the nearest railway station on pack animals and from there to the Smyrna harbour on the railway. There is no indication of special freight rates for emery stones but the reports of the Aidin Railway company classified them under a separate heading and did not include them under "minerals" which can be taken as evidence of some sort of special treatment. Table 5 shows the amount of emery carried by the Aidin Railway.

Table 5
Emery Carried by the Aidin Railway
(tons)

	1902	1903	1904	1905	1906	1907	1908	1909
Quantity	14,190	16,169	14,469	16,369	21,738	19,437	23,320	21,281
As % of Total Tonnage	4.93	5.17	4.56	4.84	7.34	6.19	7.83	6.93

Source: Rapport et Etats des Comptes, Constantinople, 1903-1910.

In order to accommodate the increasing traffic of emery stones the Aidin Railway Company ordered its workshops to convert 40 old wagons into carriages suitable for emery transportation (38). In the following years the need for additional wagons for emery became more urgent and 30 more wagons were converted (39). At the same time some new sheds were built for the ore awaiting shipment and the company's pier at the Point was extended to harbour the increased number of lighters used in the loading of ships (40).

CHROME MINING

In the early 1850's Turkey was the only chrome exporting country in the world and the north-eastern part of the Smyrna region was Turkey's only chrome producing district. With the development engineering and chemical industries in England, Germany, and the U.S. the demand for Turkish chrome ore increased in the 1870's. From 1875 onwards the British merchants in Smyrna became interested in chrome mining which resulted in an intense competition to obtain Firmans and licenses to work the deposits of chrome in Western Anatolia. Not all of them were successful but those who were granted concessions became the world's greatest chrome producers (41).

(38) Directors' Report, 31st March, 1903.

(39) Directors' Report, 29th March, 1904.

(40) Directors' Report, 26th Sept., 1905, and, 26th March, 1907.

(41) T.B.Rees, for example, struggled for five years to get a concession to work the chrome mines of Ghordes but failed, see, B.M. Add.MS. 39025, Layard Papers, vol.xcv, ff.12-13. His correspondence with the Foreign Office fills a large volume, see, PRO,FO 198/39.

The Whittalls, the unsuccessful contenders in emery business, were again outclassed by their compatriots. In 1877 they entered into an agreement with Harter & Co. of Manchester to supply 5,000 tons of ore every year (42). Under the terms of the contract W. Gilbertson, the British Vice-Consul in Brussa, was to supervise the extraction of chrome at the Whittalls' mines at Guneh and its transportation to the port of Ghemlik on the Marmora coast. The first consignment of 800 tons were ready for shipment in four months and the Whittalls chartered a ship and sent it to Ghemlik for loading. Just before the ore was sent to the port a Turkish subject challenged the validity the Whittalls' license and a local court issued sequestration orders. The Whittalls were confident that the conflict would be solved soon in their favour. With this belief they continued production for six years until no space was left at the mines to store the excavated ore because during these six years no shipment was made in virtue of the court order. Frustrated with the reluctance of the British Ambassador to help them out of the protracted conflict the Whittalls cried in anguish:

"shall we change our nationality or
liquidate our business and leave
this country altogether," (43)

to which the British Charge d'Affaires in Constantinople replied:

(42) PRO,FO 198/40, Whittall to Jocelyn, 5th March, 1877.

(43) PRO,FO 78/3787, Whittall & Co. to Fawcett, 11th Dec., 1884.

"There are signs in the skies that your turn may come again, and that soon; so I hope you will reflect before relinquishing your old and respected connection here." (44).

The Whittalls did not change their nationality but liquidated their chrome business and paid a heavy indemnity to the Manchester firm to which they had promised to send 5,000 tons of ore annually. Their attempt to work the Karaagatch mines near Adalia also ended in failure when the deposit was exhausted after 500 tons of ore was extracted (45).

The other British firm interested in the chrome business was MacAndrews & Forbes, the liquorice paste manufacturers. In 1890 they bought the right to work the Alachegme chrome deposits near Adalia from the concessionnaire, E.Ruchpani (46), and, in 1892 engaged a mining engineer, S.Dalziel, to supervise the working of the mine. For every ton of ore containing at least 55% chromium oxide, MacAndrews & Forbes promised to pay 55s to Dalziel plus 25% of the net profits of the mine. The enterprise was quite successful with an average yearly profit of £9,000 (47).

(44) PRO,FO 78/3787, Fawcett to Whittall & Co., 14th Jan., 1885.

(45) Report, p.265.

(46) PRO,FO 195/1693, Holmwood to White, no.7, 31st March, 1890. According to Report, p.272, Ruchpani did not have any Firmans but only licenses.

(47) PRO,FO 626/18/786, Dalziel v Bliss & Others, 1898; also see, PRO,FO 626/20/839.

The most important British chrome producer in Turkey was John D. Paterson who started business as the agent of the Glasgow firm of J.J. White & Co. which helped him to buy the right to work the Daghardi mines near Kutahia. In return, Paterson was to supply 1,500 tons of ore every year at the low price of £4.17s.6d. per ton, c.i.f. Glasgow (48). White & Co., which was described as the "largest consumer of chrome ore in the world" (49), became the only importer of Turkish chrome in Britain selling it at high prices to the producers of bichromates as well as using it in its own factories. In 1876 White & Co. bought all concessions of the Daghardi mines and transferred them to Paterson (50). Two years later an Italian firm made secret arrangements with the Ottoman officials to get an exclusive concession of all chrome mines in Turkey. The Eglinton Chemical Co. Ltd., a principal customer of White & Co., was informed of the deal by its agents in Constantinople and immediately warned White & Co. of the impending threat. The latter brought pressure on the Ottoman government through the Foreign Office and the British Embassy in Constantinople, and succeeded in obtaining an assurance that no firm or person would be granted a monopoly of chrome extraction (51).

- (48) PRO, FO 78/2164, White to Bonderie, 11th Aug., 1869. Paterson's voluminous correspondence with the Foreign Office about his claims on the Daghardi mines is in: PRO, FO 78/4087, and, 4591; PRO, FO 195/846, and, 985; and, PRO, FO 198/39.
- (49) PRO, FO 78/5313, Overtoun to Sanderson, 24th Aug., 1899.
- (50) PRO, FO 195/1378, Paterson to Dennis, 3rd Jan., 1881.
- (51) All documents about this case are in PRO, FO 195/1181.

The increased consumption of chrome alloys in engineering and metallurgy, and chromium compounds in chemical manufacturing led to the discovery of new deposits in Turkey. In 1879 Paterson discovered a mine near Makri and received a concession to exploit an area of 2,424 acres in return for 5% royalty (52). He employed two British mining engineers and instructed them to search the entire south-west coast of Anatolia for chromium (53). In 1883 his daily chrome exports from Makri alone amounted to 140 tons (54), most of the exported ore being excavated in the Khemikli mines newly discovered by the engineers in his employ (55). In 1890, when he was granted a 10% tax rebate on chrome exports (56), he decided to re-open his mines at Harmandjik near Daghardi (57).

He applied for a concession but the documents he sent were "lost" before reaching the Mining Department which issued a license to a rival Turkish firm. Paterson's legal battle with the Porte lasted eight years during which he continuously petitioned the Foreign Office expressing fear that every new set of documents he sent to the Mining Department was in the danger of being "done away with by certain parties at the Palace" (58). Through the personal intervention of the British Ambassador he was granted the

(52) PRO,FO 78/5313, Overtoun to FO, 18th Feb., 1902.

(53) PRO,FO 626/14/596, Baroutzian v Edwards, 1882-1890.

(54) PRO,FO 626/14/626, White & Co. v Young & Co., 1884.

(55) PRO,FO 195/1732, Paterson to Holmwood, 7th Feb., 1891.

(56) PRO,FO 195/1693, Holmwood to White, no.4, 5th March, 1890.

(57) Paterson discovered these mines in 1878 but did not work them because of the low chromium oxide content of the ore, see, PRO,FO 195/1133.

(58) PRO,FO 195/2030, Paterson to Currie, 4th Feb., 1898.

concession of the Harmandjik mines, and, later, six more concessions for the Makri mines where he invested about £100,000 in machinery and equipment (59). In this way the number of chrome mines worked by Paterson increased to 19 (the total number of chrome mines in operation in Turkey was 24) with an annual output of more than 20,000 tons of ore (60).

In 1899, immediately after Paterson established himself as the largest chrome producer in Turkey, the mining legislation was modified in favour of the Turkish nationals who were exempted from paying any royalty whereas the rate of royalty paid by foreign mine owners was increased from 5% to 20%. An additional disadvantage to the foreigners was that the new rate was retroactive. Paterson was given three months to export his stock of 28,000 tons and warned that at the end of the three month period the new rate would be applied to new production as well as to the remaining stock (61). Despite his protests the Mining Department remained adamant and he was compelled to pay the new rate on the quantity of ore he was unable to export during the three months (62). The second blow came when the Porte unilaterally withdrew the concessions of the Daghardi mines and granted them to a Palace favourite who also demanded

(59) PRO,FO 195/2030, Paterson to Currie, 2nd March, 1898; Paterson to Cumberbatch, 26th July, 1898.

(60) Report, pp.271-272.

(61) PRO,FO 195/2065, Paterson to Cumberbatch, 15th May, 1899.

(62) PRO,FO 195/2065, Paterson to Cumberbatch, 30th Nov., 1899.

the right to work the Harmandjik mines on the pretext that they constituted an integral part of the former (63). Lord Overtoun, the principal partner in White & Co., protested against the illegal nature of the Porte's withdrawal of the concessions and requested the help of the Foreign Office. In the meantime Raghیب Bey, the Palace favourite, had succeeded in depriving Paterson of all means of transportation by threatening camel owners. Thus, Paterson was unable to find a single camel while 14,000 tons of ore waited shipment at Harmandjik. Lord Overtoun, writing on behalf of White & Co., summarized the situation:

"This clique (Raghیب Bey and his associates) are exempt from government royalties and duties which have been recently considerably increased-in consequence of which the ore which we mine for our own consumption costs us a much higher price than they can sell at, and thus the cost of our raw material is raised, and we are unable to sell surplus stock at a profit, as we used to do. The German manufacturers of bichromates, with whom we are at present keenly competing both in the Home and Continental market, are purchasing their ore from this clique, and we are thus seriously handicapped in the market" (64).

The Foreign Office took up the case and in the diplomatic row that followed delivered a Note Verbale to the Porte which was followed

(63) PRO, FO 78/5313, Overtoun to Sanderson, 24th Aug., 1899.
(64) PRO, FO 78/5313, Overtoun to Gosselin, 4th Oct., 1900.

by a memorandum to the Sultan's First Secretary. The British Ambassador, acting under instructions from the Foreign Office, also protested against the "project of the Palace clique to usurp the valuable chrome mines of Harmandjik" (65). In 1902 the mining law was changed giving powers to the Turkish government to take back any mine previously conceded without paying any indemnity (66). Consequently, the Harmandjik concessions belonging to Paterson were withdrawn and given to Raghیب Bey (67). The British Embassy expressed resentment, another Note Verbale was delivered to the Porte, and the British Ambassador held an audience with the Sultan to protest against the violation of British interests but the Turkish government did not give in.

In 1879 Paterson's chrome ore exports amounted to 1,010 tons (68) which increased to 18,000 tons in 1887-1889 (69). Between 1892 and 1896 he exported an average of 18,600 tons every year (70) and maintained this level until 1902 when he lost the Daghardi and Harmandjik mines. Despite the loss of these rich mines Paterson was quick to improve his position by exploiting the Makri mines more efficiently than ever. Thus his share of chrome production, which

(65) PRO, FO 195/2112, Paterson to O'Connor, 21st Nov., 1901; Times, 9th Nov., 1900.

X (66) Board of Trade Journal, vol. xxxviii, 1902, p. 314.

(67) PRO, FO 78/5313, Overtoun to FO, 3rd Feb., 1903.

(68) Guinet, op.cit., vol. iii, p. 364.

(69) F. Rougon, Smyrne: Situation Commerciale et Economique, Paris, 1892, p. 167.

(70) Verney, op.cit., pp. 407-408

had slumped to 22.5% in 1902, increased to nearly 57% in 1907.

Table 6 shows the details of chrome production and exports:

Table 6
Chrome Production and Exports 1902-1911

Year	Total Production (tons)	Production by Paterson (tons)	Paterson's Share (%)	Total Ex- ports (tons)
1902	33,621	7,570	22.5	33,321
1903	30,472	12,014	39.4	28,467
1904	19,191	6,899	35.9	18,997
1905	20,235	2,309	11.4	22,319
1906	32,627	17,449	53.5	32,649
1907	29,123	16,544	56.8	28,860
1908	11,834	3,030	25.6	11,547
1909	17,548	3,046	17.4	17,747
1910	17,028	7,214	42.4	17,028
1911	17,457	8,453	48.4	14,939

Source: Maden Uretimi, tables xxxi-xxxiii

The discovery of chromium in New Caledonia and Canada in 1908 caused a fall in the world price and Turkish chrome production and exports decreased to a very low level. The Harmandjik and Daghardi mines, now under the ownership of Raghیب Bey, were affected badly and many pits in that area were closed because lower export prices and the high cost of transportation to the sea coast had made production unprofitable (71). Makri mines, owned wholly by Paterson, after recovering from the fall in world prices, flourished because of their closeness to the shipping points. After the war all Harmandjik mines stopped production and Makri became the only source of Turkish chrome exports.

(71) Anatolia, p.90; Ravndall, op.cit., p.145

CHAPTER IX

THE DECLINE OF BRITISH TRADE IN WESTERN ANATOLIA

The Levant Company, which had held the monopoly of Anglo-Turkish trade for more than two centuries, was dissolved in 1825. In the same year an abortive attempt to revive it along the principles of "free trade" failed (1) and for a short while trade relations between England and the Ottoman Empire fell into confusion. In some cities, such as Trebizond on the Black Sea where British ships had not been allowed until 1810, re-organisation took time and effort but in Aleppo, Constantinople, and Smyrna, the three principal centres of the company, it was relatively easy and in a few years several companies were formed. In Smyrna, the Whittall, Lee, and Barker families, all factors of the old chartered company, established their own family businesses and soon they were joined by two French families, the Charnauds and the LaFontaines, who were granted British citizenship by Special Act of Parliament (2). Through a series of mergers and intermarriages these five companies were to be the most influential representatives of British interests in Turkey.

In the early 1840's the number of British merchant houses in Smyrna had increased to 35 (3). These companies had organised their activities on a fairly simple line. Imported commodities were sold on six months' credit to Greek, Armenian, and Jewish merchants from whom exportable products were bought and shipped to England. While Armenians were considered more punctilious in their dealings and obligations, Greeks and

- (1) See, for example, Prospectus of the New Levant Free Trading Company, London, 1825.
- (2) M. Bunsen, "The New Levant Company," Journal of the Royal Central Asian Society, vol.iii, pt.1, 1920, pp.24-27. The LaFontaines started business as partners in Hayes & Co., see, PRO,FO 195/177, Brant to Ponsonby, no.8, 20th March, 1840.
- (3) PRO,FO 83/111, "British Merchant Houses Abroad," In the early XX Century the Whittall branches in Turkey numbered 48.

Jews had come to be known as slow and evasive payers with whom the British tried to avoid, as far as possible, entering into any engagements (4). At this stage of their development British merchant houses were merely acting as an intermediary between British manufacturers and Greek, Armenian, and Jewish merchants in Turkey.

It was not because they were uninterested in directly selling their imported wares to the Turkish consumers nor because they were unwilling to purchase the madder root, raw silk, valonia, etc., which they exported, from the producer that kept the British from setting up their own agencies in the interior. The reason was that until 1838 all foreign subjects had been barred from internal trade which was the exclusive domain of monopoly farmers (Yed-i Vahit) who bought from the Porte the right to buy and sell a specific commodity or a group of commodities. Foreigners could indulge in the export-import business but beyond that they were not allowed to venture. The 1838 Treaty of Commerce between the Ottoman Empire and the major European Powers abolished all monopolies and foreign subjects were granted the right to engage in domestic trade. (See, Chapter II).

The lifting of restrictions on foreigners did not immediately precipitate a change in the organisation of trade. Although the mo-

(4) "Correspondence Relative to the Continuance of Monopolies in the Dominions of Turkey," Accounts & Papers, 1840, vol.xliv, pp.589-590. The following comment was made in 1878 by Stanley Lane-Poole, a noted observer of Turkey: "It is not that the Greeks cheat more than other commercial nations; it is merely that they make more money on the same amount of cheating," quoted in, E.G.Mears, Modern Turkey, New York, 1924, pp.48-49.

nopolies had been made illegal their remnants survived for a long time and the British were kept out of internal trade until the 1850's. There is not much evidence of how they extended their activities into the interior but indications are that they, at the beginning, did so by forming partnerships with Greek and Armenian merchants. For this they were chastised by the Times for having associated themselves with people who considered Turkey, in which England had extensive economic and political interests, as "their rightful spoil," and, who promoted, if not created, financial and commercial chaos(5).

ORGANISATION OF TRADE

In the following two decades a more definite pattern emerged in the British merchants' relations with the minorities. The Greek, Armenian, and Jewish merchants found it increasingly difficult to obtain British manufactures to sell in their stores because they were exclusively imported by the British merchant houses in Smyrna. They also found it equally difficult to export the commodities they collected not only because the British had acquired complete control over the export trade with England but also what remained was passing into the hands of other European merchants. Some of the more enterprising members of the Greek and Armenian communities in Smyrna, numerically a very insignificant group of people, emigrated

(5) Times, 5th Jan., 1857. For example, J. Robertson was a partner in Marcopulos & Co. as well as having a £5,000 share in Levantini & Co., see, PRO, FO 626/27/1271, Will of J. Robertson, 1847; also, PRO, FO 195/447, Brant to Redcliffe, no. 70, 10th Oct., 1854.

to France and England where they set up their own businesses and, through the contacts they left in Turkey, succeeded in establishing a flourishing export-import trade (6). Many of the others were reduced to the already swollen ranks of store-keepers and petty merchants eking out a not so glorious existence feeling the crushing dominance of the Franks. The rest became the brokers or agents of European merchant houses (7). For nearly twenty years the British merchants held undivided sway over the foreign trade of Smyrna. Behind them stood like a huge tree with thousands of branches a large organisation of agents, sub-agents, and other agents of lesser importance, an organisation which finally ended in a grocer shop in a village where British goods were sold on British merchants' accounts and to which peasants brought their produce to be forwarded to the British warehouses in Smyrna.

Until the 1870's the British did not realize that by entrusting the vital link in their business, the buying of exportables and the selling of imported goods, to their army of brokers, and by confining themselves to the enjoyment of middle-class Victorian life in the fashionable Frank quarter of Smyrna or in the more salubrious suburbs of Bournabad and Boudja, they in fact had undermined the very foundations of their economic supremacy. The net result of

- (6) For example members of the Rodocanachi, Zarifi, and Hava families established themselves in London, see, B.M. Add.MSS. 39135, Layard Papers, vol.ccv, ff.19-27; PRO,FO 195/1075, Jolly to Elliott, no.21, 17th July, 1875; PRO,FO 626/16/679, Christodoulo, Administration, 1889-1891.
- (7) The files of the British Consular Court in Smyrna abound with contracts between the British and the former Greek merchants committing the latter to buy and sell goods on behalf of the former in return for $\frac{1}{2}\%$ commission, see, for example, PRO,FO 626/17/760, Aperio v Honischer, 1895. On the average a British merchant employed 15 agents. The Whittall family could boast 205 brokers in 1865.

the merchant-broker system of commerce was that while the British became more and more isolated from the country and the people they were doing business with, the brokers, who in the recent past had already accumulated a valuable amount of experience, came into more intimate terms with their customers. The British did not know the language, did not know the customs and traditions, and had no idea of what the latest fashion in Manchester cottons was. The brokers, all familiar figures even in the remotest villages, toured the country, collected the produce, took down orders, and informed their masters in Smyrna of what and when to import. The potential danger in the British merchants' growing dependence on their agents became all too clear in 1870 when a number of Greek and Armenian brokers re-established their trading posts in Smyrna.

The British were alarmed. Suddenly there was talk of "a change in the manner of conducting business," and of "the impossibility of carrying on business with the facility and profit of former years." (8). What was worse was the fact that the insurgents were opening branches in England thereby threatening the British merchants in Smyrna not only with excluding them from internal trade but also with depriving them of their export-import business. The following

(8) PRO, FO 83/395, Cumberbatch to Granville, no.10, 28th Dec., 1872. A summary of similar reports received from other consular agents is printed in, "Commercial Reports," Accounts & Papers, 1874, vol. lvi, pp.1066-1086.

extract from a petition is very illuminating of the anxiety prevailing among the British merchants in Smyrna :

"The increase in trade is certainly striking, the aggregate annual value of merchandise exported and imported having trebled itself within the last 30 years (...) We believe that the advantages derived from steam navigation, free trade in England, and the introduction of two railways which probe the interior of Asia Minor, having this city as their basis of action, have tended much to this development.

The feature in connection with this subject which most interests us as British merchants is this : that in proportion as our trade increases our particular share therein sensibly diminishes. This process is, moreover, working its way with so much regularity that there are those amongst us who predict that before many years pass away the English merchants shall have ceased to exist here unless some radical change takes place.

There are different theories for this decline of business in British hands, yet we cannot help thinking that the danger that exists for the foreigner to venture his capital in the interior (...) is at the bottom of the evil: while rayah houses of business are continually springing up in all the great commercial and industrial centres of Great Britain and prospering there under the protection of just and wise laws impartially administered, here we cannot make similar reprisals on Turkish territory " (9)

In 1878 it was reported that during the past three years the importation of Manchester goods "which used to form part of the business of resident British merchants" had passed entirely into

(9) PRO, FO 83/395, British Merchants to Cumberbatch, 24th Dec., 1872, printed in "British Trade Abroad," Accounts & Papers, 1873, vol. lxxvii, pp. 742-745.

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the hands of Greeks and Armenians (10). This was an exaggeration. Although the British had conceded some of their previous monopoly in trade with England to their rivals, they were still controlling a major share of it. What was unquestionably true, however, was that the 30-odd years old brokerage system had radically changed. It was no longer a master-servant relationship under which the Greek or Armenian broker could be made to pledge unswerving allegiance to the British merchant and to promise not to handle anything except the goods required for the continuance of his employer's business. The brokers were now free to open their shops in which they ran an independent business while continuing to collect and forward exportable crops to the British merchants in Smyrna (11).

In the following years one of the main preoccupations of the British was the endeavour to maintain a balance between the number of brokers essential to an uninterrupted flow of commodities to and from Smyrna, and the amount of wealth acquired by the brokers during the performance of their duties. If a broker became rich enough to threaten to establish contact with the rayah houses in England

(10) PRO, FO 78/3070, Reade to Layard, no.38, 22nd Oct., 1878.

(11) Allusions to the changing nature of the merchant-broker relationship can be found in, L.Dominian, The Frontiers of Language and Nationality in Europe, New York & London, 1917, pp.101-102; Foreign Office, Anatolia, London, 1919, p.276. In Annuaire Oriental Greek, Armenian, and Jewish names appear twice: once under "merchant" and once under "broker". Thus, in 1893 in Aidin there were 34 merchants who were also brokers, in Tireh 12, in Nazilli 9, in Odemish 5, and in Sokia there were 4.

with the intention of opening a merchant house in Smyrna, he was hastily eliminated from the scene. The methods of elimination differed in each case depending on the financial strength and the social status of the broker. MacAndrews & Forbes, for example, were known to have financially destroyed two of their brokers, Efthimius Brussalli and Jacques Armas, who had shown signs of breaking away with the British firm, by alleging that the agents had defrauded them of £400 worth of beans (12). In the same vein, Paterson & Co. sued their chief broker, A. Marudian, and obtained a conviction for £55,000. Marudian was unable to pay this huge sum and he was sent to jail (13). The destruction of potentially dangerous Greeks and Armenians continued with the successful prosecution and the resulting financial ruin of the brokers of the British firm of Haycroft, Pethwick & Co. (14) and culminated in the 'accidental' death of G.P. Camillieri, the broker of C.H. Jones & Co. who had accumulated considerable amounts of money and who was known to have entertained thoughts of opening a major export-import business in Smyrna. In 1886 he bought 17 warehouses and made arrangements for the importation of colonial goods and the exportation of valonia and raisins. He was immediately summoned to the British Consular Court to answer to four different charges brought by the British merchants. From every case Camillieri

(12) PRO, FO 195/1317, Chumarian to Dennis, 3rd March, 1880.

(13) PRO, FO 195/1379, Dennis to Goschen, no.9, 19th Feb., 1881.

(14) PRO, FO 78/3644, Fry to Fitzmaurice, 11th March, 1884.

emerged victorious (15). His "accidental" death afterwards resulted in the breaking up of his estate between his heirs who seemed to have no immediate interest in pursuing his plans (16).

Although the unsavoury details of Camillieri's death were not made public the Greek community held the British responsible for his death; riots started and there were attacks on British schools, churches, and commercial establishments. More than 70 Greeks were arrested and the disturbance was suppressed (17). The British were convinced that they had to find a more civilized way of dealing with their rivals. In 1888 they formed the British Chamber of Commerce which helped them to keep their brokers from gaining ground in the trade with England as well as affording them protection against local authorities (18). As far as the preservation of their dominant position in Smyrna's foreign trade was concerned the formation of

{15} PRO,FO 626/14/637 and 640; PRO,FO 626/15/642 and 644.

{16} PRO,FO 626/15/647, Camillieri, Administration, 1886-1887. Seven years after his father's death P. Camillieri opened three large shops in Smyrna, selling imported manufactures, see, PRO,FO 626/18/790, *Theuma v Camillieri*, 1898.

(17) PRO,FO 195/1586, Dennis to White, no.11, 30th March, 1887. Camillieri was stabbed to death near one of his warehouses. His murderers were not found and people were led to believe that he was killed by drunken sailors.

(18) PRO,FO 195/1620, Barnham to White, no.46, 21st July, 1886. British firms doing business with Smyrna were warned through the Board of Trade to deal with only those merchants who were members of the British Chamber of Commerce, see, *Board of Trade Journal*, vol.x, 1891, pp.683-684; vol.xix, 1895, pp.67-68. By 1909 its membership had risen to more than 200 and many native merchants who thought that "admittance is somewhat equivalent to a certificate of good character" applied for membership, see, "Trade of Smyrna," *Accounts & Papers*, 1910, vol.ciii, p.336. In 1911 the number of members reached 295, see, *Foreign Office Annual Series, no.4809, (Cd.5465)*, 1911, p.29.

the British Chamber of Commerce was an improvement but the fact remained that they were still dependent on brokers and agents unless they were prepared to go into the depths of Asia Minor and open branches there.

An example of this dependence was seen in 1897 when hostilities started between Greece and Turkey. The Porte ordered the deportation of all Hellenic subjects. The expulsion of Greek brokers would have a disastrous effect on British interests in Western Anatolia. The British Consul requested the dispatch of two British men-of-war to Smyrna to be stationed there (19). These war ships, he reasoned, would act as a deterrent on the Governor of Aidin and delay his execution of the Porte's order. However, the desired effect was not created and deportations started. The Consul sought and obtained permission from the Embassy to register the threatened Greeks as British subjects. The British Consulate, working round the clock, issued registration certificates and passports for 2,626 Greeks who would have been otherwise deported. The Consul regretted the fact that there was not enough time to issue passports to another 1,530 brokers who were duly expelled (20).

- (19) PRO,FO 195/1990, Cumberbatch to Currie, cypher telegram, 22nd Apr., 1897.
- (20) PRO,FO 195/1990, Cumberbatch to Currie, no.41, 26th Apr., 1897; no.55, 17th May, 1897. Following the conclusion of peace all deportees returned to Smyrna. Turkish merchants, too, were dependent on Greek brokers. Y.K.Karaosmanoglu, diplomat and a member of the Karaosmanoglu dynasty, tells the story of how the Turkish merchants of Smyrna reacted with dejection to the liberation of the city by the Turkish forces in 1922. All Greek brokers had fled to Greece and without them the mercantile community was helpless, see, D.Avcioğlu, Turkiye'nin Duzeni, (The Order of Turkey), Ankara, 1968, p.90.

The possibility of a recurrence of an Anti-Hellenic movement led the British to examine their position more carefully. Four of the largest merchant houses decided to open agencies, staffed by Englishmen, "to deal directly with the producer and dispense with the local agents." The experiment proved to be a great failure. The local people refused to have anything to do with the "strangers." The British withdrew immediately and reverted to the old system of conducting their business through brokers (21).

BRITISH RELIEF WORK IN WESTERN ANATOLIA

Unsuccessful and perhaps unwilling as they were in directly confronting the local population in the daily course of business, the British were fully aware of the fact that exports and imports ultimately depended on the preservation and the growth of the productive capacity and the purchasing power of the natives. Anything that tended to curtail the flow of commodities to and from the agricultural population was inimical to British interests (22). But in a country where the State thrived on the forceful exaction of high taxes from the peasantry there was not much to do, even for the powerful British, to affect a change either in the method of levying or in the method of collecting taxes. So the British concentrated their efforts on handing out relief in times of want thus trying to alleviate the difficulties of the local population.

(21) "Trade and Commerce of Smyrna," Accounts & Papers, 1902, vol. cx, pp. 707-724.

(22) "British trade within this district must therefore depend upon the prosperity of the people and the interest the government takes therein." PRO, FO 83/395, Cumberbatch to Granville, no. 10, 28th Dec., 1872.

In 1854 when the rural population around Adalia was threatened by famine J. Purdie, merchant and the British vice-consul in Adalia, distributed 10,000 qtrs of wheat in the villages (23). Relief work at a larger scale was also organised in 1881 when the countryside was destroyed by an earthquake and 5,058 people were killed (24). The effects of the famine of 1890, which was caused by locusts which "filled the atmosphere in never-ending clouds, throwing a glittering haze over the landscape, and blotting out all objects save those in the immediate foreground," were alleviated by the supply of large quantities of wheat (25). But even the greatest relief campaign so far organised by the British was unable to restore the disruption in trade caused by a cholera epidemic in 1893 when in Smyrna alone more than a thousand people died in less than three months and 60,000 people fled the city bringing business to a complete standstill at the busiest time of the year (26). Six years later Western Anatolia was again hit by a major earthquake. Peasants who had already been the victims of a very poor harvest fell into absolute poverty and destitution. A relief committee was formed under the chairmanship of a Whittall which distributed thousands of pounds worth of aid (27). In 1900, however, the British merchants threw Smyrna into very great danger. An unknown disease was ravaging

- (23) PRO,FO 195/447, Purdie to Brant, 8th Sept., 1855.
 (24) PRO,FO 195/1378, Dennis to Goschen, telegram, 5th Apr., 1881.
 (25) PRO,FO 195/1693, Holmwood to White, no.15, 5th July, 1890.
 (26) PRO,FO 195/1908, Elech to Roseberry, no.33, 29th Aug., 1893; also M.Tsakyroglou, L'Epidemie Cholérique de Smyrne en 1893, Smyrna, 1894
 (27) PRO,FO 195/2065, Whittall to Cumberbatch, 17th Oct., 1899.

the countryside and Smyrna was cordoned off with quarantine stations where everything entering the city was placed under observation for ten days. All British merchants agreed that if the quarantine was lifted "a great and valuable service will be rendered to British trade." For ten days they did their best to persuade the Governor General to remove the sanitary cordon "thus relieving the vilayet (the province) of the serious obstruction to trade caused by the interruption of communications between Smyrna and the producing markets" (28). Luckily the epidemic had already died down and only a few deaths were recorded in Smyrna.

Perhaps the most striking example of the British merchants' concern in the well-being of the natives—and their total disinterest in the life of one of their compatriots—was the kidnapping of Captain J. Marriott of Norfolk Regiment. The kidnapers demanded a ransom of TL15,000. The British refused to pay a single penny and although the brigands declared that they would release their captive upon payment of TL1,200 plus four guns and a pocket watch the British remained dispassionate. The gang killed Captain Marriott and started raiding villages near Sokia. It was the end of the harvest season and the peasants were just about to make their yearly purchases of British manufactures. This time the British acted swiftly

(28) PRO, FO 195/2090, Cumberbatch to O'Connor, no.41, 15th June, 1900.

and stopped the raids by convincing the brigands to come out and surrender in return for a pardon and employment in the rural police force (29).

PROBLEMS OF EXPORT-IMPORT BUSINESS

One of the essential conditions of carrying on a successful business in Turkey was the existence of an efficient consular establishment which would see to it that the British interests were not violated, and laws and treaties were properly observed. The British Consulate in Smyrna was well staffed. In 1859 it was strengthened with a legal secretary, a shipping clerk, and four ordinary clerks (30). Two years later it was granted the same status as the Constantinople Consulate with the creation of two departments, judicial and commercial, and with the appointment of a legal vice consul (31). The Consuls were not paid much—about £85 a year (32) but they usually made some extra money by doing part-time jobs. C. Blunt, for example, was engaged in trade and Cumberbatch was Lloyd's agent (33). All British Consuls in Smyrna were energetic and hard-working people and they were frequently praised by the Foreign Office for their efforts to promote British interests (34).

- (29) PRO,FO 195/1946, Cumberbatch to Currie, no.105, 31st Oct., 1896. In 1880 when an Albanian gang terrorized Sokia and Miletus the British Ambassador, upon the request of the British community in Smyrna, sent two gun-boats to the Bay of Scala Nuova, see, PRO,FO 195/1307, Dennis to Goschen, no.32, 4th June, 1880.
- (30) PRO,FO 78/1447, Blunt to Malmesbury, no.19, 21st March, 1859.
- (31) PRO,FO 78/1606, Russell to Blunt, no.7, 18th May, 1861; PRO,FO 195/687 Blunt to Bulwer, no.21, 15th June, 1861. In the early 1880's Smyrna was made a Consulate General.
- (32) British merchants frequently wrote to the Foreign Office "praying that the pay of Her Majesty's Consul be increased as befits his position," see, for example, PRO,FO 195/610, British Merchants to Russell, 16th Nov., 1860.
- (33) PRO,FO 626/6/320(11), Blunt, Estate, 1864-1867; PRO,FO 78/2196 Cumberbatch to Granville, no.62, 3rd Nov., 1871; PRO,FO 195/1009, Cumberbatch to Elliott, no.1, 4th Jan., 1872.

(continued)

Through their initiative the British won the right to appoint two of their colleagues as members of the Commercial Court (35) and the right to be represented in various ad-hoc committees set up by the local authorities (36). But there were instances when the Consulate was helpless, as in the case of a conflict between the Customs House and the British merchants. The Customs House in Smyrna was directed from the Customs Department (Kalem-i Rusumat) in Constantinople and as such did not come under the authority of the Governor General with whom the British Consul could otherwise remonstrate and obtain satisfaction. Instead, he had to write to the British Embassy which would send a note of protest to the Porte which would order the Customs Department to instruct the Director of Customs in Smyrna to rectify the error. All these took time and more often than not the British merchants preferred to keep silent about the arbitrary practises of customs officials, confining their complaints only to those issues which seriously injured their interests.

(34) The only possible exception to this rule was G.Dennis who was nearly 70 years' old when he became the British Consul in Smyrna. His scholarly interests prevented him from attending his duties as meticulously as other Consuls did. He was the author of a book which is still considered as the best and the most accurate account of Etruscan antiquities, for which he received an honorary doctorate from Oxford, see, D.E.Rhodes, Dennis of Etruria, London, 1973.

(35) PRO,FO 195/389, Brant to Redcliffe, no.17, 18th March, 1852.

(36) These committees investigated such matters as the revaluation of real property, methods of levying municipal taxes, etc., all of which closely interested the British, see, PRO,FO 195/910, Cumberbatch to Elliott, no.48, 18th June, 1866, and, PRO,FO 195/1732, Holmwood to White, no.89, 19th Nov., 1891. The British were not very pleased with the working of the Commercial Court: "...Only in cases where the grievance complained of by foreigners is too palpable that a favourable sentence need be looked for." "British Trade Abroad," Accounts & Papers, 1873, vol.lxvii, pp.742-774.

One such issue was the method of levying the export-import duties. In weighing goods the customs authorities in Smyrna used a weight which was on the average 5% lighter than the weights used in other ports. They demanded immediate payment of customs dues in cash while in other ports merchants were allowed from four to six months to pay. Furthermore, if the payment was made in foreign money the pound was valued at 105 piasters which was not only 5% lower than the market rate of exchange but also 32 piasters less than the rate used at the Constantinople customs (37). Another source of conflict was the customs officials' unauthorized modifications in the definition of merchandise contained in the tariffs. In 1882, for example, they arbitrarily decided that all imported iron bars wider than $3\frac{1}{2}$ inches would be considered as "sheet iron" and subject to 67% more duty (38). Two years later they, again arbitrarily, classified tobacco exports as coming under a special heading in the tariff and demanded from tobacco exporters a number of certificates showing that the exported tobacco arrived and landed at the port of destination, that it paid the customs duty at that port, and that it was not intended for re-exportation. Until these certificates arrived from the port of destination the exporter was required to deposit £5,000 as guarantee (39). When faced with such glaring abuses of authority the British merchants

- (37) PRO,FO 195/610, Blunt to Mustafa Pasha, 24th March, 1858; PRO,FO 78/1391, British Merchants to Blunt, 29th March, 1858; PRO,FO 195/1488, Dennis to Dufferin, no.32, 14th June, 1884.
- (38) PRO,FO 78/3410, Manchester Chamber of Commerce to Granville, 8th May, 1882; Iron Trade Association to Granville, 2nd Aug., 1882.
- (39) PRO,FO 195/1488, Dennis to Wyndham, no.3, 6th Feb., 1884.

had no option but to request the help of the British Embassy. In 1885 they petitioned the British Ambassador twice, complaining about the "harassing attempts to interfere with British trade" and about the "ignorant and capricious valuation of goods" by the Smyrna Customs House (40).

In 1895 they were complaining about the newly instituted method of weighing coal imports (41) and 1897 was a particularly troublesome year for the British mercantile community. Until that year British vessels carrying inward cargoes were unloaded without waiting for the ships' manifests, which were drawn up and sent by post after the ship left the port of embarkation. When the manifest arrived the cargo was valued against the contents of the manifest and the packages which were not included in it were subjected to a slightly higher rate of duty. In 1897, however, the Smyrna Customs House refused to give permission to unload the ships sailing in without a manifest. Long delays took place and the British merchants made formal complaints against the new measure which were counteracted by the Customs House by subjecting packages not on the manifest to double rates of duty and by confiscating the entire contents of the ship if an article on the manifest was not found among the cargo. British merchants protested more vehemently and the Customs

- (40) PRO,FO 78/3787, 'Petition by the Merchants of Smyrna,' 2nd Jan., 1885; PRO,FO 195/1518, Memorandum to Dennis, 14th March, 1885. The latter was signed by 133 merchants.
- (41) PRO,FO 195/1899, Coal Merchants to Holmwood, 20th March, 1895; 26th Apr., 1895.

House, in turn, prohibited the unloading of ships at night which was the only way for the British to make up the time lost by the first measure introduced by the customs officials. A new wave of protests and covert threats by the British was met with more obnoxious perpetrations: the Customs House ordered that all packages and crates intended for importation or exportation should be weighed separately and three men were appointed to do this seemingly impossible job. (Until then a random sample of 50 or so packages were weighed and an average weight was established for the rest of the consignment). In two months the Customs House was overflowing with parcels; no room had been left for the cargoes unloaded from ships and a huge pile of boxes, chests, baskets, and sacks had accumulated outside. After lengthy negotiations the impractical method of individual weighing was abandoned but other measures remained in force for three more weeks (42).

Through experience the British had learnt not to raise their voice against petty infractions (43). They had found that bribery in the form of occasional gifts to minor officials and money to higher ranking customs men was a useful tool to overcome their obstinacy in not implementing the customs regulations properly. However,

(42) PRO,FO 195/1990, Memorandum by Cumberbatch, 27th Feb., and, 1st March, 1897; Whittall & Co. to Cumberbatch, 8th July, 1897; Cumberbatch to Currie, no.71, 9th July, 1897; PRO,FO 195/2030, Cumberbatch to Currie, no.5, 4th Feb., 1899.

(43) In one particular instance the British succeeded in getting a corrupt customs officer removed from his post only to see him appointed as the president of the Commercial Court, "British Trade Abroad," Accounts & Papers, 1873, vol.lxvii, p.742.

as the volume of trade grew the amount of bribes that had to be paid grew, too. In 1878 the Marquess of Salisbury, the Foreign Secretary, warned Sir Austen H. Layard, the British Ambassador:

"Her Majesty's Government has good reason to believe that the cost of importations into Turkey is now greatly increased by the necessity of giving bribes" (44).

In the following year the Liverpool Chamber of Commerce drew attention to the fact that bribery in Smyrna had assumed so large a dimension that it was threatening the future development of Anglo-Turkish trade (45). Nothing effective was done to curb bribery until ten years later when the British merchants in Smyrna, who were the chief victims of bribery but who had adopted an acquiescent attitude, started a vociferous campaign against the Customs House. In a confidential memorandum to the British Consul they said that they were quite prepared to give bribes if the customs men turned a blind eye to unlawful transactions but they would not pay anything to buy their legal rights. The solution, they suggested, lay with Armenak Effendi, the Chief Political Secretary of the Governor General. He was known to be "very helpful to foreign interests" and had received decorations for his services from eight European governments. The nature of Armenak Effendi's post-he was responsible for the relations between the local government and the foreign subjects in Smyrna-had

(44) PRO, FO 195/1181, Salisbury to Layard, no.14, 26th Aug., 1878.

(45) Liverpool Chamber of Commerce, Trade with Turkey, Liverpool, 1879, p.5.

made him a very influential person and he was always able to persuade unyielding officials to facilitate customs formalities. If the British government conferred a medal upon him he would have been won over to the British (46). We do not know if Armenak Effen-di received a medal from the British government but the British never again complained about bribery.

The last and the most important problem connected with customs dues was the discrepancy between the secular fall in the price of British exports to Turkey and the valuation of these goods at Turkish customs (47). Until 1914 out of the 223 articles enumerated in the 1861 Anglo-Turkish Commercial Treaty only 43 were valued at current prices while the rest was charged 8% duty on 1861 prices. Imports from other European countries were treated better. For example, 41% of the French and 53% of the Belgian goods were valued at current prices. The Germans had obtained an undisputable advantage over their rivals: all of the 151 articles they exported to Turkey paid duty on an ad valorem basis. The British Foreign Secretary instructed his ambassador in Constantinople to start negotiations for a new tariff (48) pointing out that:

"the present commercial treaty between
Great Britain and Turkey is not so ad-

- (46) PRO,FO 195/1693, Whittall & Co., Paterson & Co., and MacAndrews & Forbes to Holmwood, 27th Sept., 1890.
- (47) The Sauerbeck general price index shows a fall from 148 in 1873 to 84 in 1886. Rostow's export price index fell from 114.6 in 1868 to 77.2 in 1886; W.W.Rostow, British Economy of the Nineteenth Century, Oxford, 1968, p.102.
- (48) The negotiations to re-establish the 1861 tariff on a completely ad valorem basis were started in 1882 but no agreement was reached until 1914. The Germans, on the other hand, renewed their treaty with Turkey in 1891 which seriously handicapped the British in the Turkish market; Eldem, Tetkik, pp.250-253.

vantageous in its stipulations or so favourable to trade as existing commercial treaties between Turkey and other Powers" (49).

Indeed, while almost half of the French and Belgian, and all of the German goods were enjoying steadily decreasing import duties, British manufactures were paying increasingly higher rates. British textiles and metallurgical products were among those most adversely affected by the fall in their prices: tin plates paid 18.5% duty, tin bars paid 15.2%, copper sheets 13.9%, iron hoops 10%, pig iron 9.8%, and iron sheets paid 9.5%. Coloured cotton twist paid 12.1%, muslins 16.6%, oil cloth 23.4%, and low quality linen paid as much as 34.8% duty. Among other British exports to Turkey which paid higher duties because of a fall in their prices were processed cochineal (18.5% duty), and tea which paid 25.6% duty (50). These rates which represent the average of 1878-1879 became more burdensome as the fall in the prices of British manufactures continued. Textiles and other manufactured articles, which were subject to valuation at 1861 prices, constituted about 75% of the British exports to Turkey. This fact that the majority of British exports to Turkey were not treated on par with the German exports was one of the reasons responsible for the decline of British trade in Turkey.

- (49) PRO,FO 195/1181, Salisbury to Layard, no.12, 20th Aug., 1878.
 (50) PRO,FO 195/1075, British Merchants to Elliott, 18th Nov., 1875;
 PRO,FO 78/3070, Reade to Layard, no.38, 22nd Oct., 1878; Baring to Layard, no.5, 27th Apr., 1879.

THE SMYRNA QUAYS

Smyrna has a natural deep harbour which is well protected from easterly and northerly winds. Merchant ships anchored at a distance from the shore and goods were loaded and unloaded by means of lighters. Lighterage charges were high (51) and the small, unstable lighters frequently capsized which resulted in loss of life and cargo. Besides, the slow movement of lighters, which were propelled by sails or in the absence of suitable winds by oars, meant that large steam vessels had to wait for a long time on anchor which added to costs in terms of time and anchorage fees. When the first section of the Smyrna-Aidin Railway opened in 1866 more goods arrived in Smyrna from the interior and the inadequacy of loading by lighters became more apparent. The Turkish government announced its intention to grant a concession for the building of a quay at the Smyrna harbour (52). Two Englishmen, John Charnaud and Alfred Bunker, formed a company and obtained the concession in 1867 which they sold to the French firm of Dussaud Brothers of Marseilles two years later (53). The French took a long time to finish the works and the completed quay was opened in 1877. It cost £400,000 and was 3,285 metres long, 18 metres wide, and attached at its southern end to a 2-kilometre long breakwater (54).

(51) PRO,FO 195/910, Guarracino to Elliott, 7th Jan., 1868.

(52) PRO,FO 195/910, Ali Pasha to Lyons, no.16611/17, 17th May, 1866.

(53) "Commercial Reports," Accounts & Papers, 1869, vol.lxv, pp.353-359.

(54) "Commercial Reports," Accounts & Papers, 1877, vol.lxxxiii, pp. 1039-1047.

The quay dues were supposed to be determined by a committee consisting of the representatives of Smyrna merchants, the Local Government, and the Quay Company but the latter, using its influence on the highly placed Porte officials, had succeeded in making up its own tariff (55). Although the loading and unloading of ships on the quay was four to five times faster than by lighters, the excessively high rates charged by the company were a serious hindrance to trade (56). In less than one year after its completion the Smyrna quays became a source of trouble for the British not only because of the high dues but also because of the Quay Company's preferential treatment of French and Austrian ships which were subject to less than half the rates applied to other nations' ships. In a private letter to the British Ambassador in Constantinople the British Consul in Smyrna said that it was both politically and commercially important that the Quay Company should be taken over by the British. He also added that there was already a group of British merchants willing to buy the French company but they would like the British Government to guarantee a profit of at least 3% on capital (57). The British government, however, was not in the habit of guaranteeing the profits of private persons abroad and the project did not materialize (58).

- (55) Sadik Pasha, the Grand Vizier, was "on the most intimate terms with the Quay Company," B.M. Add.MSS, 39020, Layard Papers, vol.xc, f.345.
- (56) Complaints by shipping companies and Smyrna merchants about the high quay dues are in: PRO,FO 424/28, PRO,FO 195/846, PRO,FO 78/3498,3499, and 3500, PRO,FO 198/40.
- (57) B.M.Add.MSS, 39021, Layard Papers, vol.xci, f.240.
- (58) The British government turned down similar applications for a guarantee on several railway projects in Turkey, see, for example, B.M. Add.MSS, 39023, Layard Papers, vol.xciii, ff.44-45.

The concession for the quay had been granted on the condition that the Quay Company should set aside a "free space" of 76 metres along the seafront near the Customs House and all merchandise passing over it should be exempt from quay dues. The Smyrna merchants exploited this advantage as fully as possible. Loading and unloading from the free-space was put on a rota basis and every merchant was given a certain time to get his merchandise over that part of the quay. The result was that while there was comparatively little activity on the rest of the quay the free-space was always full to the brink. Merchants who had used their allotted time and who were waiting for their next turn to come, and others whose merchandise were perishable and therefore had to be loaded as soon as possible had no option but to use the facilities of the Quay Company and pay the high rates charged by the company. Even so, the rota system was working so efficiently and the merchants using the free-space were completing the discharge or loading of goods so quickly that the 76-metre long free-space was doing twice as much business as the rest of the quay (59). The Quay Company, however, was quick to get the clause providing for the free-space removed from the concession and a week later increased the quay dues to twice their previous level (60). For three years the British grudgingly carried the bur-

(59) In 1878 the customs revenue on the merchandise passing over the free-space was exactly twice the amount of customs duties collected from the rest of the quay; PRO,FO 198/43, "Revenue des cent archines," 1878.

(60) PRO,FO 78/3070, Reade to Layard, no.38, 22nd Oct., 1878; Trade with Turkey, p.6.

den of high dues but when in 1881 the Quay Company announced a new increase in rates and accorded additional privileges to the Austrian and French shipping companies, they decided to put an end to this matter (61). A company was formed with a capital of £600,000 divided into 60,000 shares. Two Smyrna merchants, A. Edwards and C.W. Wallis, were the largest shareholders (62). A week later negotiations were started between the British company and Dussaud Brothers. The property of the French company was valued at £782,808 and an agreement was reached whereby the British would pay £520,000 in cash and the French would have the right to have the annual revenue, which amounted to £22,000, of the warehouses, hotels, shops, etc., on the quay (63). While the necessary formalities were being completed news came from Constantinople that the Ottoman government had intervened in the matter and ordered the reduction of the quay dues to their 1877 level as well as abolishing all the privileges given to the French and the Austrian shipping companies, upon which the British company withdrew its offer (64).

- (61) PRO, FO 198/43, Memorandum by the Manchester Chamber of Commerce, 27th Feb., 1882. Compared with their 1877 level the quay rates were four times higher in 1881, "Correspondence Respecting the Smyrna Quay Dues," Accounts & Papers, 1882, vol. lxxii, pp. 1-227. The British Consul complained that as a result of the increase in quay dues some articles of export ceased to come to Smyrna. For example, the value of Syrian cotton which used to be ginned and exported from Smyrna fell from £423,754 in 1877 to £116,119 in 1880. Similarly, between 1879 and 1881 valonia exports from Smyrna decreased by 45% from £957,133 to £528,334. British merchants found it cheaper, although more time consuming, to ship valonia from Scala Nuova; "Commercial Reports," Accounts & Papers, 1883, vol. lxxiii, pp. 1037-1091.
- (62) PRO, BF 31/2981(16769), Smyrna Quays Co. Ltd.
- (63) St. James's Gazette, 13th May, 1882.
- (64) PRO, FO 198/44, Trotter to Wyndham, no. 12a, 13th July, 1883. The Smyrna Quays Co. Ltd., was dissolved in 1889, London Gazette, 11th Oct., 1889.

Deprived of a large source of revenue the Quay Company lost interest in improving the facilities on the quay. Although the British repeatedly asked the company to erect a crane in return for a 10% rise in the rates the French refused. The British obtained permission from the Governor General and erected the crane at their own expense (65). Similarly, they applied to the Quay Company for an extension to be built at the southern end of the quay and accepted to contribute half of the cost plus an increase in the rates. The French again refused and the British started to collect money to build the extension themselves. When they got the money ready the Governor General refused to give permission on the pretext that the extension would disturb the city's sewage system (66).

In order to force the British into accepting a higher schedule of rates the Quay Company suspended part of its lighterage services. Although the use of lighters in loading and unloading ships was not as important as it had been before the construction of the docks, some ships carrying part cargoes preferred to anchor outside the harbour—which also had the advantage of avoiding many other dues levied by the Harbours Administration—and thus were entirely dependent on lighters. The answer of the British to the sus-

(65) PRO,FO 195/1693, Holmwood to White, no.12, 26th May, 1890. Seeing the reluctance of Dussaud Brothers to keep the quays in good working order, the Ottoman government agreed to the transfer of the concession to another French firm, Granet & Co., which promised to make improvements and build an extension. However, the company was unable to take off because of insufficient capital, Board of Trade Journal, vol.x, 1891, p.54.

(66) PRO,FO 195/2065, Cumberbatch to O'Connor no.16, 26th March, 1899.

pension of lighterage services was quick and determined: they started to build their own vessels. Between 1891 and 1895 the British merchants in Smyrna launched a small fleet of lighters and steam tugs. The Whittalls, for example, launched eight lighters (200 tons DW) and T.B.Rees's lighters had a carrying capacity of more than 600 tons (67). The Quay Company reacted by delaying the unloading of the British lighters until its own lighters were unloaded, and gradually increased the waiting time for the British vessels. This obstruction reached to such an extent that while the British lighters waited between 18 and 20 days at the quayside without being unloaded, the Quay Company's lighters carrying ashore the part cargoes of the Messageries Maritimes and the Lloyd Autrichien ships were discharged of their contents in one or two days (68).

The British had already regretted their move but there was no going back. If they gave up using their own lighters they would again be at the mercy of the Quay Company which would deny the British the use of its lighters until they accepted higher rates. Following a series of protests and threats by the British Consul the Governor General ordered the Quay Company to speed up the unloading of British lighters. In 1899 it was reported that the waiting time had been cut to 14 days (69). Another wave of protests

(67) PRO,FO 195/1732, Wratislaw to White, cypher, 3rd Aug., 1891; PRO,FO 195/1899, Fitzmaurice to Currie, no.57, 23rd July, 1895.

(68) Enquete sur les causes de l'encombrement, etc., Marseilles, 1897, p.7.

(69) PRO,FO 195/2065, Memorandum by Cumberbatch, 25th Apr., 1899.

followed which resulted in a temporary truce whereby it was agreed that the Quay Company would reduce the waiting time to five days pending further negotiations for a revision of the quay dues (70). The final settlement waited until 1911 when in return for a 20% rise in rates the French accepted not to discriminate against the British vessels. A company was formed which took over all the lighters and tug boats belonging to British merchants. The company also launched a tug boat and 14 new lighters (642 tons DW). D. Issigonis, the engineer who built the steam engines for the vessels, bought the majority of the shares but later sold them to the Archipelago American Steamship Company (71).

SHIPPING PROBLEMS

Ships entering or leaving Smyrna harbour were subject to a number of dues such as pilotage, anchorage, quarantine, disinfection, and lighthouse fees. British ships had to pay an additional fee of 10s. to the British Consulate and another fee of 3d. per registered ton to the British Seamen's Hospital (72).

All lighthouses in Turkish waters were run by the French (Colas & Co.) who, in 1860, had obtained a concession for 20 years.

- (70) PRO,FO 195/2090, Cumberbatch to O'Connor, no.(?), 12th Feb.1900.
 (71) PRO,BT 31/20211(117691), The Smyrna Lightermen's and Barge Owners' Co.Ltd. The company was completely taken over by the Americans in 1923, London Gazette, 9th Feb., 1923.
 (72) A complete list of harbour fees can be found in, "Commercial Reports," Accounts & Papers, 1865, vol.liii, pp.120-124. British ship masters found the 3d. hospital fee too high and requested a reduction of 1d. but their application was turned down, PRO,FO 78/1307, Vedova to Clarendon, no.6, 24th Jan., 1857.

Vessels engaged in direct trade with Turkish ports were charged 8d. per ton when they entered or left a port. Transit ships, on the other hand, were charged half of this amount. It seemed that it was only the British who were paying these high rates: the French, Italian, Austrian, and Russian companies having obtained a privileged status in 1868 were paying only half of the scheduled fees (73). However hard they tried the British never obtained a reduction in the lighthouse fees. In November 1879, two months before the expiration of the French company's concession, the Chamber of Shipping of the United Kingdom requested the Foreign Office to bring pressure on the Porte not to renew the concession but to give it to a British company. Having supported Turkey against Russia in the war of 1877, the political influence of the British was at its highest level in Constantinople; but through a series of diplomatic manoeuvres the French obtained a 99-year extension (74). After the renewal of its monopoly the first thing the French company did was to raise the 8d. fee to 10d. per registered ton, and keep the concessionary rates applied to the French and other nations at their 1868 level! The British were furious: an endless stream of protest letters invaded the Foreign Office but there was nothing to do (75).

(73) PRO,FO 195/910, Cumberbatch to Elliott, no.69, 5th Oct., 1868.

(74) PRO,FO 198/40, Chamber of Shipping of the United Kingdom to Salisbury, 13th Nov., 1879; Salisbury to Layard, no.74, 17th Dec., 1879.

(75) The protest letters of 157 shipping companies, including the Hartlepool, Cardiff, Whitby, North of England, Glasgow, and North Shields Shipowners' Societies, are in : PRO,FO 78/2980, PRO,FO 195/1231, and, PRO,FO 198/40.

The only success that the British scored in the field of shipping was the formation of the Asia Minor Screw Steamship Company which ran a fortnightly service between Smyrna and the coastal towns in the southwest. Although the Aidin Railway had facilitated the flow of commodities to and from Smyrna, the Aegean Islands and towns like Makri or Adalia, which were cut off from the railway by high mountains, needed regular shipping services to send their produce to Smyrna for exportation. In 1868 the British company obtained a 50% reduction in harbour dues and agreed to pay a fixed sum (£1,255 per ship per annum) to Collas & Co. in lieu of all lighthouse dues (76). The Turkish Azizieh Steamship Company, which had been the only company engaged in coastal trade, immediately instituted a service between Smyrna and the ports which the British company's steamers were visiting (77). In 1874 the British company strengthened its fleet of steamers with the addition of the S.S.Jura (700 tons DW) but it was reported that the Azizieh steamers were gradually driving the British out of coastal trade (78). The turning point in the company's luck occurred in 1879 when the Turkish government, despite the protests of the Azizieh Co., exempted it from all customs duties on coal imports to be used as fuel in its ships. The company extended its services to six new ports (79).

(76) PRO,FO 195/910, Vedova to Cumberbatch, 25th Aug., 1868; Cumberbatch to Elliott, no.64, 3rd Sept., 1868; Accounts & Papers, 1870, vol. lxiv, pp.78-87.

(77) "Commercial Reports," Accounts & Papers, 1871, vol.lxv, pp.353-359.

(78) "Commercial Reports," Accounts & Papers, 1875, vol.lxxvii, pp.1794-83.

(79) PRO,FO 195/1241, Vedova to Reade, 17th July, 1879; Reade to Layard, no.41, 31st July, 1879. Encouraged by the favourable attitude of the Turkish government, Paterson & Co. initiated the Anglo-Turkish Steam Navigation Company but could not obtain the same privileges.

Later on the company enjoyed a number of other privileges such as a 50% reduction in the fixed lighthouse dues (80). In 1884 its fleet was further augmented by the purchase of two steamers from the Azizieh Company (81), which practically withdrew from competition, and by two more ships in 1895 (82). In 1906 it was re-named and turned into a limited liability company and its shares were offered to the public (83).

The two other problems affecting British shipping were the fraudulent insurance practises and the frequent introduction of sanitary measures against incoming ships. There was not much the British could do to prevent the Turkish authorities from placing under quarantine those ships coming from ports where an epidemic had broken out. International agreements gave the Turkish government the right to take appropriate measures against the danger presented by contaminated vessels but the point was that British ships bringing colonial goods from India had to make short stops at the Red Sea ports where there were frequent outbreaks of contagious diseases, and thus were more prone to be placed under quarantine than the ships of other European nations which started off from such "clean" ports as Trieste and Marseilles. The Bri-

- (80) The company's correspondence with the Foreign Office is in: PRO,FO 78/4191-93, 4695, and, 4989.
- (81) PRO,FO 195/1488, Dennis to Dufferin, no.4, 1st Feb., 1884.
- (82) PRO,FO 195/1899, Joly & Co. to Fitzmaurice, (?) May, 1895.
- (83) PRO,BT 31/11628(89862), Asia Minor Steamship Co.Ltd.

tish did not question the Turkish government's rights but always maintained that the quarantine regulations at Smyrna worked against them because while the contaminated British ships had to wait for 15 to 20 days at the Karantina, the French, German, and Italian ships unloaded their cargoes quite freely. The protests of British merchants and shipping companies were directed, therefore, against the length of the quarantine period (84). These demands were always dismissed by the Turkish authorities who emphatically rejected the allegation that by placing British ships under quarantine they were deliberately undermining British interests.

The growth of Smyrna as an entrepot of trade following the opening of the interior by the Aidin and the Cassaba Railways gave way to the need for an efficient insurance system whereby goods in warehouses and on board ships could be insured against risks of fire and sinking. By 1874 there were 27 British insurance companies in Smyrna (85). But the agents of these insurance companies were inexperienced and did not even know the rudiments of reading and applying actuary tables. Furthermore, there was "a tendency to be too liberal in satisfying claims" (86). Merchants of other

- (84) Protests of shipping companies and merchants are in : PRO,FO 78/3526, 3654, and, 3655. See, also, Newcastle Daily Chronicle, 18th July, 1884. These protest notes claimed that quarantine measures paralyzed British trade in Smyrna and gave their competitors an unfair advantage. They demanded that the quarantine period should be reduced to a maximum of one week.
- (85) These companies were represented by eight British merchants, PRO,FO 195/1009, Cumberbatch to Elliott, no.28, 28th Aug., 1874.
- (86) PRO,FO 626/15/656c, Queen Insurance Co. v Gout, 1887-1891. J.Gout, the former industrialist, was perhaps the most incompetent insurance broker of all. In 1881, for example, he collected £1,056.17s.3d. in premiums while the correct amount to be charged was more than £25,000.

nationalities were quick to capitalize on this deficiency of the British. All warehouses on or near the docks and around the railway terminals were insured with the British companies (87) and between 1887 and 1892 Smyrna became the scene of daily fires in warehouses, lighters, and ships. Almost all of these fires were suspected to be cases of incendiarism (88). The procedure was simple: grossly overvalued cargoes or warehouses were insured with the British companies and then set fire to. The parent companies in England were so much irritated with the magnitude of claims that they employed a firm of loss assessors which sent a representative to Smyrna to investigate the matter. The report of the assessors established two facts: insured properties were overvalued from 100% to 300%, and 76 of the 81 fires investigated were cases of arson (89).

The results of widespread incendiarism were summarized by the British Consul:

"Insurance companies' business has turned into an illegitimate business which can only be carried on by augmenting the premiums on genuine traders and proprietors by 600% in order to provide for the claims of those who insure with the deliberate object of destroying their premises and recovering the

- (87) Plan d'Assurance de Smyrne, 1905, B.M. Map Room, Maps 145.6.2.(2).
 (88) PRO,FO 78/4687, Holmwood to Roseberry, 27th Oct., 1892. During this period British insurance companies paid between £25,000 and £60,000 a year in claims.
 (89) PRO,FO 78/4687, Alexander, Daniel, Selfe & Co. to Roseberry, 18th Jan., 1894.

fictitious values which they have put on their property" (90).

Increased premiums led to higher warehouse fees which resulted in a peculiar state of affairs never encountered before. In order to avoid higher storage charges merchants started to send all imported goods into the interior as soon as they arrived in Smyrna and instructed their agents in the villages not to forward any exportables unless they were ready for immediate shipment. The smooth course of trade was disrupted so violently that while at times the docks, the Customs House, and railway stations were extremely busy, "when least expected," at other times they came to a complete standstill. The local manager of the Aidin Railway warned the merchants that these random outbursts of activity disorganized all railway communications as well as storage arrangements, and he expressed fear that his railway might not be able to cope with the erratic movement of commodities in the very near future (91). The mercantile community persuaded the Governor General to intervene: some arson suspects were arrested and the situation returned to normal (92).

(90) PRO,FO 195/1808, Holmwood to Ford, no.12, 16th March, 1893.

(91) PRO,FO 78/4687, Holmwood to Roseberry, no.15, 4th Apr., 1893.

(92) For details see, PRO,FO 195/1850. Smyrna had no public fire brigade. Each insurance company had its own fire engine and a crew of firemen who dealt with only those fires occurring in the properties insured with the company. In 1900 insurance companies decided to unite their forces to form a common fire brigade which would deal with all fires irrespective of the company with which the property was insured. The Belgian Water Company of Smyrna agreed to install 115 hydrants in various places in the city to be used by the fire brigade. It was paid £230 a year for furnishing these services, Foreign Office Annual Series, no.2641, (Cd.429), 1901, pp.173-192.

The second wave of insurance frauds came in 1895. Ships chartered by Armenian or Greek merchants were insured at overvalued rates and either set fire to or sunk after leaving the harbour. This time the insurance claims were much higher but the detection of the fraud was comparatively easy. For example, A.Teloglou, an "Armenian (?) merchant," chartered a ship and insured her purported cargo of van-
 lonia and opium for £77,000. E.Whittall, the agent of the under-
 writer North British Mercantile Insurance Company, became suspicious and placed one of his men on board as a passenger. Teloglou did not dare to sink or burn the ship which sailed to Gravesend, anchored there and stayed on anchor for two weeks without discharging her cargo waiting for Whittall's man to leave. In the end she sailed back to Smyrna, Whittall's man still on board, and as soon as she entered the harbour the insurance company obtained a search warrant. The cargo turned out to be boxes of decayed figs and barrels of sea water. Teloglou was arrested but later released, there being no serious charge against him (93). Four months later a Greek merchant named G.M.Condonlis succeeded in collecting £28,000 from an insurance company when the ship he had chartered sank near Chesme. Later investigation showed that the ship had been sunk deliberately but Condonlis had already fled to Greece (94).

(93) PRO,FO 195/1899, Fitzmaurice to Currie, no.54, 5th July, 1895.

(94) PRO,FO 195/1946, Holmwood to Currie, no.42, 23rd May, 1896. Transshipment problems at British ports did not affect Smyrna merchants directly and therefore they are not discussed here. For some cases of transshipment difficulties see, PRO,FO 78/2980, Memorandum by the Liverpool Chamber of Commerce, 7th Feb., 1879; PRO,FO 626/18/773, P.J.Barff & Co. v F.Leyland & Co., 1897; PRO,FO 626/26/1134, Metaxas v Freight Agents Ltd., 1914.

FLUCTUATIONS IN EXPORTS

Between 1864 and 1912 Smyrna's exports showed wide fluctuations. During this period there were ten major ups and downs (Appendix I) suggesting a cyclical phenomenon. Accordingly, we assumed a multiplicative model where fluctuations are supposed to be generated by a linear trend, a cyclical component, and random elements. The linear trend was eliminated from the time-series and the de-trended figures were corrected on the basis of a 3-year cyclic ratio. The result is presented in Diagram 1 where four major cycles can be observed. It is to be noted that the duration of cycles becomes longer and the difference between the peak and the trough values in each cycle gets larger through time. Table 1 below shows the explosive character of the oscillations in Smyrna's exports.

Table 1
Export Cycles

	Duration of the cycle in years	Intensity of the cycle* (%)
Cycle I	4	9.0
Cycle II	10	14.1
Cycle III	17**	23.9
Cycle IV	16	25.2

*Intensity = (Peak Value-Trough Value)/Peak Value.

**Includes a minor cycle of five years' duration.

EXPORTS £ '000,000

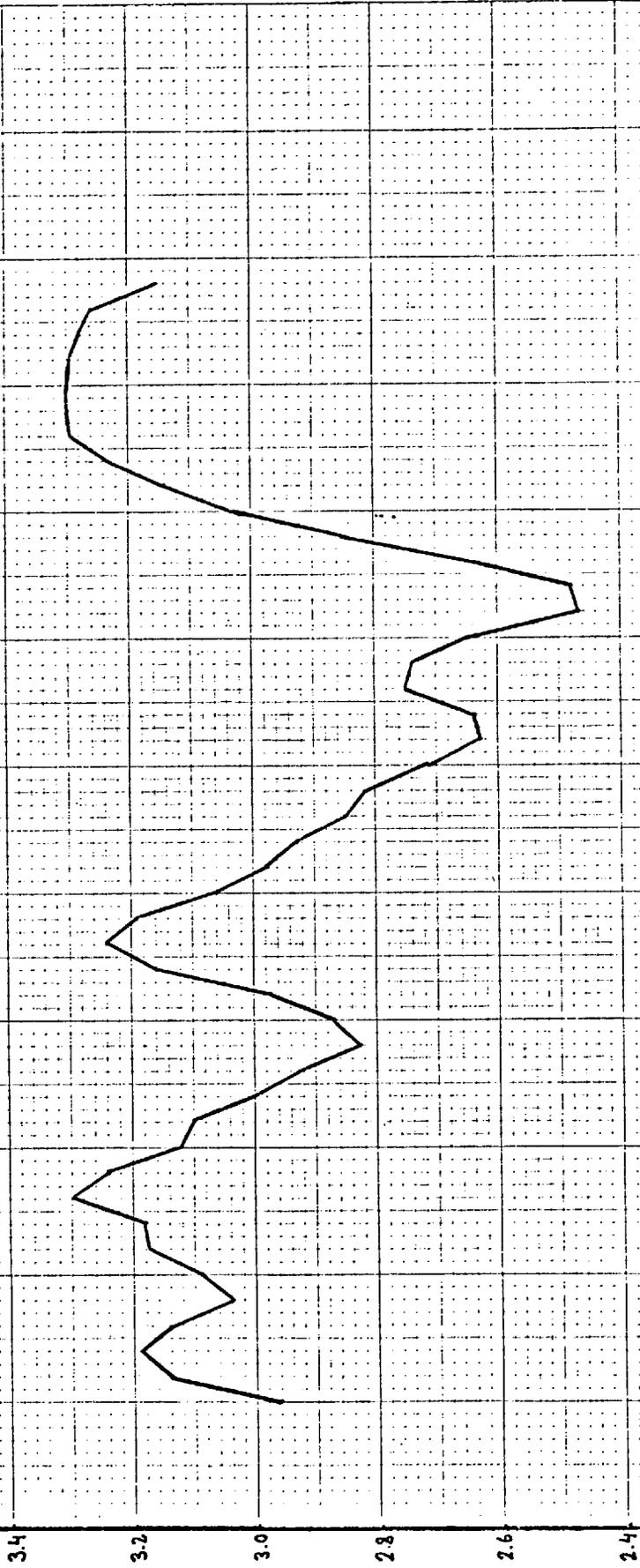


Diagram 1. Exports from Smyrna (De-trended and Corrected Series) 1866-1910

YEARS

1866 1871 1876 1881 1886 1891 1896 1901 1906 1911

The linear trend having been eliminated from the series the remaining possible explanations of the cycles are the fluctuations in export markets, especially in the U.K., and random elements such as wars or the effects of atmospheric conditions on harvests, etc. These will be dealt with in turn and their effects on British merchants in Smyrna will be shown.

According to the "Standard Reference Dates for Business Cycles" as worked out by the National Bureau of Economic Research, England experienced four major cycles between 1862 and 1914 (95). The first one started in 1862, reached its peak in 1866 and ended in 1868. Starting in 1868 there was an expansion in economic activity until 1872 when contraction began and the second cycle was completed in 1879. The third cycle reached its peak in 1882 and gradually died off in 1895. The fourth major cycle was between 1895 and 1914 with its peak in 1903, and two relative peaks in 1907 and 1912. The remarkable thing about these cycles is that their turning points are closely followed by the Smyrna export cycle. Between each turning point in the two series of cycles there is a two-year time lag. Table 2 shows this correspondence between these two cycles.

(95) S.B.Clough, C.W.Cole, Economic History of Europe, Boston, 1952, p.664. A similar reference table with minor differences can be found in, Rostow, British Economy, p.31.

Table 2
Turning Points in the U.K. Business
Cycle and the Smyrna Export Cycle

	U.K.	Trough Smyrna	U.K.	Peak Smyrna	U.K.	Trough Smyrna
Cycle I	1862	1866	1866	1868	1868	1870
Cycle II	1868	1870	1872	1874	1879	1880
Cycle III	1879	1880	1882	1884	1895	1897
Cycle IV	1895	1897	1903	1905	1914	1913

With the exception of the beginning of the first, and the end of the second and the fourth cycles the time difference between these dates is exactly two years. This is not very surprising if it is considered that England was the single largest consumer of Turkish exports. She was followed by France and Austria-Germany but neither of them equalled Britain's capacity to absorb Smyrna's agricultural and mineral riches. This can be seen in Table 3.

Table 3
Distribution of Smyrna's Exports (%)

Average of	U.K.	Austria-Germany	France
1864-1867	48.4	n.a.	n.a.
1868-1871	41.1	n.a.	n.a.
1873-1876	46.9	n.a.	n.a.
1877-1880	41.4	11.9	n.a.
1881-1884	41.2	13.3	15.6*
1885-1888	37.1**	18.0**	13.8**
1889-1892	47.6	20.5***	8.0***
1893-1896	49.4**	n.a.	n.a.
1897-1900	57.6**	20.2**	6.6**
1901-1904	56.0	20.5	6.0
1905-1908	51.2	24.1	6.8

Sources: PRO, FO 83/395; PRO, FO 78/3070; "Commercial Reports," Accounts & Papers, 1883, vol. lxxiii, pp. 1037-1091; Foreign Office Annual Series, 1886-1909.

*Average of three years

** Average of two years

***1889 only

n.a. = not available

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	U.K.	Trough Smyrna	U.K.	Peak Smyrna	U.K.	Trough Smyrna
Cycle I	1862	1866	1866	1868	1868	1870
Cycle II	1868	1870	1872	1874	1879	1880
Cycle III	1879	1880	1882	1884	1895	1897
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1897-1900	57.6**	20.2**	6.6**
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1905-1908	51.2	24.1	6.8

Sources: PRO, FO 83/395; PRO, FO 78/3070; "Commercial Reports," Accounts & Papers, 1883, vol. lxxiii, pp. 1037-1091; Foreign Office Annual Series, 1886-1909.

*Average of three years

** Average of two years

***1899 only

n.a. = not available

While the share of France in Smyrna's exports declined steadily, Austria-Germany's share increased to more than twice its initial level and England, despite a fall towards the middle of the period, maintained and slightly increased her share. With nearly half of Smyrna's exports going to the U.K. it was only natural that the ups and downs of the economic life in England had a dominant influence on the course of exports from Smyrna. As contraction started in the U.K. the demand for imports from Smyrna fell, and, conversely, whenever there was a revival of economic activity the demand for Smyrna's exports was stimulated. In Smyrna itself the adjustment of production to the shifts in export demand took time, hence the two-year lag.

Fluctuations in export markets affected the British merchants of Smyrna in a variety of ways. While booms in Europe marked a period of prosperity and high profits in Smyrna, recessions caused consternation, uncertainty, and panic: agents in the interior were ordered to stop purchases and fears of a further fall in export prices led to a quick sale of existing stocks. Those who were slow to take the necessary precautions suffered heavy losses and the number of bankruptcies increased at every trough of the export cycle. The crisis of 1865 which was further aggravated by the failure of cotton crop caused the largest number of bankruptcies ever recorded in Smyrna's history (96). Among the bankrupts there was

(96) "Commercial Reports," Accounts & Papers, 1867, vol.lxvii, p.153.

even a Whittall. Others who managed to remain solvent suspended their activities as well as their debt payments until markets abroad showed some sign of recovery. Although the U.K. business cycle reached its peak in the following year the arrival in Lancashire of long-staple American cotton from the U.S., where the Civil War had ended, decreased the demand for the short-staple Smyrna cotton as well as causing a 30% fall in world prices. The value of cotton exports from Smyrna fell from £1.268 m. in 1865 (itself £800,000 less than the 1864 figure) to £521,600, almost all of which went to Spain, the only remaining market for the inferior quality Turkish cotton.

The slump of 1870, on the other hand, was the product of at least three factors. The war between France and Germany caused a **diminution** in exports to these **countries**, and in Italy the fall in the demand for Turkish raw silk, valonia, carpets, and olive cakes brought prices down. Although the quantities exported were almost the same as in 1869 the value of exports fell from £4.5 m. to £3.6m (97). The third factor which did great damage to a number of British merchants in Smyrna was the fall in the price of imported British manufactures. The value of iron and steel imports fell £55,000, woollens £32,000, and cotton manufactures fell by £282,000. The British who were already suffering from the losses

(97) "Commercial Reports," Accounts & Papers, 1871, vol.lxvi, p.1092.

caused by the fall in export prices, found themselves in a more precarious position where they were unable to sell their stocks of imported goods which they had bought at higher prices in the previous year, without suffering a further loss. For example, M. Wolff's stocks of imported British wares and exportable crops were valued at less than one third of their original cost (98). The fall in the value of exports from Smyrna between 1874 and 1880 was also caused by the depression in export markets particularly in the U.K. where prices continuously decreased between 1873 and 1879.

In 1884 the German firm of Muller & Suppa introduced an improved variety of vine into Western Anatolia (99). It was an immediate success and exports of sultanas reached the record figure of £1,856,000 which was 38.5% of all exports (100). However, the increase in the production of grapes and the consequent growth of exports was a mixed blessing as the future course of events proved. Although the unprecedented crop of 1884 found buyers in the international market at remunerative prices, largely due to the phylloxera which had ravaged French vineyards in 1881-1882, export houses did not realize that the world demand for raisins was more or less fixed at 45,000 tons a year, and increased supply would inevitably

(98) PRO, FO 626/9/404(167-236), Wolff, Bankruptcy, (Synopsis of Losses), 1870. The total cost of stocks was 1,929,785 pts at 1868-1869 prices. In 1870 their total value was only 612,500 pts.

(99) PRO, FO 195/1620, Barnham to White, no.36, 21st June, 1888.

(100) Foreign Office Annual Series, no.67, (C.3673), 1886, pp.431-454.

mean a fall in price. In 1885 France recovered from the effects of the phylloxera and became self-sufficient in raisins while production in Western Anatolia increased from 42,000 tons in 1884 to more than 72,000 tons in 1885. Prices abroad fell by 23% and export receipts declined. Similarly, the bumper crop of 1888 could **be sold with only a** slight fall in prices from their already low level thanks to the re-appearance of the phylloxera in France and to the collapse of the Franco - Italian Treaty of Commerce. The increase in the French customs duties on raisin imports in 1891 was followed by another bumper crop in Western Anatolia in 1893. This time prices fell by nearly 60% and it was reported that "for the past eight months horses and cattle have been fed on raisins and other dried fruit" (101). Despite the heavy fall in prices huge stocks remained unsold and a number of export firms went bankrupt. The crisis of 1897, the worst since 1865-1866, came at a time when world prices were at their lowest level since 1862. It was further aggravated by the war with Greece and the expulsion of Greek brokers from Turkey.

(101) "Trade of Smyrna," Accounts & Papers, 1894, vol.lxxxviii, pp.503-12.

The effects of fluctuating exports on British merchants in Smyrna can be seen in Table 4.

Table 4
Bankruptcies and Dishonoured Debts
Among British Merchants

Years	Number of Bankruptcies	Value of Dishonoured Drafts and Bills of Exchange (£)*
Average of 1861-64	3	1,509
1865-66	27	16,034
1869	2	3,709
1870	11	14,061
Average of 1875-79	2	4,200
1880	14	n.a.
Average of 1885-96	6**	3,215**
1897	19	n.a.

Sources: Smyrna Consular Court, Returns of Civil and Commercial Cases, 1861-1897.

*Excludes the value of dishonoured drafts and bills drawn by the non-British on the British. Also excludes the drafts and bills dishonoured by the bankrupts.

**Excluding 1892 and 1894.

n.a. = not available

Although there is no way of proving that all the bankruptcies and the suspension of debt payments were caused by the periodical fluctuations in export receipts it is nevertheless true that the figures suggest a high degree of association between low exports and commercial failure. While during recessions the number of bankruptcies and the amount of dishonoured debts were low, as soon as the export cycle reached its lowest level they increased to very high levels.

ANGLO-GERMAN COMMERCIAL RIVALRY IN SMYRNA

The "Great Depression" of the 1870's is usually assumed to mark the beginning of an era when England's predominant position in commerce and industry was seriously challenged by Germany (102). The first sign of an upsurge of German commercial activity in Western Anatolia was seen in 1878 when Germany's share in Smyrna's imports increased from their usual level of 10% to 14% (103). The British did not pay much attention to this increase because, after all, their imports, too, had increased from 46% to 51%. But in the following year British imports fell to 45% while those of Austria and Germany increased to 15.6%. In 1880 British imports decreased further, to 38%. German imports had also decreased but not as much as the British. This was the beginning of the end of Britain's unquestioned hegemony in Western Anatolia. Table 5 charts the course of the struggle between England and Austria-Germany to gain mastery

(102) See, for example, L.C.A. Knowles, The Industrial and Commercial Revolutions in Great Britain during the Nineteenth Century, London, 1946, p.145.

(103) "Commercial Reports," Accounts & Papers, 1883, vol.lxxiii, p.1067. The records of the Smyrna Customs House and the Quay Company, from which the British Consuls derived their trade statistics, classified all imports according to the port of embarkation and not according to the country of origin. The Consuls were unanimous in agreeing that at least 80% of all goods coming from Holland were, in fact, of German origin. As for Austrian goods they had this to say: "Throughout this report when Austria is mentioned it should be understood that the word includes both the German powers, for as the goods shipped to Germany, as well as those she sends to Smyrna, mostly pass through the port of Trieste, Austria gets the credit of the bulk of the trade; for it is impossible in most cases to distinguish German from Austrian products," "Commercial Reports," Accounts & Papers, 1887, vol.lxxxvi, p.437. Therefore, we grouped the imports from Germany and Austria-Hungary under the heading "Austria-Germany" to which we have added 80% of the imports from Holland. Although it was certain that some of the Belgian goods shipped from Antwerp also included a certain amount of German manufactures, their exact proportion was unknown and we have not included them in the calculations.

over Turkey; a struggle which was also waged in the political arena and ended with the victory of Germany.

Table 5
Distribution of Smyrna's Imports (%)

Average of	U.K.	Austria-Germany
1877-1880	45.2	14.1
1881-1884	44.0	15.2
1885-1888	37.7*	18.0*
1889-1892	33.2	19.4**
1893-1896	30.8*	n.a.
1897-1900	32.8*	23.1
1901-1904	32.4	24.6
1905-1908	31.0	27.4***

Sources: See Table 3.

*Average of two years.

**1889 only.

*** Average of three years.

n.a.= not available

The fall in the share of British imports from 45.2% in 1877-80 to 44% in 1881-84 was the result of a loss to Germany in the imports of at least 15 goods including cotton manufactures, cotton yarns, cloth, hardwares, and ironwares. During these years British exports of cotton and linen to Smyrna fell by 30% while German cotton goods dyed with the Hemsdorff process increased 48%. Likewise, Britain's share in Smyrna's imports of cotton yarn decreased from 76% in 1882 to 57% in 1885. German iron and steel manufactures, admittedly inferior to the British product but cheaper and sold on six months' credit, made their first appearance in Smyrna in 1884. The British

Consul wrote home:

"The reduction in the value of the imports from the U.K. must be attributed chiefly to the competition which Great Britain has encountered from other countries. For, as regards the supply of some of the most important articles of import, she has been successfully rivalled by Germany, so that she has lost much of the pre-eminence she had held for many years as chief purveyor to the material wants of this district of Asia Minor," (104).

It was not only Smyrna from where the alarming news came. In Eastern Roumelia German imports were reported to be on the increase; in Salonica British shipping and trade was feeling the effects of the increased German sea traffic between Trieste and the Macedonian ports; in Crete and Damascus Germans had become the chief competitors in the market; and in Beirut the woollens trade had fallen entirely into German hands (105).

In 1885-1888 the decline gained more momentum and the British lost or came near losing some other strategic heights to the Germans. The Board of Trade felt it necessary to warn against the advancing German trade in Turkey (106). Another development putting Britain's supremacy in jeopardy was the rapid increase in the num-

(104) Foreign Office Annual Series, no.67, (C.3673), 1886, p.6.

(105) Foreign Office Annual Series, no.70, 1886, nos.75,99,114, 1887.

(106) In four years the Board of Trade issued three such warnings, see, Board of Trade Journal, vol.i, 1886, p.314; vol.iii, 1887, pp.293-94; vol.v, pp.65-66.

ber and the tonnage of the government-subsidised Austrian and German ships visiting Smyrna. Their number increased from 385 to 441 and their tonnage from 307,000 tons to 413,000 tons while the British tonnage remained almost stationary around 610,000 tons.

1889 saw the opening of a new steamer service between Smyrna and Hamburg (107). At the same time hundreds of German salesmen, travelling from town to town, village to village, bringing samples, distributing well-illustrated leaflets, discussing prices, arranging credit facilities, and taking down orders, invaded every commercial city in the Ottoman Empire. Their "superior energy and adaptability" and the fact that they enjoyed certain advantages over the British because of "the greater influence possessed by their government" resulted in a further fall in British imports (108). The annual trade report from Smyrna was very apprehensive:

"It is obvious that if German progress continues our supremacy must shortly commence to decline. The cause of the change now taking place is simply that the people of Germany work for longer hours and for lower wages than ours," (109).

One by one England was losing all the more important articles of commerce to Germany and other countries. British T-cloths, shirt-

(107) Board of Trade Journal, vol.vii, 1889, p.158. In 1906 the Nord-deutsche shipping company started a service between Marseilles and Odessa calling at Smyrna.

(108) "Trade of Turkey," Accounts & Papers, 1892, vol.lxxxiv, pp.435-442.

(109) Foreign Office Annual Series, no.1254, (C.6855), 1893, p.3.

ings, and long-cloths were ousted by the American "Cabot A" material. In cotton prints, locally made, durable "Aladja" material, dyed in fast colours with imitation European designs, replaced the British products. In cotton textiles, cheap German and Italian manufactures with original patterns put out a very serious challenge. Although Britain still maintained a leading share in fine quality cotton yarns, in rougher varieties such as "Water nos.4-12" and "Extra nos. 4-14" the market was dominated by Germans. The trade in red cotton yarns from no.4 to no.20, all of which was once supplied by Britain, became the exclusive domain of Germans. Even the famous Dundee canvas cloth was replaced by Belgian and German canvas (110). British glasswares and china gave way to German products which were "very common, without original form or taste" but to be seen "everywhere, even in the smallest villages," because they had the virtue of being cheaper than the British products. German and Austrian lamps, burners, and faience stoves came in ever increasing quantities. The Smyrna market was inundated with imitation Paris, **Vienna**, and Japanese furniture, all made in Germany, taken to pieces for transportation, and re-assembled at German work-shops in Smyrna. German pianos like the Vogel and Plegel-Wolff brands were playing German tunes in cafes, musichalls, and theatres. True, the British were still supplying the Smyrniotes with iron bedsteads to the value of

(110) "Trade and Commerce of Smyrna," Accounts & Papers, 1900, vol.xcvii,

£20,000 a year but it was no consolation because the Germans were selling £200,000 worth of furniture every year (111). In 1906 Austria and Germany had the leading share in the importation of 25 articles which increased to 30 in the following year and to 31 in 1908 when they wrested from the British the control of wool blanket imports (112). This happened in spite of the Turkish boycott on Austrian goods in retaliation to the latter's annexation of Bosnia. British cane sugar had already been driven out by Austrian beet sugar and Smyrniotes had developed a taste for the German beers such as the Dreyherr and the Pilsner in preference to the Bass and Allsopp beers of British manufacture.

The growth of German trade in Smyrna was also reflected in the increase in the number of German merchant houses. In the early 1890's there were four German and six Austrian export-import firms in Smyrna. This number increased to 40 in 1913; there were also 11 Greek and Armenian merchants dealing exclusively in German products (113). Each German firm specialised in the importation or exportation of certain commodities and thus did not have to compete with other German houses. The British, on the other hand, had

- (111) Board of Trade Journal, vol.xvi, 1894, p.718; vol.xvii, 1894, pp. 528-529; vol.xxvi, 1899, pp.23-27; vol.xxx, 1900, pp.467-468; vol. xxxiv, 1901, pp.264-265; vol. xlvii, 1904, p.343.
- (112) Foreign Office Annual Series, no.4598, (Cd.4962), 1910, pp.313-394.
- (113) F.Rougon, Smyrne, Situation Commerciale et Economique, Paris & Nancy, 1892, pp.684-689; H.W.Schmidt, Auskunftsbuch fur den Handel mit der Turkei, Leipzig, 1917, pp.101-114. The Ungarische Bank, the Wiener Bankverein, and the Deutsche Orientbank had branches in Smyrna, Aidin, and Nazilli.

fight between themselves to maintain their share in the dwindling British trade. In 1890 the British Consul in Smyrna suggested that "a number British firms of good standing" should follow the German example and combine their interests to eliminate or minimise competition (114). In 1893 some members of the Whittall, Paterson, and the LaFontaine families formed the Anglo-Eastern Co-operative Company with a capital of £20, 500 (115). The founders transferred some of their business to the company which also took over an ailing French merchant house for £16,000. Although it was a fairly successful proposition (between 1893 and 1899 it distributed 10% dividends each year (116)) it was too small to return the British their past glory because the British merchants were too spellbound with their own interests to transfer all their business to the company.

Another weakness of the British merchants was their almost unlimited indulgence in speculation. They bought large quantities of raisins, figs, valonia, etc., in anticipation of a rise in world prices and when prices fell they incurred huge losses (117). Forward buying and selling was also very widespread. In this way large profits could be made, depending on the favourable movement of world

- (114) Foreign Office Annual Series, no.764, (C.5895), 1890, pp.15-16
The same advice was repeated ten years later when a special report submitted to the House of Commons concluded by saying that all British merchants in Turkey should unite in a Central Commercial Agency and fight the Germans in unison, see, "Suggestions for British Traders with Turkey in Asia," Accounts & Papers, 1902, vol.ciii, pp. 323-332.
- (115) PRO, BT 31/32324(39699), Anglo-Eastern Co.-operative Co.Ltd.
- (116) E.Pech, Manuel des Societes Anonymes Fonctionnant en Turquie, Paris, 1902, pp.202-203.
- (117) PRO, FO 626/19/831(1-56), Brady, Rosenthal & Co. v Warren & Co., 1901; PRO, FO 626/24/954, Union Bank of Trieste v Warren, Berkshire & Co., 1907.

prices, but such ventures often came to grief. The British Consul in Smyrna commented on the fearsome magnitude of forward buying and selling by the British:

"It is no longer a practise of buying first, as far as one's own capital will allow, of shipping the goods to some foreign market, of watching for a good opportunity and then selling and realising a handsome profit. This method is now considered antiquated and obsolete.

The merchant of to-day begins at the other end: sells first what he has not yet bought, what has not yet even, perhaps, produced and afterwards begins to buy, very often with money that is not his own (...) A slight fluctuation in the market price means a heavy loss,"(118).

The British Chamber of Commerce reported that forward buying and selling in sultanas and figs in 1911 resulted in a loss of £200,000 to the British merchants (119). The formation of the Smyrna Fig Packers Ltd., "to help to control the reckless competition by forward sales in figs,"(120) was the result of the realisation by the British of the fact that if they wanted to survive against the German competition they had to adopt new methods of organisation and commercial intelligence. The British company established agencies in Hamburg, Vienna, and London from where price movements were transmitted in coded messages to Smyrna every day where the shipment of figs was regulated according to these changes.

(118) Foreign Office Annual Series, no.5011, (Cd.6005), 1912, p.10.

(119) "Trade and Commerce of Smyrna," Accounts & Papers, 1912-1913, vol.c, p.621.

(120) Foreign Office Annual Series, no.5247, (Cd.7048), 1914, pp.85-86.

The company's capital was raised from £150,000 to £200,000 and again to £250,000 in 1913, and German competition in fig exports was practically eliminated.

The difference between the British and German methods of marketing the imported commodities was also noticeable. The British relied almost ~~entirely on their~~ traditional method of trade circulars to advertise their wares while the Germans put more emphasis on personal contact and communication. The wisdom of the British method of advertising with leaflets printed in English using English measures was questioned by the British Consuls in Smyrna but the practise was continued (121). The Germans had their circulars printed in French, Greek, and Turkish and lavishly distributed them through their well-trained salesmen who could speak at least one language understandable by the natives. In 1898 the Foreign Office opened a worldwide inquiry into British trade methods in foreign countries (122). All of the 18 reports which came from Turkey stressed the importance of copying the German methods of marketing through travelling salesmen and urged the British manufacturers to study consumers' tastes. The Germans were known to "modify their patterns even in the most trivial details to suit the market," but

(121) Foreign Office Annual Series, no.764, (C.5895), 1890, p.16; no.2462, (Cd.1), 1900, p.5.

(122) "Opinions of Her Majesty's Diplomatic and Consular Officers on British Trade Methods," Accounts & Papers, 1899, vol.xcvi, pp.619-726.

the British offered their products "in too determinate or categorical a form,"(123). Another rather belated inquiry by the Foreign Office showed that in Turkey there were no restrictions on foreign salesmen (124). At last, Englishmen, with samples of the merchandise manufactured by their companies, began to arrive in Smyrna. They were not as successful as they had been hoped to be because none of them spoke Turkish and only a small minority was conversant in colloquial Greek. Besides, they were heavily outnumbered by the Germans. For every Britisher there were five or six German salesmen (125).

The decline of British trade in Western Anatolia during the four decades from 1870 to 1910 was the result of a two-sided process. Those factors that influenced this process in Turkey were examined in the preceding pages but the other equally important (perhaps more important) factors operating outside Turkey were left out because they are beyond the scope of this study. However, the most important of these factors, the change in the pattern of British foreign trade and investment, must be mentioned. During that period, especially after 1886, the British foreign economic **policy**

- (123) An American observer related the decline of British trade in Turkey to conservative marketing methods employed by the British, see, C.M.Pepper, Report on Trade Conditions in Turkey, Washington, D.C., 1907, pp.32-37. The Foreign Office was also of the same opinion: "...British merchants were content to rest on their reputation and neglected to take measures to counter the progressive methods of rival countries," Anatolia, p.107.
- (124) "Regulations in Force in Foreign Countries with regard to British Commercial Travellers," Accounts & Papers, 1904, vol.xcv, pp.1-26.
- (125) Foreign Office Annual Series, no.3170, (Cd.1766), 1904, pp.703-726; no.3467, (Cd.2236), 1905, pp.221-248; no.3722, (Cd.2682), 1906, pp.129-156.

changed; the principles of free-trade were either abandoned or modified with the introduction of preference systems; and British concentrated her efforts to develop trade within the British Empire. Exports to foreign countries declined while exports to British possessions increased. The rate of growth of imports from foreign countries was outstripped by that of imports from colonies. Imperial Trade Commissioners were appointed to develop inter-imperial trade; colonial government and railway stocks were included in what was known as "Trustee Stocks" which enabled colonies to borrow money at rates generally unobtainable by other countries, etc. The decline of British trade in Turkey, assisted by internal factors there, was only a part of a greater change.

The British merchants in Smyrna were unable to comprehend this process or perhaps they did not want to understand it. Summarizing the results of British trade in Turkey, E. Whittall expressed the sentiments of his colleagues succinctly and bitterly:

"We have been working for years and years with diminishing trade with Turkey, and have borne the heat and the burden of the day, hoping there would be some improvement. We found ourselves thrown out on the street, very nicely and politely, but still thrown out on the street," (126).

(126) O. Mance, "The Future of British Trade with Turkey," Journal of the Royal Central Asian Society, vol. xxx, 1943, p. 17.

APPENDIX I

Value of Smyrna's Exports, 1864-1912

<u>Year</u>	<u>Value (£)</u>	<u>Year</u>	<u>Value (£)</u>
1864	4,046,338	1892	3,647,512
1865	3,842,285	1893	3,282,761 (*)
1866	3,606,240	1894	4,323,839
1867	4,455,170	1895	4,334,097
1868	4,632,270	1896	3,734,000 (*)
1869	4,540,350	1897	3,100,000
1870	3,620,450	1898	3,294,529
1871	4,043,280	1899	3,782,781
1872	4,866,800	1900	4,157,405
1873	4,499,000	1901	4,413,370
1874	3,940,000	1902	4,275,233
1875	3,896,000	1903	4,833,931
1876	4,630,000	1904	4,754,533
1877	4,687,491	1905	4,504,162
1878	3,542,944	1906	4,973,412
1879	4,406,699	1907	4,690,107
1880	3,852,479	1908	4,452,983
1881	3,803,639	1909	5,036,000 (**)
1882	3,841,862	1910	4,500,000
1883	4,710,756	1911	4,400,000
1884	4,820,383	1912	4,000,000 (*)
1885	4,315,340		
1886	4,331,536		
1887	4,099,310(*)		
1888	3,867,083		
1889	4,535,975		
1890	3,708,149		
1891	3,927,182		

*Estimate by the British Consul.

** Including exports from Scala Nuova and Chesme.

Sources: See Table 3.

CHAPTER X

CONCLUSION

The gradual dissolution of the Ottoman Empire and the question of which European Powers would add to their own the territories dismembered from Turkey was one of the most momentous issues of the XIX Century international politics. While some powers, which were not always the same ones at different times, were very willing to assist this process of disintegration some others tried to slow it down. With varying degrees of eagerness at different periods, Great Britain was the most interested party in preserving the integrity of the Turkish Empire (1). In 1842 Stratford Canning, later Lord Stratford de Redcliffe, was appointed as the British Ambassador in Constantinople with a broader commission to work for a reform movement in Turkey. The idea was that an administratively and financially strong Turkey would resist more **successfully** the internal and external forces creating a centrifugal movement.

In spite of the deep political understanding between the two countries, until after the Crimean War the British capitalists showed a marked reluctance for undertaking any investment projects in Turkey. Even in the mania year of 1845, when the number of railway projects submitted to the British public for subscription was at its highest, not a single prospectus was produced by a company or a promoter to build a railway in Turkey.

(1) The economic and political motives behind Britain's interest in the revival of the decaying Turkish Empire are examined in, F.E. Bailey, British Policy and the Turkish Reform Movement, Cambridge, Mass., 1942; E.L. Jenks, The Migration of British Capital to 1875, London, 1938, chapter x.

The end of the Crimean War can be taken as the beginning of the inflow of British capital into Turkey where the British enjoyed immense prestige in consequence of their success in building up an image as the most faithful allies of the Sultan. In a short period of time the British influence in Turkey grew into such gigantic dimensions that at one time the British Ambassador was thought to wield more power than the Sultan himself in the running of the Empire. Lord Redcliffe was nicknamed "Elci Sultan" meaning "Ambassador Sultan," and, in 1864 Sir Austen Henry Layard, then the Undersecretary of State for Foreign Affairs, could write to Lord Russell:

"I wish we could get Namik Pasha removed. He is a most mischievous fellow,"

to which the Foreign Secretary would reply:

"Write to Stuart (W. Stuart, the British Charge d'Affaires in Constantinople) to try and get Tevfik Pasha in his place"(2).

The fate of a senior Ottoman civil servant could thus be sealed by an official in the British Embassy. Hostility towards the British, or even disagreement with the British, could be interpreted as treason. For example, Said Pasha, the Private Secretary of the Sultan, wrote to Layard:

(2) B.L. Add.MSS, 38990, Layard Papers, vol.lx, f.395.

"I perfectly agree with Your Excellency that England alone has an interest in maintaining Turkey as a strong and independent Empire and that it is logical that you should desire your ally a strong and not a weak Power. I cannot understand how some of our Ministers should not see this and entertain such foolish suspicions about the sincerity of England's intentions. The truth is that the ignorance of these men makes them enemy of their country" (3).

There was even a very highly placed Porte official, who styled himself "Englander" but whose real name we shall never know, who reported every minute detail of the Cabinet meetings to the British Ambassador because he thought that for the benefit of the Ottoman Empire, England should know everything including the state secrets (4).

The **amiability** of the Turkish government was a unique opportunity for the British. On the one hand it meant that the territorial integrity of the Ottoman Empire could be maintained under close British surveillance, and, on the other, British industrialists would find a ready market for their manufactures. At the ceremony of the laying of the foundation stone of the Caravan Bridge station on the Smyrna-Aidin Railway, Lord Redcliffe summarized the intentions of British capital in Turkey:

(3) B.M. Add.MSS, 39023, Layard Papers, vol.xciii, ff.163-167.

(4) These reports are in, B.M. Add.MSS, 39015-39017, Layard Papers, vols.lxxxv-lxxxvii.

"The railway is expected to prove a beneficial investment of capital, stimulating the introduction of our manufactures. I need not tell you that Europe has more than ever a deep stake in the regeneration of Turkey. Western civilization is knocking hard at the gates of the Levant, and if it be not allowed to win its way into regions where it has hitherto been admitted so partially, it is but too capable of forcing the passage and asserting its pretensions with little regard for anything but their satisfaction. It is manifestly our business to encourage those fertilizing enterprises which, like your railway, may help to infuse new vigour into the veins and sinews of Turkey" (5).

It was against this political background that British capital found its way into Turkey.

Any attempt to evaluate the exact role of foreign investment in the economic development of Turkey in general and of Western Anatolia in particular, is bound to be marred by the scarcity of data on the general conditions within which foreign capital operated. Without a thorough knowledge of these conditions one cannot draw meaningful conclusions about the direction towards which the Turkish economy was pulled by the British, French, or German capital, nor can one say that the investments of a particular nation were more 'successful' than those of another in promoting economic development. On a lower scale of abstraction where all-embracing gene-

(5) Times, 16th Nov., 1858.

realizations are not required the task of evaluation is relatively easier because one can usually compare all available information on a microcosm of historical events and reach some operational conclusions, however imperfect and imprecise they may be. Or in the absence of comparative data on such a microcosm one can hazard a conjecture by weighing up available evidence against what appears to be the non-existence or extreme scarcity of information. This last point can be illustrated by the following example. There is very little evidence about the use of wage-labour by Turkish landlords until the 1870's whereas the British were known to have employed wage-labour on their estates at least five or six years before its wider application by the natives. Although the information is insufficient it still carries a lot of weight in favour of the British enough to credit them with the introduction of capitalist agriculture in Western Anatolia. What we do not know is **whether perhaps** the Turkish landlords employed wage-labour on a smaller or larger scale even before or simultaneously with the British, **But** the fact that this was not mentioned either in Turkish sources, which showed a marked apathy for such subjects, or in foreign sources, which were too pre-occupied with recording the successes or failures of the foreigners, leads to the inescapable conclusion that it was the British who pioneered in this field. Fortunately more information is available on other subjects and one is not forced to base his conclusions on what amounts to be an unwarranted comparison of facts with the lack of recorded evidence.

In as far as the technological aspects of agricultural development were concerned one can safely assert that it was the British who first used agricultural machinery and other advanced techniques such as crop rotation, irrigation, draining, etc. on their estates. In industry, too, the British were first in the introduction of power-driven machinery and improved production processes in cotton ginning, olive-oil and tannin extraction, liquorice and soap making, and carpet weaving. If J.Gout's experiments with electrically driven machinery had succeeded his would have been the first plant in the world using electricity as source of power. Werner Siemens's application of electricity in industry came in 1867, four years later than Gout's abortive attempt.

The introduction of modern business techniques such as insurance and banking was also due to the British. The first bank in Turkey was the Bank of Smyrna, owned by the Whittall and LaFontaine families and seven other British merchants, which opened its doors to the public in 1842, almost 15 years before the Ottoman Bank (6).

In mining it is only fair to say that more than half of Turkey's present day chrome exports comes from the deposits discovered by the British in the XIX Century. Abbott's emery mines, though very much

(6) In 1843 the Bank of Smyrna was closed by the Ottoman government following a dispute about its legal position, PKO,FO 195/177, Brant to Canning, no.3, 20th Jan., 1843.

depleted, still supply Turkey with important quantities of good quality abrasive material.

The growth of Smyrna as an export-import centre and the consequent rise in customs revenue; the taxes on the high profits of the mercantile community; and the increase in agricultural production in response to the stimulus of the railways, were important sources of revenue for the Imperial Treasury. Available figures show that in 1873-1877 the average annual value of Smyrna's customs revenue was about £230,000. Among the 20 ports having a customs house this figure was the second highest after Constantinople and constituted about 12% of the total customs revenue of Turkey (7). The transfers from the provincial budget to the Imperial Treasury amounted to £770,000 a year (8). In 1910 it was as high as £1.7m which was almost 15% of the total budgetary revenue of the Empire (9). A study investigating the effects of the extension of the Aidin Railway to Dinair on agricultural production found out that agricultural taxes increased by 19% in 1891-1896 over 1885-1890, by another 13% in 1897-1902, and by 16% in 1903-1906, with an overall growth of 36% between 1885-1890 and 1903-1906 (10). If the mining

(7) PRO,FO 78/3070, Baring to Layard, no.38, 22nd Oct., 1878.

(8) This figure is the average for the years 1893-1899, see, "Budget of the Aidin Vilayet," PRO,FO 195/1850,1899,1946,2030,and 2065.

(9) Ministère des Finances, Bulletin Annuel de Statistique, vo.iii, Constantinople, 1914, pp.8-9.

(10) A.Rey, Statistique des Principaux Resultats de l'Exploitation/Chemins des de Fer de l'Empire Ottoman, 12 vols., Constantinople, 1900-1913, no pagination. Between 1856 and 1909 tithes from the districts near the Aidin Railway increased by more than 13 times.

royalties paid by the British are added to these figures it becomes clear that the Imperial Ottoman Treasury was one of the main beneficiaries of the British presence in Western Anatolia.

This seemingly impressive list of achievements can be extended further but only at the expense of running **the risk of** ignoring other features of British investment in Western Anatolia. Firstly, there was the problem of Western Anatolia's specialization, under the stimulus of the British, in a very small number of exportable crops (11). Table 1 on page 278 illustrates the significance of Western Anatolia's dependence on export earnings from a limited number of commodities. Together with Table 2 on page 280 it shows that fluctuations in world markets produced correlated movements in export earnings, because productive capacity in raisins, opium, valonia, etc., could not be easily switched to some other line of production at times of falling demand, with the result that the economy of the Smyrna region became very vulnerable to external economic disturbances. During the cycles producers saw their incomes vary as much as 25% in less than eight years. The resulting uncertainty must have checked the flow of investment into agriculture in at least two ways: when the bu-

(11) Between 1864 and 1892, three commodities, dried fruit, valonia, and opium, constituted, on the average, 49.5% of Smyrna's exports. Their share in exports never fell below 30% and was as high as 65% in some years.

business cycle was in an upswing all efforts were concentrated to increase production as much and as soon as possible and there was little or no time to introduce improvements which would yield results after some time. During a downswing, on the other hand, there was no incentive to increase output through the use of advanced machinery and chemicals. Decreasing export earnings in a downswing meant decreasing incomes for producers which resulted in a decreasing volume of imports. Since almost all investment goods were imported from abroad, the instability of export earnings could not but affect investment in an unfavourable direction (12). In short, British capital was instrumental in linking Western Anatolia's economic fate, in P. Baran's words, "with the vagaries of the world market and connect(ing) it with the fever curve of international price movements" (13).

- (12) In 28 years out of the 48 between 1864 and 1912 exports from and imports into Smyrna moved in the same direction, i.e., when exports fell imports fell, too, and vice versa. When a one-year lag is introduced, assuming that this year's exports influenced next year's imports, the number of years in which exports and imports moved parallel to each other increases from 28 to 35 out of 48. This reveals a close relationship between export earnings and imports. An empirical study of 20 underdeveloped countries utilizing 1950-1959 data showed that variations in export earnings were responsible for some significant variations in the import capacity of these countries. However, only a weak relationship was observed between export earnings and the level of domestic investment, see, A.I. McBean, "The Short-Term Consequences of Export Instability," in, I. Livingstone, (ed.), Economic Policy for Development, Harmondsworth, 1971, pp. 215-231.
- (13) P.A. Baran, "On the Political Economy of Backwardness," in, A.N. Agarwala, S.P. Singh, (eds.), The Economics of Underdevelopment, New York, 1963, p.76.

We have seen that the wages paid by the British, with the exception of the Oriental Carpet Manufacturers, were higher than what was usually paid to the workers employed elsewhere. As far as the training of managerial and technical personnel was concerned the British did not show much interest in recruiting and educating the natives to be later employed as clerks, managers, mechanics, fitters, or machine operators. Almost all the technical and managerial staff in British establishments were expatriates. The same thing can also be said for other foreign-owned establishments in Western Anatolia. Although the Aidin Railway Company trained a considerable number of technical personnel, who later staffed the British engineering works in Smyrna, they were exclusively Greeks and when in 1923 they left the country the railway experienced difficulties in maintaining its services until new Turkish technicians were trained (14).

The nature of data does not permit us to enter into a discussion of whether British capital in Western Anatolia created a dual structure as it did, for example, in Peru, Ceylon, and Malaya, where foreign capital came to exploit some particular resource or climatic characteristics with the result that foreign enterprises in these countries became isolated, both geographically and economically,

(14) H. Woods, Economic and Commercial Conditions in Turkey, London, 1924, p.24.

from the rest of the host economy. What can be said is that British capital did not create many forward and backward linkages with the local economy through input-output relations and even if there were such linkages they were at any rate relatively weak. Forward linkages, by which is meant the creation of industries or processes which would use as inputs the output of British establishments, were weak because the sought-after product was usually exported in its raw state or after some very elementary processing. It was true that the exportation of agricultural crops provided employment opportunities in harvest time and during the preliminary treatment of these crops for the journey abroad, but nowhere were to be seen the factories which would turn them into finished products. Even cotton processing, which was the most developed industry in the 1860's, did not go beyond the simple stage of ginning and packing. The treatment of raisins and sultanas with sulphur was usually made on the spot and did not require elaborate arrangements. Exports of dried fruit and opium, however, called for the establishment of numerous small workshops making wooden boxes. With some exceptions, which were in British hands, these workshops employed very primitive techniques but gave a steady employment to hundreds of people. The weakness of forward linkages was most striking in mining where emery, chromium, manganese, antimony, etc., were exported as soon as dug up without undergoing any sort of processing. Since all the machinery and other inputs used in the export sector were imported from abroad backward linkages were even weaker. The establishment of British engineering works in Smyrna brought some changes but the dependence on imported inputs was never eliminated.

The profits made by the British in Western Anatolia were generally repatriated. There were, of course, instances where profits were re-invested either in the owner's own business or some other British establishment such as the Aidin Railway but their magnitude was negligible in comparison with the profits transferred abroad. There is no way of knowing the exact amount of profits re-invested in British enterprises but an examination of the files of the Smyrna Consular Court and various company records revealed that at least five British merchants and the Anglo-Eastern Co-Operative Co.Ltd. had invested £40,847 in the shares and the debenture stock of the Aidin Railway Company.

A lot of money has gone into real estate. According to tax returns, the value of British residential and commercial property in 1843 was £369,875; by 1861 it increased to £577,273 which constituted more than a quarter of the total value of property belonging to foreigners (15). In 1877 the British paid £22,000 tax on the purchase value of their property in Smyrna. On the basis of a 0.8% tax rate this was equal to £2,750,000. In the four years between 1877 and 1881 the British bought £1,625,000 worth of houses, hotels, shops, warehouses in Smyrna bringing the total value of

(15) PRO, FO 195/177, Brant to Canning, no.15, 2nd June, 1843; PRO, FO 195/720, Blunt to Bulwer, no.26, 2nd Aug., 1862.

their holdings to £4,375,000 at purchase price (16). In 1892 the British Consul in Smyrna could categorically declare that British subjects' holdings of land and other property were "by far the largest in this country"(17). The growth of trade which required additional warehouse space and larger commercial premises was one of the factors that led to the concentration of real estate in British hands. Another factor was the ease with which large profits could be made by speculating in the property market. In 1857, for example, property prices near the projected route of the Aidin Railway increased five times in a matter of two months. In 1874 it was reported that even grave prices had increased nearly ten times in less than five years (18). The speculative motive which appeared because of the positive difference between the discounted rate of return on capital from investments in property and investments elsewhere, was also strengthened by the greater degree of

- (16) PRO,FO 195/1417, "Report on Property Tax," 25th Feb., 1882. These figures represent the purchase value of property and do not take into account the increase in value through years. They also exclude the value of British property in other towns. They would be much larger if the value of the palatial British mansions in Bournabat and Boudja, which even today catch one's eye for their architectural beauty and spaciousness, and the value of British residences and other commercial buildings in the interior were added to them.
- (17) PRO,FO 195/1770, Holmwood to Salisbury, no.1, 1st Jan., 1892.
- (18) PRO,FO 195/527, Blunt to Clarendon, no.49, 9th Nov., 1857; PRO,FO 626/11/511, Pitway, Administration, 1874-1876. The same phenomenon was also observed in other countries where new railways were built. In Argentina, for example, land and property prices in Buenos Aires, Santa Fe, Cordoba, and in parts of Corrientos increased four to ten times immediately after the announcement of railway projects, see, H.S.Ferns, Britain and Argentina in the Nineteenth Century, Oxford, 1960, p.328, and, pp.410-424. The relationship between foreign investment in social overhead capital and increased property prices in the XIX Century is examined in J.D.Gould, Economic Growth in History, London, 1972, pp.182-191.

security offered by investments in real estate than in commerce or agriculture where fortunes were subject to wild fluctuations. The legal reforms of the 1860's which guaranteed the right of foreigners to own and inherit real property were important steps contributing to the growth of British holdings of real estate.

Profits and capital were repatriated in different ways. Firstly, there was the purchase of land and other property in England (19). We do not know much about the extent of this method. Secondly, repatriation of profits and capital occurred whenever a British merchant died and bequeathed his estate to heirs in England. Although the exact amount of these transfers is not known (the wills specified the shares to be allocated to each heir but not the amount) this method seemed to account for the largest proportion of transfers because it was through this way that the wealthiest British merchants in Smyrna such as the Whittalls, Pattersons, etc., assigned their property to heirs in England and elsewhere in the world. The third method was practised when a British merchant died intestate. In such cases the Consular Court appointed an administrator to manage the estate who converted it into cash, invested the proceeds in property or shares, and made periodical payments to the inheritors from out of the interest and rent earned by the principal. Between 1865 and 1894 the Consular Court granted 91 letters of administration. These estates were

(19) A.O. Clarke, for example, bought the Pettingales Farm in Mill Hill and the Bradmore Estate in Hammersmith, PRO, FO 626/17/714, Clarke, Probate, 1892.

claimed to be worth £276,416 which seemed to be an understatement. In order to check the consistency of these claims we drew a 10% random sample (See Appendix 1) and found out that the nine estates in the sample, which had been claimed to be worth £11,655, were in fact worth £162,072, an understatement of nearly 14 times. We, therefore, multiplied the total claimed value of the estates by this number to reach a more correct estimate.

The fourth method was the formation of a trust fund as directed by the will of the deceased. If the Consular Court accepted the will as legitimate it would grant a probate certificate and the estate would be converted into cash to be "invested in the purchase of freehold, copyhold, or leasehold hereditaments in England or Wales and in the stocks funds, shares, or securities mentioned or referred to in Section 3 of the Trust Investment Act." Some wills were more specific and gave a list of companies in whose shares the proceeds should or should not be invested. The number of trusts formed in this way was 61. The fifth and the last method of transfer was the investments made by the British merchants in the shares of companies abroad. Forty-nine British merchants made such investments in more than 250 companies which included the Transvaal Land, Eastern Rubber Trust, Rio Tinto, Lena Goldfields, Surrey Commercial Dock, Eastrand, Credit Foncier Egyptien, Thomson Hellenic Electricity, British and Continental Sugar Refining, Societe Commercial Belge, and the Metropolitan Board of Works. Table 1 shows the amount of profits and capital transferred abroad by the British merchants in Smyrna.

Table 1
 Estimate of Profits and Capital Transferred
 Abroad by British Merchants in Smyrna.

<u>Method of Transfer</u>	<u>Amount (£)</u>
Administrations	3,845,000*
Trust Funds	2,675,748
Investment in Shares, etc.	641,800
TOTAL	7,162,548

*Estimate based on a 10% sample.

Source: Smyrna Consular Court, Returns of Probates and Administrations, 1864-1912.

These transfers were spread over a period of 40 years which gives a yearly figure of about £180,000. If allowance is made for other methods of transfer explained above the total would probably rise to £10m. with an annual rate of transfer of £250,000. This latter figure is slightly higher than the annual revenue of the Smyrna Customs House and it is almost equal to the average annual amount of agricultural taxes collected from the Aidin Province.

To this must be added the transfers by the British joint-stock companies operating in Western Anatolia. In the absence of reliable information on the net profits and interest payments on the debenture stock of these companies we assumed that their annual transfers amounted to £100,000. Expenditure and revenue accounts of the Aidin Railway are available for the period 1867-1911, excluding 1886 and 1887. From these figures we have calculated the annual net profits of the railway. According to the concession of the company profits in excess of £142,720 were shared equally with the Ottoman government which, on the other hand, guaranteed to make up the diffe-

rence if yearly profits fell below £112,000. The Aidin Railway Company's profit transfers, therefore, consisted of three components: net profits after deducting the share of the Ottoman government, profits which were less than the guaranteed amount, and the subsidies received from the Ottoman government to bring the second item to the guaranteed amount (See Appendix 2). To these we added the interest payments on the company's debenture stock (See Appendix 3).

Table 2
Profits and Interest Transferred by
the Smyrna-Aidin Railway Co.*

<u>Source of Transfer</u>	<u>Amount (£)</u>
Excess profits after deducting the share of the Ottoman government	3,830,947
Profits transferred being less than the guaranteed amount	700,019
Subsidies received from the Ottoman government	1,427,981
Interest payments on debenture stock	4,932,050
TOTAL	10,890,997

* Excluding 1886-1887

Source: Rapport et Etats des Comptes, 1890-1910; H. Schmidt, Das Eisenbahnwesen in der Asiatischen Turkei, Berlin, 1914. p.94; N.Vernay, G.Dambmann, Les Puissances Etrangères dans le Levant, Paris & Lyon, 1900, p.234; D.Georgiades, Smyrne et l'Asie Mineure, Paris, 1885, p.184; "Report by Major Law on Railways in Asiatic Turkey," Accounts & Papers, 1896, vol.xcvi, pp.761-794.

These calculations are recapitulated in Table 3:

Table 3
Profits Transferred by the British
from Western Anatolia (£)

Transfers by merchants	10,000,000
Transfers by the Aidin Railway	10,900,000
Transfers by other companies	4,000,000
TOTAL	24,900,000

This is equal to the total amount of British investment in Turkey before World War I. It appears that during the half-century between 1864 and 1913 the British recovered the cost of all their investments in Turkey from profits made in Western Anatolia alone.

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APPENDIX 1: Claimed and True Values of Estates (10% sample)

<u>Claimed (£)</u>	<u>True Value (£)</u>	<u>Source:PRO,FO 626/</u>
6,330	10,400	17/746
400	2,691	13/574
1,200	1,913	10/430
3,000	19,911	12/534
100	39,721	14/599
125	10,000	14/620
50	6,020	15/647
150	46,053	16/679
300	671	16/707

Sources: First Column: Smyrna Consular Court, Annual Returns of Administrations Granted.
 Second Column: Individual files as detailed in Column Three.

APPENDIX 2 : Profits Transferred by the Aidin Railway Company (£)

<u>Year</u>	<u>Profit</u>	(Subsidy) from or payment to the <u>Ottoman government</u>	<u>Net transfer</u>
1867	12,481	(99,519)	112,000
1868	8,047	(103,953)	112,000
1869	16,759	(95,241)	112,000
1870	18,380	(93,620)	112,000
1871	15,232	(96,768)	112,000
1872	24,710	(87,290)	112,000
1873	23,870	(88,130)	112,000
1874	19,058	(92,942)	112,000
1875	15,414	(96,586)	112,000
1876	37,493	(74,507)	112,000
1877	37,338	(74,662)	112,000
1878	37,143	(74,857)	112,000
1879	37,473	(74,527)	112,000
1880	35,521	(76,479)	112,000
1881	34,514	(77,486)	112,000
1882	61,546	(50,454)	112,000
1883	60,857	(51,143)	112,000
1884	116,897	nil	116,897
1885	101,711	(10,289)	112,000
1886-1887	not available		
1888	122,801	nil	122,801
1889	159,151	8,216	150,935
1890	160,593	8,937	151,656
1891	178,231	17,756	160,475
1892	155,544	6,412	149,132
1893	173,824	15,552	158,272
1894	143,434	357	143,077
1895	173,888	15,584	158,304
1896	184,959	21,120	163,839
1897	197,757	27,519	170,238
1898	102,472	(9,528)	112,000
1899	122,983	nil	122,983
1900	148,885	3,083	145,802
1901	199,536	28,408	171,128
1902	195,114	26,197	168,917
1903	193,453	25,367	168,086
1904	215,622	36,451	179,171
1905	215,927	36,604	179,323
1906	199,389	28,335	171,054
1907	193,686	25,483	168,203
1908	192,499	24,890	167,609
1909	194,219	25,750	168,469
1910	222,307	44,794	187,513
1911	231,407	44,344	187,063

Sources: See Table 2

APPENDIX 3 : Interest Payments on Aidin Railway Debenture Stock (£)

	<u>Year of Issue</u>	<u>Face Value</u>	<u>Reimbursement Date</u>	<u>Total Interest Payment</u>
1st Series	1863-73	892,000	1908	2,140,800*
2nd Series	1880	350,000	1910	525,000
3rd Series	1882	100,000	1910	140,000
4th Series	1883	175,000	1910	236,250
5th Series	1886	300,000	1910	360,000
6th Series	1886-89	1,100,000	1935	1,430,000**
7th Series	1893	100,000	1925	100,000***

*Calculated between 1868-1908

**Calculated between 1887-1913

*** Calculated between 1893-1913

Sources: See Table 2

BIBLIOGRAPHY

Note on the Published Accounts of the Smyrna-Aidin Railway Company:

The reports of the Board of Directors and the summaries of the proceedings of half yearly meetings were, with minor variations, published almost regularly in: Herapath's Railway Magazine, Railway Times, Railway Record, Railway Gazette, and, Times. In order to economize footnote space, these reports and summaries are referred to in the text as Directors' Report and Half Yearly Meeting, without giving the particular details of the sources in which they were published. These references are followed by a date which shows the date of publication and not the actual date of the report or the meeting. However, these two sets of dates can be taken as identical because there was only one, in some cases two, days between them. In all these periodicals the name of the company was abbreviated as the "Ottoman Railway from Smyrna to Aidin," while its registered name was the "Ottoman Railway from Smyrna to Aidin of His Imperial Majesty the Sultan."

NOTE ON TRADE REPORTS

Until 1862 Consular reports on the commercial situation of Smyrna were written at quarterly intervals. In 1862 the Consuls were instructed to submit annual reports and include in their dispatches the reports they received from the Vice-Consuls and the Consular Agents in their districts. In 1864 the Foreign Office started to send the original copies to the Board of Trade. All the incoming Board of Trade correspondence after 1864 were destroyed during the Second World War including the originals of the Smyrna trade reports. However, printed copies of these reports (abridged and edited by the Foreign Office after 1900) are available in Accounts & Papers. Until 1887 they were published under the general heading of "Commercial Reports," and later were incorporated in the Foreign Office Annual Series.

A) Unpublished Sources

1) Public Record Office (PRO)

a) Foreign Office Archives (FO)

<u>Class No.</u>	<u>Description</u>
78	General Correspondence: Smyrna Consular Reports, 1894-1905
83	Great Britain: General
84	Slave Trade
195	Embassy and Consular Archives: Smyrna Consulate, 1830-1911
198	Embassy and Consular Archives: Miscellaneous
424	Confidential Print
626	Smyrna Consular Court Files. (Including extracts from the records of the Smyrna Property Tax Department and Smyrna Land Registry Office).

b) Board of Trade Records (BT)

<u>Class No.</u>	<u>Description</u>
31	Files of Dissolved Companies (Ashridge)
	Index of Companies in the Register, 4 vols.

2) British Museum (B.M.)a) Add.MSS, Layard Papersb) Add.MSS, Liverpool Papersc) Map Room: Call marks 46986 (1.); 46986 (2.);
Maps 145.b.2.(2.)

E) Published Sources

1) Official and Semi-Official Publications, Collections, etc.

Accounts & Papers

Admiralty Intelligence Department, Notes on the Geography of Asia Minor, London, 1916.

Admiralty Intelligence Department, Handbook of Asia Minor, 4 vols., London, 1919.

Bulletin Annuel de Statistique, vol.iii, Constantinople, 1914.

Catalogue General Officiel de la Section Ottoman, Bruxelles, 1910.

Certificates of Naturalization Granted, etc., 3vols., London, 1908-16.

Foreign Office, Anatolia, London, 1919.

Foreign Office Annual Series.

Hertslet, L., A Complete Collection of Treaties, etc., London, various editions.

London Stock Exchange, Register of Defunct and Other Companies, London, 1960.

Programme du Ministere des Travaux Publics, Constantinople, 1909.

Turk Ziraat Tarihine bir Bakis, (A Survey of Turkish Agricultural History), Istanbul, 1938.

Young, G., Corps de Droit Ottoman, 6 vols., Oxford, 1905.

2) Periodical Publications, Newspapers, etc.

Annual Register

Annuaire Oriental

Bradshaw's Shareholders Guide

Board of Trade Journal

Ceride-i Havadis

Cotton Supply Reporter

Journal of the Board of Agriculture

London Gazette

Manchester Guardian

Newcastle Daily Chronicle

Railway Gazette

Railway Magazine

Railway News

Railway Record

Railway Times

La Reforme

Takvim-i Ticaret

Times

3) Reports, Pamphlets, Miscellaneous Publications

Chemin de Fer Ottoman de Smyrne a Aidin, Rapport et Etats des Comptes, 15 vols., Constantinople, 1896-1910.

Enquete sur les Causes de l'Encombrement, etc., Marseilles, 1897.

Layard, A.H., The Condition of Turkey, London, 1863.

Liverpool Chamber of Commerce, Trade with Turkey, Liverpool, 1879.

Manchester Cotton Supply Association, Cotton Culture in New or Partially Developed Sources of Supply: Report of Proceedings, Manchester, 1862.

Millingen, F., Slavery in Turkey, (Proceedings of the Anthropological Society of London), London, 1870.

Ottoman Railway Company, Statutes of the Company, London, 1856.

Ottoman Railway Company, Report of the Committee of Investigation, London, 1867.

Pepper, C.M., Report on Trade Conditions in Turkey, Washington, D.C., 1907.

Picot, H., Railways in Western Asia, (Proceedings of the Central Asian Society), London, 1904.

Prospectus of the Asia Minor Co.Ltd., Manchester, 1863.

Prospectus of the New Levant Free Trading Company, London, 1825.

Ravndall, G.B., Turkey, A Commercial and Industrial Handbook, Washington, D.C., 1926.

Rey, A., Statistique des Principaux Resultats de l'Exploitation des Chemins de Fer de l'Empire Ottoman, 12 vols., Constantinople, 1900-1913.

Sandford, W., On Cotton Growing in Turkey and Syria, London, 1862.

Tekeli, I., The Evolution of Spatial Organization in the Ottoman Empire, (Paper Submitted at the 21st Annual Near East Conference), 1970.

Woods, H., Economic and Commercial Conditions in Turkey, London, 1924.

4) Books

- Ahrons, E.L., The British Steam Railway Locomotive 1825-1925, London, 1925.
- (Ali Cevad), (Memalik-i Osmaniyyenin Tarih ve Coğrafya Lugati), (Historical and Geographical Dictionary of the Ottoman Empire), 2 vols., Dersaadet, 1313, (1896).
- Aulneau, J., La Turquie et la Guerre, Paris, 1916.
- Avcioglu, D., Turkiye'nin Duzeni, (The Order of Turkey), Ankara, 1968.
- Bailey, F.E., British Policy and the Turkish Reform Movement, Cambridge, Mass., 1942.
- Barkan, O.L., Osmanli Imparatorlugunda Zirai Ekonominin Hukuki ve Mali Esaslari, (The Legal and Financial Foundations of the Agricultural Economy of the Ottoman Empire), Istanbul, 1941.
- Blaisdell, D., European Financial Control in the Ottoman Empire, New York, 1929.
- Bonne, A., State and Economics in the Middle East, London, 1948.
- Boserup, E., The Conditions of Agricultural Growth, London, 1970.
- Broadbridge, S., Studies in Railway Expansion and the Capital Market in England 1825-1873, London, 1970.
- Cairncross, A.K., Home and Foreign Investment, Cambridge, 1953.
- Chandler, G., Liverpool Shipping, London, 1960.
- Chesson, F.W., Turkey and the Slave Trade, London, 1877.
- Childs, W.J., Across Asia Minor on Foot, London, 1917.
- Chisholm, M., Rural Settlement and Land Use, London, 1968.

- Clarke, H., History of British Colony at Smyrna, Constantinople, 1860.
- Clarke, H., The Imperial Ottoman Railway, London, 1861.
- Clough, S.B., and, C.W.Cole, Economic History of Europe, Boston, 1952.
- Conker, O., Les Chemins de Fer en Turquie et la Politique Ferroviaire Turque, Paris, 1935.
- Cuinet, V., La Turquie d'Asie, 5vols., Paris, 1894.
- Dobb, M., Studies in the Development of Capitalism, London, 1967.
- Dominian, L., The Frontiers of Language and Nationality in Europe, New York & London, 1917.
- Durrant, A.E., The Steam Locomotives of Eastern Europe, Newton Abbot, 1966.
- Dutemple, E., En Turquie d'Asie, Paris, 1883.
- duVelay, A., Essai sur l'Histoire Financiere de la Turquie, Paris, 1903.
- Eilon, S., and, C.D.T.Watson-Gandy, N.Christofides, Distribution Management: Mathematical Modelling and Practical Analysis, London, 1971.
- Eldem, V., Osmanli Imparatorlugunun Iktisadi Sartlari Hakkinda bir Tetkik, (A Survey of the Economic Conditions of the Ottoman Empire), Ankara, 1970.
- Evans, D.M., The History of the Commercial Crisis 1857-1858, London, 1859.
- Fay, C.R., Great Britain from Adam Smith to the Present Day, 5th ed., London, 1962.
- Feis, H., Europe, the World's Banker 1870-1914, New York, 1965.
- Ferns, H.S., Britain and Argentina in the Nineteenth Century, Oxford, 1960.

- Fishlow, A., American Railroads and the Transformation of the Ante-Bellum Economy, Cambridge, Mass., 1965.
- Fogel, R.W., Railroads and American Economic Growth, Baltimore & London, 1964.
- Fraser, D., The Short Cut to India, London & Edinburgh, 1909.
- Galante, A., Histoire des Juifs d'Anatolie: Les Juifs d'Izmir, 2 vols., Istanbul, 1937-1939.
- Georgiades, D., Smyrne et l'Asie Mineure, Paris, 1885.
- Georgiades, D., La Turquie Actuelle, Paris, 1892.
- Gould, J.D., Economic Growth in History, London, 1972.
- Graham, R., Britain and the Onset of Modernization in Brazil 1850-1914, Cambridge, 1972.
- Henderson, W.O., The Lancashire Cotton Famine 1861-1865, Manchester, 1934.
- Hicks, J., A Theory of Economic History, Oxford, 1969.
- Hoover, E.M., The Location of Economic Activity, New York, 1948.
- Jenks, L.H., The Migration of British Capital to 1875, London, 1938.
- Kindleberger, C.P., Economic Growth in France and Britain 1851-1950, Cambridge, Mass., 1964.
- Knowles, L.C.A., The Industrial and Commercial Revolutions in Great Britain during the Nineteenth Century, London, 1946.
- Lewis, B., The Emergence of Modern Turkey, 2nd ed., Oxford, 1968.

- Makai, O., Grundungswesen und Finanzierung in Ungarn, Bulgarien, und der Turkei, Berlin, 1916.
- Marghetitch, M.S., Etude sur les Chemins de Fer de l'Empire Ottoman, Bruxelles, 1894.
- Martineau, A., La Commerce Francais dans le Levant, Paris & Lyon, 1902.
- Mears, E.G., Modern Turkey, New York, 1924.
- Michelsen, E.H., The Ottoman Empire and its Resources, London, 1854.
- Okcun, A.G., Osmanli Sanayii, (The Ottoman Industry), Ankara, 1970.
- Onur, A., Turkiye Demiryollari Tarihi 1860-1953, (A History of the Turkish Railways 1860-1953), Istanbul, 1953.
- The Oxford History of England, vol.xiii, Oxford, 1962.
- Les Paquebots du Levant, Paris, 1853.
- Pech, E., Manuel des Societes Anonymes Fonctionnant en Turquie, Paris, 1902.
- Pickering, W.P., The Ottoman Railway, London 1867
- Pierce, J.E., Life in a Turkish Village, New York, 1964.
- Pretextat-Lecomte, M., Les Arts et Metiers de la Turquie et de l'Orient, Paris, 1902.
- Puryear, J.V., International Economics and Diplomacy in the Near East, London, 1935.
- Ramsay, W.W., The Intermixture of Races in Asia Minor, London, 1916.
- Rhodes, D.E., Dennis of Etruria, London, 1973.
- Rostow, W.W., British Economy of the Nineteenth Century, Oxford, 1968.

- Rougon, F., Smyrne, Situation Commerciale et Economique, Paris & Nancy, 1892.
- Salahaddin Bey, La Turquie a l'Exposition Universelle de 1867, Paris, 1867.
- Saul, S.E., Studies in British Overseas Trade 1870-1914, Liverpool, 1960.
- Scherzer, C.D., La Province de Smyrne, Vienne, 1873.
- Schmidt, H., Das Eisenbahnwesen in der Asiatischen Türkei, Berlin, 1914.
- Schmidt, H.W., Auskunftsbuch für den Handel mit der Türkei, Leipzig, 1917.
- Senior, N.W., Journal Kept in Turkey and Greece, etc., London, 1859.
- Shaw, W.A., The Knights of England, 2 vols., London, 1906.
- Smith, C.L., The Embassy of Sir William White at Constantinople 1886-91, Oxford, 1957.
- Stephenson, R.M., Railways in Turkey, London, 1859.
- (Suavi Efendi), (Turkiya sene 1290), (Turkey in 1873), Paris, 1873.
- Tak, H.G., and, A.Ray, The Economic Benefits of Road Transport Projects, Baltimore & London, 1971.
- Tsakyoglou, M., L'Epidemie Cholérique de Smyrne en 1893, Smyrna, 1894.
- Tuncer, H., Osmanli Imparatorlugunda Toprak Kanunlari, (Land Laws in the Ottoman Empire), Ankara, 1965.
- Ubicini, A., Lettres sur la Turquie, 2vols., Paris, 1853-1854.
- Union Micrasiatique de Smyrne, Etude sur l'Avenir Economique de l'Asie Mineure, Paris, 1919.
- Urquhart, D., Turkey and its Resources, London, 1833.
- Vernay, N., and, G.Dambmann, Les Puissances Etrangères dans le Levant, Paris & Lyon, 1900.
- Wood, A.C., A History of the Levant Company, London, 1964.

5) Articles

"A Railway Engineer's Journey in Persia," Journal of the Royal Central Asian Society, vol.ix, pt.2, 1922.

Baran, P.A., "On the Political Economy of Backwardness," in, A.N. Agarwala, and, S.P.Singh, The Economics of Underdevelopment, New York, 1963.

Bonne, A., "Some Aspects of the Recent Socio-Economic Changes in the Middle East," Journal of the Royal Central Asian Society, vol.xxvii, 1940.

Bunsen, M., "The New Levant Company," Journal of the Royal Central Asian Society, vol.iii, pt.1, 1920.

Collins, E.J.T., "Labour Supply and Demand in European Agriculture 1800-1880," in, E.L.Jones, and, S.J.Woolf, (eds.), Agrarian Change and Economic Development, London, 1969.

(Demirzakis, E.D.), "ΒΙΟΜΗΧΑΝΙΚΗ ΠΑΡΑΓΩΓΗ ΝΟΜΟΥ ΑΙΔΙΝΙΟ," (Industrial Production of Aidin), ΜΙΚΡΑΣΙΑΤΙΚΑ ΧΡΟΝΙΚΑ, vol.xiii, 1967.

Gunderson, G., "The Nature of Social Saving," Economic History Review, 2nd series, vol.xxiii, 1970.

Hanson, T.O., "Recollections of Smyrna," ΜΙΚΡΑΣΙΑΤΙΚΑ ΧΡΟΝΙΚΑ, vol.xiii, 1967.

Jensen, J.H., and, G.Rosegger, "British Railway Builders along the Lower Danube," Slavonic and East European Review, vol.xlvi, 1968.

Koymen, O., "The Advent and Consequences of Free Trade in the Ottoman Empire," Etudes Balkaniques, vol.vii, 1971.

Kurmus,O., "Britain's Dependence on Foreign Food and some Railway Projects in the Balkans," NETU Studies in Development, vol.i, 1971.

Lewis,B., "The Impact of the French Revolution on Turkey," in, G.S.Metraux, and, F.Crouzet,(eds.), The New Asia, New York, 1965.

Lewis,B., "The Islamic Guilds," Economic History Review, 1st series, vol.viii,1937-1938.

Mance,O., "The Future of British Trade with Turkey," Journal of the Royal Central Asian Society, vol.xxx,1943.

McBean,A.I., "The Short-Term Consequences of Export Instability," in, I.Livingstone, (ed.), Economic Policy for Development, Harmondsworth,1971.

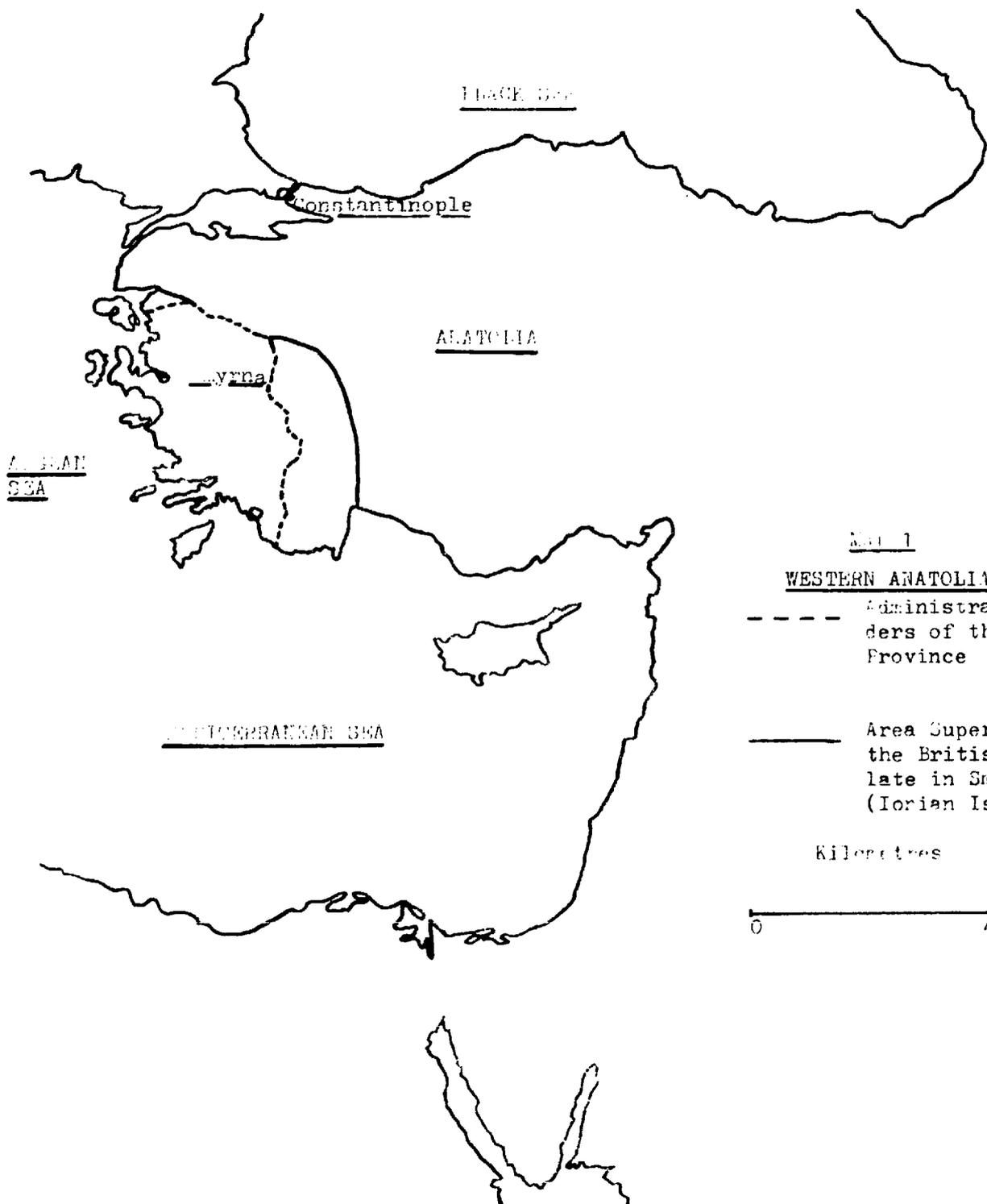
Okcun, A.G., "XX. Yuzyil Baslarinda Osmanli Maden Uretiminde Turk, Azinlik, ve Yabanci Paylari," (The Shares of Turks, Minorities, and Foreigners in Ottoman Mining at the Beginning of the XX Century), in, Abadan'a Armagan, (Essays in Honour of Y.Abadan), Ankara, 1969.

Rogers,E.M., "Motivation, Values, and Attitudes of Subsistence Farmers," in, C.R.Wharton, (ed.), Subsistence Agriculture and Economic Development, London, 1970.

Sarc,O.C., "Tanzimat ve Sanayimiz," (Tanzimat and Industry), in, Tanzimat, Istanbul, 1940.

Schultz,T.W., "New Evidence on Farmer Responses to Economic Opportunities," in, C.R.Wharton, (ed.), Subsistence Agriculture and Economic Development, London, 1970.

Stelle,C.C., "American Trade in Opium to China," The Pacific Historical Review, vols.ix-x, 1940-1941.

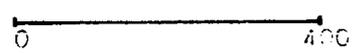


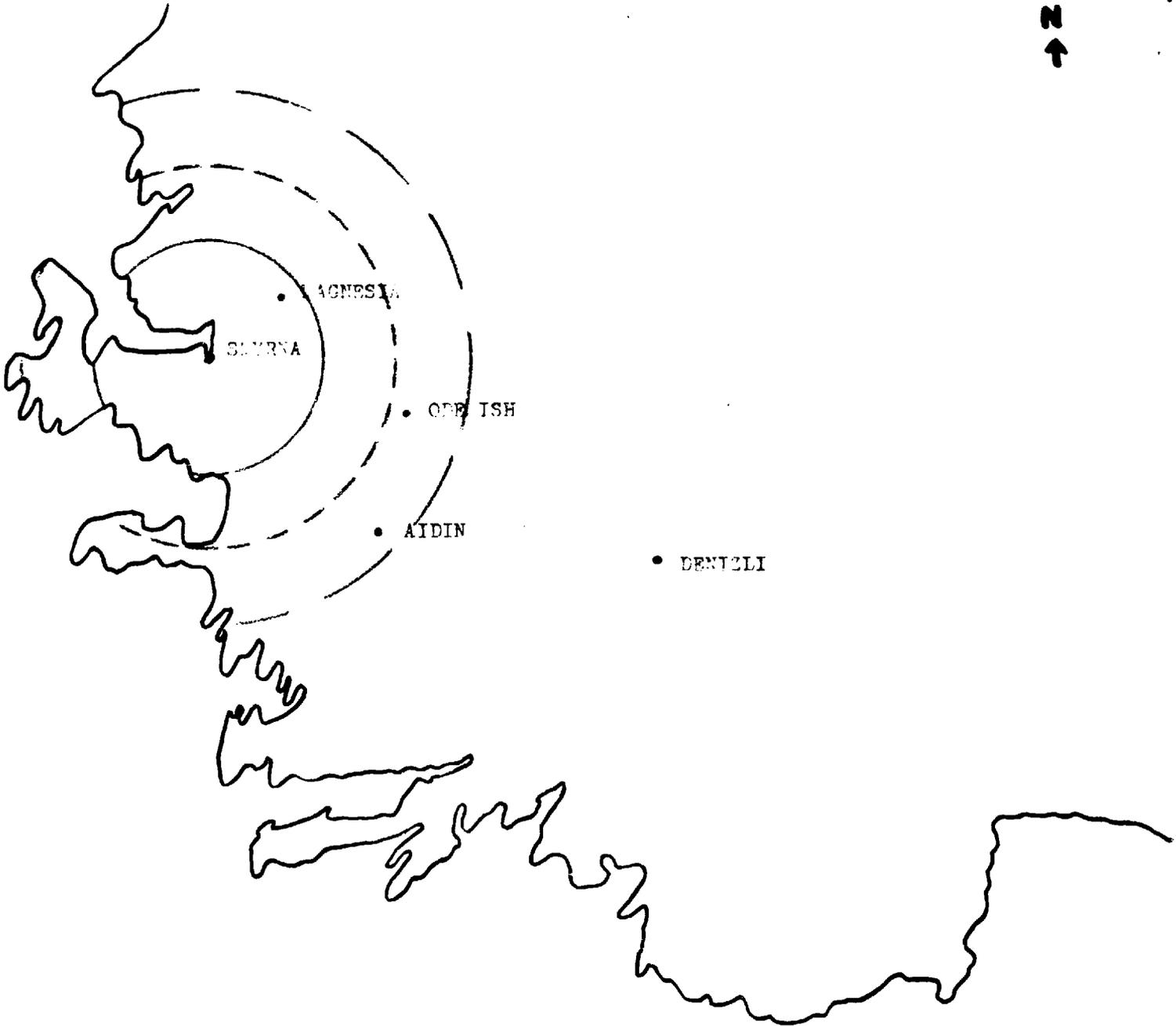
MAP 1

WESTERN ANATOLIA

- Administrative Borders of the Aidin Province
- Area Supervised by the British Consulate in Smyrna (Ionian Islands included)

Kilometres

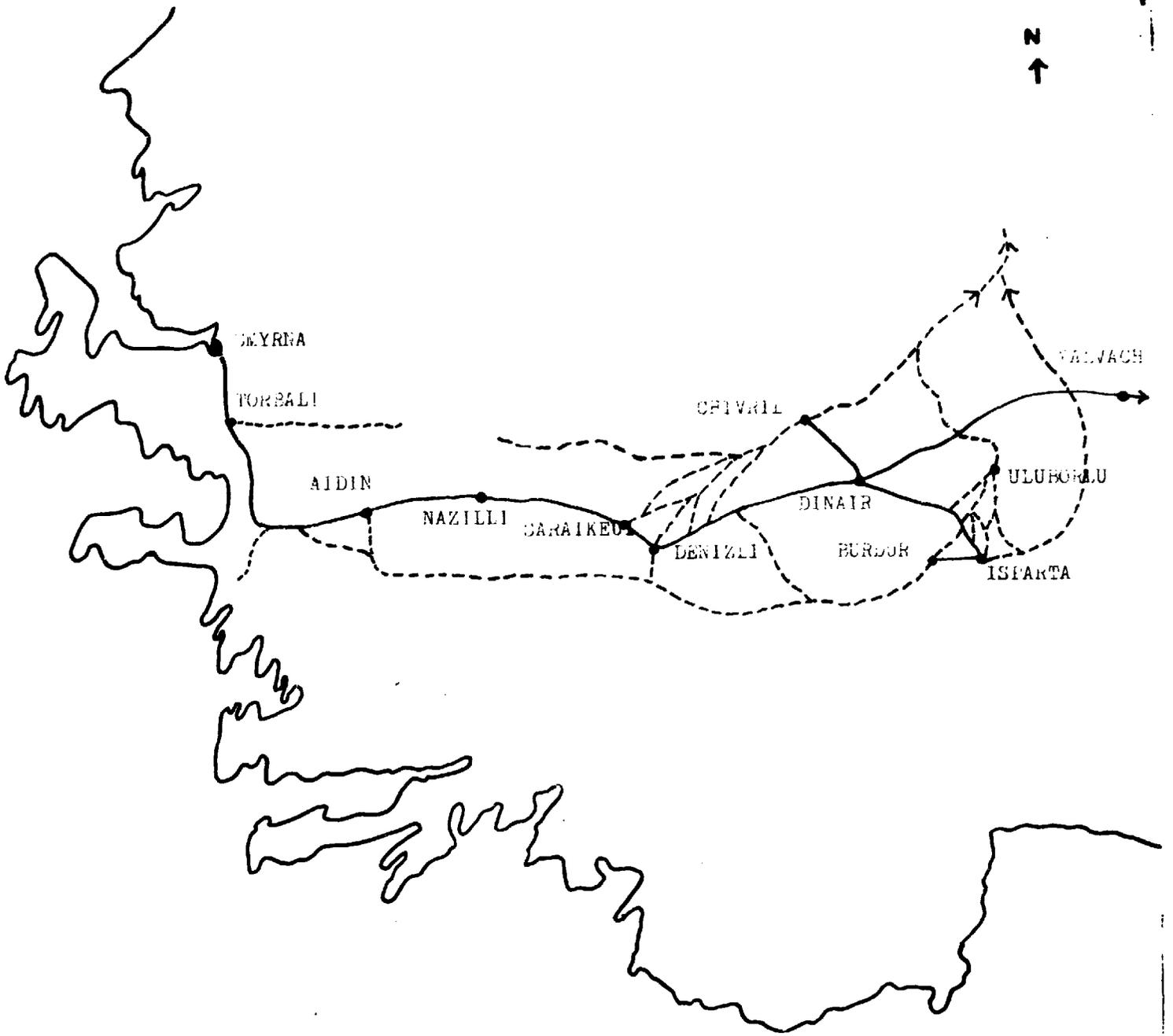




MAP OF ZONES OF PRICES OF WHEAT TRADE 1900

Scale: 1:2,100,000

- 35 mile zone, wheat price £4. 0s. 8d. per ton
- 45 mile zone, wheat price £3. 10s. 0d. per ton
- 55 mile zone, wheat price £3. 10s. 0d. per ton

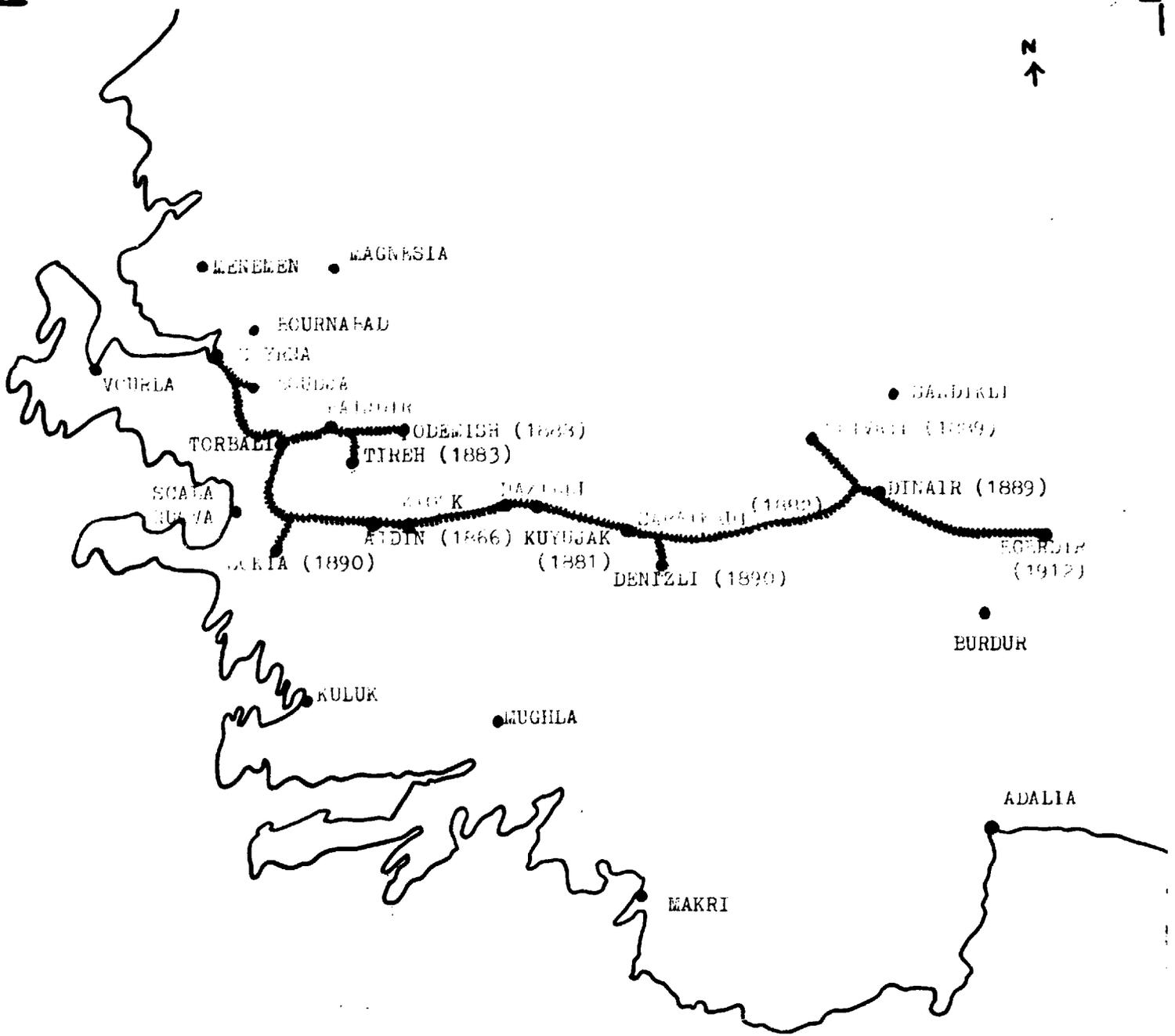


MAP 3: MAIN AND SECONDARY CARAVAN ROADS 1857

Scale: 1:2,100,000

Based on: B.M. Map Room, 46986.(1.),
and, 46986.(2.).

————— MAIN ROAD
- - - - - SECONDARY ROAD



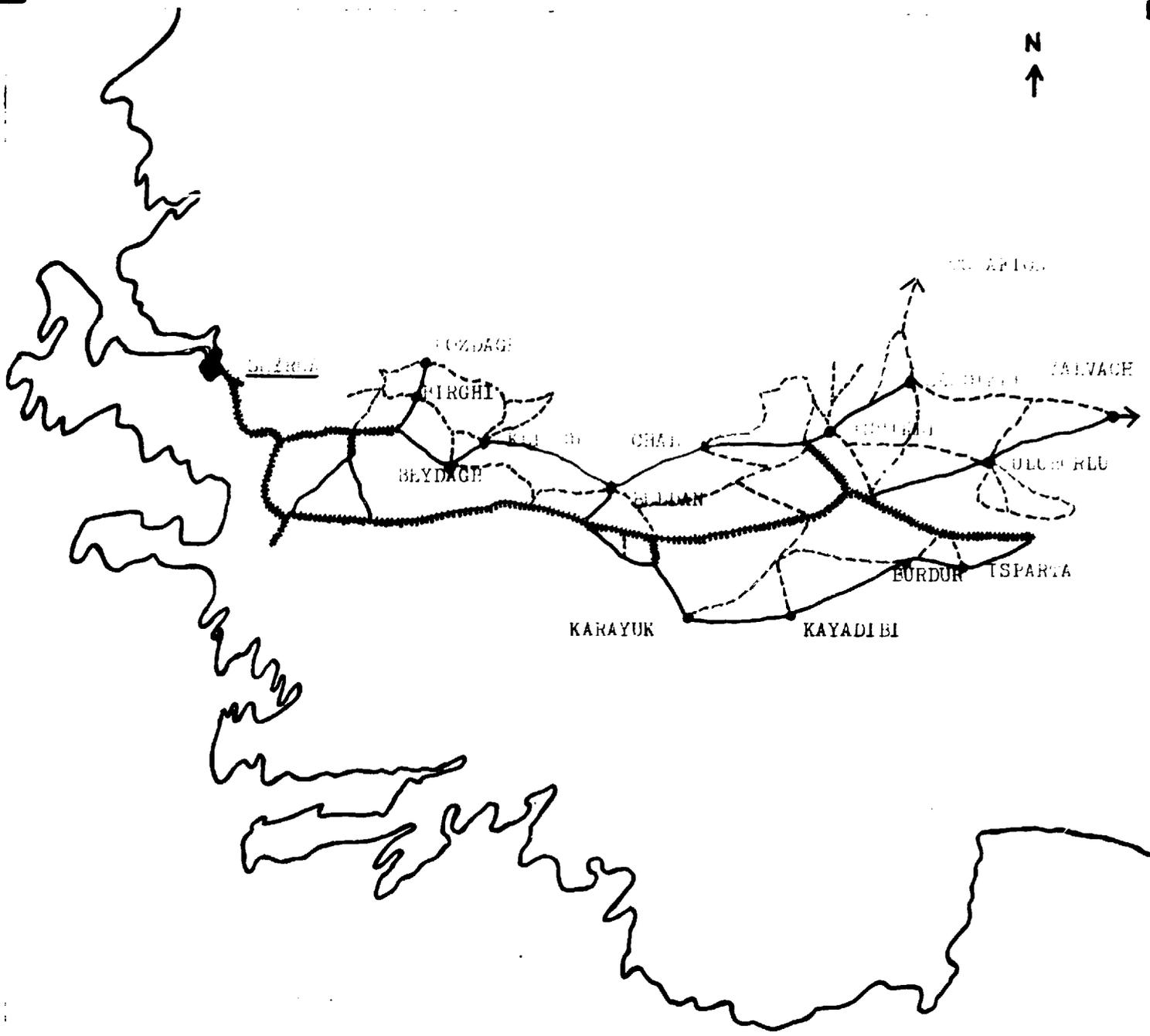
MAP 4: THE SMYRNA-AIDIN RAILWAY (1912)

Scale: 1 : 2,100,00

Based on: Directors' Reports, and, A.Onur, Turkiye Demiryollari Tarihi 1860-1953, (History of the Turkish Railways), Istanbul, 1953, pp.49-51.

———— RAILWAY

• DENIZLI RAILWAY TOWN
(1890) (DATE OF OPENING)



MAP 5: CARAVAN ROADS, 1890

Scale: 1:2,100,000

Based on: Admiralty Intelligence Department, A Handbook of Asia Minor, vol.ii, London, 1919, pp.407-542; F.Rougon, Smyrne: Situation Commerciale et Economique, Paris & Nancy, 1892, p.155.

- Aidin Railway
- Main Caravan Road
- - - - Secondary Caravan Road
- BULGAN Railway Agency