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EGYPTIAN INDUSTRIALIZATION SURVEY:
SOME SALIENT ASPECTS*

VC/EGY/73/059.
ARAB REPUBLIC OF EGYPT

Volume I:

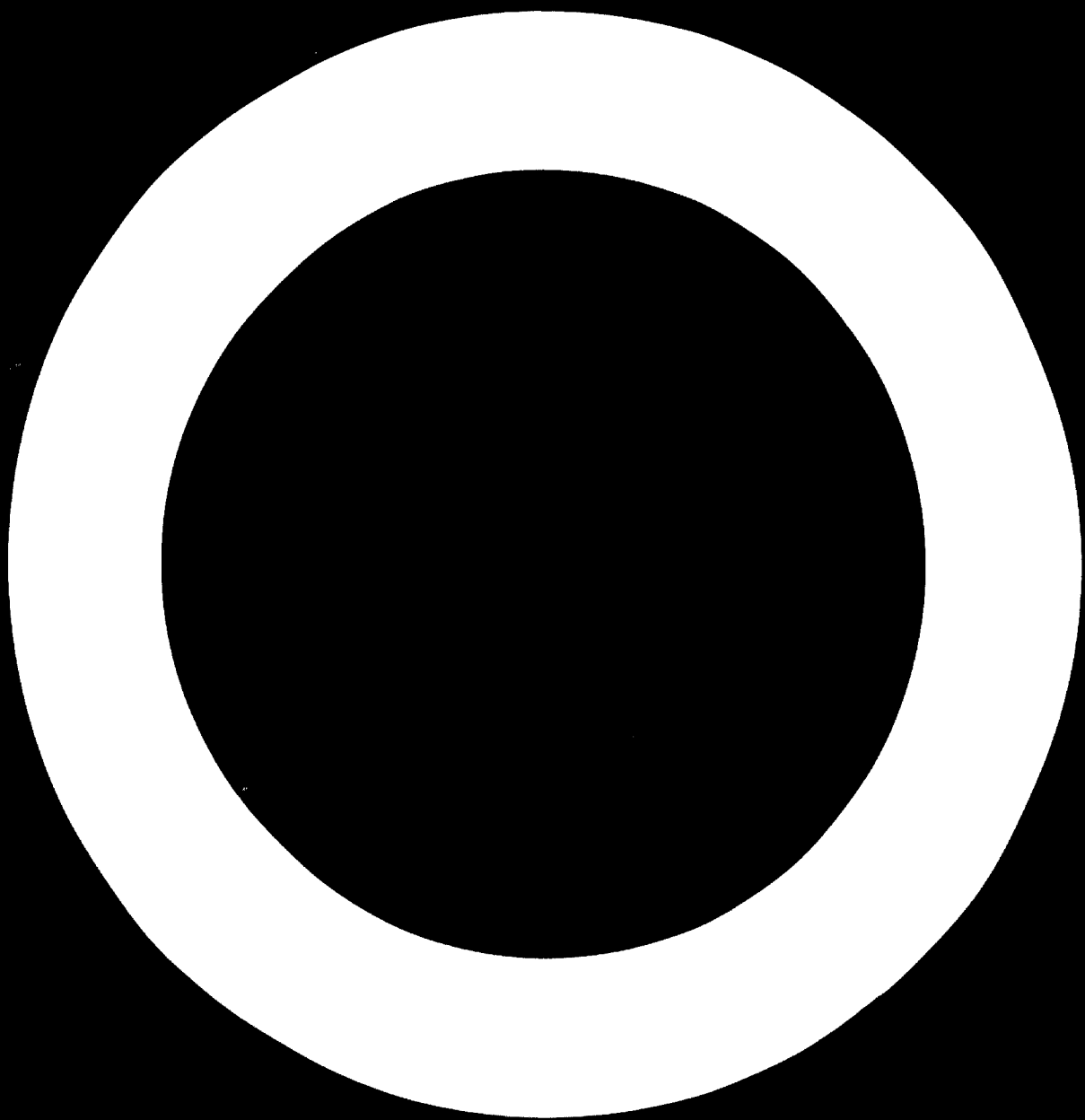
Structure and organization of the Egyptian
manufacturing industry since 1945 .

29 JUN 1978

Prepared for the Government of the Arab Republic of Egypt
by the Institute of National Planning on behalf
of the United Nations Industrial Development Organization

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PREFACE

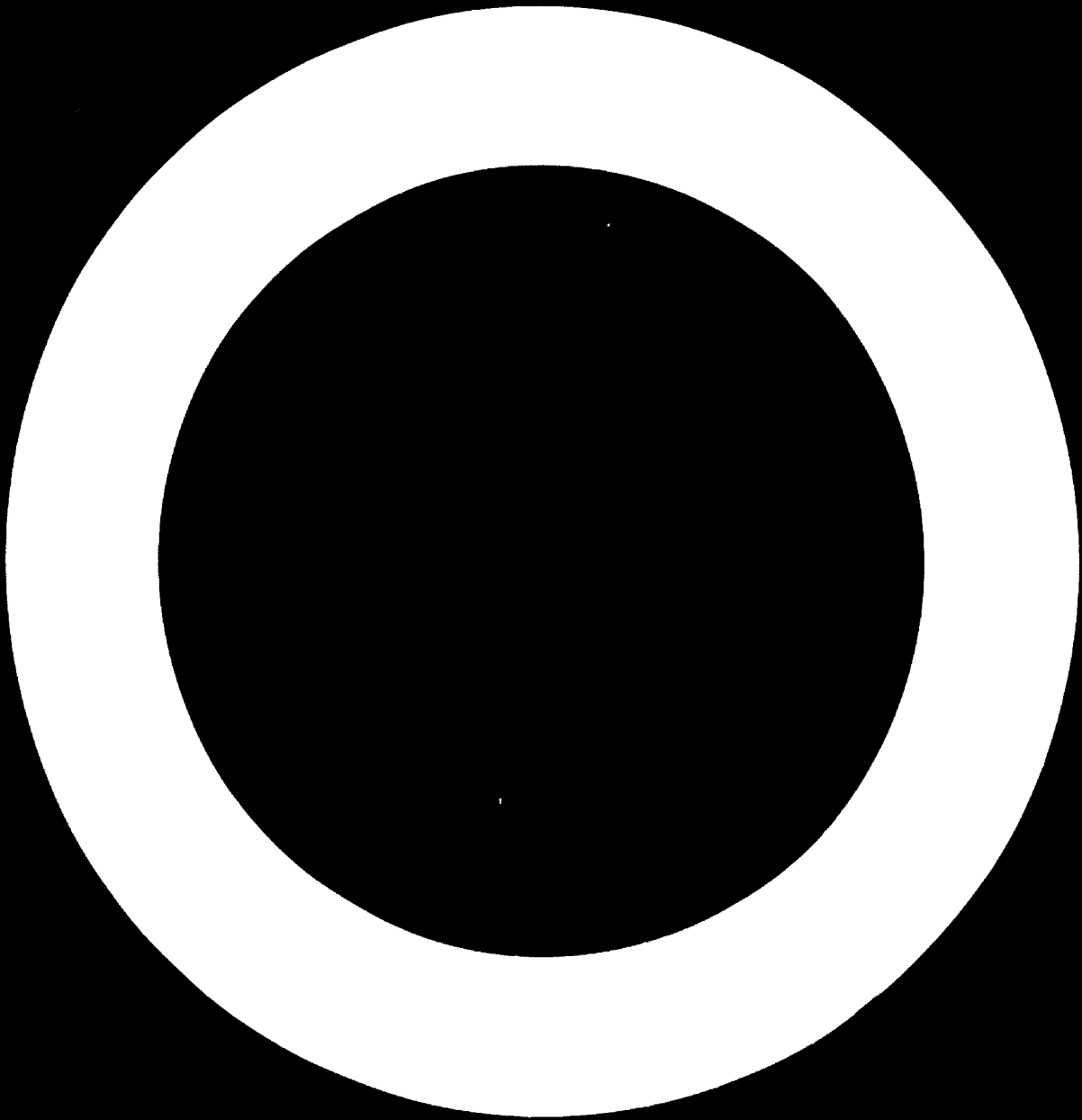
This is one of a series^{1/} of four studies on some aspects of industrial development in Egypt undertaken by the Institute of National Planning (INP) in Cairo at the request of the United Nations Industrial Development Organization (UNIDO). It is expected that these descriptions of the Egyptian experience will prove useful to developing countries at all levels in formulating industrial programmes and setting policies to achieve development goals. They may also be of interest to developed countries and international organizations, giving them a better perspective of the fields of activity covered by their different types of programmes.

The present study deals with the main changes in organization, investments, output, employment, productivity and geographical distribution of the manufacturing industry during the period 1945-1970. It was prepared under the supervision of Maurice Macramalla, Director of the Social Planning Centre, INP. Two INP Industrial Planning Experts were charged with the analysis of data and preparation of the study, Fathi Khalil El-Housseini, who prepared chapters I, III and VI, and Hassan Abd-El-Aziz Hassan, who prepared chapters II, IV, V and VII.

In the preparation of this study, the Institute received assistance from the Ministry of Planning and the General Organization for Industrialization.

The authors wish to express their thanks to all individuals who extended their assistance during the course of the study, especially to Abdalla Darwish, Chief of the Price Planning Agency, for his comments given in his capacity as a consultant, and to M. Fahmy, Secretary General of the INP, and his assistants, who efficiently handled administrative and other matters.

^{1/} The other three studies published under symbol UNIDO/IOD.189 deal with the following aspects: volume II with "Manufactured exports - development since 1950 and their future prospects", volume III with "Small-scale industries" and volume IV with "Transfer and adaptation of technology".



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I. GENERAL OUTLOOK

The revolution of 23 July 1952 was a turning point in Egypt's political and socio-economic history. Therefore any attempt to analyse and evaluate the achievements of the revolution as well as the structural changes which occurred in the economic life must take into account Egypt's political, economic and social conditions during the first half of the century. Economic developments are also linked to the political and social conditions which prevail in the society.

After Second World War the poorer nations of the world began to realize the wide gap which separated their standard of living from the industrially advanced countries. This realization made manifest the close link existing between the efforts to achieve economic development and the political and social conditions of a country. Economic development requires the creation of a suitable atmosphere involving the political and social aspects of a society, such as ensuring political stability, reforms in the taxation and banking systems and reforms in methods of training. The problem of backwardness is to a large extent linked to population growth and to the structure of employment.

Economic life in Egypt has been tied to the existence of the Nile, a river that runs in the midst of a vast desert area forming a valley and a delta. Egypt's physical area is estimated at about 230 million feddans^{1/} including the Nile Valley, the delta, western and eastern deserts and the Sinai Peninsula.

The land area of the Nile Valley and delta are estimated at about 8 million feddans and contains most of the country's agricultural resources and the majority of the population. Most of the physical area of the country, or 96%, is occupied by the desert. Egypt's agricultural area is estimated at about 12 million feddans, of which 6 million are cultivated; the rest represents an arable area or land which could be cultivated if water were available. Modern technological methods to lift water might be used.^{2/}

^{1/} 1 feddan = 0.42 hectares.

^{2/} Dr. Ezz el Din Naman "Lectures on agricultural planning", Part One, Institute of National Planning, Internal memorandum 48, pp. 3-5.

The hot climate and the scarcity of rain has helped to delineate the features of the struggle between the Egyptian man and nature throughout history. This situation crystallized the position of the Egyptian peasant, namely that he is almost an integral part of the soil. Agriculture became the backbone of economic life and the quality of the soil has been enhanced by silt sediments from the Nile. The cultivation of long-staple cotton necessary for the manufacture of best-quality textiles became predominant. Greater attention was given to irrigation and drainage as well as to the construction of bridges and canals to promote agriculture. Thus, irrigation works reached the sum of LE 22.5 million ^{3/} between 1927 and 1937. Foreign trade basically rested on exporting cotton and importing industrial goods. This type of agriculture-oriented production was reflected in the social structure of Egyptian society and in the important role which the landlords played in the country's economic, political and social life.

Despite shortcomings in the statistical data on the structure and development of the Egyptian economy during this period, the following table indicates the growth of the net national product between 1939 and 1950.

Table 1. Net national product by industry (million LE)

	1939	1945	1945	1950
Agriculture, livestock, poultry, fishing	81	217	224	374
Industry, mining, building	13	46	51	105
Commerce	11	50	-	-
Transport	6	15	282	150
Professions	17	50	3	115
Public services	12	13	10	-
Personal services	8	16	10	35
Other	9	42	-	46
Total	157	449	580	825

Source: Charles Issawi, Egypt at Mid-Century (London, Oxford University Press, 1954)

^{3/} Mahmoud Omar, The strategy of industrial planning and the experience of industrial development. A case study of the U.A.R. 1952-1965 (Hague, Institute of Social Studies, 1967), page 8.

The agricultural sector contributed more than half the net national product in 1939, but this proportion decreased a little in 1945 and 1950. Table 2 indicates the growth of population in Egypt and the distribution of manpower over the various sectors. The category manufacturing and handicrafts includes textiles, foodstuffs, leather, chemicals, paper, metals and non-metallic products.

Table 2 illustrates:

- (a) Agricultural activity is the major outlet for increased manpower;
- (b) The relative importance of industrial manpower was limited in 1947 despite its steady increase;
- (c) The relatively growing importance of professionals, particularly teachers, physicians, scientists, lawyers and engineers;
- (d) The substantial increase in the number of persons engaged in personal services in 1947 is paralleled by a substantial drop in the number of unemployed in comparison with prior years. This may result from the fact that housewives were included in 1947 personal services, while in the years 1927 and 1937 housewives were rated as unemployed.

Table 2. Number of persons employed in various industries
(in thousands, excluding children under 5 years)

	1927	1937	1947		Total
			Men	Women	
Agriculture	3,486	4,265	3,656	3,899	7,555
Fishing	40	43	-	-	-
Mining	10	11	13	-	13
Manufacturing and handicrafts	483	478	652	57	709
Construction	125	121	112	1	113
Transport and communications	196	139	201	2	203
Commerce and finance	460	460	544	75	620
Personal service (hotels, restaurants bars, cleaning establishments, mortuaries, domestic servants, etc.)	284	286	267	2,589	2,856
Professions	132	151	489	26	515
Non-industrial public services	152	171			
III-defined and unproductive	596	1,123	1,123	427	1,570
Unemployed persons	6,184	6,391	1,054	1,173	2,227
Total	12,148	13,809	8,111	8,270	16,381

Source: Charles Issawi, *op. cit.*, p.62.

The previous analysis indicates the minor importance of industrial activity as compared with agricultural activity. The need for industrialization, although felt in the wake of Second World War, was confined to efforts of the Misr Bank which was established in 1920. The primary aim was to promote the cotton gining, weaving and spinning industries, as well as cotton seed pressing. Food industries also took an early lead, as well as light industry in general.

The trend toward industrialization was stimulated by the role played by foreign capital. As a matter of fact, foreign capital played a prominent role in the process of industrialization throughout the first half of the 20th century. It was helped by the framework of economic freedom which prevailed at that time, a situation ensuring freedom of transfer of foreign capital and of revenue. The important role played by foreign capital in the Egyptian economy until the post-war period is seen in table 3.

Table 3. Share of Egyptian and foreign capital in jointstock companies, 1933-1948 (million LE)

Period	Egyptian	Foreign	Total	Egyptian percentage of total
Before 1933	6.0	60.7	66.7	9
1933-48 (newly formed companies)	21.0	5.7	26.7	79
1933-48 (increase of capital)	19.3	-	-	-
	46.3	71.6	117.9	39

Source: Charles Issawi, op. cit. p. 208

Another important characteristic of Egyptian industry in that period is represented in the marked importance of small industries which employed less than 10 workers. This was the logical outcome of the nature of the industries which existed at that time and which were basically represented by the weaving, spinning and foodstuffs industries. For instance, the weaving and spinning industries, although dependent for most part on two major units, one in Mehalla el Kobra and the other in Kafr el Dawar, included a number of small and medium units which used the manual loom. Table 4 indicates the nature of Egyptian industry with regard to the number of establishments in 1944 and 1947.

Table 4. Number of industrial establishments by number of employees, 1944 and 1947

Average number of employees	Number of establishments		Total number employed	
	1944	1947	1944	1947
Under 10	18,374	23,362	79,000	96,000
10 to 49	2,773	2,798	58,000	58,000
50 to 449	523	519	77,000	76,000
more than 500	45	64	102,000	137,000
Total	22,220	26,743	316,000	367,000

Source: Charles Issawi, op. cit., p. 157.

If foreign trade is the genuine reflection of the degree of economic growth of a society, this would apply to the Egyptian economy in the first half of the 20th century. Thus, in the Egyptian economy, as in the rest of the developing countries, foreign trade has played an important role in economic activity. Thus, in the post-war years exports accounted for around 20% of the national income, and imports were slightly higher.^{4/} The imports of the Egyptian economy depended on cotton production, and these fluctuated from year to year according to the circumstances of cotton production and their prices as observed in table 5. Foreign demand for Egyptian exports, basically cotton, was elastic and the demand for imports was, by their very nature, closely related to the revenues accruing from cotton exports.

In view of the general framework governing Egyptian economic development during this period and the important role played by foreign capital in the national economy, businessmen looked upon foreign trade as a source of profit. It was, therefore, the major recipient of foreign investments, since profits were relatively reliable by being linked to cotton, the major crop.

^{4/} Charles Issawi, op. cit., page 194.

Table 5. Cotton prices and importation capacity

Year	prices per kantar ¹⁰⁰ Us	imports m. LE
1921- 1929	20-40	45 - 55
after 1930	10-13	25 - 35
1947	50-100	100 -200

Source: Charles Issawi, op.cit., p.196.

Tables 6 and 7 indicate the structure of Egyptian foreign trade for three separate years. Imports are more varied than exports, and the evident impact of population growth on the structure of imports has made Egypt a major importer of cereals, tea and tobacco in the post-war years. The increase in the imports of iron and steel as well as equipment and chemicals indicates the degree of industrial growth which accompanied the war years.

Table 8 indicates the geographical distribution of Egypt's foreign trade; to be noted is the relatively low level of trade with other countries in the Middle East, because these countries were not industrially advanced either.

Table 6. Main imports (thousands of tons and LE)

Commodity	1949				1950				
	Quantity	Value	Percentage	Quantity	Value	Percentage	Quantity	Value	Percentage
Cereals	16	107	0.3	582	17,914	10.1	614	17,043	8.3
Tea and Coffee	17	1,117	3.0	26	7,837	4.4	22	8,719	4.1
Cotton cloth	19	3,339	9.0	5	4,837	2.7	6	5,815	2.7
Silk and Woolen cloth and yarns	5	2,029	5.5	13	12,725	7.2	15	14,316	6.7
Chemicals	27	798	2.2	36	3,941	2.2	60	5,599	2.6
Fertilizers	514	2,955	8.0	621	11,385	6.4	634	12,335	5.8
Timber	303	1,711	4.6	347	9,221	5.1	374	9,783	4.6
Coal	1,538	2,697	7.4	376	1,806	1.0	219	987	0.5
Petroleum	696	2,397	6.4	902	16,036	8.8	1,211	9,083	4.2
Iron and steel	219	3,660	10.0	200	11,942	6.7	300	13,281	6.5
Machinery	23	2,402	6.5	22	16,928	10.6	10	11,620	5.7
Motor vehicles and parts	10	1,225	3.3	19	6,725	3.8	10	7,074	3.2
Gold (100 grams)	1	126	0.3	21	11,000	6.6	12	16,233	7.6
Other		13,746	37.2		49,153	27.6		75,076	35.7
Total		36,869	100		176,220	100		212,721	100

Source: Charles Issawi, *op.cit.*, p.200.

Table 7. Main exports (100 tons and LE)

Commodity	1938			1949			1950		
	Quantity	Value	Percentage	Quantity	Value	Percentage	Quantity	Value	Percentage
Cotton	359	21,298	72.9	360	108,063	79.6	389	152,344	88.1
Cotton seed	337	1,612	5.5	2	177	0.1	1	121	0.1
Cereals	79	797	2.7	349	14,615	10.8	182	7,797	4.5
Vegetables	155	1,007	3.4	131	1,533	1.1	93	2,313	1.3
Petroleum	214	543	1.9	450	2,585	1.9	372	1,973	1.1
Phosphates	403	307	1.1	147	340	0.3	502	1,073	0.6
Cotton yarn	-	-	-	4.7	1,852	1.3	5.3	2,342	1.3
Others	-	3,669	12.5	-	6,690	4.9	-	4,996	3.0
Total	-	29,235	100	-	135,875	100	-	172,959	100

Source: Charles Issawi, op.cit. p.199.

Table 8. Direction of Trade (Percentage of total value)

Year	United Kingdom		Continental Europe		United States		Middle East		Other countries	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
1938	23	32	48	44	7	2	7	7	16	14
1943	17	30	2	1	11	9	43	22	28	39
1946	29	16	26	35	11	8	21	14	20	28
1949	21	17	33	44	8	3	10	6	27	32
1950	19	17	41	40	26	19	9	5	25	21
1951	15	19	35	40	23	10	8	5	19	27

Source: Review of economic conditions in the Middle East, 1951-1952, United Nations
 Dept. of Economic Affairs, New York, 1953.

II. ORGANIZATIONAL STRUCTURE OF THE MANUFACTURING INDUSTRY

A. Some features of the institutional framework of manufacturing industry between 1945 and 1952

Prior to 1952, the manufacturing industry was almost entirely in private hands. The contribution of the public sector in the field of industry and electricity did not exceed 1.8% of the gross value added of this field.^{5/} Apart from the Misr Bank, industrial establishments, and a few large private Egyptian industrialists, most of the large-scale industrial enterprises were owned by foreigners.^{6/} The organization of small-scale industrial enterprises in productive co-operation was almost non-existent.^{7/} In each branch of industry, a Chamber of Industry was set up by industrialists and these chambers were grouped together into a Federation of Industries, which represented employers. This Federation was subsidized by the Government, and it adopted a policy of protective tariffs as early as 1930. The Federation developed into a very powerful and influential organization. On the other hand, up until 1942, when the first law for the recognition of trade unions was promulgated, only a small number of workers were able to organize themselves into unions, but these were almost powerless because their activities were closely and strictly supervised by the Government. Furthermore, their financial resources were meagre, and they were dominated to a great extent by the entrepreneurs.

^{5/} P. O'Brien, The revolution in Egypt's economic system (London, Oxford University Press, 1968), page 154.

^{6/} S.Y. Sidhom, "Development planning in the United Arab Republic - An economic analysis and evaluation of the Egyptian experience" Memo No. 775 (Cairo, Ministry of Planning, 1969), page 103.

^{7/} The general Egyptian organization of co-operative production and small-scale industry, Co-operatives and small-scale industries, The second book (Cairo, 1963), page 21 (in Arabic).

The role of the Government was restricted to the creation of conditions in which free enterprise might flourish. It did not participate directly in economic activities, with the exception of the construction of infrastructure, and in 1945 a Five Year Plan was drawn up which concentrated on certain projects of infrastructure. However, by 1950 less than half the appropriations set aside by the budget for new works had been spent. The Government contributed more than half the capital of the Industrial Bank, which was established in 1949, to provide existing companies with long- and short-term loans and to participate in the foundation of new enterprises. The activities of the Industrial Bank were few until 1952, however.^{8/}

Protection against foreign competition represented by far the most important stimulus offered by the Government to industry. The Government certainly had no fixed policy to promote efficiency by fostering competition behind the tariff barrier, but it favoured large combines by granting them differential freight rebates on state railways.^{9/} On the other hand, many small-scale enterprises were compelled to stop production because of competition and the Government's desire to decrease their activities in order to help large-scale manufacturing.^{10/} Government policies which encouraged private monopolies were largely interpreted as a response to the demands of the wealthy elite.^{11/} Therefore monopolies existed in some important industries due to the attitude of the Government, to the limited market, the lack of capital and the presence of protective tariff policies.

^{8/} M. Sheta, The Public Sector (Cairo, Muktabat Ein-Shams, 1972), p.119 (in Arabic).

^{9/} See P. O'Brien, op.cit., pp. 54, 65.

^{10/} During the three years 1947-1950 the number of textile establishments employing less than 99 workers decreased by 50%, while the number of textile establishments employing 100-149 workers increased by 45%. A.H. Hassan, "The problems of industrial development in the U.A.R.", Central School of Planning and Statistics, Warsaw, 1972, p.20.

^{11/} D.C. Mead, Growth and structural change in the Egyptian economy (Illinois, Irwin, 1967) p.48.

B. The 1952 revolution and its institutional and organizational changes

Government relations with the national economy have gone through three stages since the revolution: the free enterprise stage (1952-1965) and the stage of guided capitalism (1957-1960) were the first two;^{12/} the third stage (1960 to present) may be called the period of predominance of the public sector.

During its early years, the Government of the revolution was satisfied to leave the largest part of the economy in private hands. In fact, no very clear departure can be observed from the economic policies pursued by the old regime. Apart from the land reform, up to 1956, the continuity seems more evident than change. However, stress on continuity is by no means intended to minimize the more positive role played by the new Government in economic development and in supporting the rights of the workers and their unions.^{13/} It was the first time that the Egyptian Government faced the problem of economic development.^{14/} In 1952, the Permanent Council for the Development of National Production (N.P.C.) was established. Its function was to study and recommend economic projects for the development of agriculture, industry, electricity and commerce. It was not a merely advisory

^{12/} P. O'Brien, op. cit.

^{13/} Ibid., pp. 68-69.

"Although the new Government encouraged industrial workers to organize, it retained overall responsibility for almost all matters pertaining to their welfare and they appear to have derived more benefits from direct state interference with the prerogatives of their employers than from union activity. But no doubt unions performed the vital task of ensuring that companies obeyed the law" (Ibid., p.75.)

^{14/} Ismail S. Abdalla, "The birth and development of the public sector in Egypt", Seminar on the role of the public sector in the economic development of Africa, Institute of National Planning, Cairo and UN African Institute for Economic Development and Planning, Dakar, (Cairo, 20 May - 29 June 1972) p.1.

body; but it was empowered to participate actively with both the ministries and the private sector in identifying, executing and in the financing of projects.^{15/} The N.P.C. was to submit within one year of its inception an integrated programme of national economic development to be carried over three years; however, this programme was not submitted. It nevertheless studied and executed a number of important industrial projects, among them the iron and steel plant and chemical fertilizers plant, and the rubber tyres project.^{16/}

The economic policy of the revolution was mainly aimed at helping industry through the adoption of two policies:^{17/}

(a) The Government's direct and indirect participation in the establishment of industrial projects. The purpose behind this was to provide a substantial part of the capital required for new projects before appealing to the public for subscriptions. This was rendered necessary by the lack of a well-developed capital market in Egypt, particularly underwriting institutions.

(b) Encouraging the private sector to subscribe to projects of national importance. Such encouragement assumed various forms. The tariff system became more protective. Import duties on machinery and non-competitive raw materials were reduced or abolished completely, while tariff rates for competitive and non-essential manufactured goods were subsequently raised. More important was the adoption of a "licensing of imports", which prevented the importation of goods that could technically be produced within the country. Other forms of incentives were direct subsidies, tax exemptions, cheap loans, bulk purchases, the guarantee of minimum dividends for some newly established companies, etc.

^{15/} P. O'Brien, op. cit., pp. 68-69

^{16/} F.R. Fahmy, "Some aspects of the structural change in the manufacturing sector and their implications in Egypt, 1930-1970", Seminar on long term planning, organized by I.M.P. (Cairo) and SGPIS (Warsaw), (Cairo, 18-25 February 1959) p.22.

^{17/} Ibid., p.25.

The goal was to stimulate the expansion of industry and more specifically to give private investors every possible incentive to place their savings within manufacturing firms. Investors included foreigners as well as nationals. In order to attract more private capital from overseas, the Government of the Revolution reversed the Egyptianization policy of 1947.^{18/}

C. The birth of the public sector during the period 1956-1960

Government policies failed, however, to attract private foreign capital or to shift domestic saving from other investment fields, mainly luxury residential buildings, to industrial development. Then, with the nationalization of the Suez Canal and the ensuing Suez War in 1956, government policies changed rapidly to what was called guided capitalism. The Suez War prompted the Government to nationalize British and French property, while a law of the "Egyptianization" of all financial institutions was passed in 1957.^{19/} The Suez War, together with the failure of private enterprise to shoulder its expected role in industrial development, led to growing government control over private production and the expansion of the scope of activity of public enterprises.

^{18/} It is worth referring to the "Egyptianization" policy issued in 1947 whereby 51% of the capital of all new joint stock companies had to be owned by Egyptians. This policy had the effect of stopping foreign capital investments in the Egyptian economy. Then, a new law in July 1952 proclaimed that only 49% of the shares of a joint stock company had to be set aside for Egyptians and if the required proportion was not taken up by native citizens within a month, the share issues became open to public subscription regardless of nationality. (See P. O'Brien, op. cit., p.71.)

^{19/} This meant that all shares were to be owned by Egyptians; in addition all members of the board of directors and managers were to be Egyptians.

The Ministry of Industry was established in 1956 in addition to two important organizations, the National Planning Committee and the Economic Organization. The first one was created^{20/} in 1955 to draw up a long term plan for social and economic development which would mobilize public and private efforts. The second one was established in 1957 with a view to controlling the operations and investment policies of the industrial and commercial enterprises already totally or partly owned by the state. To assess the importance of the Economic Organization it is sufficient to say that the industrial firms affiliated with it produced around one third of the aggregate output of the organized industrial sector and employed around 20% of the labour force.^{21/}

Since the creation of the first comprehensive plan by the newly established Planning Committee was to take some time, a five-year industrial programme for the period 1957-1961 was laid down by the Ministry of Industry. To implement this programme, a special organization was created in 1957, namely the General Authority to Execute the Five-Year Industrial Programme. Furthermore, in order to harmonize investments within the framework of the Plan, a special law providing for the organization of industry was promulgated in 1958. This law empowered the Ministry of Industry to control all industrial investments by requiring every new establishment or expansion to obtain a license. It is worth noting, however, that the industrial programme depended mainly on public investment. This industrial programme, together with an agricultural one, was later amalgamated into the overall five-year plan for the period 1960/61 to 1964/65 drawn up by the National Planning Committee.

^{20/} Whereby the earlier Permanent Council for the Development of National Production and another, previously established, Council for National Welfare Services were amalgamated.

^{21/} It is assumed that the organized industrial sector is equal - not quite accurately - to firms employing more than 10 workers. Firms employing 10 or more workers accounted for 56% of the net industrial output and employed 46% of the labour force. (See P. O'Brien, op. cit. p.90.)

In July 1960 the implementation of the first comprehensive five-year plan began. This plan constituted the primary stage in the long term ten-year plan, which aimed at doubling the national income in ten years; 40% of this target was to be realized in the course of the first five-year plan. Its principal objectives apart from the income target, were to achieve greater equality of opportunity, a better distribution of income and property, and expanded work opportunities. The plan took into account the necessity of diversifying the economy, harmonizing the balanced development of the economy, and strengthening its competitive position in the world market. The planned investment target was LE 1,696.9 million for five years.^{22/} The second five-year plan (1965/66-1969/70) had no chance of adoption as a result of external problems. Annual comprehensive plans accompanied with annual government budgets were adopted during the two years 1965/66-1966/67 and a three-year plan was drawn up for the period 1967/68-1969/70, mainly to complete the partly executed projects and to counteract production bottlenecks and relieve pressure on the balance of payments. Unfortunately, the last three-year plan was not implemented because of the war in June 1967. However, it is worth noting that despite military and defense expenses the process of development went on.

Up to 1960, the date of the beginning of the plan, and in spite of the heavy dependence on public investment for the realization of the plan targets, the greatest part of the economy was still in private hands. The public sector accounted for only about 17% of the gross domestic income. More than half of this portion was contributed by traditional government administrative functions and the greater part of the rest was contributed by the transport and communication sectors.^{23/} Thus the economy remained basically capitalist. The state intervened and directed the economy by a group of administrative measures, by organizing industry, by fixing prices, by adopting systems of licensing of imports, by exchange control and by a group of measures that placed the State in possession of certain key enterprises in the economy.^{24/}

^{22/} U.A.R. National Planning Commission, "General frame of the five-year plan for economic and social development, July 1960-June 1965", (Cairo, G.O.G.P.O., 1960) pp.7-23.

^{23/} P.O'Brien, op.cit., p.154.

^{24/} Ismail S. Abdalla, op. cit. pp.7-8.

D. The development of the public sector

In 1960 and 1961 the picture of the economy changed fundamentally as the public sector became predominant. The nationalization of the Mitr Bank and its affiliated large concerns took place early in 1960. There was a new series of laws issued in July 1961 that gave the Government controlling ownership - and in most cases complete ownership - of the shares of enterprises in the industrial sector. Smaller manufacturing establishments were left to the private sector, but many were later nationalized.^{25/} In 1963 most large share-holding companies were taken over completely by the State, and in 1964 some additional enterprises were nationalized. Nationalization laws helped to expand the public sector, which by 1969/70 contributed about 67% to the output of the industrial sector.^{26/}

The predominance of the public sector was less in some light manufacturing activities such as printing and publishing, apparel and footwear, wood products and furniture and leather and leather products.^{27/}

The nationalization laws of 1961 brought benefits to employees such as higher minimum wages, the reduction of the working week to 42 hours, the introduction of a system of profit sharing and participation in administration.

^{25/} The nationalization laws of 1961 included 44 industrial companies representing basic and heavy industry and half of the shares of 82 companies, mostly of light industries and contractor activities. Ownership of shares was limited by these laws to LE 10,000 by any individual; shares over this ceiling were taken by the State. A measure gave the State a strong hand in about 145 other industrial companies of spinning, weaving and light industries. (See A.O. Mettwaly, "Scope and organization of the Egyptian public sector", Seminar on the Role of the Public Sector, I.N.P.C., Un A.L.E.D.P.D., Cairo, 1972, p.15.)

^{26/} Abdallah Darwish, Vice President of the General Agency of Prices.

^{27/} See A.H. Hassan, table 1.A.3., p.429.

In 1960 the Misr Organization was established to run the nationalized Misr Bank and its many affiliate companies. Another El-Nasr Organization was founded in 1961 to supervise the enterprises that were established and affiliated with the "General Authority for the Execution of the Five Year Industrial Programme" and to limit the activities of the said authority in the process of studying and establishing new industrial projects. Through the 1961 nationalization, the three existing public organizations (the Economic Organization, the Misr Organization and the El-Nasr Organization) supervised the various nationalized enterprises. Each of these three public organizations supervised a group of various enterprises in the fields of industry, agriculture, commerce and insurance in order to maintain competition among similar enterprises.

In 1962 there was a substitution of another organizational structure. For instance, in the field of industry, nine specialized organizations were established.^{28/} Each one was concerned with closely related industrial activities and supervised the public enterprises and newly nationalized private concerns which worked in the same field. These organizations were attached to the Ministry of Industry. In the same manner, other organizations were attached ministries according to the nature of their activities. At the top, a Supreme Council for Public Organizations was created, comprising all the members of the Government (president and ministers). The Council determined the production targets of the various enterprises, co-ordinated and followed up their activities and approved their budgets and activities. The ministries assumed the responsibility for extending advice and guidance, organization, control and supervision, and for implementing the annual production programmes laid down for the organizations and approved by the Supreme Council for public organizations.^{29/} The role of the specialized organizations was one of

^{28/} The General Egyptian Organization for Metallurgy, for the Foodstuffs Industry, for Weaving and Spinning, for Chemical Industries, for Building Materials and Ceramics, Metallic Industry, Engineering Industries, Petroleum and Co-operative Organizations and Small Industries.

^{29/} See B. Hansen and G. Marzouk, Development and economic policy in the U.A.R., (Amsterdam, North Holland Publishing Company, 1965) p.167.

supervision, guidance and control rather than of direct administration, which was the main concern of the affiliated enterprises.^{30/}

One of the industrial organizations - the General Egyptian Organization of Co-operative Production and Small-Scale Industry - was concerned with encouraging the establishment of productive co-operative societies among small-scale industrial enterprises. Through these co-operative societies various kinds of help were offered to the members, such as the supply of material, funds, technical advice, marketing etc.

E. Final remarks

First, in spite of the creation of a large public sector, it was not the Government's intention to run a centralized economy with detailed production targets and fixed resource allocation for individual enterprises. In regard to current production, enterprises are supposed to react to the demand of the market, given all the circumstances such as fixed prices, import licenses etc. The economy was to continue as a planned market economy with an expanding predominant public sector. It was not the aim of nationalization to abolish the market economy, as it was the complete and direct control of savings and investment. The distinction between public and private sectors does not tell us very much about the influence of the Government. Through its more general economic policies and regulations, the Government exerts a strong influence on the private sector, while at the same time it seems to interfere less with the activities of the publicly owned enterprises than it could.^{31/}

^{30/} M. Sheta, op. cit., p. 165.

^{31/} B. Hansen and G. Marzouk, op. cit., pp. 275, 279, 283, 284; and Ismail S. Abdalla, Organization of public sector, (Cairo, Dar-El-Maaref, 1969) pp. 469, 470 (in Arabic).

Secondly, there are certain problems in the organization and management of the public sector. Some of these are due to deficiencies in the new organizational and administrative system, and others are due to management. The organizational system is not very sound regarding its base, viz. the nationalized enterprise. The nationalized enterprise is far from being economically rational, since it is a mixture of different productive activities that lack sound essential technological and economic ties. Its jurisdictional independence lacks a certain economic basis and consequently the nationalized enterprise unit cannot always be considered a rational public enterprise unit. Moreover, all public enterprises were put under the same hierarchical organizational system and the same strict administrative routine and relations. A detailed plan for every enterprise (as a part of the comprehensive national plan) is not in existence and consequently there is the possibility of creating problems among enterprises on one hand, and between enterprises and controlling authorities on the other hand, and even among the different controlling authorities.^{32/}

^{32/}

See: Ibid., pp. 269-270; A.H. Hassan, op. cit., pp. 383-385; and S. Sidhom, op. cit., pp. 411-412 and 414-420.

III. THE STRUCTURE OF INDUSTRIAL INVESTMENTS

The period of the Second World War was opportune for the development of the Egyptian industry due to the disappearance of foreign competition, since imports were interrupted by the war. The war period consequently witnessed expansions in existing industries and the establishment of new ones, designed to fill the needs of the allied armies. Unfortunately, the industries that were built or expanded during the war did not change the Egyptian dependence on manufactured imports to any marked degree, and this situation resulted in the depletion of the greatest part of foreign currency reserves earned by Egypt from servicing and supplying the allied armies. Furthermore, the greatest part of income from agricultural exports, mostly cotton and rice, was spent on imports of consumer goods designed to satisfy the luxurious tastes of the upper classes. The lack of a clear-cut policy of industrialization designed to achieve specific development targets also contributed to this state of affairs. The result has been the low contribution of industry to national income. Egyptian entrepreneurs sought low-risk and high-return consumer goods industries instead of high-risk and low-return basic industries.

A. The strategy of industrial development after the revolution

In studying the strategy of industrial development after the revolution, three different periods can be distinguished. The first period, between 1952 and 1957, was characterized by increased governmental intervention in economic life. The second period, 1958 to 1960, was a stage of partial planning. The third period, at the beginning of the 1960s, adopted national comprehensive planning.

The period 1952 - 1957

The basic goal of the revolution with regard to industrial development was to transform the national economy from one dependent upon primary agricultural materials. The first step in the industrialization effort was the establishment of the Permanent Council for National Production Development in 1952. This Council was given the responsibility for economic policy in general and industrial development policy in particular. The Government took steps to consolidate the Council's efforts by issuing a series of decrees designed to facilitate industrial development and encourage its growth. These included the exemption of raw materials from import duties and the refunding of customs duties as well as production, consumption and various other taxes. Laws were made to reorganize foreign investment, to grant leases for oil prospecting and for the importation of machinery and equipment necessary for industry. A building code was established in an attempt to limit capital investment in construction and to channel more capital into industrial development.

In the early stages of the industrialization programme, emphasis was placed on strategic and basic industries. The most important were projects for generating electricity needed for agriculture and industry, such as the Aswan Dam electrification project, and petroleum refining. Road building and the development of other transportation facilities were expedited. The Permanent Council for National Production Development undertook feasibility studies for iron and steel, rail cars, electric cables and military industries.

The Government gave special attention to the Aswan Dam electrification project and tried to ensure that most of its output would be directed to industrial uses. The Government also strengthened the Industrial Bank and issued laws to enable it to serve industry better. Perhaps symbolic of the State's attention to industry was the establishment of the Ministry of Industry in 1956. Table 9 shows the investments in the industrial sector during the period 1952 - 1957, illustrating the increase in industrial investment during that period

compared to the pre-revolution period. These investments were limited compared to those in the period of national planning in the 1960s.

Table 9. Capital investments in the industrial sector, 1952-1957

Year	Actual investment (LE)
1952	11,580,404
1953	7,347,716
1954	6,851,238
1955	9,734,860
1956	26,208,405
1957	12,907,432

Source: Industrial Association, Yearly book 1959.

The first industrial programme, 1957-1960

After the establishment of the Ministry of Industry in 1956 there was an expansion in industrial development studies. The industrial sector was viewed as an integrated sector charged with the task of satisfying local demand and import substitution for consumer and intermediate goods. This was the prevailing government policy at that time.

The total investments for this first programme was estimated at LE 250 million, some of which were channeled into new projects while the rest went to expand existing industries. During this period, LE 80 million were added to the original LE 250 million, making the total investments LE 330 million divided among 502 projects. The programme was terminated in 1960, at which time the principal of total planning was adopted and implemented for the 1960-1965 plan. Total actual investment in the period 1957-1960 was LE 87.3 million. The rest of the planned sum, LE 330 million, was added to the 1960-1965 plan.

Projects for the production of consumer goods took an important place in the first industrial programme, with 51% of the finished projects and 38.6% of the total investments in this category. This is explained by the import substitution policy and the policy to encourage local industry to fill the largest part of demand. The rest of investment (61.4%) went into capital and intermediate goods.

Some of the most important projects which were finished within the period of the first industrial programme were petroleum prospecting, geophysical research, the building of two oil tankers, the expansion of fertilizer production, the expansion in paint and drug production, lead pencils, iron and steel, cement, food industries and cotton spinning and weaving. In the engineering industries, several projects were completed such as small automobiles, rail cars, bicycles, gas stoves, sewing machines, washing machines, transistor radios etc.

The first five-year plan, 1960/61 - 1964/65

Since the early 1960s the Government has adopted the principle of total planning as a means of mobilizing and developing the country's economic resources for the achievement of certain socially desirable objectives. The first plan for economic and social development was prepared in the light of the experiences obtained in the course of the period of partial planning (1957-1959), when the first industrialization and agriculture development programme was implemented.

In preparing the first five-year plan, an attempt was made to make its goals complement the projects of the first industrialization programme. An attempt was also made to make use of the excess capacity in some of the existing projects. If this attempt were to succeed, it would mean obtaining a large increase in national income with a relatively low investment. Many of the projects in the new plan were expansions in the projects of the first plan.

Total investments in the first plan were estimated at LE 434.2 million (at 1959/60 prices) according to a 1964/65 follow-up report prepared by the Ministry of Industry.^{33/} During the plan period the government policy was to expand consumer goods industries in the belief that it was necessary to allow an increase in consumption commensurate with the increase in national income. That period was characterized with a multiplicity of problems. The country was dependent upon imports in filling the largest part of its need for manufactured goods at a time when the local industrial sector was unable to satisfy those needs. This in turn hindered the formation of capital which could have been directed towards building basic industries. In the meantime, the success of basic industries could not have been achieved without setting up consumer goods industries, which had a ready market for their products. Furthermore, building basic industries usually takes longer than building consumer goods industries. Consequently, the latter projects accomplish faster results for the national economy in profit and employment while using up a lower level of investment than is required for most basic industries.

Table 10 shows that the implementation rate was higher for consumer-goods industries than for capital-goods industries. Factors stimulating the active execution of the plan for consumer goods industries were:

- (a) The relative ease of promoting food, spinning and weaving projects because of past experience in these fields;
- (b) Many projects in consumer industries need relatively limited investments;
- (c) Basic industries need relatively large investments and have a longer gestation period;
- (d) A lack of experienced personnel for basic industries existed.

^{33/} Abdallah Darwish, "Evaluation of the first five-year plan and an opinion on the second plan for the industrial sector", February 1965.

Table 10. Planned and actual investment during the period of the first five-year plan

Industry	Planned invest-ments (million LE)	Actual invest-ments (million LE)	Actual planned (%)
<u>Consumer-goods industries</u>			
Food, beverage, tobacco	31.7	39.4	124.3
Spinning, weaving, ready-made cloth	48.6	54.6	112.3
Electrical appliances (refrigerators, washing machines, radios, T.V.)	4.5	9.7	215.5
Total	84.8	103.7	122.3
<u>Capital-goods industries</u>			
Chemical	58.2	46.1	79.2
Basic metallurgic	46.9	32.4	69.1
Petroleum (research, extraction, refining)	82.5	83.2	100.8
Total	187.6	161.7	86.2

Source: Abdallah Darwish, *op. cit.*

Table 11. Rates of execution of planned investments, 1960-1965

Year	Actual/planned (%)
1960/61	93.9
1961/62	53.4
1962/63	68.0
1963/64	78.9
1964/65	88.1

Source: Ministry of Planning, Following-up reports, 1965.

Table 11 provides a yearly progress report for the execution of the first plan and demonstrates that investment plans were never completely carried out in any single plan year. The rate of execution varied and was at its lowest (53.4%) in 1961/62. The low level of implementation was not common to all sectors. In some sectors investment surpassed the plan - at the expense of other sectors. Investment surpassed the plan in the following:

	Actual/planned (%)
Metallurgy products	387.9
Petroleum research and extraction	251
Non-metallic minerals	230.4
Electrical machinery	215.5
Leather and leather goods	206.6
Food, beverages, tobacco	124.2
Coal products	119.5
Spinning and weaving	112.3

However, investment was below planned expenditures in the following:

	Actual/planned (%)
Transportation	39.9
Metallurgy and metallurgic research	44.9
Petroleum refining products	63.9
Basic metallurgical industries	69.2
Paper products	74.6
Non-electrical machines	77.2
Chemical products	79.2

Table 12 gives details of the execution rate of planned industrial investments in the five-year plan 1959/60 - 1964/65.

Table 12. Actual and financed investments during the first five-year plan (thousands of LE)

Industry	6/1961		11/1962		6/2/1963		6/3/1964		6/4/1965						
	Planned Investment	Actual Investment	Planned Investment	Actual Investment	Planned Investment	Actual Investment	Planned Investment	Actual Investment	Planned Investment	Actual Investment					
Cotton Ginning and Pressing Petroleum	1559	6785	424.3	77.6	3990	50.1	4633	9328	153.2	11225	8165.2	72.7	11516.0	5972.7	85.7
Petroleum research and extraction															
Metallurgy and metallurgic research	4552	1635	36.4	7838	16.2	20.9	8700	2845.1	32.7	5156	6342.2	123.0	6942.6	3476.2	50.1
Food, beverage, and tobacco	7724	5755	74.4	9625	4240	44.1	14649	6296.9	43.0	22704.2	9934.4	43.8	20256.9	14279.7	70.5
Spinning, weaving, and ready made clothes	8984	11201	124.7	10724	5920	55.2	18256	90760	49.7	13533.06	14077.8	104.0	9780.8	15132.5	154.7
Wood and wood Products	471	70	14.9	593	277	46.7	258	36.6	14.2	331	96.9	29.3	383.5	157.6	41.1
Leather and leather goods	3687	7071	141.8	5179	1748	33.8	2241	1287.8	61.9	1925.8	1172.2	60.8	1918.0	4485.7	233.8
Printing and Publishing															
Rubber															
Chemical Products and drugs	7167	13543	188.9	9213	7162	77.7	13444	10267.5	76.4	10168.5	10278.6	101.2	12903.7	13419.0	104.0
Petroleum refining	9604	2867	29.9	5620	6424	114.3	14267	14801	103.7	14189.7	15413.0	108.6	10826.2	4930.7	46.1
Coal refining															
Products from non-metallic raw materials	160	330	206.3	231	214	92.6	2501	786.2	31.4	1737	977.4	55.9	3551.5	1351.5	38.0
Basic metallurgic products	7812	3702	47.4	6249	2917	43.5	7318	7633.4	104.3	8645	4501.1	52.1	9931.3	12923.1	130.2
Metallurgic Products	1560	1056	67.7	1303	972	74.6	1407	1172.8	76.2	1701	1173.3	63.9	1232.8	679.2	45.7
Non-electric machines	2551	434	21.2	1126	431	38.3	3068	2646.9	86.3	3929	2217.5	56.4	2258.2	1194.2	25.9
Electric machines	788	1185	150.4	1931	1210	62.7	2653	2209.1	82.0	2666.8	1686.8	63.3	5433.1	3927.2	72.3
Transportation means	5875	5766	98.1	11300	1186	10.0	9044	1744.6	19.3	13075	7744	59.2	10181.0	6091.7	59.2
Other engineering products	480	180	37.5	157	37	23.6	356	352.1	98.9	915.2	876.9	95.8	1768.4	131.6	7.4
Rural crafts	748			2364	165	70.1	310	567.5	720.6	1452	950		1069	2264	
Technical training	112	252	230	350	430			709.8		1021.1	1423.9	13.4	586.8	58.0	111.0
Complementary	2671	1500	50.2	1000	1800	180.0	inside the activities			inside the activities					
Unidentified				4500	4500	100.0	9912	8530	89.7	15136.6	14261	94.3			
Replacement and renewal	4000	3500	87.5	2500	3500	144.0	inside the activities			inside the activities					
Administrative investment	289	128	44.3												
Investment expenses															

Source: Abdallah Darwish, *op. cit.*

The failure to implement some planned investments is due to the inclusion in the plan of some projects for which the necessary studies had not been made and others that were cancelled after a second study. Also some complementary projects were not carefully co-ordinated beforehand. An example was the lack of the necessary quantities of milk for the operation of milk processing plants at full capacity. Therefore, projects which met with such problems were discontinued. Another difficulty was the lack of metallic products in suitable quantities and condition. In general, difficulties encountered included the following:

- (a) A lack of complete technical and economic studies for some projects;
- (b) A lack of foreign exchange and hence an inability to import needed materials at the proper time;
- (c) An inability of the construction sector to execute investment within the planned time and budget;
- (d) A lack of the necessary number of technical and managerial personnel;
- (e) A lack of building materials and difficulties in transporting them;
- (f) A lack of services necessary for projects such as electricity.

The rate of growth for investment was high during the plan years. The rate averaged 15% per year, which can be considered acceptable for that period. Table 13 gives the rate of investment growth in the plan years.

Table 13. Rate of growth for investments during the first five-year plan

Year	Yearly rate of growth	Rate of growth relative to the base year, 1959/60
1960/1961	38.4	38.4
1961/1962	- 25.7	2.7
1962/1963	60	64.4
1963/1964	30.9	115.1
1964/1965	- 5.3	103.8

Source: Computed from data obtained from Ministry of Planning.

The second five-year plan, 1964/65 - 1969/70

The proposed second five-year plan allocated LE 897 million for the development of the industrial sector (including electricity) out of a total investment figure of LE 2,535 million, i.e. the industrial sector obtained 35.4% of total planned investment. The energy and fuel sub-sectors were allotted LE 115 million, out of which LE 90 million went to electricity. Thus, proposed investment for the industrial sector - excluding electricity - was LE 807 million, or 31.9% of the total planned investments. Since the industrial sector's investments in the first five-year plan were LE 434 million out of a total of LE 2,169 million (including changes in inventories), i.e. 25.6% of the total, the share of the industrial sector was increased from a fourth of the total in the first plan to about a third of the total in the second plan.

In preparing this second plan, emphasis was placed upon basic heavy industry, especially iron and steel, aluminium, copper, petroleum and metallic raw materials. Other industrial goods that were emphasized include motors, spinning and weaving machinery and various factory machines. Table 14 demonstrates the emphasis on heavy industry, which was a reflection of the trend in the latter years of the first plan.

Table 14. Distribution of investment in consumer- and capital-goods industries

Type of activity	First plan	Second plan
Activities with a prevailing capital nature	64.1	74.5
Activities with a prevailing consumer nature	24.4	19.1

Source: Abdallah Darwish, op. cit.

Regarding the implementation of the plan, the yearly rates of growth of investment were lower in the second plan than the corresponding rates in the first one. Table 15 shows the yearly rates of investment growth during the second plan years.

Table 15. Yearly rates of investment growth during the second five-year plan

Years	Yearly rates of growth	Rate of growth relative to the year 1959/60
1965/66	- 5.9	91.8
1966/67	- 8.1	76.3
1967/68	-16.4	47.5
1968/69	24.2	83.1
1969/70	7	96

Source: Computed from data obtained from the Ministry of Planning.

The rate declined in the period 1965/66 - 1967/68. This was a period of investment cutbacks. The Government followed a policy of reducing investments in new projects while directing investment towards exploiting excess capacity created during the first plan years. Table 16 gives details of the implementation rates of planned industrial investments in the second five-year plan.

Table 16. Actual and planned investments during the second five-year plan (thousands EE)

Industry	67/66				67/69				69/70					
	Planned	Actual	Actual	Planned	Actual	Actual	Planned	Actual	Actual	Planned	Actual	Actual	Planned	
	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	Invest-	
Food and processing	1189	203	53,1	584,8	439,7	85,4	503,5	480,2	95,4	75,2	475,3	53,9	182,2	11,2
For food research and production	89,2	89,1	96,7	75,37	71,4	105	9173	9897	105,6	12730	1,491	9,25	5550	99,8
Metallurgy and metallurgical research	3272	2397,9	55,3	4010	3126,6	78	3101	1216	39,2	4374	4001	91,5	2033,8	53,3
Food, cereals and tobacco	1350,26	1474,1	108,8	14643	14300	97,7	7709,5	12256,5	159	14813	12460,6	8,1	1062	1153,9
Spinning and weaving and ready-made clothing	4430	4624	104,4	3670	1910	52	7239	5604,4	77,4	5392	5867	103,8	8753	102,1
Wood and wood products	357,3	174,7	48,8	-	-	-	-	-	-	-	-	-	-	-
Paper and paper products	2673	4802	179,6	5737	4229	73,7	1502	1536,3	102,3	549	921	167,8	444,5	52,9
Printing and publishing	792	486,7	61,7	85	-	-	87	164,1	188,6	738	478	64,8	215	100
Rubber	600	352	58,7	560	95	17	-	356,6	-	697	529,7	76	124	234,7
Leather and leather goods	495	616,3	124,5	612	1864	304,6	837	1201,7	143,6	1305	1710	131	975	282
Chemical and drugs	7670,9	16459,8	214,6	15697,2	14180,2	90,3	11997	8607,4	71,7	15705,5	9947,7	63,3	6225,3	9438,7
Petroleum refining products	6150	3636,1	59,1	3656	6092	166,6	12546	7538	60,1	8940	8695	97,3	9584	9829
Coal refining products	939	978	104,2	1400	274	19,6	500	246	49,2	776	549	70,7	250	735
Products from non-metallic products	5834	10935	181,6	7572	4796	63,3	1618	4182	253,5	6437	6329	98,3	2771	2236
Basic metallic products	12913	13339,3	103,3	14094,3	16049,6	113,9	113,9	10402,9	164,4	17840,7	18648,2	104,5	23033,5	21708,6
Metallurgical products	1447,2	618,4	42,7	657,6	747,6	113,7	341,1	157,8	46,3	1495,9	776	52,2	1131,5	432,3
Non-electrical machines	2097,3	915	43,6	752,9	399,9	50,4	459,8	289,5	63	405	269,8	66,6	484,5	264,9
Electrical machines	4812,2	2576,5	53,5	2085,1	2346,6	112,5	1364,6	1371,1	100,5	1921,6	1632,4	85	705	915,3
Transportation means	5102	4485,1	87,9	3865	5640,1	146,2	3233,3	6392,3	197,7	4501	2777,8	61,7	2575	3419
Other engineering products	421,3	50,1	11,9	6,7	8,6	128,4	-	-	-	21,7	7,5	34,6	-	-
Rural crafts	238	107	45	94	92	97,9	20	15,5	77,5	137	31,2	22,8	246,5	175
Technical training	773	1931	249,8	2064	1935	88,9	400	354	88,5	712	253	35,5	396	231,5
Industrialization agency	-	-	-	-	-	-	-	-	-	855	450	32,6	1157,5	636,3
Center for quality control	-	-	-	-	-	-	-	-	-	74	24,9	33,0	116	5,7
General	5309,8	537,4	10,1	1000	-	-	-	-	-	-	-	-	-	-
Total	90308,7	93967,3	104,1	90363,6	86399,9	95,6	69159,4	72269,3	104,5	102113,6	89725,6	87,9	905662,3	96022,9

Source: Ministry of Planning, Plans and follow-up Reports.

The difficulties encountered during the second plan can be summarized as follows:

(a) The total available investment funds were spread over too many projects without giving proper priorities to the important ones. This was one of the reasons for the failure to accomplish the goals of the second plan;

(b) The rates of return on second plan projects were lower than the corresponding rates in the first plan;

(c) Total available investment funds were distributed to sectors without giving enough attention to the relative importance of these sectors;

(d) The increase in the production of consumer appliances without a corresponding increase in exports. This led to an increase in consumption and a decline in saving and to the waste of much foreign currency needed to import production necessities;

(e) Many firms were pushed to export their products at prices lower than their production costs in order to increase exports. This has hurt the process of development and has reflected the failure to properly channel investment funds. This failure resulted from the desire to increase exports, coupled with a lack of market studies evaluating the realistic possibilities for such increases. The final result was the reduction of investment efficiency in the second plan;

(f) Economic pressures faced the country with the start of the second plan. One such pressure was the cut-off of American surplus food aid which was obtained during the first plan;

(g) The war with Israel in 1967 and the consequent seizure of some production facilities and shelling of some others;

(h) The deflation policy that was implemented in 1965/66 and reached a high point in 1967. This policy meant increasing prices for many local products with the aim of reducing their local consumption and increasing their exports. In the early years of the second plan the increase of exports was emphasized. When this policy failed, emphasis was shifted to heavy industry. Increasing prices succeeded in reducing local demand, but since exports failed to increase substantially, the final outcome was a halt in the expansion of industrial production in general.

B. The role of foreign investment in the national plans

Total foreign investment in the first five-year plan amounted to LE 375 million, a large part of which, 36.2%, was allotted to energy. Metallurgical industries had a share of 16.7% of the total foreign investment; consumer goods industries 13%; chemical industries 12.1%; metallurgy 8.5%; and other industries obtained 13.5% of the total. Table 17 illustrates the distribution of foreign investments in the different sectors during the first plan years.

In the period 1965/66 - 1969/70, the total amounted to LE 300 million. Energy was allotted 34.5% of the total, metallurgical industries 21.8%, consumer goods industries 15.5%, chemical industries 10.5%, metallurgy 10.5% and other industries were allotted 7.4%. Table 18 shows the distribution of such investments during the second plan.

Table 17. Distribution of foreign investments in different sectors during the first plan

Industry	Investment (million LE)	Share of total (%)
Metallurgy and metallurgic research	32	8.5
Energy	135.4	36.2
Metallurgic industries	62.8	16.7
Chemical industries	45.4	12.1
Consumer goods industries	48.7	13.0
Others	<u>50.7</u>	<u>13.5</u>
Total	375	100

Source: Ministry of Planning, Cairo.

Table 18. Distribution of foreign investment in different sectors during the second plan

Industry	Investment (million LE)	Share of total (%)
Metallurgy and metallurgic research	25	10.3
Energy	90	34.5
Metallurgic industries and machines	45	21.8
Chemical industries	40	10.5
Consumer goods industries	65	15.5
Others	<u>35</u>	<u>7.4</u>
Total	300	100

Source: Ministry of Planning, Cairo.

IV. THE STRUCTURE OF MANUFACTURING OUTPUT

A. The development of the manufacturing output

Over the 25 years from 1945-1970, manufacturing industry has more than tripled in terms of gross value added. It rose in constant prices from LE 105.7 million in 1945 to LE 411.7 million in 1969/70, realizing an annual compound growth rate of 5.7%. These 25 years could be subdivided into three periods: the period 1945-1952, 1952-1959/60 and 1960/61-1969/70, with annual growth rates of nearly 5.2%, 6.5% and 5.4% respectively.

It is worth noting that the manufacturing sector was quite successful not only in holding its output but also in increasing it after the end of the Second World War. Import duties on industrial products were high towards the end of the 1930s and increased even more during the immediate postwar period. The Government gave every encouragement to the amalgamation of rival domestic producers. Moreover, the Council of Ministers drew up a five-year programme which concentrated on infrastructure projects. However, by 1950 less than half the appropriations set aside by the budget for new projects had been spent. The huge profits which many industries had made during the Second World War and the increased incomes of certain classes of the community encouraged some Egyptian entrepreneurs to launch new industrial projects.

In contrast to the immediate post-war period of 1945-1950, the next two-year period, 1951 and 1952, witnessed a stabilization or even a slight decrease in manufacturing output. By 1950 the replacement of imports of simple consumer goods by domestic substitutes had been almost completed.^{34/} Furthermore, rates of expansion in the output of this

^{34/} P. O'Brien, The revolution in Egypt's economic system, Royal Institute of International Affairs (London, Oxford University Press, 1968) p.20.

substituted production appeared somewhat limited. On the demand side, as industry was a small sector of the economy, the multiplier effects of industrial investments were unlikely to raise appreciably the demand for manufactured commodities. The mass market for the consumer-goods industries was in the village where real per capita income was virtually stagnant. The sharp decline in cotton prices on the world market after the Korean boom lowered the farmers purchasing power. Without the Korean War the rapid growth rate for Egyptian industry at that period would probably have declined sooner.^{35/} On the supply side, prices of manufactured goods were high because of the high cost of raw materials and low output of manpower.^{36/} Moreover, other difficulties appeared, such as the shortage of hard currency, the difficulties of utilizing available sterling reserves to buy machinery from overseas,^{37/} and the reluctance to invest in industrial stocks.^{38/} The Government might be blamed also for only half completing the approved infrastructure programme.^{39/} These difficulties, especially the inability of reducing costs, put a limit not only on the expansion of the domestic market but also on the possibility of exportation.

The next period, 1952 - 1959/60, began with the 1952 Egyptian Revolution, which assumed the responsibility of developing the national economy in all its aspects. In the field of industry that period witnessed the early activities of the National Council of Production and later the execution of the first industrial programme. Due to various government efforts the rate of growth of the manufacturing gross value added increased, realizing about 6.5% over the period 1952 - 1959/60.

^{35/} Ibid., p.303.

^{36/} Fédération des Industries Egyptiennes, Annuaire 1951-52; and National Bank of Egypt, Annual Report of President, 1949.

^{37/} National Bank of Egypt, Economic Bulletin IV, 1951, p.250.

^{38/} National Bank of Egypt, Annual Report of the President, 1950.

^{39/} P. O'Brien, op. cit., p.33.

The last period 1960/61 - 1969/70 witnessed the execution of the comprehensive plans for doubling the national income in the course of ten years. Concerning manufacturing output, the annual growth rates realized during the first five-year plan were higher than those achieved during the second five-year plan. Many factors were responsible for the low rate of growth of the manufacturing output during the period 1965/66 - 1969/70.

B. Structural changes in the manufacturing output

Structure by categories of use

In 1945, the manufacturing industry was dominated by consumer-goods industries which accounted for more than two thirds of the gross value added of manufacturing industry. Intermediate-goods and capital-goods industries accounted for the rest, i.e. 28.0% and 6.0% respectively, as indicated in table 19. The major part, nearly three quarters, of the intermediate-goods output was used by consumer-goods industries and most of the rest went to building and construction activities. Therefore, about 87.7% of the manufacturing output went to the consumers needs, whilst the share which went into investment accounted for only about 12.3%.

In the structure of manufacturing output the category of consumer-goods industries dominated over the 25 year period, with a decrease in its share in the gross value added by manufacturing industry from about 66.0% in 1945 to about 54.0% in 1969/70. The structure of the manufacturing industry witnessed a decrease in the relative proportion of the output of consumer-goods industries over the seven years from 1945-1952. This decrease was compensated, however, by an almost equal increase in the relative share of the output of consumer-goods industries over the next eight years from 1952-1959/60.^{40/} Therefore, the decrease of the predominance of consumer-goods industries happened over the period of the first five-year plan 1960/61-1964/65.

^{40/}
Mostly during the years 1953 and 1954.

Table 19. Percentage of distribution of gross value added of manufacturing industry, by categories of use (selected years from 1945 to 1971/72; at 1959/60 fixed prices)

Categories of Industries	1945	1950	1952	1959/60	1964/65	1969/70	1971/72
<u>First Classification</u>							
1. Consumer-Goods Industries	66.0	65.2	64.0	66.7	56.4	56.5	57.1
2. Intermediate-Good Industries	28.0	29.6	31.0	28.6	37.3	35.7	34.8
3. Capital-Goods Industries	6.0	5.2	5.0	4.7	6.3	7.8	8.1
Total Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Second Classification</u>							
1. Consumer-Oriented Industries	87.7	88.1	88.2	86.8	81.6	79.2	..
2. Investment-Oriented Industries	12.3	11.9	11.8	13.2	18.4	20.8	..
Total Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	..

Pre-1952 data are not so accurate.

Source: Hassan Abd-El-Aziz II., The Problems of Industrial Development in the U.A.R., The Central School of Planning and Statistics, Warsaw, 1972, table No. III A. 8, based on compiled, reprinted and reclassified data from: National Planning Committee, Memo. No. 22, specially prepared for the plan, Nov., 1959. (Published in D. Head, op. cit., pp. 281;285), UAR, Ministry of Planning, A Preliminary Report on The Following up of the plan during the second year 1961/62, Cairo, 1964, in Arabic; and S.A. El-Bavab, The Determinant Factors for the Growth of Mining, Manufacturing and Electricity in the First Five Year Plan (1960/61 - 1964/65) of UAR, Memo. No. 780, IIP, Cairo, 1967, p. 4 (in Arabic). For the last year 1969/70; Mahros Reza, Applied Study on Evaluating the Sector of Industry in the A.R.E., Arab Socialist Union, Cairo, Dec. 1971, pp. 8 and 9. (in Arabic).

The relative proportions of the other two categories of manufacturing industry, i.e. intermediate- and capital-goods industries developed into the opposite direction to that of consumer-goods industries. The relative share of the output of intermediate-goods industries increased by about 8% (from about 28% in 1945 to about 36% in 1969/70), which was mostly achieved during the period of the first five-year plan 1960/61 - 1964/65, and the relative share of the output of capital-goods industries increased by about 2% (from about 6% in 1955 to about 8% in 1969/70).

In short, it may be said that over the 25 years between 1945 and 1970 the structure of the manufacturing industry was dominated by consumer-goods industries. However, there was a structural change which decreased the relative share of consumer goods industries and increased the shares of both intermediate and capital goods industries. Most of this structural change occurred during the period of the first five-year plan, 1960/61 - 1964/65. However, despite this structural change, capital goods industries represented a small proportion in the structure of manufacturing industry - only about 8% in 1969/70.

The change in the structure of industry reduced the proportion of the intermediate goods output allocated to consumer goods industries from about more than three quarters in 1945 to less than two thirds in 1969/70. Therefore, within the output structure of manufacturing industry, that part which was oriented to consumer needs (consumer-oriented industries) decreased from about 88% in 1945 to about 79% in 1969/70, while that part which was oriented to investment needs (investment-oriented industries) increased from about 12% in 1945 to 21% in 1969/70, ^{41/}according to gross value added.

^{41/} See table 19.

The structure by branches of industry

In 1945 the food products and beverages industry accounted for more than one third (38.4%) of the gross value added by manufacturing industry.^{42/} The textile industry was second with about 9.4%, while other manufacturing branches contributed relatively small shares. The most important of these branches were tobacco manufacture, petroleum, chemicals and apparel and footwear, as indicated in table 20.

During the immediate postwar period 1945-1952, the gross value added of the manufacturing industry increased by a proportion of over 40%. Certain groups of industries (food, drink, tobacco and textiles), contributed nearly 60% of that increase. The remaining increase was primarily contributed by the production of building materials (non-metallic mineral products and basic metals), petroleum refining and metal products. The iron and steel industry was established, depending on war scrap for supplying the local market with a part of its needs for building materials, such as iron bars. Through the period 1945-1952 food, textiles and building materials were behind most of the increase in manufacturing output.

42/

There are some defects in the quality of pre-1952 data. The National Planning Committee estimated gross value added by industrial branches over the period 1945-1954. These estimates are derived by applying indices to 1954 value added figures. These indices are of physical output or, failing that, inputs or employment through which it was possible to estimate the pattern change of real product at constant prices over the period 1945-1954, where employment figures were often taken from the survey of wages and working hours.

Table 20. Percentage shares of manufacturing branches in the gross value added of manufacturing industry, 1945-1971/72 (at fixed 1959/60 prices)

Manufacturing Branches	1945	1952	1959/60	1963/65	1969/70	1971/72
Food products & Beverages	38.4	37.1	27.6	21.5	21.5	21.1
Tobacco Manufacture	6.7	4.8	3.0	2.6	2.0	2.4
Textiles	9.4	11.0	23.5	19.9	20.2	20.4
Apparel & Footwear	5.1	3.3	4.2	3.6	4.7	5.3
Wood Products & Furniture	1.6	2.8	2.9	2.9	2.9	2.8
Printing & Publishing	1.8	2.3	4.0	3.8	4.7	3.9
Miscellaneous	3.0	2.7	1.9	1.5	1.0	1.2
Consumer-Goods Industries	56.0	64.0	66.7	55.8	56.5	57.1
Ginning & Pressing	1.8	2.3	11.0	1.2	1.0	0.8
Paper & Paper Products	0.2	0.5	0.5	2.1	2.5	2.9
Leather & Leather Products	0.6	0.5	1.1	0.7	0.8	0.8
Rubber Products	0.1	0.3	5.0	1.3	1.3	1.2
Chemicals	13.5	6.0	5.5	11.2	12.9	13.6
Petroleum & Coal Products	6.1	7.7	9.2	10.4	5.3	3.1
Non-Metallic Mineral Products	2.7	4.4	3.9	4.5	4.8	5.5
Basic Metals	-	3.1	3.0	3.4	3.8	3.7
Metal Products	3.0	6.2	2.7	3.2	3.3	3.2
Intermediate-Goods Industries.	28.0	31.0	28.6	37.8	35.7	34.8
Non-Electrical Machinery	2.2	1.4	0.7	0.8	1.3	1.5
Electrical Machinery	3.2	3.3	1.3	2.8	3.6	3.3
Transport Equipment	0.6	0.3	2.7	2.7	2.9	3.3
Capital Goods Inds.	6.0	5.0	4.7	6.3	7.8	8.1
Total Manufacturing	100.0	100.0	100.0	100.0	100.0	100.0

Source: A.H. Hassan, op.cit., tables no.

Secondly, over the period 1952-1959/60, a clear change occurred in the structure of the branches of manufacturing industry (see table 21). Textiles realized the highest proportion in the rise of the output of manufacturing industry. Its proportion in the structure of the gross value added of manufacturing industry rose from 11.0% in 1952 to 23.6% in 1959/60. The coefficients of the structural changes of certain other branches such as transportation, rubber products, leather products and printing and publishing were higher than one, i.e. their growth rates were higher than the average for manufacturing industry. However, the shares of these branches did not contribute substantially to the increase because of their low initial percentage shares. The coefficients of structural changes of the other manufacturing branches were less than one, i.e. their growth rates were lower than the average for manufacturing industry. These branches with negative growth rates were metal products, electrical and non-electrical machinery. The food products and beverages industry, which predominated the structure of manufacturing industry by share, rose by an annual rate of only one-third of that of manufacturing industry as a whole. Consequently its relative share in the output structure of manufacturing declined from 1952 to 1959/60. The growth rates of chemicals and petroleum products were around the average growth of manufacturing industry.

Thirdly, over the ten years from 1960/61 - 1969/70 the realized structural change by various manufacturing branches explains the previously indicated change in the structure of manufacturing industry in favour of the increased importance of intermediate- and capital-goods industries (particularly during the period of the first five-year plan). Thus, during the period 1960/61 - 1964/65, while nearly all the branches of consumer-goods industries realized coefficients of structural changes lower than one, most of the branches of the other categories of intermediate- and capital-goods industries realized coefficients of structural changes higher than one. The highest coefficients of changes were found in paper and paper products, electrical machinery and chemical industry.^{43/}

^{43/} The greater part of the electrical machinery industry has consisted of durable consumer goods.

Table 21. Coefficients of structural changes of manufacturing industry by branches ^{a/}
(Gross value added at fixed 1959/60 prices)

Manufacturing Branches	1952-1959/60	1959/60-1964/65	1964/65-1969/70	1969/70-1971/70
Food Products & Beverages	0.4	0.4	1.0	0.9
Tobacco Manufacture	0.0	0.6	- 0.3	2.0
Textiles	2.7	0.7	1.1	1.1
Apparel & Footwear	1.5	0.6	3.1	2.1
Wood Products & Furniture	0.7	1.4	0.8	0.8
Printing and Publishing	2.3	0.9	1.5	0.6
Miscellaneous	0.2	0.4	- 1.0	1.3
Consumer Goods	1.1	0.6	1.1	1.1
Ginning & Pressing	0.2	0.2	0.2	-1.9
Paper & Paper Products	1.0	5.0	2.3	2.3
Leather & Leather Products	2.7	0.0	1.1	.1
Rubber Products	3.5	1.4	2.0	0.7
Chemicals	0.8	2.9	2.1	1.4
Petroleum & Coal Products	1.4	1.3	- 4.0	-3.3
Non-Metallic Mineral Products	0.5	1.5	1.7	2.1
Basic Metals	0.9	1.5	1.9	0.8
Metal Products	-0.7	1.2	1.2	0.9
Intermediate Goods	0.8	1.7	0.5	0.8
Non-Electrical Machinery	-0.3	1.7	4.7	2.1
Electrical Machinery	-1.0	3.0	2.9	0.5
Transport Equipment	6.9	1.0	1.5	2.5
Capital Goods	-0.9	1.7	2.6	1.5
Total Manufacturing (rate of Growth)	1.0 (6.5)	1.0 (6.6)	1.0 (2.6)	1.0 (5.0)

^{a/} The Coefficients of structural changes are found by dividing the annual growth rate for the particular categories or branches by the one for manufacturing industry as a whole. (See; Nassan A.R., Ibid, p. 101).
Sources: Ibid., Tables Nos. III A.3. and III. A.4.

Among the expanding manufacturing branches, due to their relatively large initial share, in 1959/60 the chemical industry took the lead by the highest increase in its share with about 5.5% within the structure of total gross value added by manufacturing industry occupying the third place. The textile industry, which was the leading one during the previous period, lost its lead with the drop in its rate of growth to a lower level than the average for manufacturing industry. Food products and beverages continued realizing low annual growth rates.

During the period 1965/66-1969/70, the negative growth rates of certain important manufacturing industries, in addition to the decrease in the growth rates of some other important manufacturing branches such as food products, textiles and chemical industries, were some of the main factors behind the low growth rate of manufacturing output.

The share of the textile industry in the structure of manufacturing industry accounted for 20.2% in 1969/70, as against 19.9% and 23.6% in 1964/65 and 1959/60 respectively. In spite of the low growth rate of manufacturing output, the chemical industry grew and accounted for 12.9% of the manufacturing output, in contrast to 11.2% and 5.6% in 1964/65 and 1959/60 respectively. During the same period the relative shares of the three branches of the capital goods industries realized an increase within the structure of the manufacturing industry.

C. The impact of the pattern of investment on the structural changes of output

The development and structural changes in the output of manufacturing industry reflected the pattern of allocation of investments among manufacturing branches^{44/} in addition to the change in output by the existing projects. Egyptian structure of manufacturing industry witnessed, from 1955 onwards, the erection of certain new modern industries for the production of rubber tyres, basic steel products, railway

^{44/} See Chapter III.

vans and wagons, lorries and trailers, busses and passenger cars, modern durable consumer goods, and certain chemical and petroleum products. Some of these projects began their production before 1959/60, but their impact did not appear fully on the 1959/60 pattern of manufacturing output. Certain branches of these industries had little growth in spite of the investments allotted to them and the beginning of production. This was the case of both the electrical and non-electrical machinery industries. The increase in output realized in most of the manufacturing industries during the first five-year plan, 1960/61 - 1964/65, was less than could be expected in comparison to the total investments directed to these branches and to the exploitation of the excess capacities which had been available before 1959/60.^{45/}

During the five year period 1965/66 - 1969/70, it is difficult to say that the gross value added by manufacturing branches was a representation of both the gross value added that was generated by pre-1965/66 excess capacities or by the pre-1965/66 projects under construction, or finally by the investment allocated to the industrial branches over the period 1965/66 - 1969/70. Various other conditions were perhaps responsible for the low growth rates and structural development of manufacturing industry during this period. These include defects on the side of the labour force and the organization and administration of the public enterprises.

D. Import substitution and export promotion effects^{46/}

The post Second World War expansion of industrial production was in the form of import substitution. By 1950, as has been mentioned before, the process of import substitution of simple consumer goods was almost complete. The ratio of imports with respect to total consumer spending of both categories of processed food imports and non-food consumer goods imports decreased sharply from 2.5% and 6.7% respectively during the period 1945-1948 to 1% and 0.6% respectively during the period 1948-1951.

^{45/} H. Hassan Abd-El Aziz, op.cit., pp.117, 118.

^{46/} See chapter II.

The post 1952 policies of industrialization recognized that the only way forward was again through import substitution without neglecting, however, the possibilities of exportation.^{46/} During the period 1952-1970 the import substitution objective was mainly achieved for consumer-goods industries as much as the available domestic natural resources permitted. Import substitution of intermediate goods has only been partially realized. In spite of the expansion and diversification of the output of the intermediate-goods industries, the established industries have increased their requirements for intermediate-goods imports. For instance, after a drop in the ratio of imports of semi-finished goods in relation to industrial production from 1.37% during 1953-1956 to 0.45% during 1956-1959/60, it increased to 0.97% during the period 1959/60-1964/65 that witnessed in general a relatively big structural change in the output of the manufacturing industry in favour of intermediate-goods industries.

Imports of raw industrial materials increased during the period 1959/60-1964/65, because the use of local resources did not expand fast enough. The import of capital goods with respect to total gross investment was nearly equal to the total amount of equipment, machines and transportation, because there was a heavy dependence on imports for obtaining machinery.

Concerning the effect of export promotion, it is worth noting that exports of manufactured products (viz. semi-finished and finished products) increased from LE 6.6 million in 1948 to LE 96.9 million in 1969/70, going up as a percentage share of total exports from 4.6% in 1948 to 29.5% in 1969/70. Consequently, an important structural change occurred within total exports between the relative positions of industrial and agricultural exports.

Exports of certain important industrial goods have not been possible except with the continuous subsidies such as in the case of cotton yarn and textiles. Export receipts of some electrical commodities could only cover the cost in foreign currencies of the imported used inputs.^{47/}

^{46/} See chapter II.

^{47/} A.A. Kadis, "A quick illustration to our foreign trade during the period 1959/60-1965/66", Internal Memo. No.24, INP Cairo, 1968, p.19 (in Arabic).

Moreover, it is worth noting that in spite of the increase in the share of industrial exports to total exports, the structure of industrial exports has been dominated by the same traditional industrial exports, with only a change in their relative importance. Exports of new industrial products were relatively small. In any case, during the early stages of development the structure of exports may not witness important changes. With the exception of the textile industry, the process of industrialization has not achieved earlier targets of export promotion. This fact may mean a return to a policy of industrialization based on import substitution objectives. In this connection, a reference should be made to increases in domestic consumption and the achieved targets of domestic production.

E. Summary

Over the 25 years period 1945-1970, the manufacturing industry more than tripled in terms of gross value added. The highest annual growth rate (8.6%) was realized during the period of the first five-year plan, 1960/61-1964/65. However, the contributed gross value added by nearly all the manufacturing branches during that five year period was far less than could be justified by both the gross investment allocated to these branches and the expected generated gross value added as a result of the utilization of pre-1959/60 excess capacities. The realized annual growth rate during the last five years 1965/66-1969/70 was very low due to various considerations, including the Israeli war of 1967.

Over the same 25 years predominant emphasis was given to consumer goods industries, but structural changes decreased the relative share of that category of industry and increased the shares of both intermediate and capital goods industries. Most of this structural change happened during the period of the first five-year plan, 1960/61-1964/65.

The food products and beverage industries still dominate the structure of the manufacturing industry, in spite of a declining proportional share of output. The textile industry, occupying second place in manufacturing, was the most expanding one over the period 1945-1959/60. The chemical industry, which occupied third place in manufacturing during the 1960s, became the fastest growing one over the ten-year period 1960/61-1969/70.

For consumer goods industries, the objective of import substitution has been achieved as much as available domestic natural resources have permitted. Import substitution of intermediate goods has only been partial. As for capital goods, import substitution has been slight. Concerning export promotion, it may be said that with the exception of the textile industry, the process of industrialization was not basically concerned with this objective.

V. EMPLOYMENT BY MANUFACTURING INDUSTRY

A. Employment absorption by manufacturing industries

In 1947, the sector of agriculture contributed about two thirds (61.6%) to total employment in the national economy. Services contributed most of the rest, with only a small part (8.4%) of total employment being absorbed by manufacturing (see table 22).

Over the three periods 1947-1960, 1960/61-1964/65 and 1965/66-1969/70 employment in the national economy expanded by about 1.2, 1.4 and 0.8 millions respectively. Of this increase in employment, the manufacturing industry absorbed relatively small shares of only 13.1, 15.8 and 8.9%. Certain limitations prevented agriculture from continuing to provide work opportunities. Therefore, services contributed the highest part in the increase of employment especially during the two periods 1947-1960 and 1965/66-1969/70 (see table 23).

In 1969/70, the relative share of labour absorbed by the agricultural sector declined to about one half (48.9%) of total employment. This decrease was paralleled by an increase in services which rose from 29.5% in 1947 to 39.7% in 1969/70. The relative share of employment by the manufacturing industries increased from 8.4% in 1947 to 10.7% in 1969/70 (see table 22).

The limited capacity of the agricultural sector to absorb more labour and the modest contribution of the manufacturing industry (13.0%) to the total increase in employment, over the period 1947-1970, allowed services to become the alternative possibility for more labour. This development could switch under-employment from agriculture, which is typical of that sector, to services.

Table 22. Percentage distribution of employment by economic sector, 1947-1971/72

Economic sector	1947	1960	1959/60	1964/65	1969/70	1971/72
Agriculture	61.6	56.3	54.0	51.6	43.9	47.2
Industry and electricity	8.9	9.9	10.2	11.4	11.4	13.0
(Manufacturing)	8.4	9.1	9.7	10.8	10.7	-
Services	29.5	33.9	35.8	37.0	39.7	39.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: H. Hassan Abd-El Aziz, *op.cit.*, p.182. 1947 and 1960 data are revised ones from UAR Department of Statistics and Census, Population census 1960, vol.II, Cairo, 1963, p.xiv, adjusted to exclude unemployed workers. For 1959/60, 1964/65 and 1969/70: Ministry of Planning, Follow-up and evaluation of the first five-year plan 1960/61-1964/65, vol.1, Cairo, 1966, p.63; Following-up and evaluating the economic growth of JAR in 1969/70, Cairo, 1977, p.45 (in Arabic) and Following-up and evaluating the economic growth of JAR in 1971/72, Cairo, 1973, p.71 and 73 (in Arabic). 1947 and 1960 data are census figures, i.e. actual data; 1959/60, 1964/65 and 1969/70 data are partly actual data and partly estimates by the Ministry of Planning.

Table 23. Percentage distribution of the increase of employment among economic sectors, 1947-1969/70

Economic sector	1947-1960	1959/60-1964/65	1964/65-1969/70	1959/60-1969/70
Agriculture	27.1	40.4	30.8	35.4
Industry and electr.	15.0	17.0	9.9	14.4
(Mnaufacturing)	13.1	15.8	8.9	13.3
Services	57.9	42.6	59.3	50.2
Total	100.0	100.0	100.0	100.0

Source: Same as for table 23.

In the manufacturing industries more than two thirds of the labour works in the consumer-goods industries, around one fifth in the intermediate-goods industries and around one tenth in the capital-goods industries; as is indicated in table 24. Over the period 1947-1969/70, the proportion of employment in the consumer-goods industries to total employment in the manufacturing industry decreased by about 5.1 percentage points while in the intermediate-goods industries increased by about 5.7 percentage points and capital-goods industries decreased by 0.6 percentage points of the total employment. This structural change in the distribution of employment in favour of the relative increase in the intermediate-goods industries has occurred gradually all over the period 1947-1970 and not only during the last ten years as is the case with the structure of output. This phenomenon had repercussions on the trends of productivity of the three categories of manufacturing industry as will be explained in the next chapter.

Table 24. Percentage distribution of employment in the manufacturing branches of industry, 1947-1969/70

Manufacturing branches	1947	1960	1959/60	1964/65	1969/70
Food products, beverages	10.4	12.7	14.9	14.8	15.0
Tobacco manufacture	0.9	1.2	1.6	1.5	1.5
Textiles	23.1	25.7	30.0	28.3	28.0
Apparel, footwear	20.0	7.7	6.9	7.1	7.0
Wood products, furniture	14.1	12.4	10.3	9.2	8.4
Printing, publishing	1.8	2.3	2.6	2.2	2.2
Miscellaneous	2.2	5.2	6.3	5.6	5.3
Consumer-goods industries	72.5	67.2	72.6	68.7	67.4
Paper, paper products	0.2	0.7	1.2	1.7	1.8
Leather, leather products	1.5	1.3	1.6	1.3	1.4
Rubber products	-	0.3	0.4	0.4	0.4
Chemicals	1.2	2.7	3.1	4.6	4.9
Petroleum and coal products	0.2	0.6	0.7	1.2	1.4
Non-metallic mineral prod.	3.2	5.1	5.5	5.5	5.3
Basic metals	4.3	2.2	1.6	2.6	2.8
Metal products	6.8	8.0	4.9	5.0	5.1
Intermediate-goods inds.	17.4	21.0	18.7	22.3	23.1
Non-electrical machinery	4.4	2.4	1.9	2.0	2.0
Electrical machinery	1.0	1.5	1.7	2.3	2.6
Transport equipment	4.7	7.9	5.1	4.7	4.9
Capital-goods indus.	10.1	11.8	8.7	9.0	9.5
Total manufacturing	100.0	100.0	100.0	100.0	100.0

Sources: A.H. Hassan, *op.cit.*, p.185; based on data of: Egypt Department of Statistics and Census, Census of population 1947, Second Part, Cairo, pp.96; and 150; UAR, C.A.P.M.S., Census of population 1960, Second Part, Cairo pp. 59 and 129; UAR, Ministry of Planning, A Primary Report on Following up the Execution of the Plan in the Second Year 1961/62, Cairo, 1962 (in Arabic); UAR, Ministry of Planning, The General Plan of Economic and Social Development-Appendix of the Primary Report on Following up the Execution of the Plan in the Fourth Year 1963/64, Cairo, 1964 (in Arabic); and S. El-Haweb, Factors Determining the Growth in the Development of Mining and Quarrying Manufacturing and Electricity in the First Five Years Plan (1960/61 - 1964/65) in the UAR., Memo No. 730, INP., Cairo, 1967 (in Arabic). The Last year 1969/70: R. Mahros, *op.cit.*, p. 15.

With regard to employment by the various branches of manufacturing industry, the most noticeable fact is that the greatest part of employment in manufacturing is concentrated in a limited number of branches. In 1947 a proportion of 67% of the total manufacturing employment was absorbed by only four branches, namely textiles, apparel and footwear, wood products including furniture and foodstuffs. During the period from 1947 to 1969/70 the proportion of these four branches decreased to about 58%, this being mainly due to the great decline in the labour absorbed by the apparel and footwear industry. The relative shares of employment in other manufacturing branches achieved important increases, such as chemicals, non-metallic mineral products, petroleum products and paper products as well as electrical machinery.

B. Scales and techniques of production from the point of view of employment

It is worth pointing out the factors which have been behind the changing pattern of employment in manufacturing. In this respect expansion in large scale enterprises and the increase in the use of capital intensive techniques were significant factors. Industrial expansion in the post-war period was characterized by these two factors. In spite of expansion in manufacturing output, during the period 1947-1950, the total volume in both the number of manufacturing establishments and in employment decreased by 26.9 and 15.8% respectively. During that period, many small-scale enterprises using less capital-intensive techniques were compelled to stop operations because of competition and lack of government protection or help.

Over the next period 1952-1960, large-scale enterprises went on expanding and increasing their share of labour absorption to the detriment of the relative share of labour by small-scale enterprises (see table 25). The conditions which prevailed after 1952 encouraged the use of more capital-intensive techniques. "Import regulations and other protectionist measures have created domestic monopolies in the commodity market in Egypt and this given, the amount of industrial capital, contracts the tendency towards more labour-intensive methods."^{48/} To this we have to add the fact

^{48/} B. Hansen and G. Marzouk, op.cit., p.165.

that many government projects established during the fifties were, by the very nature of the process of manufacturing, relatively capital-intensive projects. Consequently, over the period 1947-1959/60, capital intensity by manufacturing industry realized, roughly, an annual compound growth rate of about 8%.^{49/}

Table 25. Percentage distribution of manufacturing establishments and employment by size of establishment, 1952, 1960, 1964 and 1967

Size category of establishment by number of workers	1952		1960		1964		1967	
	Est.	Emp.	Est.	Emp.	Est.	Emp.	Est.	Emp.
1 - 9	93.1 ^{a/}	40.7 ^{a/}	93.3	36.4	93.3	27.2	95.3	36.0
10 - 49	4.5	13.2	4.8	14.3	5.6	14.3	2.8	9.5
50 - 499	0.9	17.4	0.8	18.6	0.9	18.2	0.5	13.1
500- and over	0.1	28.7	0.1	30.7	0.2	40.3	0.1	41.4
Unindicated	1.3	0.0	1.0	0.0	0.0	0.0	1.3	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. in thousands	60.4	402.3	84.4	521.8	87.4	686.4	159.3	850.7

^{a/} Estimated figure based on similar relative share in the Census of establishments in 1954.

Sources: Egypt, Department of Statistics and Census, Census of industrial production 1952; Annual general statistics 1959, Cairo, 1961, p.272, U.A.R., C.A.P.H.S., Census of establishments, various years (in Arabic).

^{49/} H. Hassan Abd-El Aziz, op.cit., pp.120 - 125.

During the last 10 years 1960/61 - 1969/70, most of the investment activities were carried out by the public sector. Established projects were mostly in large-scale units using more capital-intensive methods. This trend, which was not accompanied by sufficient governmental help to small-scale establishments, decreased the relative share of the labour absorbed by small establishments. In 1967, however, there was an increase in the share of the labour absorbed by small establishments. However, this increase may be due to the decreased rate of labour absorbed by large-scale industrial plants due to the contraction of economic activities which followed from 1965/66 to 1967/68.^{50/}

In short, it is clear that generally the policies concerning the scales and techniques of production adopted over the period 1945-1970 were of the capital-intensive type, a situation that resulted in a modest absorption of labour by the manufacturing industry, as already indicated.

C. The effect of the change in the structure of manufacturing output

Changing the structure of manufacturing output had an influence on labour absorption. This is due to the difference between the various industries in the possible alternative ranges of capital intensity in the process of manufacturing. Let us go back again to the previous analysis of the various scales and techniques of production as factors behind labour absorption by manufacturing industry, but the presentation will be from another angle, namely the kind of output. Examining the change which occurred in the structure of labour by changes in manufacturing, it may be better to use the incremental approach, i.e. the distribution of the increment in output in the proportion of the labour used by manufacturing branches.

^{50/} A.H. Hassan, "Industrial development and its influence on internal migration", Seminar on the Relation between Population and Development in Africa, Cairo, 8 April - 15 April 1974, p.29.

Over the first period 1947 - 1960, it is possible to see from table 26 (apart from the difference indicated between 1947 and 1960 censuses of population), that some manufacturing branches realized negative employment changes, while others realized relatively large positive employment changes. The negative employment change of the first category of manufacturing branches accounted for as much as 206% of the total net employment increase by manufacturing industry over the period 1947-1960. Most of the negative employment change was in the apparel and footwear industry. It is not possible to attribute the decrease in employment which occurred to a decrease in output. The real explanation is the appearance of large-size establishments, the decline in the proportional share of small scale establishments, the change in the product mix of some branches in favour of the production of modern or developed products, and the increase in the capital intensity of the techniques of production.

Concerning the other categories of manufacturing branches that witnessed an increase in their labour absorption, it is possible to say that they were also subject to the same factors, which reduced employment absorption. However, the increase in labour absorption was primarily to the large expansion in output which reached about five times their 1947 level for instance in the textile industry.

Over the next period 1959/60 - 1969/70, manufacturing branches can be classified into two main categories, namely "more labour-absorbing industries" and "less labour-absorbing industries". The first category comprises the manufacturing branches in which the relative share of labour absorbed by each of them is larger than the relative share of investment allotted to each of them. In contrast, the second category comprises those manufacturing branches in which the relative share of labour absorbed by each of them is smaller than the relative share of investment allotted to each of them, as indicated in table 26. Applying this new classification on the structure of the manufacturing output, during the period 1959/60 - 1969/70, growth was in favour of the category of the "less labour-absorbing industries". The repercussions of that structural change on the employment structure of the manufacturing industry was an increase of an estimated 3.7% of the share of labour by the "less labour-absorbing industries" to the detriment of the share of labour by the "more labour-absorbing industries". Considering the modest absorption of labour by manufacturing industry over the period 1947-1970, it is possible to say that the various industrial policies, namely the structure of production, size of establishments and techniques of production, were in favour of labour saving. However, some labour was absorbed due to social considerations, namely the reduction of working hours.

Table 26. Distribution of the increase of employment among manufacturing branches and gross investment by manufacturing branches, 1947 - 1969/70
(No. of employment in thousands)

Manufacturing branches	Increase of employment between:				Investment Total gross	
	1947 - 1960 (period)		1959/60 - 1969/70		1960/61	1969/70
		%		%		%
Food products and beverages ^{a/}	20.9	40.5	44.5	15.2	105.0	14.6
Tobacco manufacture	2.9	5.7	4.1	1.4		
Textiles	30.2	58.5	66.0	22.6	85.2	11.9
Apparel and footwear ^{a/}	-76.2	-147.4	21.4	7.3		
Wood products and furniture ^{a/}	-4.7	-9.0	13.8	4.7	0.8	0.1
Printing and publishing	4.9	9.5	4.6	1.6	5.6	0.8
Miscellaneous	21.6	41.8	11.3	3.9	67.4	9.4
Consumer-goods inds. ^{a/}	-0.2	-0.4	165.7	56.7	264.0	36.8
Paper and paper products	3.9	7.4	8.5	2.9	26.6	3.7
Leather and leather products	-0.3	-0.6	2.6	0.9	6.9	1.0
Rubber products	2.1	4.0	1.5	0.5	4.5	0.6
Chemicals	11.6	22.5	25.3	8.7	97.7	13.6
Petroleum and coal products	3.5	6.8	8.3	2.8	87.9	12.2
Non-metallic mineral ^{a/} products	14.8	28.8	16.2	5.5	37.9	5.3
Basic metals	-13.0	-25.1	15.3	5.2	114.0	15.9
Metal products ^{a/}	11.8	22.8	15.7	5.4	9.0	1.3
Intermediate-goods inds.	34.4	66.4	93.4	32.0	384.5	53.6
Non-electrical machinery ^{a/}	-12.3	-23.9	6.3	2.2	10.9	1.5
Electrical machinery	4.0	7.8	13.5	4.6	19.2	2.7
Transport equipment	25.9	50.1	13.2	4.5	39.0	5.4
Capital-goods inds.	17.6	34.0	33.0	11.3	69.1	9.6
Total manufacturing	51.7	100.0	292.1	100.0	717.6	100.0

^{a/} More labour absorbing industries.

Sources: Same as for tables 9 and 24.

VI. LABOUR PRODUCTIVITY IN THE INDUSTRIAL SECTOR

There are two measures of labour productivity.

The first measure is:

$$\text{Productivity} = \frac{\text{Value of total production}}{\text{Number of workers}}$$

The second measure is:

$$\text{Productivity} = \frac{\text{Value added}}{\text{Number of workers}}$$

The value added is the value of total production minus production requirements or intermediate input. Indeed, the value of total production includes the value of intermediate goods used in the production process. Such intermediate goods include energy, raw materials, machinery, and spare parts. Consequently, in estimating the value added by the industrial sector, we should subtract the value of intermediate goods from the value of final goods. In other words, the value added by the industrial sector is the value it adds to intermediate goods in the process of production. In this way, productive efficiency of every activity is measured by its contribution to the total national income which is made up of total added value in all sectors, including the industrial sector.

As explained above, the value added is what is added by the industrial sector to intermediate goods produced in other sectors. The procedure for computing this measure can be summarized in the following steps:

(1) Estimate the total production of primary and secondary products and services provided using the cost of production factors as a basis for the estimate. Production taxes and duties are excluded. Subsidies to industry are added.

(2) Subtract the cost of production including raw materials, energy and industrial services from total production.

(3) Subtract depreciation of fixed assets from the net figure in step (2). This gives us net added value.

Estimates of total value added were used in computing productivity in the industrial sector in general and in industrial groups in particular. Unfortunately depreciation data is not available.

There was an improvement in average productivity in the industrial sector in general, and in most industrial groups. This reflects slight improvement in production efficiency since the base year 1959/60. However, productivity declined in the years 1965/66, 1966/67 and 1967/68 and then increased again in 1968/69 and 1969/70. Average productivity was LE 483.5 in 1969/70, which represents 113.5% of the base year 1959/60. This means that labour productivity increased by over 13% in 10 years.

Table 27 shows that the slight increase in the average labour productivity during the 10 years 1960-1970 was at the same time accompanied by a greater increase in average wages, and it was one of the reasons for the inflationary pressure which accompanied the industrial development process. The most important reasons which led to this are: the determination of wages did not link wages with productivity, but because of social considerations the minimum level of wages and the determination of annual gains were fixed with no consideration to productivity (see table 28); and an employment policy based on the necessity of employing the surplus labour force did not help in the increase of labour productivity.

Table 27. Development of labour productivity for different industrial activities 1960/61 - 1969/70
(LE/worker, at 1969/60 prices)

Activity	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70
	60/61	61/62	62/63	63/64	64/65	65/66	66/67	67/68	68/69	69/70
Cotton ginning & pressing	307,1	322,8	282,2	270,1	321,4	325,5	325,7	325,7	325,7	325,6
Mining and quarries	714,3	759,3	690,8	840,1	832,2	725,2	812,3	801,6	1354,2	1707,1
Food industries	781,6	752,9	721,1	676,9	660,1	616,5	633,5	644,5	645,5	632,7
Beverages	604,7	673,9	623,8	650,8	666,7	565,2	412,5	545,7	419,6	491,9
Tobacco	784,9	800	818,1	723,9	724,9	798,3	740,5	712,1	677,5	664,2
Spinning and weaving	351,2	366,8	347,8	340,4	333,5	280,6	228,3	244,1	267	242,1
Wool and used products	252,5	265	305,2	221,5	233,1	266,6	268,2	280,6	313,5	317,6
Wood and paper products	101,7	152,5	109,7	152,2	147,2	132,6	150	133,9	140,3	133,5
Printing and publishing	123,1	137,5	132,4	130,6	137,5	111,9	654,3	677,9	671,1	650,3
Leather and leather goods	126,7	133,8	605	773,9	780,9	848,3	915,7	952,6	877,9	957,1
Textiles	270,3	60	221,9	267,3	257,1	243,2	254,7	265,1	265,3	260,5
Chemicals	955,5	10000	1226,9	1242,4	1176,5	1285,7	942,9	1428,6	1315,8	1333,3
Petroleum products	724,2	845	824,2	1002,9	1115,4	1233,8	1244,3	1197,5	1237,5	1233,8
Coal products	516,6	3697,8	4632,6	4298,7	3967,7	3875	3817,8	2264,5	2317,1	2250
Products from non-metallic raw materials	316,7	320,5	330	365,8	371	348,1	379,2	350,3	532,8	432,9
Basic metallic products	760,4	801,9	847,5	622,4	596,2	601,9	605,5	618,8	577,9	632
Non-ferrous products	220	227,6	233,1	261,5	288,6	261,3	239,9	252,9	256,4	299,6
Manufactures and maintenance of non-electrical machines	103,6	172,7	167	270,4	186,3	223,6	223,6	251,5	284	312,1
Manufactures and maintenance of electrical machines	200	594,8	496	560,7	549,5	510,5	494,8	420,6	497,8	512,6
Manufacture of cotton textiles	218,1	322,6	379,7	350,3	360,8	221,2	260,8	226,8	264,9	274,4
Other cotton industries	123,6	194,6	194,7	120	124,1	120,5	112,4	105,1	102,6	102
Total for the industrial sector	425,9	425,5	456,4	468,3	466,7	445,4	442,2	433,2	465,9	483,7

Source: Ministry of planning data.

Table 26. Development of labour productivity and wages, 1960 - 1970 (SE/worker)

Activity	First five-year plan		Second five-year plan		Ten-year plan	
	average increase in labour productivity	average increase in wages	average increase in labour productivity	average increase in wages	average increase in labour productivity	average increase in wages
Cotton gins and pressing	0.9	1.2	0.4	4	0.7	2.6
Mining and quarrying	3.1	8.3	15.4	3	1.1	2.7
Food industries	3.3	6.	0.7	-3	-1.3	-4.5
Beverages	2	5.6	0.5	-11.5	-2.2	2
Tobacco	0.2	6	-3.5	-11.3	1.7	2.72
Spinning and weaving	-1.0	5.4	-5.9	-0.8	-3.5	2
Ready made clothes and shoes	-1.6	-3.	6.4	-2.00	2.3	0.6
Printing and Publishing	3.9	3.5	3.9	3.4	2.8	-0.4
Leather and leather goods	-2.4	-11.	0.2	3.4	-1.1	3.4
Rubber	4.2	4.5	2.5	-1.00	3.4	2.1
Chemicals	8.1	2	2.1	1.4	5.1	.8
Petroleum and coal products	5.2	19	-11.5	-3.2	8.4	10.2
Products from non metallic and raw materials	5.2	0	3.1	-1.00	3.1	-29
Basic Metallurgical products	4.7	-4.7	1.2	-1.4	-1.8	-3.00
Metallurgical products	4.6	9.2	0.8	1.2	2.7	4.00
Manufacture and maintenance of non electrical machines	2.7	25.8	10.6	.9	6.7	12.4
Manufacture & maintenance of electrical machines	12.9	-0.4	2.1	1.6	7.4	0.7
Transportation means manufacture	3.6	1.2	1.00	2.2	2.3	1.6
Assembled industries	0.01	14.3	4.200	-1.6	1.9	6.00
Paper and Paper products	25.9	14.3	2.7	1.00	13.7	6.9
Total for the industrial sector	1.8	2.8	0.7	-1.1	1.3	.9

Sources: Ministry of Planning data.

VII. GEOGRAPHICAL DISTRIBUTION OF MANUFACTURING INDUSTRY

A. Some geographical data of Egypt^{51/}

The total area of Egypt is 1,001,449 square kms., with a populated area of only 35,580 sq. kms., which is only 3.55% of the total area. The area covered by the Nile waters and lakes is 7,380 sq. kms., and the remaining area is desert land. The Nile is the jugular vein of Egypt, for it is the only source of irrigation water upon which the cultivated area can depend. The length of the Nile Valley from Aswan to Cairo is 885 kms., while its maximum breadth is 16 kms. The Delta and the Fayum Oasis constitute the remaining population areas in Egypt. According to the last census taken in May 1966, the density in the populated area is 845 persons per square kilometer.

The desert area is divided topographically into parts: the Western Desert which extends from the western side of the Nile Valley and the Delta to the Libyan borders; the Eastern Desert which occupies the area between the eastern side of the Nile and the Red Sea; and the Sinai Desert which is situated in the north-eastern part of Egypt. Besides the Fayum Oasis in the Western Desert there are the Dakhla, Kharga, Farafra, Baharia and Siwa Oases as well as some other depressions which constitute the New Valley with an approximate area of 8 million feddans. The Qattara Depression which is the deepest depression in Africa covers an area about 4.5 million feddans and is situated in the northern region of the Western Desert. It is mostly covered with sand and salt.

^{51/} See: Central Agency for Public Mobilization and Statistics, Population and Development, A study on the population increase and its challenge to development in Egypt, World Population Year 1974, (Cairo, 1973) pp. 155-156.

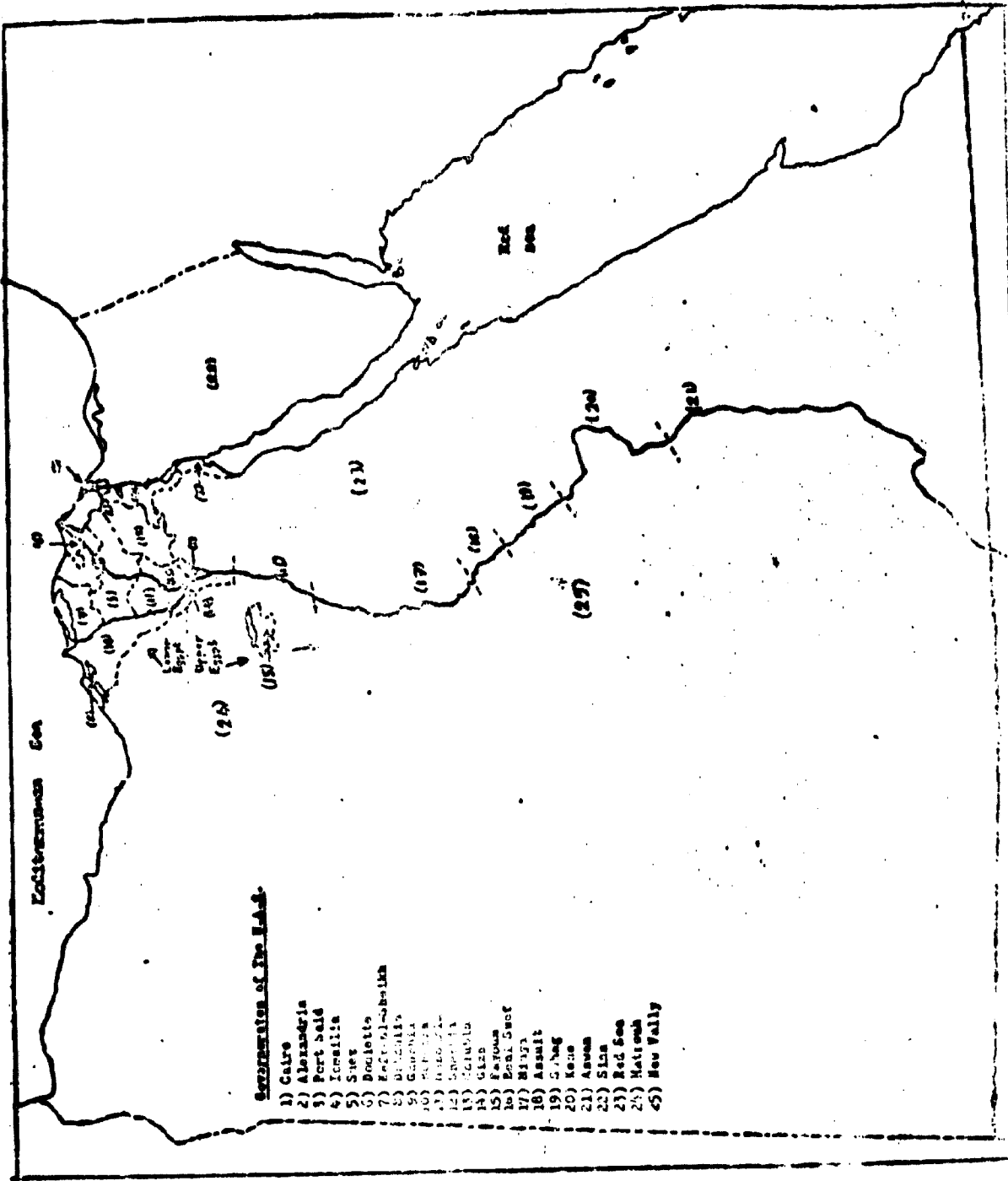
The land is characterized by its levelled surface with the exception of some regions in the Eastern Desert and the Sinai Desert which rise up to a height ranging between 6,000 and 7,000 feet. The Sinai heights extend from south to north gradually towards the sand plains extending to the Mediterranean coast. The eastern heights include a chain of mountains running parallel to the Red Sea and extends westwards towards the Nile. The region is rich with minerals and is traversed by a number of valleys which were used as roads in the past.

Egypt is divided administratively into 25 governorates. The two main governorates are Cairo (the capital) and Alexandria. The other governorates can be grouped geographically into canal zone governorates (3), lower-Egypt governorates (8), upper-Egypt governorates (3) and frontier governorates (4). The frontier governorates occupy most of the desert area.^{52/}

B. Geographical distribution of manufacturing industry in 1947

In 1947, manufacturing industry was not distributed evenly among the governorates. Three governorates absorbed about one half (50.3%) of the total manufacturing employment (see table 29). Cairo accounted alone for more than one quarter of the total manufacturing employment. Alexandria, the main harbour, and Gharbia, the main cotton textile centre, accounted together for another quarter of the total manufacturing employment. The second half of the manufacturing employment was distributed among the other governorates. In most of these governorates manufacturing industry accounted for only 3 to 5% of the total manufacturing employment.

^{52/} See the attached map.



Nomenclature of the M.A.A.

- 1) Cairo
- 2) Alexandria
- 3) Port Said
- 4) Ismailia
- 5) Suez
- 6) Bouletto
- 7) Farafra
- 8) Bahariya
- 9) Matruh
- 10) Matruh
- 11) Matruh
- 12) Matruh
- 13) Matruh
- 14) Matruh
- 15) Matruh
- 16) Matruh
- 17) Matruh
- 18) Matruh
- 19) Matruh
- 20) Matruh
- 21) Matruh
- 22) Matruh
- 23) Matruh
- 24) Matruh
- 25) Matruh

Table 29. Distribution of manufacturing employment and share of manufacturing employment (as percentage of) population, by governorates, 1947

Governorates	Distribution of manufacturing employment by governorates	Manufacturing employment as percentage of population
Cairo	26.7	8.5
Alexandria	11.4	8.2
<u>Suez Canal governorates:</u>		
Port-Said	1.7	4.5
Suez	0.6	4.0
<u>Lower-Egypt governorates:</u>		
Damietta	1.1	13.3
Dakahiliya	5.5	2.6
Sharkiya	3.9	1.9
Calubia	4.7	4.5
Gharbia	12.2	3.5
Menofiva	4.3	2.5
Beheira	4.3	2.3
<u>Upper-Egypt governorates:</u>		
Giza	4.3	3.5
Beni-Suef	1.5	1.6
Fayum	3.6	3.4
Minya	2.9	1.8
Assyut	3.5	1.7
Soubag	3.1	1.6
Kena	0.7	1.7
Aswan	0.2	1.7
<u>Frontiers governorates</u>		
Total	100.0	

Source: Egypt, Department of Statistics and Census, Census of Population 1947, Second part, (Cairo, 1953).

The importance of the manufacturing industry in the various governorates has to be considered, however, in relation to the size of the population of the governorates. The relatively high population share of certain governorates was the reason for the relatively high share of the total manufacturing employment, and the relatively low population share of some other governorates was the main factor behind the relatively low share of the total manufacturing employment. The governorate's level of industrialization - measured by the proportion of its manufacturing employment to the number of population shows that in 1947 three governorates accounted for relatively high levels of industrialization (see table 29). These governorates are Damietta and the two main governorates of Cairo and Alexandria. The lead in industrialization of the Damietta governorate was the result, on the one hand, of the large number of small-scale industries because of certain historical factors and, on the other of its administrative composition which involves only the urban area of Damietta. Apart from the peculiar case of Damietta, the two main governorates of Cairo and Alexandria had the highest levels of industrialization. The Charbia governorate had a relatively moderate level of industrialization. A moderate level of industrialization was also achieved in the Suez Canal governorates, and the two governorates adjacent to Cairo, Calubia and Giza. It is clear that in these governorates manufacturing industry was the result of certain factors related to their geographical site either besides the Suez Canal or Cairo. The rest of the governorates had rather low levels of industrialization.

C. Changes in the geographical distribution of manufacturing industry

It is possible to trace the government policies of industrial location by analysing the geographical allocations of manufacturing investments. The available data are concerned with the two periods 1957-1959/60 and 1960-1964/65.

During the period of the first Industrial Programme, November 1957 - June 1960, the geographical location of manufacturing investments was greatly concentrated (see table 30). Greater Cairo (Cairo and the adjacent areas of the Calubia and Giza governorates) absorbed alone more than one third of the total manufacturing investments. If we add the allocated manufacturing investments to the other main governorate, Alexandria, their share increases to a little less than one half (48.7%) of the total manufacturing investments. Outside these two main governorates, relatively high proportions of the total manufacturing investments were allocated to the Suez and Aswan governorates. In contrast, all the rest of the governorates except Gharbia, Beheira and Kena received either very low investments or none at all.

Over the period 1960/61 - 1965, one of the objectives of the industrial plan was to distribute industry whenever possible between the various governorates of the country. This aim was partly achieved, as manufacturing investments - although still concentrated - were more evenly scattered over the various governorates than during the period 1957-1960/61. The two main governorates of Cairo and Alexandria received more than one quarter of the total manufacturing investments. Adding the two governorates adjacent to Cairo (Giza and Calubia) their proportion increases to a little less than half (50%) of the total investments. The two new manufacturing centres (Suez and Aswan) and Kena absorbed a little more than one quarter of the total investments (26.1%). The remaining small part of investments was scattered unevenly over the rest of the governorates.

As a result of the geographical concentration of investments, the spatial structure of manufacturing industry was more localized in 1960 and 1964 (see table 31). The increase in localization was toward Alexandria, Cairo and its two adjacent governorates Calubia and Giza while the relative shares of most of the other governorates in the total manufacturing employment were gradually decreasing, except for the two new manufacturing centres, Suez and Aswan, where the shares in the total manufacturing employment increased, although they still accounted for relatively low proportions.

Table 30. Percentage distribution of manufacturing investment by governorates during the periods 1957-1959 and 1960/61 - 1964/65

Governorate	1957-1959/60	1960/61-1964/65
Cairo	37.8	14.3
Alexandria	10.9	13.3
Port Said	0.7	1.0
Ismailia	0.2	1.9
Suez	17.4	10.4
Danietta	0.4	0.7
Dakahlia	1.0	1.1
Sharkiya	1.7	0.5
Calubia	5.3	5.8
Kafr El Sheikh	0.1	0.2
Gharbia	4.6	1.9
Menoufiya	0.0	2.1
Beheira	2.5	3.3
Giza	0.1	14.4
Beni-Suff	0.0	0.4
Fayum	0.0	0.4
Minya	0.7	1.1
Assyut	0.7	1.8
Souhag	0.1	0.3
Kona	3.8	3.9
Aswan	13.8	11.8
Frontiers Governorates	0.0	0.2
Unspecific Locations	0.0	9.3
Total	100.0	100.0

Sources: Aida Beshara, "Planning industrial location in the U.A.R." Memo No. 385, INP (Cairo, July 1965) pp. 3, 7 and 8 (in Arabic) and Institute of National Planning, "Final Report on employment problems in rural areas of the U.A.R.", INP (Cairo, 1965) p. 63.

Table 31. Geographical distribution of manufacturing employment
1947, 1960, 1964 and 1967

	1947	1960	1964	1967
Cairo	26.7	26.6	28.6	26.7
Calcutbia	4.7	8.6	9.7	8.7
Giza	4.3	6.0	7.6	6.3
Alexandria	11.4	19.1	17.9	18.2
Port-Said	1.7	0.9	1.2	1.0
Ismailia		0.4	0.2	0.5
Suez	0.6	1.0	1.5	2.2
Damietta	1.1	1.9	2.0	2.3
Dakshiliya	5.5	3.1	2.9	3.4
Sharkiya	3.9	2.3	1.6	2.6
Kafr El Shaikh		1.0	1.0	1.2
Gharbia	12.2	9.5	8.5	8.2
Menoufia	4.3	1.7	2.3	2.6
Behere	4.3	5.7	5.6	4.9
Beni-Suef	1.5	0.9	0.8	1.1
Fayoun	3.6	1.1	1.0	1.3
Minya	2.9	1.8	1.7	2.2
Assyut	3.5	1.5	1.2	1.7
Sorag	3.1	1.5	1.2	1.5
Kena	3.8	2.2	1.7	2.2
Aswan	0.7	1.2	1.5	1.0
Frontiers Co.	0.2	2.1	0.0	0.0
Total	100.0	100.0	100.0	100.0

Sources: Department of Statistics and Census, Census of population 1947, Second part, (Cairo, 1953); C.A.R.M.S., Census of Establishment, various issues.

It is interesting to note that in 1967 localization of industry slightly decreased. While the labour absorbed by the main manufacturing governorates declined slightly, the absorption by other governorates increased. It is difficult to explain this adverse phenomenon in terms of the previously indicated localized spatial structure of manufacturing investments. It may be largely explained by the policies of contraction followed from 1965/60 to 1967/68. These policies decreased the total volume of investments and consequently decreased expansion in employment opportunities by the different economic sectors. The sector of small-scale establishments was, however, opened for extending employment opportunities to further newcomers. It seems that the increase in the relative share of the labour absorbed by small-scale establishments, which are less localized than the large-scale establishments, was the main reason behind this adverse phenomenon.^{53/}

Over the period 1947 to the mid-1960s, the same pattern of change in the localization of manufacturing industry applied to each one of the manufacturing branches (see table 32), which witnessed a general increase in their concentration from 1947 to 1964, especially during the period of the first five-year plan (1960-1964). Each manufacturing branch was being confined to a fewer number of governorates, and this was the case in spite of locating a large part of the consumer goods enterprises outside Cairo and Alexandria.

^{53/} See Abd-El-Aziz H. Hassan, op.cit., pp. 27, 29 and 30.

Table 32. Localization ratio by manufacturing branches
1947, 1960, 1964 and 1967

Manufacturing branches	1947	1960	1964	1967
Food products	0.16	0.31	0.59	0.23
Beverages	0.28	0.46	0.67	0.34
Tobacco manufacture	0.45	0.48	0.75	0.58
Textiles	0.26	0.28	0.61	0.25
Apparel and footwear	0.10	0.26	0.63	0.17
Wood products and furniture	0.14	0.25	0.60	0.25
Printing and publishing	0.48	8.46	0.74	0.57
Paper and paper products	0.48	8.43	0.73	0.50
Leather and leather products	0.32	0.40	0.70	0.43
Rubber products	0.34	0.32	0.64	0.39
Chemicals	0.34	0.32	0.38	0.26
Petroleum products	0.15	0.97	0.88	0.79
Non-metallic mineral prods.	0.25	0.25	0.60	-
Basic metals	-	0.65	0.70	0.51
Metal products	0.15	0.26	0.60	0.27
Non-electrical machinery	0.28	0.19	0.60	0.29
Electrical machinery	-	0.31	0.67	0.35
Transportation means	0.21	0.24	0.60	0.28
Miscellaneous	0.13	0.24	0.61	-

Source: Ibid., p.17.

D. Factors influencing the geographical distribution of manufacturing industry

Spatial structure of manufacturing industry is a result of the geographical pattern of allocating manufacturing investments over longer periods of time. Investments, in turn, have been induced by different factors. It happens that one or a group of these factors predominate in a certain industry, at a certain time or in a certain area. These factors may be classified into economic and social ones.

The economic considerations were in most cases behind the previously explained localized pattern of manufacturing industry. Vicinity to market plays an important role in this regard. For instance, in 1969/70, the two main industrial governorates Cairo and Alexandria accounted for about 21% of the total population, 33% of the total individual income and 32% of the total private consumption. At the same time, average private per capita income amounted to nearly LE 113.2 and LE 107.3 in Cairo and Alexandria respectively as against an average of LE 55.3 and LE 54.8 in lower and upper Egypt governorates respectively.^{54/} The economic considerations participated with the factor of markets in realizing the localized pattern of manufacturing industry. These considerations are such as availability of transportation facilities, different infrastructure, labour force, energy and raw materials. The lack of some or most of these economic considerations (in addition to the market factor) in most of the Egyptian governorates has influenced the location of industry.

^{54/}

Ministry of Planning, The main features of growth by governorates 1964/65 - 1969/70, Third report (Cairo, 1972) pp. 23, 175 and 176 (in Arabic).

The previously explained geographical characteristics of the Egyptian region had an influence in this concern because of their reflection on economic magnitudes. For instance, Upper Egypt is geographically a very long and very narrow area. The distance between the Southern governorates of Upper Egypt and Cairo is very long and means of communication between Upper Egypt and the Red Sea are difficult.

The appearance of new manufacturing centres in Aswan and Suez is due to economic considerations. Vicinity to the sources of raw materials was the main cause for locating most of new oil and some chemical projects at Suez. At the same time, closeness to the hydro-electric power which was generated by the Aswan dam explains why large fertilizer and related chemicals projects were located in Aswan.

Economic considerations were also behind the relatively less localization of small-scale establishments. Nearly all these establishments are privately owned. Then, in their profit seeking they are scattered all over the country to satisfy part - or most - of the local needs of consumer goods and to submit the needed industrial services. Unavailability of most public utilities, such as electric power, modern transportation means etc., do not handicap them; on the contrary, these factors may protect them from outside competition of large-size establishments.^{55/}

Historical factors are responsible for the existence of certain small-scale establishments and industrial centres in certain governorates such as Damietta.^{56/} Economic and social factors were responsible originally in industrial location. These factors may have disappeared, but industry is still sited in its original place due to the creation of other economic factors.

^{55/}

See: Abd-El Aziz H. Hassan, "The problem of industrial localization in Egypt" Seminar on Regional Planning and Urban Planning, Research Institute for Developing Countries, (Cairo, 23-26 June 1975) p. 12.

^{56/}

See p. 74.

For instance, Damietta was until the end of the 19th century an important Egyptian harbour through which some main raw materials were imported. Proximity to the source of these materials encouraged certain industries to be located in Damietta. In spite of Damietta's diminishing importance as a harbour, these industries are still alive because of the substitution of the old economic considerations with new ones such as an industrial and trading atmosphere and labour skills suitable for their industries, etc.^{57/}

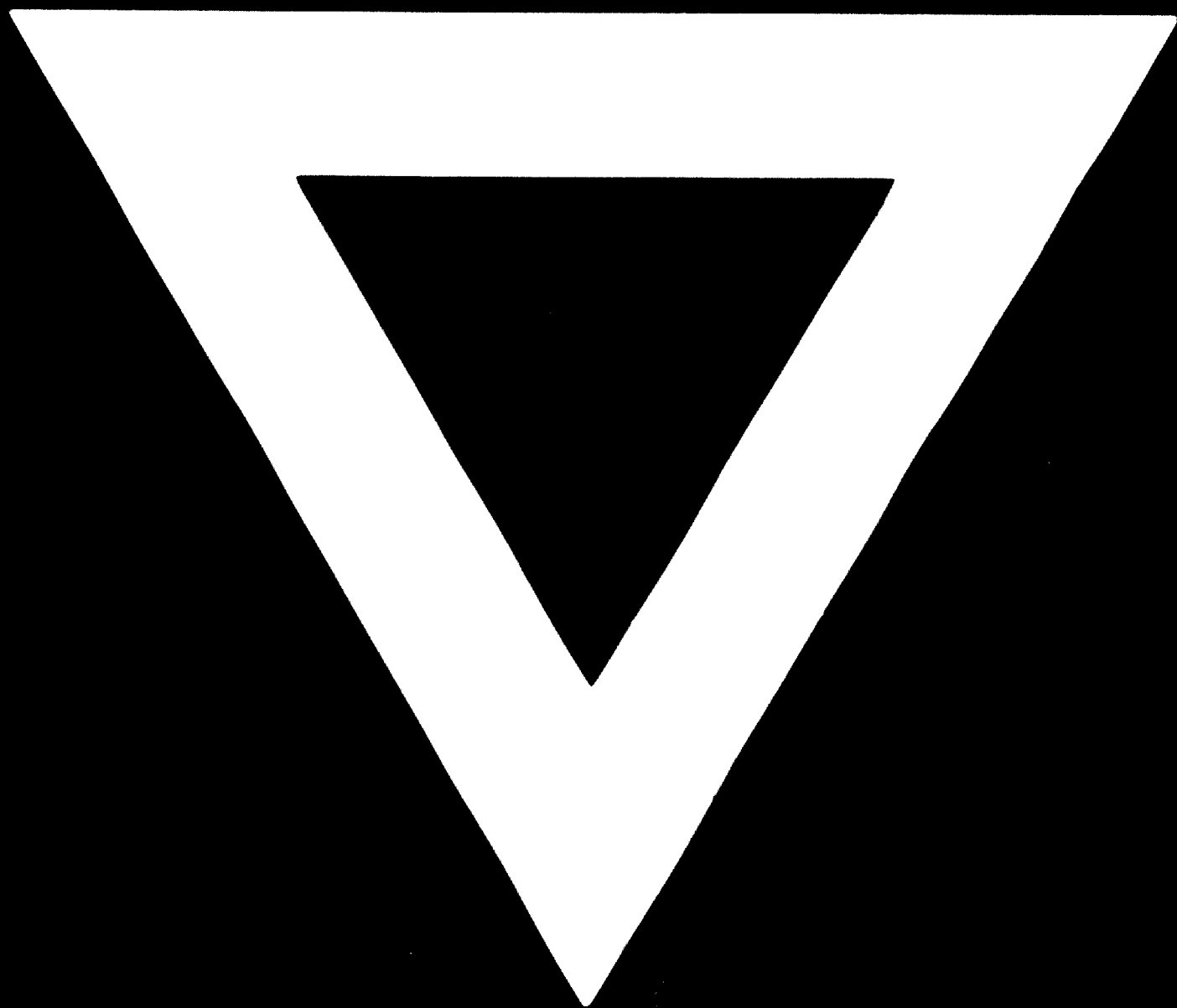
It is clear that economic considerations have had the most important role in locating manufacturing establishments. Social considerations such as the need to raise the standard of living of certain governorates were, however, behind the location of some recent manufacturing projects.

57/

See: Abd-El Azis H. Hassan, "Industrial location in Egypt", Internal Memo No. 448, I.N.P. (Cairo, 1975) pp. 25-26 (in Arabic).

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

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