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THE IMPACT OF DEVELOPMENT PROJECTS
ON
THE POPULATION PROBLEM OF EGYPT

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PREFACE

The standard of living of any nation is affected in general by two principal factors: the resources of natural wealth and the way this wealth is exploited, and the rate of increase of the population. (If these resources are not utilized to a degree rendering an excess of production to correspond with the rate of increase of the population then the standard of living is in danger of a decline.)

Egypt is one of the countries which suffer^s from a continuous disproportion between population and resources which has intensified the population problem and rendered it almost insolvable.

A study of the present Egyptian economy indicates that it is characterized by three common features: the minute percentage of cultivated land in relation to total area; the dense population as a result of a rapid rate of growth on a small land area already cultivated to capacity, and a rate of population increase which greatly exceeds the rate of agricultural and industrial production. Therefore Egypt's basic problem is compounded of two enteracting elements. (The population is rapidly increasing; the agricultural land available to support this population is limited. Thus the typical conditions of overpopulation exist in an extreme form: "an excessively high density of population; rural unemployment on a large scale; and

a rate of population increase which greatly surpasses agricultural production".¹

Since the end of the Second World War the successive Egyptian Governments attempted to solve the chronic problem of population by embarking on a development program that aims at increasing production to keep pace with the great increase in population. But this attempt was carried on a limited scale which rendered it ineffective.

With the emancipation of the New Regime in 1952 the Egyptian Government decided to tackle the population problem on a wider scale by embarking on short and long-run development projects in an attempt to increase agricultural production to the maximum and to industrialize Egypt. For this purpose special agencies were created and empowered to study, plan and execute any development project that can achieve that end.

The purpose of this dissertation is to study and analyze the impact of development projects on the population problem of Egypt. The study is thus divided into five chapters:

- (a) Chapter I is a brief description of the general features of the Egyptian economy.

1. Dorreen Warriner, Land Reform and Development in the Middle East (London: Royal Institute of International Affairs, 1957) P.15

- (b) Chapter II deals with the population problem of Egypt. It is divided into four sections. The first section is a brief study of some population doctrines. The second section is devoted for the composition and distribution of the population. Section three is a study of the population trend in Egypt during the last fifty years. (The final section is a brief statement of some of the economic and social factors underlying the population problem.)
- (c) Chapter III is a theoretical study of the possible solutions for the population problem with special reference to Egypt.
- (d) Chapter IV gives an account of development projects that are planned or executed by the Egyptian Government through different Ministries or special agencies in an attempt to solve the population problem. The period of reference is limited to the period (1945-1956) with special emphasis on the period (1952-1956) which marks the presence of the New Regime.
- (e) Chapter V is an attempt to appraise and evaluate development projects in the light of their effect on the population problem. It is divided into three sections. The first section is an

enumeration of some of the obstacles which limit the success of development projects in solving the population problem. The second section is an appraisal of the main development projects in the light of their contribution to agricultural and industrial expansion. The final section is an attempt to draw some conclusion as to the impact of development projects on the population problem; whether development projects can fully, partially solve the population problem, or have no bearing at all.

The author is particularly indebted to Dr. Albert Badre and Dr. Edward Fei under whose supervision the study was prepared and whose valuable remarks made its preparation possible.

ABSTRACT.

The basic problem facing Egypt is the failure of the productive capacity of the country to keep pace with the rate of population growth which has caused a continuous decline in the per capita income.

The study undertaken on the population problem in the light of the latest census conducted in 1947 revealed that the population trend over the last fifty years is characterized by a high fertility and mortality rates. Available figures on both rates indicate that they are among the highest in the world. On the other hand the increase in the cultivated and cropped area over the same period is insignificant which rendered it incapable of sustaining the increase in population.

Industrialization, increase in agricultural production, emigration and birth control are believed to be possible solutions for the population problem in Egypt. The aims of industrialization and increase in agricultural production is to increase the productive capacity of the country to an extent that can keep pace with the increase in population while emigration and birth control aim at checking the increase in population to an extent that development projects can cope effectively with the remaining surplus.

The Egyptian Government has resorted to industrialization and increase in agricultural production as possible solutions for the population problem by embarking on short and long run development projects in different sectors of the economy

in an attempt to increase agricultural production to a maximum and to industrialize Egypt on a scale that can absorb the surplus agrarian population. In order to secure adequate funds for such a development program the Government has resorted to internal and external means of finance.

Investigation carried on the effectiveness of the development projects in solving the population problem indicated that the inadequacy of domestic savings, the balance of payment difficulty and the rate of population growth are serious obstacles to the development program. Moreover existing scale on which development projects are carried can provide only a partial solution to the problem through the absorption of part of the surplus population.

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CHAPTER I

GENERAL FEATURES OF THE EGYPTIAN ECONOMY

This chapter aims at a brief description of the various sectors of the Egyptian economy. Those sectors which have more or less direct bearing on the topic and subject matter of this dissertation are discussed in more detail.

A. Agriculture:

Although Egypt has an area of 386,000 square miles, which amounts to approximately 240 million feddans,¹ the cultivated area of the Nile and the Delta does not exceed 6,000,000² feddans or 2.5 per cent of the total area. There are two main factors which limit the extension of cultivated area: the geography of the river valley and the amount of water available. As a result of these two factors the cultivated area increased slightly over the last fifty years. In 1900 the cultivated area was estimated at 5,403,000 feddans as compared with 5,900,000³ feddans at the present time. This slight increase is explained by the fact that the maximum area that can be cultivated lies within 10 meters of river level.

1. 1 feddan = 1.038 acres

2. Charles Issawi, Egypt At Mid-Century, (London Oxford Press; 1954) p.102.

3. Ibid. p. 102

However, as a result of the shift from basin to perennial irrigation it became possible to have more than one crop per year. This shift in the system of irrigation has increased the cropped area from 7,563,000 feddans in the year 1900 to 9,130,000¹ feddans at present. With this progress in the control of the Nile, the former system of irrigation (basin) is confined to 900,000 feddans in upper Egypt, the rest of the land being under perennial irrigation with three rotations: summer, flood and winter.²

Although the cultivated area of Egypt comprises a very minute proportion of the total area, Egypt is basically an agricultural country with cotton alone providing about 80 per cent of agricultural income and 16 per cent of the total national income. However this extreme dependence on cotton as the main source of income renders the Egyptian economy vulnerable to any change in world cotton prices, as well as to changes in textile production. Furthermore, concentration on cotton together with the rapid increase in population have made Egypt progressively less sufficient in food during the recent years.

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1. A. Cumberbatch, Egypt (London: Her Majesty's Stationery Office; 1953) p.70.
 2. "Winter" crops are sown in November and harvested in May. Wheat is the chief "winter" crop. "Summer" crops grow between March and September. Cotton is the main summer crop, while "flood" crops grow at the time of Nile flood. The chief crop is maize sown in August and harvested in November.

The Egyptian cotton occupies a unique place in the world market although it accounts for only 5 per cent of the world crop, because it produces about two third of the world's production of long staples.

The main agricultural crops in Egypt, beside cotton, are wheat, maize, millet, rice, barley, onions, "bersim" and sugar cane. Table (I) shows the area and production of each of the main agricultural crops: cotton, wheat, rice, onions, and sugar cane.

Rice is mainly cultivated in the Northern Delta, being sown in the spring and harvested at the end of September. It has in recent years become Egypt's second most valuable export commodity after cotton. Certain quantities of rice crop, surplus to local requirements are requisitioned each year by the government and sold for export.

∟ The Egyptian Government controls the production and marketing of wheat. A minimum proportion of 30 per cent in Lower Egypt and 40 per cent ¹ in Upper Egypt of each holding must be sown to wheat. Moreover a specified portion of the crop, ranging from 1 to 3 ardebs per feddan, must be surrendered to the government at a fixed price.

Until recently Egypt was self sufficient as far as cereals are concerned. However, the consequent fall in the availability of local supplies, namely wheat, added to the factor that the demand is increasing steadily with the growth in population has necessitated the import of large quantities of wheat.

1. Ibid. p.72

TABLE I
AGRICULTURAL CROPS (AREA AND PRODUCTION)^{*}

(IN MILLION)

Year	Cotton		Wheat		Rice		Onions		Sugar Cane	
	Area (fedd.)	Pr. (Cantar)	Area (fedd.)	Pr. (ardebs)	Area (fedd.)	Pr. (dariba)	Area (cantar)	Pr. (cantar)	Area (fedd.)	Pr. (cantar)
1952	1.97	9.92	1.40	7.62	0.37	0.55	0.32	5.9	0.09	72.51
1953	1.32	7.08	1.79	10.31	0.42	0.69	0.35	6.7	0.10	82.12
1954	1.58	7.75	1.79	11.53	0.16	1.18	0.45	8.4	0.11	43.11
1955	1.82	8.53	1.52	9.68	0.60	1.39	0.50	9.2	-	-

SOURCE: National Bank of Egypt, The Economic Bulletin, v. IX No. 2, 1956

* Area : feddans

Production: Cantars, ardebs and dariba

1 cantar = 44.9 kilograms

1 Ardeb = 150 kilograms

1 dariba = 945 kilograms

Onion is grown chiefly in Upper Egypt and is marketed between March and early July, the period during which it is suited for export. Similarly, sugar cane crop is cultivated entirely in Upper Egypt and in certain districts it is the sole means of livelihood of the inhabitants. The government tried to encourage the planting of a larger acreage of sugar cane by increasing the fixed price payable to cultivators.

In a word, Egyptian agriculture is characterized by extreme dependence on cotton and labor-intensive technique.

B. Industry

*Upper Egypt
the started*

The post-war period was one of growth for Egyptian industry, but progress was uneven and was interrupted by setbacks. In the immediate post-war years some of the war-time mushroom industries were eliminated by foreign competition, but imports were limited and pent-up demand was high to maintain or increase output. Generally speaking, industry was prosperous but two difficulties appeared: 'the difficulty of importing raw materials,' and the increase of foreign competition. However the outbreak of the Korean war gave Egyptian industry a new stimulus, both by raising the price of cotton, and with it internal purchasing power, and by diminishing foreign competition.

An index of growth is employment in industrial establishments which rose from 458,000 in 1945 to 695,000¹ in 1950. Concurrently, there was an increase in the capital

1. United Nations, The Economic Development of the Middle East 1945-1954, (New York; 1954) p.36-

of industrial joint stock companies from L.E. 28.5 million to L.E. 68¹ million in 1953.

The Egyptian industry is characterized by its diversified products. There are few sectors of industry not covered by Egyptian entrepreneurs. The following list which comprises only, the main industries of Egypt gives a rough idea of Egyptian industry:

1. Extractive industries are those concerned with the production of phosphate, manganese, gold, magnesium and salt.

2. Oil industry which includes the production of petroleum, mazzout and kerosene.

3. Metal industries are concerned with the production of iron, steel, gold, copper and silver.

4. Chemical industries including compressed and liquid gas, fertilizers, starch and glucose, soap and alcohol.

5. Food industries include the production of milk, butter, cheese, flour, biscuits, chocolate.

6. Textile industries are composed of ginning, pressing, spinning and weaving of cotton silk and linen.

These are the main industries in Egypt. The textile industry is considered the largest as regards both employment and value of output. In recent years, chemicals and metal industries have grown but they still occupy a minor place.

1. Ibid. p. 36

On the other hand, construction material industries such as cement not only covers her local needs but is a potential exporter. Table (II) shows the production of each of the main industries.

The poverty of the mass of the population, due to the smallness of the agricultural surplus strictly limits the internal market, and the preference of richer classes for foreign goods, due to psychological reasons, reduces the purchasing power available for local manufactured goods. (These two factors are obstacles to industrial progress in Egypt.) The lack of some important raw materials, and to the low efficiency of labor are considered also obstacles in the face of industrial progress.

The government has undertaken various measures to aid industry the most important of which was the adjustment of tariff. In June, 1950 ad valorem duties on most kinds of industrial machinery were reduced from 10 per cent to 4 per cent and those on numerous raw materials from 7 to 3 per cent.¹ In May, 1954 duties on other raw materials were abolished or reduced while those on certain articles manufactured in Egypt were raised tremendously. As a result the industry benefited from the high protection afforded to local production and also from the considerable reduction in duties on imported raw materials. (This policy was clearly manifested by the year 1955 which was more favorable to Egyptian industry than any year since the)

1. Ibid- p.38

TABLE II

INDUSTRIAL PRODUCTION

<u>YEAR</u>	<u>Cotton</u>		<u>Petroleum</u>			<u>Minerals</u>	<u>Paper</u>	<u>Cement</u>		
	<u>Yarn</u> (tons)	<u>Wooven fabric</u> <u>Seed Oil</u> <u>Oil</u> (tons)	<u>Mazout</u> (tons)	<u>Benzine</u> (tons)	<u>Kerosene</u> (tons)	(tons)	(tons)	(tons)		
1953	55.7	219.8	92.2	2388	1606	176	218	1220	20.2	947.0
1954	59.3	233.8	110.5	2268	1689	187	205	1155	20.4	1,096.4
1955	64.3	240.9	85.1	1972	1506	224	220	1161	24.2	1,237.3

SOURCE: National Bank of Egypt, The Economic Bulletin, v.IX, No.2, 1956

re-opening of normal trade channels following the end of World War II. Both production and sales of most industries increased considerably, and as a result the capital of Egyptian companies has increased by L.E. 33 Million¹ in the period 1952-1955, (although it was expected that the flow of capital into the industry still will be more rapid as a result of restricting land ownership.) However, it was realized that released capital that would have otherwise gone to land ownership has been concentrating on real estate.

C. Water Control

Egyptian agriculture is characterized by a highly developed system of irrigation. Irrigation in Egypt is based on the harnessing of the Nile and consists of storage dams, barrages, and pumps to raise the level of the feeder canals, drains and pumps for carrying off the water, and dykes for protecting the fields against the summer flood.

The discharge of the Nile differs throughout the year from a low ebb of 50 milliard cubic meters per day in early summer to a high level during the flood period. There are, at present, three storage dams on the Nile to hold water in times of short supply. The Aswan Dam was constructed in 1902 to hold some 980 million cubic meters of water for irrigating the cultivable area. The height of the dam was twice raised in 1912 and 1933 increasing

1. National Bank of Egypt, The economic Bulletin, v.IX No.2, 1956.

the capacity of the reservoir to 5 milliard cubic meters. The other two dams, the Gabal al-Awlia dam and the Sennar dams, are located on the White Nile and Blue Nile respectively. The Gabel al-Awlia dam has a capacity of 3.5 milliard cubic meters of which 2.5 milliards¹ are used by Egypt and the remainder by Sudan.

To control the distribution of the extra water stored, in addition to natural supply, as well as to feed the canals with the quantities required to expand the perennial area, a set of barrages were erected on different sites on the Nile. Thus the Esna Barrage was constructed in 1908 to provide both basin and perennial irrigation for Upper Egypt. The Assiout Barrage irrigates around 1,000,000 feddans² in Middle Egypt while Mohammad Ali Barrage raises the level of the Behera canal, which irrigates the eastern Delta, and the Tewfic Canal, which irrigates the western Delta.

Moreover in times when the discharge of the river is just sufficient for country's requirements, dykes are built at both ends of the Nile Delta and prevent water from going to the sea.

The authorities responsible for perennial irrigation undertake the distribution of the limited supply of water;

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1. The National Bank of Egypt, "Irrigation System of Egypt", The Economic Bulletin, No.3, 1950.
 2. Ibid. p.10

The exact requirements of all cultivated area are estimated and just the required quantity of water is permitted to enter the feeding canals.¹ Water is supplied to the whole cultivated area through a net work of canals the total length of which is estimated at 23,000 kilometers.² Fields are irrigated either by free flow or by mechanical means such as pumps.

Lift drainage is used to reduce the accumulation of salts in the soil which may diminish its fertility. Lift drainage is at present carried out in Lower Egypt by means of 25 pumping stations depending on 3 main power stations. In Upper Egypt drainage is carried out by 14 pumping stations depending on 2 main power stations. These stations help to raise drainage water from low levels into drains taking it freely to the outlet. The outlet in Upper Egypt is directed to the Nile and the principal canals while in Lower Egypt the outlet is mainly the sea.

At present, about 1,000,000 feddans in Lower Egypt and 200,000 feddans³ in Upper Egypt are provided with lift drainage.

1. Water control in Egypt is directed and supervised by the Department of Irrigation in the Ministry of Public Works.

2. The National Bank of Egypt, op. cit., p.10

3. Ibid. p.14

D. Transportation

1. Roads:

Egypt's roads are the weakest link in her transport system. The road consists of 4,000 kilometers of paved highway and 13,000 kilometers of earth road varying in quality from very good to bad. It is estimated that Egypt has 25 kilometers of roads for every 100 square kilometers of cultivated area, a proportion roughly equal to that of Eastern Europe and above the Middle East average.

Motor traffic in Egypt has greatly increased in recent years and in spite of a poor network of roads, has entered into serious competition with the State Railways in both freight and passenger haulage. This increase is attributed to the fact that owing to the State Railways shortage of a rolling stock and locomotives, their carrying capacity has remained more or less the same since the end of the war, whereas the demand for goods transport has been increasing rapidly.

2. Railways

The Egyptian State Railways comprises 29 main lines of standard (1.435 meter) gauge and one line of narrow gauge. With the exception of the southern part of the Upper Egypt line, all important lines have double track.

The state of rolling stock lags behind the demand and has lead to the diversion of traffic through other channels.

1. The National Bank of Egypt, The Economic Bulletin,

This is attributed to the fact that increased traffic is not met by increasing the number of locomotives and wagons due to inadequate appropriations in the state budget.

Table III shows the length of lines exploited, the number of locomotives, passenger vehicles and goods vehicles during the period 1950-1954.

TABLE III
LINES EXPLOITED AND ROLLING STOCK

	<u>1950/51</u>	<u>1951/52</u>	<u>1952/53</u>	<u>1953/54</u>
Length of lines (km.)	4,238	4,242	4,269	4,278
Locomotives (Number)	770	845	850	871
Passenger vehicles	1,105	1,131	1,146	1,215
Goods Vehicles	17,304	17,095	17,487	17,700

SOURCE: National Bank of Egypt, Economic Bulletin, V.VII No.4, 1954.

3. Inland Navigation

Inland navigation in Egypt is the cheapest means of transport, especially for bulky goods.

The Nile is navigable from Aswan to the sea throughout the year, with a depth of 1.50 meters, except in May when it is less than that level. Its course joins the majority of Egyptian towns without any natural impediment, to the traffic with the exception of sandbanks and changing channel of the river. The utility of the Nile as a water

way is enhanced by the system of navigable canals and lakes where it extends to 1200 kms. in the Delta.

In spite of the advantages which the Nile is offering as a natural waterway, inland navigation suffers from the narrowness and the low water level of some routes as well as the irregularity in opening bridges which cause much delay.

The volume of merchandise carried by inland navigation increased from 842,000 tons to 930,000¹ tons during the period 1950-1955. On the other hand as a means of passenger transport, inland navigation is of relatively little importance.

E. Money and Banking

1. Money Supply:

As indicated in Table (IV) money supply reached L.E. 424 million in December 1952, L.E. 420 in December 1953, L.E. 444 million in December 1954 and increased to L.E. 463 million in December 1955.

TABLE IV

MONEY SUPPLY:

<u>YEAR</u>	<u>MONEY IN CIRCULATION</u>	<u>DEPOSITS</u>	<u>TOTAL</u>
1952	205.7	218.5	424.2
1953	139.0	229.8	418.8
1954	186.9	255.6	442.5
1955	185.4	273.0	458.4

SOURCE: National Bank, The Economic Bulletin,

V. IX, No.2, 1956.

1. The National Bank of Egypt, The Economic Bulletin, V.VII, No.4, 1955.

The increase in money supply could be attributed to the increase in loans and credit facilities offered by banks.

However, the increase in money supply was not accompanied by an increase in the amount of banknotes in circulation. This means that the increase in the supply of money was due mainly to the great increase in deposits and especially in government deposits and individual saving deposits. Government deposits were L.E. 9 millions in December 1952, L.E. 14 millions in 1953, L.E. 17 millions in 1954 and L.E. 23.9 millions in December 1955. This increase in government deposits was initially caused by the floatation of development loans and later by the consolidation of treasury bills issues and unblocking of the counterpart of the special Treasury Bills used as cover of note issue.

2. Banking:

The banking system of Egypt is composed of four distinct groups: The Central Bank, the Clearing Banks, the non-clearing banks - which are registered as Commercial Banks with the National Bank of Egypt - and finally those institutions whose main business is not to accept deposits from the public but to extend loans for agricultural and industrial projects.

Clearing banks besides the National Bank now number 11 and form two Clearing Houses one at Cairo and the other

at Alexandria. Other banks are not allowed to become members until they fulfill certain minimum conditions in regard to years of existence, capital, deposits and turnover. All Clearing Banks belong to the Association des Banques en Egypte. Membership in this Association gives certain privileges but on the other hand requires members to abide with agreed minimum charges and rates of interest.

Non-Clearing Banks - which are registered as Commercial Banks - are composed of 16 banks of which half are branches of foreign banks. By definition and by practice these commercial banks provide only short-term credit in their transactions.

In May 1951, the National Bank of Egypt was transferred from a de facto into a de jure Central Bank. Law No.57, 1951 stipulated the following:

- (a) The National Bank of Egypt will be the State's Central Bank.
- (b) The Bank will supervise the stability of the Egyptian currency.
- (c) To organize credit for the safeguard of general interest in her capacity of lender of last resort and within the limits set down by such interest, and to cooperate with the public authorities in questions of monetary and banking policy.

The fourth group of banks known as "Other Credit Institutions" is composed of three classes of institutions:

agricultural credit banks, mortgage credit banks and industrial credit banks. The main function of these banks is to encourage agricultural and industrial investment by providing the necessary capital.

The increased liquidity of banks is one of the most noteworthy development in the banking structure of Egypt. This is evidently the result of the Exchange Control and the cessation since 1947 - when Egypt left the Sterling Area - of the movement of funds from Egypt to United Kingdom or elsewhere, at the end of each cotton season.

Large reserves above the legal minimum are not usual, except during the slack months of April and July. On the other hand during the months of November to February, it is only the accommodation obtained from the National Bank which keeps the various banks within the legal minimum.

F. Public Finance:

1. Budgetary Position

Closed accounts for the financial years 1951-1954 indicate that Egypt was incurring a deficit in her ordinary budget with the exception of the year 1953/54 where a surplus of 6.7 million was realized. The deficit incurred in other financial years amounted to 38.8 million in 1951/52; 10.2 million in 1952/53. Budget estimates for the years 1954/56 were balanced at 227.9 and 238.3 respectively. As indicated in Table (V) a slight increase is marked in the Egyptian

State Ordinary Budget compared to the numerous development projects which are being planned or executed by the government. This slight increase is attributed mainly to the fact that two extra ordinary budgets were created by the government to finance development projects that are planned or executed by the National Production Council and the Permanent Council of Social Services.

TABLE V

EGYPTIAN STATE ORDINARY BUDGET

<u>Fiscal Year</u>	<u>Expenditure</u>	<u>Revenue</u>	<u>Surplus or Deficiency</u>
1951/52	232.9	194.1	- 38.8
1952/53	208.4	198.2	- 10.2
1953/54	199.2	206.4	+ 6.7
1954/55 (a)	227.9	227.9	
1955/56	238.3	238.3	
1956/57	280.5	280.5	

SOURCE: National Bank of Egypt, The Economic Bulletin, V. IX, No.2, 1956, pp.186-187.

(a) Budget Estimates.

The 1956/57 ordinary budget estimates are put at L.E. 280.5 million compared with 238.3 million in previous financial year. This large increase in expenditure estimates is partly due to the inclusion in the ordinary budget of the projects of Services Council. The greater part of the increase, however, was brought about by the expansion in defence expenditure.

The transfer of some development projects to the ordinary budget was motivated by the desire to meet part of the expenditure from ordinary receipts and thus reduce the dependence on loans for financing. This increase in "ordinary" expenditure could not be covered in full from expected increase in the field of existing source of revenue. A new defence tax is to be levied which is expected to yield L.E. 9 million to cover the increase in ordinary expenditure.

Taxation in Egypt is the main source of public revenue. Out of an estimated revenue of L.E. 238.3 million in 1955/56, estimated revenue from taxation amounted to L.E. 153.9 or about 64.2 per cent. The basic of taxation in Egypt is overwhelmingly indirect with customs and excise alone accounting for about 45 per cent of public revenue.¹ In addition to customs and excise, which are the main source of revenue, the major taxes in Egypt are: the tax on movable

1. Customs duties are both ad valorem and specific.

property and earned income, the general income tax, the transfer tax, the land tax, the building tax and the stamp tax. Other important sources of revenue are the Egyptian State Railways, state domains, industrial establishments and confiscated royal property.

On the expenditure side appropriations for the ministries of War, Education, Public Works and Communications account for most of public expenditure in the ordinary budget.

Upon the creation of the National Production Council in 1953 an extra-ordinary budget was formulated to carry out incomplete development projects that were financed through the Ordinary Budget before 1953, and to finance new development projects that are planned by the Council.

Table (VI) shows the extra-ordinary budget for 1953-54, 1954-55 which embodies a wide range of agricultural, industrial and communicational projects, and provides for an estimated expenditure of L.E.42 million for each of the two financial years.

TABLE (VI)
EXTRA-ORDINARY BUDGET
 (LE Million)

	<u>1953-54</u>	<u>1954-55</u>
Public Works' Projects	23,318	17,667
Agricultural Expansion Projects	2,920	2,636
Petroleum refining & mining	730	2,656
Agricultural Production Projects	4,470	4,136
Communication Projects	8,480	10,785
Resettlement of Behira	-	2,105
Development of Wadi Natroun	200	167
Helwan Iron & Steel Co.	-	260
Aswan fertilizer plant	-	200
Electricity studies	-	1,570
Liberation Province	1,520	-
TOTAL	41,638	42,252

SOURCE: National Bank of Egypt, The Economic
Bulletin, V.IX, No.2, 1956.

2. Public Debt:

In 1955 the Egyptian Public debt amounted to L.E. 214.6 million as compared with L.E.143.0 million in 1951, L.E. 173.0 million in 1952, L.E. 172.5 million in 1953, 173.5 million in 1954. (Table (VII) shows the position of the public debt during the period 1951-1955:

TABLE (VII)

THE PUBLIC DEBT OF EGYPT (L.E. MILLION)

	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>
National Loan 3½ percent 1963/73	67.0	67.0	67.0	67.0	67.0
National Loan 3½ percent 1955/58	11.0	11.0	11.0	11.0	11.0
Palestine Loan 2½ percent 1959/61	15.0	15.0	15.0	15.0	15.0
Palestine Loan 3 percent 1964/79	15.0	15.0	15.0	15.0	15.0
Cotton Loan	-	15.0	15.0	15.0	-
Agrarian Reform Bonds	-	-	-	12.5	14.6
Development Loan	-	-	-	-	5.0
Development Loan	-	-	-	-	10.0
Development Loan	-	-	-	-	10.0
Treasury Bills	<u>35.0</u>	<u>50.0</u>	<u>49.5</u>	<u>38.0</u>	<u>67.0</u>
TOTAL	143.0	173.0	172.5	173.5	214.6

SOURCE: National Bank of Egypt, The Economic Bulletin,
V.IX, No.21, 1956.

It will be seen from the above table that in the year 1955 public debt has increased by L.E. 41.3 million over the previous year. This was a result of the government's decision to float three internal loans of L.E. 25 million in order to finance development projects that are planned by the National Production Council. These three loans consisted of:

(a) A loan of L.E. 5 million for 10 years bearing an interest of $2\frac{1}{2}$ per cent.

(b) A loan of L.E. 10 million for 10 years bearing an annual interest of 3 per cent payable at the end of every six months.

(c) A loan of L.E. 10 million for 15 years bearing an interest of $3\frac{1}{2}$ per cent and to be paid every six months.

A number of other loans were floated to finance cotton purchases. Thus Law No. 242 of 1955 allowed the Minister of Finance and Economy to issue Treasury Bills for not more than L.E. 150 millions to be increased to L.E. 200 million if necessary to finance cotton purchases.

G. Foreign Trade:

Statistics of Egyptian foreign trade indicates that the Egyptian balance of trade suffers from a chronic deficit. Table (VIII) shows the total value of exports, imports and re-exports during the period 1952-1955.

TABLE VIII
FOREIGN TRADE OF EGYPT (1952-1955).
 (LE Million)

YEAR	IMPORT	COTTON	OTHERS	RE-EXPORTS	TOTAL	(+)
						EXCESS OR DEFICIT (-)
1952	223,943	126,413	16,436	2,266	145,116	= 78,377
1953	177,010	116,348	19,515	1,482	137,345	= 39,665
1954	161,417	113,102	23,606	1,566	138,275	= 23,145
1955	183,226	107,438	29,554	1,374	138,366	= 44,860

SOURCE: National Bank of Egypt, Economic Bulletin,
 V. IX, No.4, 1956.

As indicated in the above table, the year 1952 marked a large deficit to the amount of L.E. 78,377,000. This deficit was the result of the extempore policy followed by authorities concerned at that time concerning cotton and import policy. As a result of the new cotton policy followed and due to the restrictions imposed on the import of luxury and consumer goods by the new regime, the deficit fell from L.E. 78,377,000 in 1952 to L.E. 23,142,000 in 1954. The increase in the deficit in the 1955 trade balance as compared with 1954 which amounting to L.E. 21.4 million is mainly due to the increase in the imports of capital goods necessary for development projects. These projects incur much expenditure at the beginning without contributing to production since a large sum is spent on the purchase of capital goods from abroad. This explains why imports increased

from L.E.161,417,000 in 1954 to L.E. 183,226,000 in 1955 while exports remained almost the same during the same period.

The main articles that are imported by Egypt are wheat, flour, tea, timber, petroleum, fertilizers and motor cars. On the other hand cotton is the main export and constitutes over 80 per cent of the total value of exports. Onions, rice and phosphate lime are considered to be important exported articles.

At present, Egypt's foreign trade policy can be summarized in the following:

(1) The variation of exports and the avoidance of complete reliance on one exportable crop, namely cotton. The government is embarking on certain projects to achieve this end but no tangible success is achieved till now.

(2) The expansion in the Egyptian export markets in such a manner as not to confine the marketing of Egyptian products to limited markets. The government has concluded several trade agreements in this respect (especially with East European Countries) and has expanded the Egyptian export market.

(3) The creation of normal prices for Egyptian cotton in accordance with the law of supply and demand without the interference of the government in the market to create artificial prices.

(4) The encouragement of multilateral trade operations in order to expand the exports of Egyptian products, and in particular cotton, thus enabling the country to import its needs with the best means of payment. Due to the presence of critical situation in Egypt this policy is difficult to execute.

(5) Limiting the import of luxury articles which consume much of Egypt's foreign balances without any benefits to the country. Statistics of balance of trade show that the government has succeeded in reducing the import of luxury goods in order to import the necessary capital equipment.

H. National Income

Until recently estimates of the National Income of Egypt were carried by private research workers, thus rendering such estimates unreliable for scientific research.

The first official attempt on the part of Egyptian government for the computation of national income of Egypt was made in 1953 when the Minister of Finance revealed that the preliminary estimates of the National Income for the year 1953 amount to L.E. 856,701,000 as shown in Table (IX) with a margin of plus or minus 10 per cent. Figures shown in the above mentioned table represent "value added" to the various products through the various stages of the productive chain.

TABLE (IX)

NATIONAL INCOME OF EGYPT (1953).

(In thousand L.E.)

<u>Sector</u>	<u>L.E.</u>
Government Sector	128,264
Agriculture	272,798
Pressing	2,824
Mining	2,910
Manufacturing	65,876
Electricity, gas and water	2,650
Construction	20,326
Wholesale and retail trade	129,446
Real estates and financial activities	18,146
Insurance	2,691
Transport	52,129
Storage	2,851
Services	53,528
Other Professions	24,966
Housing rents	57,686
Household sector	27,500
Rest of World sector	7,800
	<hr/>
Total National Income	856, 701

SOURCE: The Egyptian Economic and Political Review, October 1955, p. 29.

The per capita income is estimated at L.E. 39 which is considered a low per capita as compared with other countries.

As indicated in the above table agriculture constitutes the major sector of the economy contributing with a share of about 35 per cent of the national income. The second important sector is Trade which constitutes about 17 per cent and is followed by Manufacturing industries with 7 per cent. Transport, Rent and Services are more or less on the same level contributing 6 per cent of the national income.

I. Balance of Payments:

During the Second World War, Egypt had a large surplus on its current account which was due mostly to the expenditure of Allied troops in the country, and partly to the curtailment of imports. On the other hand, the post-war years and specially the period 1951-1955 showed a permanent import surplus and a deficit in the balance of payments. This deficit was covered by releases from Egypt's sterling balance under five successive agreements with the United Kingdom Government. As a result Egypt's sterling balances declined from L.E. 356 million in July, 1947 to L.E. 140 million in 1955. Concurrently, reserves of other currencies have increased. This was made possible partly by releases of dollars by the United States against releases of sterling balances, partly by exporting certain commodities only against payment in hard currencies, and partly by granting hard currencies for essential imports-

1. United Nations, The Economic Development of the Middle East, (New York; 1955). p. 42.

A considerable part of these reserves has already been used up due to the continuous deficit in Egypt's balance of payments. In an export economy like Egypt where the whole economy is based on the export of cotton, the balance of payment, is a major determinant of the money supply and the level of economic activity. Moreover, the execution of development projects depends to a large extent on the ability to import capital goods. The adverse balance of payments and the drain on foreign exchange resulting from the above-mentioned reasons led the Egyptian Government to adopt several measures to reduce the deficit in the balance of payments. The main measures adopted were the intensification of exchange restrictions and the expansion of bilateral trade and payments agreements.

Table (X) shows the position of Egypt's balance of payments during the period 1953-1955.

TABLE (X)

EGYPT'S BALANCE OF PAYMENT

(in L.E. Millions)

A. Current Transactions:

<u>Receipts</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>
Proceeds of Exports	135.3	139.8	133.1
Transit Trade	2.5	4.4	6.0
Insurance and Shipping	7.7	7.6	9.5
Suez Canal dues	29.1	30.6	31.8
Interests dividends	6.3	5.0	7.3
Travel and Maintenance	0.6	1.7	1.5
Other Receipts	34.5	33.1	38.1
	<hr/>	<hr/>	<hr/>
TOTAL	215.1	222.2	227.3

B. Disbursements:

Payments for imports	165.2	150.7	190.3
Transit Trade	1.5	5.2	3.6
Commercial Payments	2.5	2.7	2.8
Insurance and Shipping	7.4	7.8	10.3
Interest, dividends	17.4	18.1	17.1
Travel and Maintenance	9.6	13.0	10.2
Egyptian Gov. Expenditure	6.6	9.4	11.0
Others	12.8	11.7	16.0
	<hr/>	<hr/>	<hr/>
Balance of Current Trans.	223.0 - 7.9	218.6 + 3.6	261.3 -34.0

C. Capital Remittances

Inflow	1.9	2.6	4.8
Outflow	<u>2.3</u>	<u>2.9</u>	<u>2.6</u>
Net Inflow or Outflow	-0.4	-0.3	+2.2
Overall Deficit or Surplus	-8.3	+3.3	-31.8

SOURCE: National Bank of Egypt, The EconomicBulletin, V.IX, No.2, 1956

As shown in the above table, total current receipts amounted to L.E. 227.3 million in 1955 compared with L.E. 222.2 million in the previous year, while total current disbursements rose by nearly L.E. 43 million to L.E. 261.3 million with the result that the deficit from current transactions reached L.E. 34 million in 1955 as compared with a surplus of L.E. 3.6 million the previous year.

The deterioration of L.E. 35.1 million in the country's foreign payments position between the two years was brought about mainly by lower exports and higher imports of capital goods and military equipment.

CHAPTER II

THE POPULATION PROBLEM OF EGYPT

The purpose of this chapter is to discuss the population problem of Egypt on the light of the census carried out in 1947 and to make a brief presentation of some population doctrines. Finally some of the economic and social factors underlying the population problem are discussed briefly.

A. Doctrines of Population

1. Malthus Theory of Population:

Thomas Robert Malthus (1766-1834) the second of the trinity who laid the foundation of the classical School is most famous for his theory of population. His theory of population is considered as one of the main pillars on which the Classical School is built.

In 1798 Malthus published the "Essay on the principle of population as it affects the future improvement of society", in which he maintained that given the "passion between the sexes", the need for food, (the observed fact that population increased when the means of subsistence increased, and the declining yield of the soil, the point must be reached when the increase of population overtakes the increase in the supply of food.)

After the publication of the above-mentioned pamphlet, Malthus endeavoured to collect inductive proof for his theory and his investigations were elaborated in his second edition in 1803 where his theory was summarized into three main propositions:

a. "Population is necessarily limited by the means of subsistence.

b. Population increases where the means of subsistence increase unless prevented by some powerful and obvious checks.

c. These checks and the checks which repress the superior power of population and keep its effects on a level with the means of subsistence are all resolvable into moral restraint, vice and misery".¹

his theory
*
In simple form the theory is to the effect that population tends to increase more rapidly than it is possible to produce the means for their subsistence; the reproductive power of man is in excess of his power to increase the food supply. Unless the reproductive tendency is controlled, there will be a chronic scarcity of food and people will live in misery. According to Malthus this conclusion rests upon the "natural" operations of the following three factors:

-
1. Alfred Newman, The Development of Economic Thought, (New York: Prentice Hall; 1952)

1. The minimum rate of increase (unchecked) of population based on sex instinct is equal to geometrical ratio.

2. The maximum rate of increase of subsistence is equal to arithmetical ratio.

3. Checks on the increase of population.

The first two factors can be combined and be termed the ratio of increase of population to the increase of subsistence; or the ratio of population to subsistence. As to the first Malthus says ("It may safely be pronounced that population, when unchecked, goes on doubling itself every twenty-five years or increase in a geometrical ratio").¹ His use of an assumed rate of increase of food appears in the following words, ("It may be fairly pronounced, that considering the present average of the earth, the means of subsistence, under circumstances the most favorable to human industry could not possibly be made to increase faster than in an arithmetical ratio").² On the basis of these two factors, the conclusion seems inevitable: population, tending always to increase faster than the means of their subsistence, must ever press on these means of subsistence and their numbers be limited within them. The size of population is kept from indefinite increase directly by the

1. L. Haney, History of Economic Thought, (London: Macmillan Co., 1949) p. 264

2. Ibid p. 264

scarcity of food or indirectly by disease and other conditions induced by food scarcity.

The checks which can obviate excess population and adjust population to subsistence are of two kinds: positive and preventive. The former check include all those which increase the death rate, such as wars and famines, the latter which diminished the birth rate, were vice and moral restraint. According to Malthus view, there was but one sensible method of improving the conditions of the mass of population so that it would not increase as rapidly as the means of subsistence; the outlook for the future depended upon how effective the preventive check could be made, particularly that form of the preventive check which Malthus called "moral restraint". This mean abstention from marriage not followed by irregular gratification.

This pessimistic outlook which characterizes the Malthusian theory of population was subject to many criticisms. There is no doubt that Malthus primary contribution to the study of population problem was his use of facts for the support of his general doctrine regarding the dynamics of population growth and change. Despite this fact Malthus was criticized because he failed, when discussing the population subsistence ratio, to recognize more clearly the possibilities of increase in production growing out of the application of science to agriculture, manufacturing and transportation.

The facts of economic development after Malthus sufficiently contradicted his prognosis. The recent inquiry into changes in population has proved that the opening up of new areas of the world and the development of scientific methods in agriculture have increased and made it possible to increase still further the means of subsistence as to maintain a larger population at a higher standard of living.

2. Post-Malthusian Doctrines:

The conditions which arose out of the Industrial Revolution made many people feel that Malthus' pessimism was not justified and consequently that his theory must be discarded. Thus two general types of theories predominated in the discussion of population growth since Malthus day natural theories and social theories. The former are based on the belief that there is something inherent in the nature of man, or of the world in which he lives which determines his growth at a rate and in a direction largely or wholly beyond his control.

On the other hand social theories of population assume (that population growth is not subject to any immutable natural law but is rather the resultant of social conditions (including economic conditions) in which people find themselves.)

* The natural theory of population is defended by Sadler while the social theory is defended by Marx.

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* The natural theory of population is defended by Sadler while the social theory is defended by Marx.

Sadler theory of population can be outlined in the following: "the fecundity of human beings is, *ceteris paribus*, in the inverse ratio of the condensation of their numbers; and still in direct contradiction to the theory now maintained (Malthus), (the variation in that fecundity is effectuated not by the wretchedness and misery but by happiness and prosperity of the species"¹. In a word, (Sadler believes that the ability to conceive diminishes as the the density of population increases. Hence, he held that man's happiness, so far as it depended upon the rate between the increase in production and the increase in population, was ensured by the very law of his growth. Such a theory furnished the basis of an easy optimism as regards man's economic future, (for as soon as his numbers began to get dense, man would cease to produce as rapidly as before.)

Sadler's theory suffers from certain grave defects. He failed to realize that Malthus had definitely shown that a population may be very fertile i.e. that it can have a high birth rate and yet have little or no growth because of high death rate. Moreover, judging from available facts today there are people as the Japanese, and Chinese, who are among the most fecund as well as the most fertile of people, and yet they are among the most densely crowded of peoples.

1. Warren Thompson, Population Problems (New York: Mc-Graw Hill, 1953).

On the other hand the social theory of population growth was best presented by Marx. According to Marx, man's tendency to press on the means of subsistence was solely due to the evils of the social systems which had prevailed up to his day. He maintained that it is the working population which, while effecting the accumulation of capital, also produces the means whereby it is itself rendered relatively superfluous, is turned into relative surplus population, and it does so to an ever increasing extent.

This statement means that the poverty which so much concerned Malthus was entirely a consequence of unemployment which was an inevitable accompaniment of the development of modern capitalism. It has probably always been true that some improvement in the living conditions of the masses could be effected, at least temporarily, by the abolition of the abuses which accompany the development of every social system. Marx did not prove that the uncontrolled growth of population was not an important factor in making possible many of the abuses of capitalism, or that these abuses were the inevitable consequence of capitalism alone, and therefore could not be abolished unless the system itself were abolished.

3. The Interrelation of Population Growth and Economic Development

Both the Malthusian and post-Malthusian doctrines of population have neglected the interrelation between economic development and population growth. These doctrines stressed only the dynamic factors of population growth while their point of view as far as the exploitation of natural resources is concerned was static. (In other words, they have failed to recognize the possibilities for exploiting the natural resources) "the available means of subsistence" according to their terminology in such a manner as to meet the needs of the increased population.

Recently there has developed a growing conviction that (economic development is the key for solving economic problems arising from population growth, by reducing the pressure of increased population on available resources.) "Economic development refers to the process whereby the people of a country or region (come to utilize the resources available to bring about a sustained increase in per capita production of goods and services".) Conceptually this definition of economic development views the economic organization of a society as a productive unit. It reflects or measures the capacity of the economy to increase the

1. Williamson & Buttrick, Economic Development, Principles and Patterns (New York: Prentice-Hall; 1954) p.7

of fact these countries neglected relation to economic develop.

Recently they had economic develop solve the problem.

that this defines economic develop as productive unit

scarcity low incl
output can increase
product with limited
services.

supply of capital goods and services that require scarce resources for their production and which denies their value because of their ultimate contribution to the satisfaction of consumers. | This concept of economic development subordinates other considerations to the problem of how a greater output of scarce goods and services may be obtained. |

Countries differ in respect of the pressure they are under to exploit their natural resources. Thus in Egypt for example, pressure upon resources arises principally from the comparative magnitude of the population. Such a country undergoing continuous population growth may respond by utilizing its equipment of natural resources. This goal can be attained through "capital formation" which means that the society does not apply the whole of its current productive activity to the needs and desires of immediate consumption, but directs part of it to the making of capital goods. There are essentially two ways in which capital formation can occur.

① First, some resources engaged in providing goods and services for current consumption can be diverted into the production of capital goods. In this instance, the flow of consumption goods is diminished while that of capital goods is increased; the fraction of total productive resources devoted to capital goods production is raised, that devoted to consumption goods reduced.

utilize
resources
move to form
Capital
this means
into prod.
of goods

② The second method of accumulating capital equipment is to increase total output in such a manner that the increase

consists entirely of capital equipment. In this case, the increased flow of capital goods is not, as in the first case, a substitute for a portion of the flow of consumption goods.

In both of these methods of capital formation the value of the flow of total output over a given period will exceed the value of the flow of consumption goods by the amount of capital formation that has occurred. Total output will equal the value of the consumption goods produced plus the value of the capital goods.

∞ The second method of capital accumulation - an increase in capital goods output without a decline in consumption goods output - may be applicable in underdeveloped areas where disguised unemployment of labor and heavy seasonal unemployment in agriculture are widespread. These underdeveloped countries suffer from large-scale disguised unemployment in the sense that, even with unchanged techniques of agriculture, a large part of the population engaged in agriculture could be removed from the land without reducing agricultural output.¹

These countries have disguised unemployment

| The assumed functional relationship between population and economic well being and its derivative, overpopulation, do not lend themselves to statistical analysis with any degree of facility.

-
1. This second method of capital accumulation is discussed in detail by R.G. Nurkse.

"In short, the two variables - population growth and economic production - are to a certain degree independent of each other in their movements.⁽¹⁾ Population trends arise from family institutions, health measures, popular customs as well as from economic conditions.⁽²⁾ Economic trends (related to the factor of resources) arise from business institutions, market opportunities and technological invention as well as from population trends".

In considering economic development as a population policy for overpopulated countries two outstanding facts must be borne in the mind:

- * a. The fall in birth rate as a result of a rise in economic progress.
- * b. a lag in the effect of economic progress on the birth rate.

These two facts are well manifested in the population trends of industrialized countries. Moreover, it should be clearly borne in mind that economic progress may even result, in the short-run in an aggravation of the population problem, if as the death rate falls due to better living conditions a time lag is experienced between economic progress and its effects on the growth of population. A further question must be considered - whether population (with or without time lag)

1. N.K. Choudry, "A note on the dilemma of planning population in India", Economic Development and Cultural Change (November 1955) p.80.

*In considering
developing
as an answer
to overpop.*

Does popul.
always fall
↑

falls as economic well being rises at all points or whether the population rises at some points in response to economic progress and falls at others (i.e. $\frac{dp}{dy}$ is positive at some points and negative at others).

The impact of economic development on demographic trends will remain a matter of doubt unless four points in the functional relationship between population (represented herein in P) and economic growth (represented in Y) are determined. These four points are the following:

(a) " $\frac{dP}{dY} > 1$, and $\frac{d^2P}{dY^2} > 0$. On this point the growth of population rises more than proportionately to the standard of living and therefore the rate of growth of population rises.

(b) $\frac{dP}{dY} = 1$, $\frac{d^2P}{dY^2} = 0$. On this point the growth of population is proportionate to the standard of living, the rate of growth of population is constant.

(c) $\frac{dP}{dY} < 1$, $\frac{d^2P}{dY^2} < 0$. In this case the growth of population is less than proportionate to the standard of living and therefore the rate of population growth falls.

(d) $\frac{dP}{dY} = 0$, $\frac{d^2P}{dY^2} < 0$. In this case the population is stationery and the rate of growth of population falls¹

Point (d) would be the maximum point on a curve relating population (P) and standard of living (Y), with Y measured along the horizontal axis and P measured along the vertical axis.

1. Ibid. p.80

The above mentioned four points assume that population does not fall as living standards, rise at all points. In other words, it rises at some points and falls at others.

Study the importance of a rise in Pop.

In considering economic development as a key for solving the population problem in overpopulated countries it is important to know how population would react to living standards at different points. Moreover, if the above mentioned four points could be determined, they would not offer adequate basis for any definitive statement regarding economic development as a population policy unless the scope for increase of living standards could be determined within the given known resources of the country. Thus the possibility cannot be ruled out that the given resources for expansion of the economy may not permit the standard of living of the population to rise up to points (c) and (d).

Therefore it is on the light of the above mentioned functional relationship between economic growth and population that what the impact of development projects on the population problem of Egypt should be studied.

✓ B. Composition and Distribution of the Population in Egypt.

During the period (1900-1955) the Egyptian Government conducted six population censuses. The first census was made (carried) in 1897 while the last was conducted in the year 1947. Recently it was revealed by authorities concerned in Egypt that a new census will be carried out in March 1957.

Therefore, for the purpose of this dissertation the composition and distribution of population in Egypt is derived from the 1947 census.

The census of 1897 stated that the total population of Egypt, excluding nomads, is 9,715,000 while the population census of 1947 indicates that population has increased to 19,022,000. It is estimated that at present the population of Egypt stands at 22,942,000.¹

The phrase composition of the population which is the topic of this section is used to cover the totality of the measurable qualities of the people that form a given population. (The composition of one group or community differs from that of another when one group or community has a larger or smaller proportion of persons with any particular quality than those in another.)

In the following discussion the composition of Egypt's population is divided among sex, age, rural and urban, education and occupation.

1. Sex Composition:

The population of Egypt is rather evenly divided between the sexes. Thus in 1927 census there were 7,058,000 males and 7,120,000 females, and in 1937 there were 7,967,000 males and 7,954,000 females. On the other hand the last census of 1947 show a slight increase of females, with 9,623,000 against 9,419,000 males.

1. United Nations, Monthly Bulletin of Statistics.

| The ratio of sexes in any community affects the social and economic conditions in a variety of ways. It throws light on the future trend of population whether it will increase and to what extent. Obviously, if there are more males than females of those ages generally thought of as "marriageable", there will be a smaller proportion of married men than in a population where there is an excess of females.

The sex ratio is also an important factor in determining the death rate of any population. Women generally have lower death rates than men at most ages; hence if females constitute more than half of the population, as they do in Egypt, the total death rate of population is affected by this fact. |

The census of 1947 indicates that females in Egypt exceeds males at most ages with the exception of 5-9, 10-14, 15-19 and 40-46 ranges.

2. Age Composition

The 1947 census gave a total population of 19,021,840 of whom 9,603,000 were females and 9,419,000 were males. The following table shows how this population is distributed among different age groups:

TABLE XI

THE DISTRIBUTION OF POPULATION AMONG
AGE GROUP;

AGE GROUPS	MALES	FEMALES	TOTAL	PERCENTAGE OF TOTAL
Less than 5	1,279,582	1,305,235	2,584,817	13
5 - 9	1,208,856	1,191,197	2,400,053	12
10 - 14	1,142,332	1,071,153	2,213,485	11
15 - 19	984,033	917,427	1,901,460	10
20 - 24	677,765	706,152	1,483,917	7
25 - 29	685,730	786,537	1,472,267	7
30 - 39	1,279,299	1,343,194	2,822,493	14
40 - 49	997,571	981,422	1,978,993	10
50 - 59	592,327	621,582	1,213,909	6
60 - 69	335,808	380,943	716,751	4
70 - 79	131,230	160,763	191,993	}
80 - 89	39,647	58,297	97,944	
90 and above	12,456	17,874	30,330	
Non-specific age	25,092	33,263	58,355	6
Total	9,391,728	9,575,039	18,966,767	100%

SOURCE: Annuaire Statistique, 1947

(Cairo: Ministry of Finance)

young population

The most obvious ^{imp. thing} conclusion that can be drawn from Table XI is that an extraordinary large percentage of the population consists of children. According to the table 22.5 percent of the population is below 9 years. This kind of age structure is typical of conditions of high fertility and mortality. The birth rate in Egypt is considered among the highest in the world. The approximate figures given in the following paragraph show that the birth rate in the first half of the present century was stable at a level which can be considered among the highest in the world. It fluctuated between:

43 and 45 per thousand during the period 1900-1930

41.3 and 44.5 per thousand during the period 1930-1939

38 and 41.5 per thousand during the period 1940-1944

41 and 44.7 per thousand during the period 1945-1951

Similarly, the death rate is among the highest in the world; it fluctuated between:

25 and 28 per thousand in the year period 1910-1930

24.9 and 28.8 per thousand in the period 1930-1940

26 and 28 per thousand in the period 1940-1944¹

* On the other hand it started ^{death} declining in the past ten years as follows:

1. The Permanent Council for Public Services.

The Population Problem in Egypt; (Cairo:

Government Press; 1955) p.17.

1947	28.4 per thousand
1949	20.6 per thousand
1951	19.3 per thousand ¹

X) This decline in death rate is attributed to the improved health conditions and to the successful combat against epidemic diseases.

A comparison of the birth rates to the death rates mentioned above indicates that the "net rate" (i.e. the difference between birth rate and death rate) has increased from 17.5 per thousand, during the period 1900-1930, to 32.2 per thousand during the period 1945-1951. This increase represents the actual growth of population which is due to the decline in death rate accompanied by almost a steady birth rate.

The determination of the age distribution is one of the primary objectives of almost all population censuses. The data on age are essential for the calculation of mortality and for the analysis of the factors of population changes.

3. Rural and Urban Distribution:

Census statistics of the urban and rural population have a variety of uses. The process of urbanization has been long recognized as a concomitant of social and economic development, but the precise interrelations and the demographic implications have not been fully analyzed.

1. Ibid. p.17

"Any interrelation of process of urbanization to the economic indices that reflect the progress of economic development in terms of production and national income, and to the demographic trends, as indicated by rates of population growth, will be a valuable guide for economic planning on national basis"¹.

It should be noted at the outset of the discussion of the composition of rural and urban population in Egypt that the terms urban and rural have no precise meaning which is generally accepted. In Egypt, the terms "Urban Population" is defined as percent of people who were living in municipalities, governorates, chief towns of provinces, and chief towns of districts.

The census of 1947 indicates that there are five governorates with a population of 3,416,485; 14 provinces with a population of 15,389,341 and 55,073 bedouins who are not settled in one specified place.

4. Educational Composition:

Factual information on the educational status of the population is important at the national level in connection with the planning of education programmes and economic development.

-
1. United Nations, Handbook of Population Census Methods.

Three principal varieties of census statistics that are obtainable on educational characteristics: (a) data on literacy (b) data on educational level and (c) data on school attendance. The Egyptian Government followed the first two varieties in the 1947 census in order to classify people by educational status.

It was discovered that the percentage of illiteracy amounts to 76.6 percent among males and 93.9 per cent among females.

Table XII shows the educational composition of Egypt's population in the 1947 census:

TABLE XII
EDUCATIONAL COMPOSITION¹

	TOTAL POPULATION	LITERATE	ILLITERATE	NOT SPECIFIED
Mohafazat	2,931,312	1,167,505	1,566,745	197,562
Frontiers Muhafazat	137,669	19,360	101,206	17,103
Province of Lower Egypt	7,032,792	1,381,152	5,360,007	291,633
Province of Upper Egypt	6,279,677	991,561	5,646,333	241,7
TOTAL	16,381,950	3,559,578	12,974,291	748,081

SOURCE: Annuaire Statistique, 1947

1. Excluding children below 5 years of age.

The most obvious conclusion that can be drawn from Table XIII is that an extraordinary large percentage of the population are illiterate. The above table indicates that 24 per cent of Egypt's population are able to read or write, and that 76 per cent are illiterate. At present two-thirds of the children do not find places in the schools. Statistics indicate that the ratio of children in the age group of 6-12 registered in government compulsory schools and private schools, to the total number of children of the same group in governorates and moudirias varies between 20 and 50 per cent or 1.4 million children out of a total of 3.6 million.

5. Occupational Distribution:

Statistics on the economic activities of the people, derived from censuses of population provide an inventory of the human resources of the country, showing the number and characteristics of persons engaged in economic production and their occupations. Table XIII shows the Occupational Distribution of Egypt in 1947 census.

TABLE XIII
1.
OCCUPATIONAL DISTRIBUTION

<u>OCCUPATIONS</u>	<u>MALES</u>	<u>FEMALES</u>	<u>TOTAL</u>
Agriculture	3,656,047	3,898,567	7,554,614
Commerce	544,679	75,609	620,288
Industry	651,778	56,998	708,776
Transportation & Communication	201,477	1,858	203,335
Public & Administrative Services	489,055	26,359	515,414
Personal Service	267,159	2,588,235	2,855,394
Construction & Building	112,414	947	113,361
Mining and Quarrying	12,856	109	12,965
No occupation	1,058,844	1,171,723	2,230,567
Non-specified Industries	1,222,887	449,395	1,672,282
	6		
TOTAL	8,112,146	8,269,800	16,381,946

SOURCE: Department of Statistics, Annuaire Statistique
(CAIRO: 1953)

1. Excluding children below five years.

There are certain generalizations that can be drawn from Table XIII. It demonstrates that almost half of Egypt's employed population was in 1947 engaged in agriculture. Personal services and Industry are next in importance where they employ 20 per cent respectively.

A striking fact which can be drawn from Table 5 is that 12.5 per cent of the total population are unemployed which is considered to be a high ratio. Moreover, the casual labor force which were termed under non-specified industries constitute 6 per cent of the total labor force. This reflects a serious social problem arising from internal migration where people move from rural to urban area searching for employment.

C. Recent Population Trend in Egypt:

The growth of the population in Egypt since the first reliable census took place is shown in the following table:

TABLE XIV

<u>YEAR</u>	<u>NATURAL RATE OF GROWTH</u>
1897-1907	1.6%
1907-1917	1.3%
1917-1927	1.2%
1927-1937	1.2%
1937-1947	1.9%
1947-1954	2% (Estimate)

SOURCE: Permanent Council of Social Services,
The Population Problem.

(This table shows that the rate of increase until 1937 was 1.3 percent. But as a result of decline in the death rate in the last twenty years due to better health conditions the annual rate of growth rose recently to about 2 per cent yearly (approximately 450,000 persons).)

This chronic increase in population has intensified the population pressure on the available resources of Egypt. This pressure is illustrated by the constant deterioration in man-land ratio. The ratio of cultivated are to total population fell from 0.2 hectares per capita in 1907 to 0.16 in 1927 and 0.14 in 1937; in 1952 it was estimated at 0.11.

The cropped area per capita declined correspondingly from 0.29 hectar in 1907 to 0.24 in 1927 and to 0.22 in 1937. In 1952 it was estimated at 0.18 hectares per capita^{1.}

In order to understand this growth in population a study of fertility and mortality trends is necessary.

1. Fertility Trend

All evidence points toward the conclusion that reproduction in Egypt is among the highest in the world.

A priori evidence exists in the social customs of the country which cause the vast majority of females to be married soon after puberty.

1. United Nations, The Economic Development of Middle East Countries, 1945-1954.

1.
Statistical data indicates that the fertility ratio in Egypt in 1947 was 536 as compared with 470 in the United States and 405 in Britain. This high fertility ratio is attributed to the following reasons: In the first place the poverty and general wretchedness of the peasants makes procreation one of the few pleasures left to them. In the second place, the influence of cotton (the main produce of Egypt) which provides employment for children turns the child into a financial asset at his early age. In the third place, there are social factors that are deeply rooted in the Egyptian society such as the obligatory nature of marriage and the early age at which it is concluded, which cause a high birth rate.

2. Mortality Trend:

Mortality in Egypt stands at present at a relatively high level as compared with developed countries, but it is in the process of falling. As mentioned previously, the death rate declined over the last decade from 28.6 per thousand in 1945 and to 19.3 per thousand in 1952 due to better health conditions.

Infant mortality, the most sensitive index of social and economic conditions varies widely throughout Egypt. The major killer of infants are malnutrition, diseases borne by impure water and other epidemic diseases. In the cities where the level of education is higher than in rural areas

1. Fertility Ratio: Children under 5 years x 1000

Females 10-39

less mortality
and where medical care and pure water are available, infant mortality is less than in rural areas.

death rate decrease
It can be reasoned from an examination of the causes of its present levels that mortality in Egypt has been declining in the past few decades, and that its decline will accelerate as economic development proceeds. This decline is mainly due to the decrease in the death rate of infants under one year of age. The death rate was 160 per thousand in 1945 while it declined to 130 per thousand in 1952.

basic probl of death rates of level
It appears from this discussion that the death rate in Egypt has started to decline without being accompanied by a corresponding decline in the birth rate. If the birth rate were to remain at its present level and the death rate to continue declining then a great increase in population is expected. This contention is based on the following facts:

First, the application of modern methods of mass disease control, the expansion of public health expenditure as well as the fight against famine and epidemics may further reduce mortality rates.

Second, the decline in infant mortality rate means an increase in the number of those reaching marriage and reproduction age, with the consequent increase in births. "The rise in the fertility rate in Egypt at present is due to the increase in the number of live births in the recent past with the concomitant increase in the number of females

of reproductive age (15 to 20). This figure has increased from 3.8 million in 1937 to 4.4 million in 1947 just as the ratio of married women to the total female population of marriageable age increased from 72.9 per cent to 74.4 per cent".

Third, the population of Egypt is characterized by the fact that almost half of the population was below 21 years in 1947 census. Similarly a large proportion of the population is in the reproductive ages. Thus a high rate of increase is expected in the future because large cohorts will move into the reproductive age.

Under present circumstances in Egypt it is not possible to project population trends for a long period as the fate of the population depends on food possibilities, and the changes in birth and death rates.

D. Factors Underlying the Population Problem

There are certain economic, social and health factors which intensify the population problem of Egypt and renders it almost insolvable. This section is an attempt to discuss these factors with special emphasis on the economic factors.

1. Economic Factors:

Egypt's basic economic problem is the failure of national output to keep pace with the rate of population increase which has led to a further decline in the per capita income of Egypt. The level of total output and thus per capita income is broadly determined by the availability

of productive resources and how effectively these resources are used. |

The agricultural resources available in Egypt and which are supposed to support this increase in population is limited. | As mentioned before, the cultivated area on the Nile does not exceed 2.5 per cent of the total area. Moreover, the expansion in the cultivated area did not follow the same pace as the increase in population and that in spite of the fact that agricultural land was used more intensively as a result of better irrigation, the rate of increase in the crop area has been below the rate of population growth since the first world war as shown in Table XV.

TABLE XV

EXPANSION OF CULTIVATED AND CROP
AREA IN RELATION TO POPULATION

<u>Year</u>	<u>Cultivated area</u> (Acres Millions)	<u>Crop Area</u>	<u>Population</u>
1917	5.3	7.7	12.8
1927	5.5	8.7	14.7
1937	5.3	8.4	15.9
1947	5.8	9.2	19
1949	5.8	9.3	20

SOURCE: The Population Problem in Egypt, p-11

According to these figures, | the population has almost doubled, while the cultivated area increased by 9 per cent and the crop area by 18 per cent. |

This has resulted in a surplus agrarian population and the most striking feature of the Egyptian economy, "disguised unemployment". This term refers to the problem of rural overpopulation which is a characteristic feature of the densely populated countries.¹ Such countries usually suffer from chronic and large scale underemployment in agriculture in the sense that a large part of the population engaged in agriculture could be removed without reducing agricultural output. This phenomenon is amply demonstrated in Egypt by the fact that the amount of cultivated land per head of the population dependent on agriculture is not more than 1.1 acres as compared with 1.3 in India, 2.7 in Greece and 3.2 in Yugoslavia. If the amount of cultivated land per head is taken as a rough index of population pressure in countries with broadly similar economic structure, these figures would indicate that Egypt suffers from high degree of "disguised" unemployment which intensifies the population problem.

As far as the utilization of available resources is concerned, which is the second determinant of national output and per capita income, statistics of agriculture indicates that the yield per feddan has not noticeably increased since the first world war, with the exception of cotton and rice. It is due to the Egyptian farming methods which are very intensive, involving much labor but only limited use of modern tools or machinery. Between

1. The average density of population is 835 per square kilometer in Egypt as compared with 35 in United States and 125 in France.

the years 1913/22 and 1943/52 the cotton crop increased by 23 per cent, cereals by 27 per cent and the total crops by 26 per cent, against an increase of 75 per cent¹ in the population (on the basis of 1913).

A third economic factor behind the population problem is that the Egyptian economy is mainly dependent on the cultivation of one crop, cotton. This extreme dependence on a single export commodity, causes instability for the whole economy since the Egyptian cotton is subject to fluctuations in world cotton prices and textile production, and consequently impairs Egypt's ability to earn foreign exchange to meet her need of diversified imports. This fact explains the various measures undertaken by the Egyptian Government to restrict areas cultivated by cotton and to encourage the cultivation of other crops such as wheat and rice to meet the demand for food by the increased population.

The economic factors underlying the population problem of Egypt can be summarized in the following table showing the relationship between population and resources in the past thirty years:

-
1. The Permanent Council of Public Services.

The Population Problem in Egypt, 1955, p.13.

TABLE XVI

RATIO OF INCREASE IN POPULATION AND RESOURCES

Ratio of Increase in Population	+ 1.5 percent
Ratio of Increase in Crop Area	+ .5 percent
Ratio of Increase in Crop Production	+ .75 percent

SOURCE: The Permanent Council of Public Services,
The Population Problem of Egypt.

2. Social Institutional Factors:

In addition to the above-mentioned economic factors there are social institutional factors underlying the population problem of Egypt. These factors differ in their nature, but combine to intensify the population problem.

Education is the first social institutional factors. As mentioned previously and according to 1947 census 76 per cent of the total population (above 5 years) are illiterate of which 67 per cent males and 87 per cent females. The low income levels associated with a high incidence of illiteracy are favorable to a high propensity to procreat. / Such a society which is characterized by high percentage of illiteracy and widespread ignorance is subject to a great increase in its birth rate. This phenomenon can be attributed to the fact that in poor societies such as the Egyptian society since the majority of the masses are living within the subsistence level, any increase in population will not result in more worse

conditions than those existing before since they are already within the subsistence level. Also it is believed that in rural areas the "standard of living" as aspired for by the Fellah does not markedly surpass the actual level of living. The whole cultural pattern is oriented to a glorification of the virtue of content, ascetism and fatalism. This fact explains why in industrialized communities the birth rate tends to be lower since any increase in population may violate the high standard of living of the people who are accustomed to a certain level. Moreover the poverty, ignorance and general wretchedness of the majority of people, make procreation one of the few pleasures left to them, and make them ignore completely the benefits arising from lower birth rate.

The religious factor, which is the second social institutional factor behind the population problem, is important because it influence to a great extent the patterns of marriage and the attitude of the people towards any attempt for solving the population problem.

It is commonly believed that the religious factor is mainly responsible for Egypt's high birth rate. This argument is supported by the fact that the Islamic Religion (which is the religion of the States and for 90 per cent of the total population) permits both polygamy and divorce which increases the birth rate by increasing the chances of child bearing. Moreover, due to the fact that the sex composition

ratio is considered to be low (i.e. females exceeds males) according to the last census, it is believed that birth rate tends to increase. Also, the almost obligatory nature of marriage and the early age at which it is concluded contributes to the high birth rate.

Poor health conditions in Egypt constitute the third institutional factor behind the population problem. It is estimated that 55 per cent of the population suffer from bilharzia, 30 per cent from ankylostomai and 15 per cent from malaria. These endemic diseases which are brought about by perennial irrigation, inadequate drainage and impure water is spread mainly in rural areas where the preventive measures are inadequate.

Endemic diseases are largely responsible for the high death rate in Egypt and for the low working capacity of the Egyptian labourer.

"Finally there is the influence of cotton cultivation which is carried on largely by laborious methods of land cultivation, providing employment for children and turning the child into a financial asset at the early age of five".¹

1. Charles Issawi, Egypt At Mid Century
(Oxford University Press;
1954) p.56.

CHAPTER III
POSSIBLE SOLUTIONS FOR THE
POPULATION PROBLEM

It is appropriate to mention at the beginning that this chapter is an attempt to discuss possible solutions for the population problem of Egypt. The core of the discussion is mainly theoretical in the sense that these possible solutions may apply to all underdeveloped countries that suffer from the same problem.

The main solutions introduced to tackle the population problem are: industrialization, increase of agricultural production, emigration, and birth control.

A. Industrialization:

The term "industrialization" refers to the change in the structure of production which takes the form of planned expansion in the so-called secondary and tertiary occupations versus primary occupations. (In other words industrialization designates the growth of manufacturing industries.) (In the light of this narrow connotation industrialization is one particular form of economic development which in the present context involves the raising of standard of living through a steady increase in the efficiency of factors of production.) "One method of achieving such an

increase is by the continual (transfer of resources from less to more production occupations.) The term "transfer" denotes not only physical movement of existing resources but a change in the relative rate of absorption or recruitment of the factors of production into various occupations".¹

(It is believed that such a transfer would effect economic welfare by promoting the allocation efficiency of the economic system, and increasing the total supply of productive resources.) Moreover, since this transfer from primary industries to secondary (manufacturing) industries involve an expansion in the whole exchange system, additional resources are also required in other sectors of the economy. Therefore, any industrial development does not prelude the development of agriculture but on the contrary move together and are dependent upon each other.

The industrialization of agricultural countries is considered as one particular form of economic development. This contention is based on the following arguments:

In the first place, a high degree of correlation is existing between the level of real income and the occupational distribution of population. As a general rule, industrial

1. United Nations, Processes and Problems of Industrialization in Underdeveloped Countries (New York: Department of Economics and Social Affairs; 1955) p.12.

countries enjoy a high level of real income whereas agricultural countries suffer from low level of income. ("Studying economic progress in relation to the economic structure of different countries, we find a very firmly established generalization that a high average level of real income per head is always associated with a high proportion of the working population engaged in territory industries. Primary industries are defined as agriculture, forestry, fishing; secondary industries as manufacturing, mining and building; territory industries include commerce, transport and other activities.) (Low real income per head is always associated with a low proportion of the working population engaged in territory production and high percentage in primary production".)²

² A second argument in favor of industrializing agricultural countries (is that these countries have suffered from specialization in a narrow range of products.) (Owing to the relative inelasticity of supply and demand of agricultural products, prices and income tend to exhibit considerable fluctuation thus rendering the whole economy to be unstable.)

³ A third argument, which is the most important (as far as our topic is concerned, (is that industrialization is likely to exercise a powerful influence on the rate of population growth in agricultural countries.) This influence

2. Colin Clark, The Conditions of Economic Progress (London: Macmillan & Co. Ltd., 1951) p.6.

will be discussed in reference to those underdeveloped countries that are considered to be "overpopulated".

Overpopulated countries are characterized by the presence of chronic and large scale underemployment in agriculture. In other words, overpopulated countries suffer from what is known as "disguised unemployment" in (the sense that "even with unchanged techniques of agriculture a large part of the population engaged in agriculture could be removed without reducing agricultural output").¹ It follows that (a large percentage of labor working in agriculture does not contribute to the agricultural output, but on the other hand subsisting on a share of their family's real income. This means that the marginal productivity of labor over wide range is zero if not negative in the sense that agricultural output could be increased by removing part of the surplus labor.

The existence of vast surplus of labor in agriculture creates a situation where money costs of production are higher in industry in relation to agricultural money costs. (To say that there is surplus of manpower in agriculture is one way of saying that other branches can absorb labor from agriculture with relatively little sacrifice of agricultural output).

1. Ragnar Nurkse, Problem of Capital Formation in Underdeveloped Countries (Oxford: Basil Blackwell; 1955) p.32

*need for
Indust.*

A positive improvement in the welfare of any country suffering from disguised unemployment, such as Egypt where the degree of disguised unemployment is estimated at 40-50 per cent, requires a sufficiently rapid pace of industrialization which is sufficient to absorb the surplus labor in agriculture and the great increase in population. The absorption of a part of agricultural population should be one of the primary targets of industrialization. (If the purpose of industrialization is to promote the economic welfare of the country as a whole it follows that no spectacular results could be attained unless a reduction is made in the number of those dependent on agriculture.)

In the initial stages of industrialization three types of surplus will be accounted to. (The reallocation of resources imply a transfer of labor from agriculture to expanding industry.) A second source of surplus arises from the (inevitable disintegration of the village economy,) and the third source of surplus arises from the increased rates of population growth. The combined surpluses (necessitate a very rapid pace of industrialization in order to absorb the surplus agrarian population which is estimated approximately at 5 millions.)

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be very
quick*

However, there are certain obstacles which impede the process of industrialization. These obstacles may be grouped in three major categories: ¹⁻ inadequacies of the

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obstacles to
this*

1. Ibid. p.35.

economic environment, shortages in factors of production and socio-demographic problems. For the purpose of this part only sociodemographic obstacles are discussed.

Demographic factor refers to the economic effects of the size of population and changes in their rates of growth on the industrialization process of underdeveloped countries. (Thus in a country with a low per capita level of income and severe shortage of capital, rapid natural growth of population tends to add to the difficulty of saving and investing enough to achieve this result; for in such circumstance, a large part of the capital formed each year is pre-empted for the working equipment, education, housing, health and so forth required merely to maintain the existing level of capital assets per person, before anything becomes available for new industrial investment. Consequently, excessively rapid growth of population may hinder the industrialization even of a country with relatively abundant land and other natural resources.

Two factors
Capital
Growth

1

(The demographic characteristics of a rapidly growing population indicates that the obstacles facing industrialization are serious because a country with a very high birth rate tends to have a smaller proportion of its population in the age brackets which are the most economically productive in an industrial society. The output of this proportionately small productive group has to satisfy its own consumption needs and those of its dependents before anything can be

Low
product
section

2

used for purposes of investment.

case
Supply
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The (effects of a rapid rate of increase are accentuated in a country in which land resources are meagre in relation to population, for in these circumstances further population growth is more likely to impede the process of industrialization.) (Although in a low income country with high density of population and rural underemployment, there is an urgent need for industrial development, the unfavourable relationship between population and resources tends to perpetuate the situation in which low output and low income result in a shortage of capital and considerable difficulty in the rate of industrial investment. Hence, in the absence of substantial increase in agricultural productivity, high birth rates and rapid population increase tend to remain as a handicap to the industrialization process.

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B. Increase of Agricultural Production

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Some economists maintain that a second solution for the population is to increase the agricultural production of the country. Their belief is based on the contention that agriculture constitutes the main occupation in almost all underdeveloped countries, and that any attempt to correct the continuing disproportion between population and resources should start by the development of agriculture which is the basis of the economy. Moreover, the development of industrial potential in underdeveloped countries requires

the existence of a higher purchasing power in the economy to enable it to absorb the increased production and to create foreign markets for the expected surplus. Consequently, any attempt for putting the foundations for an extended industrialization should start by the improvement of agricultural production.

In Egypt, agriculture is the main pillar of the economy. It is estimated that about 1200 million Egyptian pounds are invested in agricultural land which constitutes about two thirds of the national capital. On the other hand 60 per cent of the working population are engaged in agriculture representing with their dependents about 70 per cent of the total population. In addition to that about 70 per cent of the existing Egyptian industries are based on the conversion of local agricultural crops employing 70 per cent of industrial labor and 60 per cent of the capital.

The above mentioned facts indicate the important role of agriculture in the Egyptian economy, where it constitutes the greater part of national capital, national labor as well as national income.

The condition of agricultural production in Egypt as well as in other underdeveloped countries is characterized by low productivity and this low productivity is attributed to the presence of backward technical methods followed in agriculture. These methods include the use of inferior seeds, antiquated methods of planting, lack of disease control, bad systems of harvesting and marketing

and a corrupt rotation system. In spite of the noteworthy improvement during the last thirty years agricultural production capacities are under the sought standard both in labor unit or in the soil itself. Comparison between productivity and labor unit in Egypt indicates that one Egyptian farmer produces foodstuffs for three persons only while one British farmer produces for eight. Moreover, the yield per feddan of wheat, for instance, is 70 per cent of an equivalent area in Holland and 80 per cent in Britain.

The condition of agricultural production in Egypt is in a state of unbearable deterioration particularly as the pressure of population on the resources is in constant increase. The population has risen up to 180 per cent of the number at the end of the last century with the consequence that the individual's ratio of the production area has dropped by 20 per cent of what it was at that time in spite of all efforts for the expansion of the cultivated area. These factors have caused a drop in the standard of living by continuously reducing the productivity for each unit of labor and capital employed in agriculture.

It is necessary therefore to draw a general policy which aims at increasing agricultural productivity and production to such an extent as to help in correcting the disproportion between population and resources and to create a favorable atmosphere for future industrialization.

The increase of agricultural productivity stands on four technical supports:

1. "The main basis for the increase of productivity is the seed which carries in its pedigree formation the elements of high productivity".¹ Thus it is necessary to increase the propagation of selected seeds of proved higher productivity for principal cereals such as corn, rice and maize among farmers. These seeds have to be immuned against plant diseases, and pests in order to obtain the most abundant yield. Seeds will however be of no avail in raising productivity in general unless these selected breeds of plant are utilized on the widest scale by every farmer instead of being utilized by few farmers.

2. The second main technical support on which the increase of productivity stands is the creation of suitable environment in order to allow the pedigree possibilities of the seed to come forth in the form of high production both in quality and quantity. The basis for such a suitable environment is the soil. Thus in order to reveal the nutrition elements that are lacking in the soil and results in low productivity in some parts of the cultivated area it is necessary to analyze the soil.

1. Abdel-Razak Sidki, Egypt's Agrarian Policy Under the New Regime (Cairo: Ministry of Agriculture; 1955) p. 46

Moreover, the creation of suitable environment necessitates the improvement of already existing irrigation and drainage systems in order to provide the proper water requirements of the plant without shortage or excess and at the most suitable intervals so that the plant can grow up to its full.

3. The reduction of production costs constitutes the third basic technical support for increasing agricultural productivity. Thus all means which may lead to raise the yield of the feddan and to decrease the loss will have an indirect effect on the reduction of production costs. Such a reduction can be realized through the expansion in the use of agricultural machinery so as to increase and stimulate production and to relieve farm animals from field work to animal production.

4. The fourth basic technical support for increasing agricultural productivity deals with a different factor of production namely labor. The productive efficiency of labor supply in underdeveloped countries is very low. There are certain economic, social and cultural factors behind the inefficiency of labor. Economic factors refer to diets which are below the biological minimum requirements and to endemic diseases which induce lethargy and apathy. The profound effect of poor diets, endemic diseases and lack of medical care upon the efficiency of labor is one of the main causes behind low productivity.

It is necessary therefore that any policy which aims at increasing agricultural productivity should take into consideration the raising of nutritional standard of the agrarian population. It is estimated that the calories which an Egyptian farmer gets are 20 per cent less than the normal although he consumes so much calories in his daily energies as to increase his needs to a higher ratio of calories than the minimum.

There is no doubt that increasing the agricultural productivity on the above-mentioned basis is a sound policy, but judging by the trends of recent years it is not possible to predict an increase in the yield per feddan of sufficient magnitude to compensate for or even mitigate the acuteness of the population problem.

All the above mentioned factors are important in increasing agricultural productivity. On the other hand agricultural production can be increased not only by increasing the yield per feddan, but can be increased through the extension of cultivated area.

As stated previously, the present cultivable area of Egypt does not exceed 2.5 per cent of the total area. Thus the extension of cultivated area in a necessary measure to alleviate the constant pressure of population on the limited resources of the country. Such an extension can be realized by means of expansion of irrigation schemes, and the reclamation of the desert.

C. Emigration to Sparsely Populated Area:

Emigration to sparsely populated areas is one of the several partial means of alleviating the population pressure on the available resources in underdeveloped countries that are suffering from overpopulation. It is important to emphasize that emigration is not the only solution nor it is the most effective means for alleviating the population pressure, but it can cope effectively with other means such as industrialization, increase in agricultural production and birth control to solve the population problem.

The effects of migration upon population growth in the homeland have formed the basis for much heated discussion among economists as to whether the country of emigration gains any relief from population pressure by sending out emigrants.¹ In other words the question is to what extent can emigration in general be considered as an effective cure for the persistent population pressure? According to the official report passed by the International Economic Commission which was sponsored by the League of Nations in 1937, emigration is an effective cure for the economic problems arising from overpopulation.

International emigration to sparsely populated areas

1. Warren Thompson, Population Problem (New York: McGraw Hill, 1953) p.230

is a suggestive solution where theoretically it is effective in raising the standard of living of densely populated areas as industrialization. If the growth of population is artificially stopped in this way, there would be much better chance of coping effectively with the present surplus of population through industrialization. In fact, the industrialization of Western Europe has been assisted to a considerable extent by great emigration waves to the New World.

Studies carried by the World Population Conference¹ in 1954 on the effects of migration on the economic situation of the country of origin indicates that emigration to overseas countries has contributed to European economic recovery although emigration can only be considered a safety valve for the population pressure of certain countries and cannot serve as a total substitute for other factors such as capital formation.

The Conference revealed that in Italy, overseas emigration since the war has absorbed one fifth of the natural increase of population; it has been an important although not a decisive factor in reducing population pressure. Similarly in other European countries such as Spain, Portugal emigration helped in reducing the population pressure. However, studies of the Conference indicated that in some overpopulated countries such as India and Japan the volume of emigration from these countries during recent decades has been so small

1. The World Population Conference was held in Rome from 31 August - 10 September 1954 and was sponsored by the Department of Economic and Social Affairs of the United Nations.

and the natural increase of the population so rapid that population pressure has not been reduced.

On the other hand there are some economists who maintained that emigration does not really relieve population pressure because it does nothing to stop the population explosion at the source. Their contention is based on the undoubted fact that in the past certain European countries have had a rate of increase which does not seem to have been effected by variations in the outflow of emigrants. However, one cannot be certain that the number of immigrants was the only, or even the most important factor affecting population growth in a given period. The effects of migration are so closely bound up with other social and economic conditions affecting population growth that they can never be isolated with any assurance. The extent of industrialization, the efficiency of agriculture, natural resources and capital formation are some of these factors.

These economists proceed to state that if there is a high birth rate and a high death rate in a country then this is an indication of a considerable pressure of population upon the means of livelihood. Under such conditions emigration probably will not appreciably change the rate of population in the sending country. It may however raise the rate of natural increase if emigration is at a high rate because it will make possible a somewhat lower death rate. The birth rate is unlikely to be much affected. The departure

of persons from a country immediately reduces the size of population by the number of those who leave. This relieves the conditions of overpopulation but for a short time. In order to understand the causes behind such a result it is necessary to distinguish between two different situations:

(a) Steady Migration:

When a reasonably steady migration sets in from an overpopulated country there is a gradual amelioration in the conditions of life of the people due to the presence of more work and higher wages. The immediate result of the improved condition is a decline in the death rate. A second result is that emigration by temporarily relieving the subsistence struggle gives rise to a spirit of hopefulness. The knowledge that there is an outlet for redundant inhabitants encourages a high birth rate. These two consequences of migration - a decreased death rate and an increased birth rate - result in a population increase that offsets the drains of immigration.

(b) Sudden Migration of Large Proportions:

Where there is a sudden and extensive migratory movement those who remain may experience a definite relief. This leads to a rise in their standard of living. Once they become accustomed to this somewhat higher standard of living they will make every effort to maintain it by exercising control over birth rate. Thus it is only in cases where a

reduction in population is so sudden and large that people remaining become habituated to a new and higher standards of living before the forces of reproduction have filled the breach created by the exodus that emigration has any permanent effects on population growth.

This is a brief presentation of different views about the effectiveness of emigration as a solution for the population problem. It can be concluded from the above mentioned presentation that emigration is not the most effective nor it is the only solution for the population problem. However, it can cope effectively with other proposed solutions to reduce the seriousness of the problem.

The next step is to study the possibility of carrying out emigration as one of the several partial means of alleviating the population pressure in Egypt.

In the present state of International relations, emigration offers few possibilities for Egypt. The only two countries which can absorb part of the surplus population are Iraq and Sudan. Both of these countries possess almost similar geographical, cultural, and agricultural conditions to those prevailing in Egypt. Although it was reasonable to envisage fairly large scale emigration to Iraq few years ago this possibility is almost eliminated due to the displacement of some 800,000 Arab refugees who will be given priority in any immigration policy adopted by Iraq.

Sudan provides the second outlet for Egyptian emigrants, but its potentialities should not be overestimated. The northern part of the country which is closest to Egypt in language, race and religion as well as in physical condition is poor, barren and fairly densely populated. On the other hand the southern part of the Sudan consists of jungles and swamps which render it futile for any immigration scheme.

"There remains the central belt which offers the only possibility for emigration on a large scale. "This belt which is cutting across the Gesira region has sufficient water whereby cultivation could be considerably, expanded and Egyptian settlers could be accomodated"¹. Those settlers can help the Sudanese to exploit their resources by offering their technical experience in agriculture which surpasses the experience of the Sudanese. Moreover, such an emigration will encourage Egyptian capital to participate in the exploitation of Sudan natural resources which is in need of such capital.

In any case to resort to emigration as a solution there must be a previous understanding between the countries of origin and destination in order to avoid the economic problems as a result of such an emigration.

1. Charles Issawi, Egypt At Mid-Century, (Oxford: Royal Institute of International Affairs; 1954) p.243

D. Birth Control:

Some economists believe that the problem of overpopulation with its train of human miseries may be avoided by exercising rational control over the birth rate. In order to improve the economic conditions of any country suffering from overpopulation, the addition of new population units must be limited at least to the level of increase subsistence. The control of the birth rate may be without or within the marriage relation: outside, by celibacy and late marriage; within by limiting the number of children allowed to be born.

The modern birth control movement and the effort to make effective means of family limitation common knowledge had its origin in the Malthusian controversy of the early nineteenth century. Certain more realistic thinkers, accepting the Malthusian premises of the human reproductive tendency and the limited means of subsistence, saw a solution to the population dilemma in the voluntary limitation of family size through the control of conception.

The practice of birth control has certain effects on the population; the extension of the practice will intensify and generalize the effects now apparent and will bring other consequences not generally recognized.

The conscious practice of birth control has in general reduced the birth rates in the countries where contraception

information has been available. But the knowledge and practice are not general as among peoples and the full possibilities are inherent in the practice will be realized only as contraceptive knowledge becomes general. A widespread knowledge and practice of contraception control would result in a more orderly form of population growth. On economic grounds it is commonly claimed that a general knowledge and practice of contraception is a necessary preliminary step in the control of poverty because there is a close relation between scarcity of population and prosperity. There is no doubt that an unrestricted population growth decreases the scale of living.

"By decreasing the numbers of the labouring population the practice of birth control would in the long run make possible a more equitable distribution of economic product through a rise in wages"¹. Low incomes are due in some part at least to the superabundance of unskilled labor. Therefore the higher wage that would result from relative scarcity would raise the efficiency of the worker and therefore will increase the total output and his share of the increased output

1. Edward Reuters, Population Problems (New York: Lippincot Co; 1937) p.461.

Another economic advantage which is anticipated as a result of wider knowledge of contraception is that it would in the long run be a material help in the solution of unemployment. It would be an important help in reducing child labor.

The problem of bringing underdeveloped agrarian societies to adopt the practice of birth control bristles with difficulties. The essential question implicit in any direct attempt to lower the high fertility rates can be formulated in the following:

First: Are there contraceptive techniques which are suitable for the kind of living conditions which exist in most underdeveloped areas?

Second; If such techniques were available would the people use them?

Finally: If a reliable answer can be given to the second question, what are the appropriate means of introducing these techniques and bringing about their widespread use among people in underdeveloped areas?

The above mentioned questions constitute the main limitations upon the practice of birth control as a means for solving the population problem in overpopulated countries. On the other hand some countries fight the idea of birth control as a means for solving the population the population problem on the following grounds:

1. It is very doubtful if birth control has affected the population growth cycle - the crude birth rate in those countries which has applied such a measure. The fall in the birth rate has been too gentle; it has been universal and proceeded with evolutionary steadiness. "Birth control, like migration, does not put waves into the curve of growth of a population already of a certain absolute size; it merely alters a population by altering the preparations of the different sections".¹

2. It is a double edged weapon in case it succeeds in reducing the crude birth rate. In some European countries such as Italy the practice of birth control resulted in a drastic decline in the fertility rate which has lead the Italian Government to pass certain laws which aim at increasing the fertility rate.

The practice of birth control in countries like India and Japan has succeeded somewhat in slowing down the rate of growth. In India the government made large scale attempts to institute birth control clinics in order to teach peasant women the methods of birth control. Contrary to expectations, it has been found that peasant women are willing to adopt such methods. These may yield results applicable to Egypt where social and economic conditions are similar.

1. D. Glass, Population Policies & Movement in Europe (Oxford; 1940)p.60-

The greatest obstacle facing the practice of birth control in Egypt is the attitude of the masses. So far no interest in birth control methods is found, but it is hoped that a vigorous campaign carried by the Government might arouse some response, but there is no reason to expect a basic change in the immediate future.

This pessimistic view to the success of birth control in Egypt is due to the presence of social and religious factors that impede the execution of such a measure. The religious factor refers to the dominant conviction that the practice of birth control is incompatible with the Islamic religion. Although in the recent decade there has been some considerable modification of the solid opposition of the religious authorities, but this liberalization of sentiment is still on a very limited scale.

The social factor arises from the high percentage of illiteracy among the people which causes them to be completely unaware of the problem.

The main point that emerges out of the proceeding discussion is that Egypt has to develop its agrarian sector together with her ambitious schemes of industrialization in order to solve the population problem. An improved system of agriculture can be attained by:

- a. Intensification of utilization of land already in use through improved methods in agriculture

such as improved kind of seeds, better farming and improved methods of manuring.

- b. Extension of land use through bringing more areas under the plough by means of expansion of irrigation works.
- c. Removing certain obstacles for the full utilization of land resources through an effective planning with regard to land tenure, tenancy, ownership of land and size of holdings.

Needless to state that one of the important tasks in any system of preparing the people for a rapid agricultural and industrial development, lies in educating and developing a proper outlook among the people themselves besides the ability of the personnel to whom the program is entrusted.

Should the agricultural and industrial development of the country be inadequate to relieve population pressure it is inevitable that the surplus population seek an outlet by migration and birth control.

CHAPTER IV
AND ACCOUNT OF DEVELOPMENT PROJECT.
(1945 - 1956)

Having discussed the population problem of Egypt and the possible means for solving it, it is natural therefore to proceed and give an account of development projects, that were planned and executed by the Egyptian Government during the period 1945-1956 in an endeavour to raise, if possible, an already low standard of living by increasing agricultural production and quickening the pace of industrialization program.

It is appropriate to distinguish those projects that are planned by different ministries¹ and which are considered as a part of the governments routine work, and those projects that are planned and executed by special agencies created for that purpose. The first kind of development projects constitutes a part of the ordinary role of the Egyptian Government in the economic development of Egypt, while the second kind of development projects constitute the extraordinary role.

1. Development projects are discussed in relation to the following ministries: Public Works, Public Health, Education, Agriculture, Industry, Communications, Municipal and Rural Affairs.

In discussing the ordinary role of the government a brief section is devoted to changes in legislation which reflects the economic development policy of the Egyptian Government during the period 1945-1956. The next section will be devoted for describing development projects that were carried by different ministries in different sectors of the economy.

As far as the extraordinary role of the government is concerned, a section is devoted for discussing the aims behind the creation of special agencies which will be followed by an account of development projects that are planned and executed by these special agencies.

Finally, means to finance these development projects, are discussed on the basis of their source with more emphasis on the internal means.

A. The Ordinary Role of the Egyptian Government in the Economic Development of Egypt.

During the period 1945-1956 the Egyptian Government carried out certain development projects in different sectors of the economy. These development projects were planned and executed by different ministries as a part of their routine work. It is for this purpose that it is necessary to distinguish the ordinary role of the government in the economic development of the country from the extra-ordinary role.

1. Economic Development as Reflected in Changes of
Legislation and Budget Appropriations.

The Egyptian Government has enacted several laws that aim directly at the economic development of the country in different sectors of the economy and to create an atmosphere favorable to economic development.

The most important measure taken immediately after the Second World War was the enactment in 1946 of the Five Year Plan laws in order to increase the country's productive capacity. Thus two laws were passed authorizing the expenditure of L.E. 35.5 million of which L.E. 9.3 million were for irrigation and drainage, L.E. 9.4 million for transport, L.E. 3.5 million for housing and L.E. 3.3 million for drinking water supplies.¹

In the field of agriculture the Government's aim was the diversification of the agricultural production instead of depending on one main product, cotton. To achieve this end the Ministry of Agriculture decided to impose restrictions on the acreage to be planted with cotton and to specify the minimum acreage which must be planted by each cultivator with wheat or barley. To this end, two laws were enacted in 1950. Under the first, long-staple cotton cultivation was restricted to Garbieh and Dakahlieh

1. The Five Year Plan is discussed in detail in section 2.

provinces. The second law stipulated that landowners must plant with wheat or barley a minimum of 25 per cent of their total holdings in certain specified areas of North Delta; of which 20 per cent must be planted with wheat; and 50 per cent with wheat or barley, provided that the proportion of land cultivated with wheat is not less than 40 per cent.¹ The main purpose of this law is to alleviate the shortage of wheat and other cereals and to decrease the extreme dependence of the Egyptian economy on cotton.

In the field of industry among the most important measures taken by the Government to aid industry are the Investment Law and the Mining Law.² The main purpose behind the enactment of these two laws is to encourage foreign companies to expand their industrial investments, and to attract foreign capital to participate in financing development projects.

According to the Investment Law joint stock companies formed for the purpose of new investment in the field of industry may be exempted for seven years from taxes on industrial profits. Existing companies which raise their capital with new subscription for the purpose specified in the Law may also be granted exemption from the same taxes for five years commencing on two years after the effective

1. A. Cumberbatch, Egypt (London: Her Majesty Stationery Office, (1952)

2. Laws No.156 of 1953 and No.66 of 1953 respectively.

increase in capital and in proportion of this increase to their total paid-up capital. Moreover, the Law provides for transfer abroad of profits up to an annual limit of 10 per cent of the foreign capital invested in Egypt. Foreign capital may be transferred abroad within five years of the date of investment, at the rate of one fifth per year.

The Mining Law extended the authorized period of exploitation and fixed uniform percentages for royalties on various groups of minerals. Oil concessions have been opened to foreigners on an equal footing with the Egyptians. Oil royalties have been fixed at 15 per cent of production from up to half the concession area and 25 per cent on the remaining half.

In the field of public health the creation of the Ministry of Municipal and Rural Affairs in 1950 was one of the main measures undertaken by the government. This Ministry was created for the purpose of providing pure drinking water for the Egyptian peasants in their villages. This measure derives its importance from the fact that most of the epidemic diseases in Egypt are due to the absence of pure drinking water.

This is a brief and selected statement of the laws enacted by the Egyptian Government to create a favorable atmosphere for the economic development of the country during the period 1945-1956.

Changes in Budget Appropriations

A study of the appropriations of different Ministries during the period 1945-1956 gives an idea about the role played by the ministries in the economic development of Egypt. Table XVII shows the budget appropriations of the Ministries concerned as derived from closed accounts and Budget estimates.

TABLE XVII

BUDGET: APPROPRIATION OF MINISTRIES CONCERNED

(In Millions of LE)

	<u>1945</u>	<u>1952/53</u>	<u>1953/54</u>	<u>1954/55</u>
Ministry of Industry	.6	2.3	1.6	9.7
Ministry of Agriculture	3.6	3.6	4.2	4.2
Ministry of Education	10.5	25.8	26.4	28.7
Ministry of Public Health	4.1	7.9	7.6	8.8
Ministry of Communications	13.6	22.0	21.3	24.5
Ministry of Public Works	10.1	14.6	11.5	13.6
Ministry of Rural Affairs	-	3.6	4.7	6.5

SOURCE: Ministry of Finance, Closed Accounts & Budget Estimates (Cairo: Government Press).

The above table indicates that most of the increase in the expenditures of different ministries is accounted for by increases for industry, education, public health and communication. The appropriations of education increased to meet the expansion in the different stages of education

especially for technical schools. Appropriation for public health was almost doubled owing to the expanding expenditure on the combat of epidemic disease, the construction of hospitals and the establishment of new medical units in the villages.

Appropriations for the Ministries of Agriculture and Public Works show a slight increase. This is mainly due to the establishment of a separate Development Board Budget which includes development projects previously included under the "new work" item of the Ordinary Budget.

As shown in Table XVII appropriations of the Ministry of Agriculture was L.E. 3.6 million in 1945 as compared with L.E. 4.2 million in 1955. This minute increase in the appropriation of the Ministry which is supposed to be the most important one in an agricultural country proves with no doubt that the achievement in the field of agriculture is very limited even if we take into consideration the fact that in 1952 a separate development budget was created.

2. An Account of Development Projects

As mentioned earlier, the most important measure taken immediately after the war to increase the country's productive capacity was the Five Year Plan passed in 1946. This plan provided for a total expenditure of L.E. 35.6 million of which L.E. 9.3 million were for irrigation and

drainage, L.E.9.4 million for transport, L.E.3.5 million for housing and L.E. 3.3. million for drinking water supplies.

Table XVIII shows the main projects included in the Five Year Plan with the estimated costs of each project.

TABLE XVIII
FIVE YEAR PLAN:

<u>PROJECTS</u>	<u>ESTIMATED COSTS (LE MILLION)</u>
Pure drinking water projects	3.2
Renewals of Railway Material	4.7
Roads	4.6
Edfina Barrage	3.5
Housing for workers at Cairo	4.6
Cairo main drainage projects	2.0
Drainage of swamps	2.0
Agricultural projects	1.7
Alexandria Port Improvement	1.2
Reinforcement of Esna Barrage	1.7
Cairo's Electric Power Station	1.3
Other projects	4.7
	<hr/>
TOTAL	35.6 millions

SOURCE: A. Cumberbatch, Egypt (London: Her Majesty Stationery Office in 1952)

After the expiry of three years on the commencement of Five Year Plan the Finance Committee of the Parliament reported that out of total allocations of L.E. 24 million

during the first three years, only L.E. 12.5 million, or about 52 per cent had been spent. There are various factors which held up the implementation of development projects contained in the Five Year Plan. The inadequate preparatory study and the failure of certain government departments to cope with the additional tasks involved by the new projects are some of these factors.

Projects that are related to the extension of cultivable area and the increase of agricultural productivity were carried on such a limited scale as to render them ineffective.

Water Control

In the field of irrigation, achievement was limited. Thus during the period 1945-1956 few projects were carried out by the Irrigation Department in the Ministry of Public Works. These projects were the strengthening of Esna Barrage and the construction of Edfina Barrage. The reinforcement of the Esna regulator barrage in upper Egypt was completed in 1948 while the construction of Edfina Barrage was finished in 1951. The advantages that are derived from the construction of Edfina Barrage are the following:

1. To save 600 million cubic meters of water wasted in the sea every year.

1. United Nations, Economic Development in the Middle East (1945-1954) (United Nations: Department of Economic and Social Affairs; 1955) p.29-

ii. To utilize the additional infiltration water accumulating before the canal to the benefit of agricultural lands on the river banks.

On the other hand the Irrigation Department planned a stable programme for the purpose of remodelling and improving the present irrigation and drainage systems in the actual cultivated area. For several years the Ministry of Public Works has been carrying out the construction of power stations for the running of drainage pumps to ensure the depth necessary for the drainage of lands. Thus, El-Serw, Atf and Belcas Electric Stations have been completed and jointly connected by an electric current to the 19 drainage pumps situated in the north of the Delta so as to serve 1,030,000¹ feddans, apart from the other drainage stations already constructed to drain 350,000² feddans. In 1953 three stations in the south of the Delta have been completed to drain an additional 280,000 feddans.

b) Industry

Since the end of the Second World War the Egyptian Government is following a policy of planning and encouragement for industry. The Government has not directly participated in the industrial development of the country but has adapted

1. "Irrigation in Egypt", Egypt Today(1953-1954)
(Cairo: El:Maref Press; 1954) p.71.

2. Ibid.,p.72

various measures to aid industry. Among the measures undertaken for this purpose are the foundation of an Industrial Research Institute, the enactment of the Investment and Mining Law and the adjustment of the tariff.

The only large government owned enterprise is the Suez Oil Refinery which was built in 19 . The Ministry of Industry decided to extend the capacity of the Refinery in order to save foreign exchange by importing crude oil instead of finished products. In 1949 the annual capacity of the Refinery amounted to 300,000 tons, and in 1954 the capacity was raised to 1,300,000¹ tons, in order to meet the increased demand for petroleum.

c) Public Health

The Ministry of Public Health undertook certain measures to combat tuberculosis, mental and endemic diseases especially during the period (1952-1955). These measures were the following:

i. The provision of an additional 4500 beds to cure the victims of the tuberculosis disease.

ii. The provision of a well equipped asylum for 2400 mental patients.

iii. The establishment of 561² collective health units in Sharkia and Minia provinces for the treatment of Bilharzia and Ankylostomiaris.

1. UNRWA, Quarterly Bulletin, June 1954, p-13.

2. Ministry of Finance, Closed Accounts 1952

The provision of pure drinking water to towns and villages in provincial areas is one of the most important projects which has received close attention especially after the severe cholera epidemic of 1947. A special ministry was created in 1950 to carry out this vital project.

The cost of the scheme was originally estimated at L.E. 16,250,000¹ in which are included five major water works for the service of the rural population in the northern part of the Delta. It was estimated that 3,000,000 inhabitants will benefit from the project at the end of the year 1955.

The Ministry of Municipal and Rural Affairs planned this project and started executing it. The project is divided into two main parts: the first part depends on the artesian wells as a source of water supply which the second part depends on the Nile as a source of water supply. It is estimated that 5,000,000 peasants will benefit from this project, and that by the end of 1957 pure drinking water will be provided for all parts of Egypt.

d) Housing:

From 1945-1951 the preceding governments had shown some interest in the possibility of erecting a large number of prefabricated houses to relieve the acute shortage of accomodation for middle and lower income groups of the

1. A. Cumberbatch, Egypt (London; Her Majesty's Stationery Office; 1952), p.90.

population. The only project which was completed during the six years following the War was the construction of the new workers city at Embabash, outside Cairo, where the construction of 1000 houses was completed in 1951. In the year 1952 the Egyptian Government formed a company whereby the Government, banking institution and insurance companies had shares in the capital. The Company is executing at present the following projects: the construction of 700 houses at Belbis; 2800 houses for railway employees and 1000 houses for the workers of the Oil Refinery at Suez.

This is a brief account of the main development projects which were carried out by the different Ministries and which constitutes the ordinary role of the Government in the economic development of Egypt.

B. The Extra-Ordinary Role of the Egyptian Government in the Economic Development of Egypt:

With the emancipation of the New Regime in 1952 the Egyptian Government realized that the most serious economic problem facing Egypt is the maintenance of a stable standard of living despite a fast and continuous increase in population. Moreover, the Government realized that the ordinary role of the Government in the economic development of the country is not sufficient to solve the problem and even to stop the low standard of living from a further decline. This belief is based on the fact that

the exploitation of the country's resources is not adequate, and that the Government must have an extra-ordinary role in the economic development of the country. For this purpose special agencies were created to plan and execute development projects in an endeavour to develop national production to its maximum. These agencies are: The National Production Council, the Permanent Council for Public Services and the Higher Committee for Agrarian Reform.

On October 17th, 1952 Law No.142 was promulgated to establish the National Production Council. The Law stipulates that the objectives of the Council shall be a detailed study of the country's resources and to exploit these resources in the most efficient manner. In other words, the Council was established to fulfil the objectives of studying, promoting and executing projects tending to develop and exploit the natural resources of Egypt including both the products of the soil and industry. Products of the soil include both agricultural, mineral and all inorganic materials that can be exploited on an economical scale. Moreover, the Council's term of reference cover transportation which is an element absolutely indispensable for the establishment of a well planned economy.

The National Production Council is composed of Ministers of Finance, Commerce, Agriculture, Public Works, Communications and 16 experts appointed by the Council of

Ministers. The Council is directly responsible to the Prime Minister, freed from routine government restrictions and endowed with the necessary powers to carry out its functions. Moreover, the Council formulates its own budget which is financed entirely outside the Ordinary Budget.

The second agency created upon the emancipation of the New Regime to carry out the extra-ordinary role of the Government is the Permanent Council for Public Services. It was created in November, 1953 in accordance with Law No.493 of 1953. The functions of the Council as stipulated in the Law are the following.

- a. To plan the overall policy for social reform
- b. To draw health, educational and social projects
- c. To supervise and participate in the execution of these projects.

The Permanent Council for Public Services is presided by the Minister of Social and Rural Affairs, and is directly responsible to the Prime Minister. The Council formulates its own budget which is financed by the proceeds of the confiscated Royal Property.

The third agency was created for the sole purpose of carrying out the Land Reform Law promulgated in September 9th, 1952 to limit land ownership. Article 12 of the Law stipulated that a Higher Committee for Agrarian Reform shall be established. Its functions shall be the enactment of the

operations of requisition, distribution and management of the lands requisitioned during the period preceding distribution. The Committee shall be entitled to give directives to the cooperative societies and to supervise their work. Moreover, the Committee is empowered to fix the amount of money needed to raise the standard of agricultural production in the land requisitioned and distributed.

As far as the organization and administration are concerned, the Committee is presided over by the Minister of Agriculture, and include the Under-Secretaries of State for Agriculture, Social Affairs, Public Works, Finance and Economic Affairs and seven other members appointed by the Council of Ministers. In performing its duties the Committee is exempted from following the government procedure and regulations.

This is a brief description of the three agencies in relation to their objective, organization and administration. The following section is an attempt to give an account of projects that are planned and executed by these agencies. These projects are discussed in detailed because they are supposed to be the key for the industrialization and increasing the agricultural production of the country.

1. An Account of Development Projects:

Agriculture:

In the field of agriculture the Egyptian Government is embarking on a policy which aims at the improvement of

existing cultivated acreage and extending the cultivable area by reclaiming the desert.

The following is an account of the main projects planned and executed by the special agencies to achieve the above mentioned policies in the field of agriculture.

a. Land Reform

On September 9, 1952 Law No.178 was promulgated to limit agricultural land holdings and to expropriate certain land for distribution among small farmers. The most important provisions of the Law are the following:

- i. No person may possess more than 200 feddan of agricultural land except industrial companies that are in existence before the promulgation of the decree.
- ii. The Government has the right to requisition the area exceeding 200 feddans in a period of 10 years. During the first five years, the Government shall requisition the area in excess of 200 feddans retained by the proprietor for himself provided that the land requisitioned each year shall not be less than one fifth of the total area to be requisitioned.

c. The proprietor may transfer the ownership of such agricultural land in excess of 200 feddans to small farmers provided they are tenants cultivating the land disposed of, or to his children at a maximum rate of 50 feddans per child provided that the total to be disposed of does not exceed 100 feddans.

d. Any person whose land is requisitioned is entitled to an indemnity in the form of state bonds bearing interest at 3 per cent, redeemable in thirty years.

e. The land requisitioned in each village shall be distributed among small farmers so that each farmer shall have a small holding not less than two feddans and not more than five feddans.

f. An agricultural cooperative society shall be constituted to advance agricultural loans to small farmers, to provide them with the necessary seeds, fertilizers, livestock, agricultural machinery and to organize the cultivation and exploitation of the land in the most efficient manner.

The Higher Committee of Agrarian Reform estimated the total area liable for requisition under the Law at 621,479 feddans. The requisitioned land which was leased to small farmers until the end of 1955 amounted to 406,000 feddans which gave benefit to 688,000 persons.¹

The Committee distributed LE 12,182,396 worth of state bonds to proprietors as indemnity. In order to facilitate their circulation, the government authorized their registration on the stock exchange and their inclusion in the official lists of securities guaranteed by the government to capital and interest.

The Agrarian Committee which has replaced landowners had extended technical guidance to cultivators and made arrangements with the Agricultural Credit Bank to provide them with seeds, fertilizers and loans. The Committee is supervising the formation of cooperative societies in areas where land has been distributed. By December, 1955, 150 cooperatives have been formed to help farmers increase their land productivity.

The explanatory note concerning the aims of the Land Reform Law states that, in addition to the promotion of social justice by removing the mal-distribution of wealth, Land Reform has an economic purpose namely the stimulation of economic development by removing two main obstacles standing in its way: the tendency to invest the major part of savings in land, and the low purchasing power of agricultural labourers. It is believed that the Reform will divert capital into industrial, mining and commercial enterprise since it is expected that part of the indemnity paid to landowners will be invested in other

branches of the economy. It is also expected that the redistribution of land and the raising of agricultural wages will widen the external market for Egyptian industry.¹

b. Extension of Cultivated Area:

The National Production Council is implementing a short-term program covering the four years (1953-1957) to extend the cultivated area. The program is established on the following lines:

- i. Reclamation and preparation of about 24,000 feddans in Behera province and of 10,000 feddans in Fayoum province, by a demonstration performance to encourage the emigration from thickly populated areas to these new zones.
- ii. The extension in reclamation and cultivation operations in the desert. At present 24,000 fed feddans have been reclaimed in the new Liberation Province² as a part of a large scheme which aims at the reclamation of 610,000 feddans.³

c. Increase of Agricultural Productivity

The National Production Council is embarking on certain projects which aim at increasing the productivity

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1. The validity of these two arguments are discussed in detail in Chapter VI where a section is devoted for the appraisal of the main development projects.
 2. Liberation Province is situated at the North of the Delta.
 3. Ministry of National Guidance, The Egyptian Revolution in Three Years (Cairo:Government Press; 1955) p.36-

of the actually cultivated area to the maximum possible return, by increasing the supply and generalizing selected seeds of proved higher productivity for principal cereals such as corn, rice and maize.

During the period 1952-1955 the Council executed the propagation of selected seeds project by providing 290,000 ardebs of wheat seeds, 553,000 ardebs of rice seeds to small farmers who cultivated an area of 511,000 feddans and sufficient hybrid maize seeds for an area of 150,000 feddans.¹

2. Industry

Since Egypt's industrialization will require a heavy expenditure of foreign exchange for the purchase of machinery and equipments from abroad, attention has been concentrated on industries that will contribute towards Egypt self-sufficiency. Most important of these industries are:

a. Iron and Steel

On February 11, 1954 the National Production Council awarded a contract to the Demag Company of Germany for the installation of an iron and steel plant at Helwan near Cairo. The plant will have a capacity of 110,000 tons within three years, and 220,000 a year later. Egypt at present consumes about 310,000 tons of iron and steel of which 40,000 tons are produced locally. The plant will use Aswan iron deposits,

which average about 53.7 iron content, with proved reserves of 160¹ million tons.

Preliminary studies indicate that the cost of ore necessary to produce one ton of iron will be L.E. 3 piastres at the factory site, as compared to L.E.9.1 piastres in Germany and other European countries. This advantage is only slightly offset by the higher price of imported coke in Egypt of about L.E.9 piasters as compared with 500-600 piasters in Europe.

The Demag Company will undertake the supply, erection and working of the complete plant, including technical responsibility. The basic bessemer process will be used for steel production, while electric furnaces will be used for some special steels. The Factory will include the following departments:

- i. Mining plant at Aswan
- ii. Loading and unloading Nile facilities at Aswan and Helwan.
- iii. Blast furnace and accessories at Helwan.
- iv. Steel plant and rolling mill at Helwan. The plant will supply rails, sleepers and structural sections, heavy steel plates, medium plates, sheets and billets. In four years Egypt will meet 84 per cent of its annual requirements.

1. The Ministry of National Guidance, The National Production Council, (Cairo: Government Press; 1955) p.26-

The operation is to be owned and conducted by the "Egyptian Iron and Steel Company" with a capital of L.E.15 million. It will include the following participants:

- i. The Egyptian Government contributing two electric furnaces, an iron and steel foundry, and a rolling plant estimated at L.E.2 million.
- ii. The National Production Council contributed L.E. 1 million.
- iii. The Industrial Bank contributed L.E.250,000.
- iv. Bank Misr contributed L.E. 500,000.
- v. Misr Insurance Company contributed L.E.250,000.
- vi. Misr Spinning and Weaving Company contributed L.E. 250,000.
- vii. Demag Company participated by paying 20 per cent of the total f.o.b. price of all deliveries with a maximum of L.E. 2 million.
- viii. There are 875,000 shares at L.E.2 each, opened for public subscription and the government guarantees a minimum profit of 4 per cent.

It is estimated that this industry will provide means of living for 4,000¹ skilled labour.

b. Fertilizer Plants

The Egyptian consumption of nitrogen fertilizer amounted to 639,670 tons in 1953. To meet this great demand

1. Ibid. p. 27, 28

an agreement was reached among the National Production Council, Agrarian Reform Committee, Industrial Credit Bank and Misr Insurance Company to erect the Ammonium Nitrate Fertilizer Factory at Aswan. This plant will absorb the greatest part of the electric energy generated from Aswan Dam. It will have an annual output of 370,000 tons of fertilizers containing azote, which may be extended to 500,000¹ tons to meet the increasing demands of the farmers.

The project is estimated to cost L.E. 20 of which L.E. 6 million will be subscribed by the above-mentioned participants. The rest of the capital needed (L.E. 4 million) will be secured by floating stocks at the end of 1956. The project will save about L.E. 12 million in foreign currency used for importing fertilizers.

The National Production Council decided to raise the annual output of the calcium nitrate fertilizer plant at Suez to 250,000 tons by supplying it with gas which became available after the expansion of oil refinery at Suez. Thus the expanded Suez plant and the proposed Aswan plant will supply the requirements of nitrogen fertilizers.

c. The Jute Industry

The national Production Council planned and began to execute a project which aims at producing 20,000 tons of jute sacks annually to meet part of the local consumption

1. Ibid. p.30

which amounts to 28,000.¹ The project started in 1954 and is expected to be finished in 1958. It was decided that the present factory owned by the Egyptian Jute Company will specialize in hessian products (5,000 tons per year) after it has been furnished with new looms.

The new project is estimated to cost L.E.2,000,000 contributed by the Industrial Bank, the Pakistani Organization for Industrial Development and the Company which will provide the machinery.

d. Paper Industry

The Council has asked various international and local companies to submit their offers for the establishment of a paper and printing industry dependent on the agricultural residue. These are the main points planned by the Council for the development of the industry.

- a) To help the present factories to reach their maximum productive capacity.
- b) To charge an Egyptian enterprise to erect a plant which can produce 20,000 tons of writing and printing paper.
- c) To examine the different types of Egyptian timber and to construct a factory for producing paper for news print, writing and printing, made of this timber.

1. Ibid. p.34

3. Water Control and Electric Projects

The National Production Council planned certain projects to control Nile water wasted in the sea and to create electric power for different industries.

a. The High Dam

The main objectives of the High Dam are to ensure agricultural expansion, ward off high-flood dangers and generate electrical energy.

In the light of the comprehensive studies and investigation it was decided to construct the Dam at a distance of 6.5 kilometers South of Aswan. The site was found to be most suitable where it will make it possible to secure adequate quantities of building material necessary for the construction of the dam from the neighborhood.

It was decided that the dam should be constructed in such a manner that its walls can hold water up to a level of 182 metres above sea level. The upper surface of the dam will stand at a level of 196 metres and the length of its base across the river will be 1,300 metres.

The discharged water of the Nile will run through seven diversion tunnels of the eastern bank. Each tunnel will be 16.5 meters in diameter and about 2,160 meters in length. The Dam will permit water storage at a level of 182 meters, and its capacity will be 130,000 million cubic meters of water.

On the western bank sixteen turbines will be installed to generate an electric power of 6 billion k.w.h. a year. This power will be utilized for increasing the productivity of the synthetic fertilizer factory and for feeding pumping stations which will be established with a view to raise the water level of the vast area of high lands which extend on both sides of the river course in upper Egypt.

Experts of the Dam maintain that its economic advantages are the following:

i. The High Dam would ensure agricultural expansion of 2,000,000 feddans, about 30 per cent more than present cultivated area.

ii. It would ward off the dangers of exceptionally high Nile floods without the necessity of elevating banks and strengthening embankments.

iii. The dam would ensure irrigation of 100,000 feddans for the cultivation of rice no matter what the annual discharge of the river is.

iv. An estimated 10,000 kilowatts of power could be transmitted from Aswan to Alexandria at a cost of six millemes per kilowatt. Current could be transmitted to Cairo at a consumption price of two millemes per kilowatt, thereby opening up a wide vista for the growth of different industries.

- v. It would make possible the expansion of the Aswan fertilizer factory, to a capacity of 500,000 tons per annum.
- vi. It would increase the national income by L.E. 355,000,000¹ per year in the final stages of the project.

The only serious challenge to the High Dam project is related to the precipitation of silt in the dam basin which, by not being flood carried, would deprive the lands of Egypt of a refreshing and invigorating element.

b. Electrification of Aswan Dam

The Aswan Dam was built in 1902 with the aim of storing one billion cubic meters of water. In 1934 it was raised to store five billion cubic meters of water.

The idea of electrifying the Aswan Dam was raised in 1934 but remained neglected until 1953. The National Production Council awarded a contract in March 1953 to the French Societe de Grande Traveaux de Marseilles, specialized in the erection of barrages and power stations, in association with an Egyptian contractor, to construct power installations of 345,000 kw. capacity at Aswan Dam.

The Project consists of three stages: the first is boring the tunnels, the second is constructing the station, and the third is installing the turbines generating the electricity.

Actual construction work began in May 1953. A temporary dam was built to isolate the site of the water intake and to house the turbines. Four tunnels have been

bored, each with a length of 800 meters and an area of 150 square meters. Work is proceeding for installing nine-turbo-generators, seven of which have a capacity of 46,000 kilowatts each, and two reserve turbo-generators of 11,500 kilowatt each.

The economic benefits of the projects are to use a large part of the electric power generating in the running of the proposed fertilizer factory which will produce 370,000 tons of synthetic fertilizer containing 20 per cent azote. Moreover it will serve pump stations in Aswan and Kena provinces for irrigation purposes.

The total cost of the project is estimated at L.E.27.5 million¹ over a period of seven years.

4. Transportation and Communication

a) Railways

Most of the Egyptian State Railways installations are in bad state. For this reason, the National Production Council laid down a program for the renovation of these installations which comprise the renovation of 500 km. of rails, the purchase of 120 shunting engines, 150 passenger carriages and 2,000 trucks.

The program further envisages the replacement of all steam shunting engines by diesel engines. This will save L.E. 350,000² in fuel cost.

1. UNRWA, Quarterly Bulletin, September 1954, p.23

2. The Ministry of National Guidance, The Egyptian Revolution in Three Years. (Cairo: Govt. Press; 1955) p.141

In addition the N.P.C. decided to execute the following projects in collaboration with the government:

- a. Completion of the electrification of the Helwan Line and the purchase of these additional electric units.
- b. Construction of underground depots for mazouts .
- c. Construction of a bridge at Mazarik to connect the industrial sectors of Maadi, Maasara and Helwan with the railway systems of upper and lower Egypt at a distance from Cairo City area and will thus relieve traffic pressure on the Cairo-Helwan desert line.

The total cost of these projects, including the renovation program is L.E 21,530,000¹ to be spent during the period 1954-1959.

b). Sea Transport

The National Production Council decided to establish an Egyptian mercantile fleet. The following are the main measures undertaken in that respect.

- i. Establishing a fund to support the mercantile fleet.
- ii. Paying interest from the fund on loans granted to companies constructing new units.

1. Ibid. p. 142

- iii. Giving priority in the construction program to tankers, cargo ships and passenger ships.

One of the results of the cooperation between the Council and the Higher Council for Sea Transport and the Navigation Companies was that the three Egyptian navigation companies were merged into one big organization called the Union of Egypt's Navigation.

c) Internal Navigation

The Council has drafted an amendment to the internal navigation law of 1941, establishing uniform regulations for navigation units and providing for the supervision of the implementation of these regulations.

The Permanent Committee for Navigation is devising a uniform design for the different kinds of anchorages, which will be adequately equipped and will comply with sanitary conditions.

The Committee has drawn up a program to improve the present navigation lines. These lines will meet the requirements of the Council as a means of transport for its extensive industrial production schemes.

The Committee has already laid the plans for the first stage (1954-1959). L.E.195,000¹ have been allotted to that project.

5. Public Services

The Permanent Council for public services was created, as mentioned before, to draw and execute health and social

projects. The most important projects executed were in the fields of Public Health and collective units.

a) Public Health

The Permanent Council for Public Services planned and executed certain projects to combat T-B-, mental and endemic diseases. The following is an account of these projects:

- i. The construction of 6 new hospitals with a capacity of 500 beds each in upper and lower Egypt to treat T.B. Patients. In addition, 7 existing hospitals were expanded, and 16 clinics, were established for the same purpose.
- ii. The establishment of 3 assylums in each of Alexandria, Tanta and Assiout to combat mental diseases. The capacity of each assylum is 400 beds.
- iii. The Council decided to construct a Cancers' hospital which has a capacity of 600 beds. The estimated cost of the project is L.E.110,000. The importance of this project lies in the fact that the victims of their disease are not less than 35,000 per year.
- iv. The construction of 177 health units in Minia and Sharkish to combat endemic diseases. Each unit will treat 10,000 people.

v. The provision of pure drinking water for the villages in collaboration with the Ministry of Social Affairs. The project will provide potable water to 3,000,000¹ peasants at the end of 1956.

Collective Units

The idea behind the collective unit is to supply the Egyptian villages with social, health and educational services as well as to increase their agricultural production.

The unit caters for the needs of several villages with an average population of 15,000 each. It takes care of their land and cattle, provides them with selected seeds of fruits and vegetables. It also introduce new-breeds of cattle, poultry, beehives and silk works.

The collective unit is composed of a social center, a health center, a nursery, a school and an experimental field; it also contains houses for the employees who supervise the work in the units.

Since the establishment of the Permanent Council for Public Services in 1953, 292 collective units were constructed out of 572 units to be finished at the end of 1957. Table XIX shows a list of the units completed till now, and the number of people benefiting from it.

1. Ministry of National Guidance, The Permanent Council for Public Services (Cairo; Government Press; 1955).

TABLE XIV
NUMBER OF COLLECTIVE UNITS CONSTRUCTED

Province	Estimated Population	Units Constructed	No. of People Benefiting
Behira	1,445,000	26	371,096
Gharbia & Fouadia	2,735,000	37	884,016
Dakahlya	1,659,000	28	449,871
Sharkya	1,485,000	29	561,163
Menoufia	1,330,000	44	847,484
Galiubya	804,000	19	440,037
Giza	980,000	11	583,235
Beni Suef	702,000	10	433,080
Fayoum	760,000	11	448,180
Minya	1,203,000	22	805,382
Assiout	1,549,000	19	1,072,555
Gerga	1,440,000	14	1,000,492
Kena	1,238,000	15	930,480
Aswan	328,000	7	213,559
	<hr/> 17,658,000 <hr/> =====	<hr/> 292 <hr/> =====	<hr/> 9,040,630 <hr/> =====

SOURCE: Ministry of National Guidance, The Egyptian Revolution in three years.

C. Means to Finance Development Projects

Financing development projects in Egypt is a major problem on which economic progress is largely dependent. The Egyptian Government is resorting for both internal and external means of finance to carry out its ordinary and extra-ordinary role.

"Internal finance is determined by the availability of national savings and by the ease of mobilizing available savings and channelling them into useful investments".¹

1. Hussein Khallaf, "Financing Economic Development in Egypt" Middle East Economic Papers, (1955) p.27-

The Egyptian Government resorted to the following methods which fed internal finance in Egypt:

1. Taxation

Prior to the creation of the National Production Council in 1953 development projects were financed from appropriations in the "New York" items of the Ordinary Budget which was fed by tax revenues. Taxation in Egypt is the main source of public revenue. Out of an estimated revenue of L.E. 206 million in 1952-1953, estimated tax revenues amounted to L.E. 147.3 million or about 71.5 per cent of estimated revenue; in 1953-54 budget estimates revenue from taxation amounted to 70 per cent and in 1954-55 to 65 per cent.

The basis of taxation in Egypt is overwhelmingly indirect with customs and excise accounting for about 45 per cent of public revenue. Custom duties are both ad-valorem and specific.

Direct taxation is mainly personal income tax which is composed of the following three kinds:

a) Tax on income derived from movable capital which is levied on dividends, interest and all other profits derived from shares of any kind. This tax is levied at a flat rate of 17 per cent.

b) Tax imposed on profits derived from commerce and industry and is levied annually at a flat rate of 17 percent.

c) General income tax levied on the total annual income of all Egyptians wherever they are domiciled and foreigners living in Egypt. It is a progressive taxation where the first L.E.1000 are exempted.

Land tax is at a rate of 14 per cent of the annual rental value of the land. This tax was levied on half of the rental value since 1949, but in 1952 a supplementary tax was set on land in excess of 200 feddans, at a rate equivalent to 5 times the amount of the basic tax.

This is a brief presentation of different kinds of taxation which are the source for financing development projects falling within the ordinary role of the Government.

With the emergence of the extra-ordinary role upon the creation of special agencies in 1952 the Egyptian Government tagged other sources of finance and declared that it does not wish to finance its development projects by means of increasing existing rates of taxation.

2. Public Borrowing

The Egyptian Government regards public borrowing at present a basic source of internal finance. In December 1954 the government issued new loans in order to finance projects planned and executed by the National Production Council. These loans were the following:

- a) A loan of LE. 5 million for a period of five years and bears $2\frac{1}{2}$ per cent.

- b) A loan of LE.10 million for a period of ten years and bears 3 per cent interest.
- c) A loan of LE. 10 million for a period of 15 years and carries $3\frac{1}{2}$ per cent interest.

The Government exempted these loans from taxation to encourage subscriptions. Subscription was opened on the 15th, 20th, and 22nd of December 1954. The long-term loan was covered in few hours after the opening of the subscription, and the public subscription amounted to LE. 20 million.

Sixteen months from the launching of the three above mentioned loans, the Minister of Finance announced the floating of two new Production loans:

- a) A short term loan of LE. 5 million bearing an interest of $2\frac{1}{2}\%$, redeemable on April, 1961.
- b) A long term loan of LE.20 million bearing interest at $3\frac{1}{2}\%$ and redeemable not later than April, 1957.

As with old Development Loans, interest is exempted from present and future taxation except for death duties.

The government's policy of public borrowing is based on the contention that borrowing has the advantage of channelling private savings that may lie idle into productive investments and of spreading the burden of the financing of development over a longer span of time. Another consideration in favor of these loans is that the size of public debt in Egypt is small. In 1954/55

this debt did not exceed LE.123¹ million (excluding Treasury bills used as currency cover) and thus no large interest payment is involved which if present may become a burden on economic development.

3. Gold Cover and Foreign Exchange

Both constitute funds owned by the state which may be used to purchase abroad capital equipments for implementing development programs.

The government has already depended on the gold currency cover for financing part of its capital expenditure. This was realized by adding to the development budget of 1953 the gain which resulted from the revaluation of gold assets in 1950 which amounted to LE.11.7 million.

On May 4, 1954 the Minister of Finance was allowed to issue Treasury bills to the amount of LE.100¹ million over a period of fifteen years to exchange these bills for foreign sterling reserves held by the National Bank of Egypt. These foreign reserves will be used to purchase capital equipment for implementing development projects.

4. The Confiscation of Royal Property

On November 8, 1953 the Council of Ministers decided to confiscate the property of all members of the ex-royal family. The value of this property is estimated at LE. 45 million. It consists of land, real estate and movable property.

1. Ibid., p.38

On May, 1954 the Council of Ministers decided to put the proceeds of the confiscated property under the disposal of the Permanent Council for Public Services. Thus all projects executed by the council are fed from this source.

B. External Finance

External finance is fed by three sources: private investment, grants, and loans from the International Bank for Reconstruction and Development.

1. Private Investment

The Egyptian Government has tried in the last few years to encourage the flow of private foreign capital into Egypt by removing most of the legislative obstacles that hampered such flow. Measures were taken to allow foreign investors, within certain limits, to repatriate the funds invested by them in Egypt. The result of these measures was that foreign capital was encouraged to participate in certain projects, the most important of which is Iron and Steel Industry.

2. Foreign Aid

Following an agreement in 1954 between the United States and the Egyptian Government, an annual sum of \$ 40 million is flowing into Egypt. This sum is spent mainly on the reclamation of deserts. In August 1956

the American aid was stopped as a result of the Suez crisis.

3. International Bank for Reconstruction and Development

The Egyptian Government applied to the I.B.R.D. for a loan of \$200 million to finance the High Dam project whose total cost is estimated at \$1330¹ million spent over a period of ten years. After four months of negotiations the Bank agreed to offer Egypt a loan of \$200 million.

In July 1956 the Bank withdrew its offer to finance the High Dam Project after the United States and Britain withdrew their grant to Egypt which amounted to \$ 70 million. As a result of this withdrawal the Egyptian Government decided to nationalize the Suez Canal in order to get the necessary fund for building the High Dam.

These are the internal and external means for financing development projects in Egypt.

1. Al-Ahram, February 9, 1956.

CHAPTER V

THE IMPACT OF DEVELOPMENT PROJECTS ON THE POPULATION PROBLEM.

After the preceding discussion of the population problem of Egypt and the possible means for solving it, and after the description of development projects that were planned or executed by the Egyptian Government in and endeavour to solve the population problem, an attempt is made in this chapter to analyze the impact of these development projects on the two components of the population problem; the rapid increase of population, and the limited resources available to support this increase. This analysis aims at reaching to a conclusion as to whether development projects can solve totally, or partially the population problem, or whether it will have no bearing at all.

The criterion used for reaching such a conclusion is the contribution of development projects either to the expansion of agricultural and industrial capacity of the country to an extent that can keep pace with population growth, or to the reduction in the fertility rate to the extent necessary to stabilize the population at a level consistent with the requirements of the national economy. Therefore development projects are appraised in the light of this criterion. Those projects that are considered as the keys to the economic development of Egypt such as the Land Reform and the High Dam, are appraised separately.

However, there are certain obstacles inherent in the Egyptian economy which impede the execution of any development program on a large scale. It is appropriate to mention these obstacles before analyzing the impact of development projects on the population problem so as to know the limits imposed on the whole development program.

These obstacles are the following:

1. Inadequacy of Domestic Savings

Capital
The first condition to initiate an economic development program is to secure adequate capital for investment. This investment can come from the voluntary savings of the individuals i.e. from the amount of the national income which remains after consumption. (In underdeveloped countries the national income is usually very low and the consumption needs are hardly satisfied.) Moreover, (the population increases with a rapid rate of growth thus increasing the consumption needs of the community.) With this situation the domestic savings which could be mobilized for investment are usually a low percentage of the national income, and quite insufficient to provide the economy with the capital necessary for even a moderate rate of economic development.

This is one of the main obstacles to economic development program in Egypt. Similar to any other

underdeveloped economy, the Egyptian economy is characterized by a low national income and a high level of consumption thus leaving a small margin of savings.

Statistics on the amount of net savings in Egypt reveal that it constitutes 5 per cent of the national income as compared with 25¹ per cent in developed economics.

Taking into consideration (the fact that a moderate rise in per capita income of underdeveloped countries with growing population requires savings ranging from 15 to 25² per cent of the national income, then one can realize the obstacles facing economic development program due to) the insufficiency of savings. Moreover it seems impossible for Egypt to increase its rate of saving out of current income particularly in view of its expanding need for food and other necessities as a result of rapid population growth.

(The inadequacy of voluntary savings which could be mobilized for economic development might lead the government to build "Compulsory savings" through taxation. However, the amounts which could be thus obtained in an underdeveloped country are limited because of the reasons given up on the inadequacy of saving, and the fact that consumption per capita is often near to the bare subsistence.) Moreover

1; J. Pintos, "Economic Development and Obstacle in Underdeveloped Countries". Digest of Lectures. p. 2

2. United Nations, Asia & the Far East Seminar On Population (New York; 1957) P-21

the present policy of the Egyptian Government in this connection, as revealed by government officials, is not to finance development projects by additional levies or of an increase in existing rates of taxation.

On the other hand the Egyptian Government resorted to public borrowing as a basic source of finance when it floated bonds for three production loans in December, 1954.

The Egyptian Government's policy of public borrowing as a means to finance economic development (is based on the contention that it has the advantage of channelling private savings into productive investments, and of spreading the burden of financing of development over a longer span of time. Another advantage in favor of public borrowing is that the size of public debt in Egypt constitutes a small percentage of its national income¹. A large public debt is likely to result in large interest payments which may become a burden on economic development.

Nevertheless there are certain factors which limit the use of public borrowing on a large scale as a means of finance. One of these factors is that "such loans are ultimately subscribed for by savers, and it has been noted previously that Egyptian savings are small. In addition the Egyptian financial, money, and credit market is narrow and of low flexibility. It is not therefore easily capable

1. In 1955 the outstanding public debt of Egypt stood at LE. 158 million which constitutes about 5 per cent only of the total national income.

Key does not use
taxation

of absorbing loans of a large size"¹.

A second factor which limits the use of public borrowing is that this method of finance is inflationary if the debt is held mainly by financial institutions. Commercial bank purchases of government bonds may involve the creation of additional purchasing power. If the additional purchasing power increases faster than the flow of available goods then it is inflationary.²

Thus of the many difficulties involved in financing economic development program the most important is the inadequacy of domestic savings.

(Regarding the external means of financing economic development there are certain obstacles which prevent a large flow of foreign capital. These obstacles are largely the result of actions and attitude adopted by the borrowing countries.) Among the most important is the imposition of exchange controls which limit the use of foreign exchange to narrowly specified purpose and which have borne with special harshness upon the transfer abroad of income from foreign investments. Although Egypt enacted several laws³

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1. Hussein Khallaf "Financing Economic Development in Egypt, Middle East Economic Papers, (1955)p.39
 2. No official information is available as to whether public loans in Egypt are held mainly by financial institutions or not.
 3. Law No.156 of the year 1953 known as the "Investment La" is the most important.

which permitted the repatriation of profits accruing from foreign capital and is making every effort to attract foreign capital. The presence of a very complicated exchange control acts as a threat to the participation of foreign capital in substantial amounts.

Another obstacle which discourages any substantial flow of foreign capital to participate in the financing of economic development program of Egypt is the political instability prevailing in the area. The recent Suez crisis has proved the validity of this contention where a substantial outflow of foreign capital took place.

2. Balance of Payments Difficulty:

The undertaking of investment for development purposes almost invariably has repercussions on the balance of payments position of the country concerned. The implementation of development projects tends to increase the debit side of the country's balance of payment for two main reasons:

- a) Payments for imports of machinery and other capital goods necessary for development project.
- b) The resulting inflationary tendencies will increase the general demand for imports.

The fact that the importation of capital equipment is usually more expensive in terms of foreign exchange than the import of consumer goods, will cause a heavy drawin on Egypt's


limited foreign exchange reserves¹, and therefore slow the rate of Egypt's economic development program.

A second factor which constitutes a handicap for Egypt's economic development program is the spending of large sums on the purchase of armament from abroad which also presents a direct strain on the country's foreign exchange reserves.

The inadequacy of foreign exchange reserves is explained by the structure of Egypt's balance of payment which is characterized by its dependence on one single primary commodity over the price of which Egypt has no decisive control. This major export commodity is cotton, the annual produce and the price of which are subject to wild fluctuation. This instability in the balance of payments is shown in the net results recorded by balance of payments figures which stood as follows: 1951 a deficit of L.E.19.8 million; 1952 a deficit of LL;55.4 million; 1953 a deficit of LE.8.3 million; 1954 a surplus of LE.3.3 million; and 1955 a deficit of LE.34 million.²

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1. In 1955 the total foreign exchange reserves in Egypt stood at LE. 276 millions distributed as follows:
Gold LE. 60.6 million
Sterling LE.184.5 million
US.\$ LE.15.4 million
Others LE.15.5 million.

2. See chapter I section H.

 In spite of the above mentioned fact the Egyptian Government made every effort (to curtail the importation of consumer and luxury goods in order to save enough foreign exchange to import capital goods for the implementation of development projects.) Thus balance of payments figures for the period 1953-1955 indicate that the importation of consumer goods was curtailed while that of capital goods was expanded. For instance, the importation of wheat was reduced from LE.2 million in 1953 to LE.0.3 million in 1955. Similarly, sugar importation was reduced from LE.2.3 million to LE.0.1 million during the same period.

On the other hand, (imports of capital goods, and materials necessary for the execution of development projects increased from LE. 12.1 million to LE.25.3 million during) the same period. Imports of Petroleum products and fuel increased from LE.14.6 million in 1953 to LE.19.8 million in 1955; iron and cast iron from LE.10.9 million to LE.11.7 million and construction timber from LE.6.4 million to 7.1 million during the same period.

For developing economics, such as the Egyptian economy, equilibrium in the balance of payments is of special importance for the planning of development projects. The problem of equilibrium in the balance of payments is revealed in case of expansion of investment is allowed to proceed at so a rapid rate that it will give rise to a demand for foreign exchange which is far in excess of

1. National Bank of Egypt, The Economic Bulletins 1953-1955.

The quantities available.

Since the population problem of Egypt requires a large development program which must be carried out quickly in order to alleviate the pressure of the increased population, the problem of shortage of foreign exchange reserves will remain a handicap because it will limit the magnitude of development projects.

3. Other Obstacles

The inadequacy of domestic savings to finance the necessary investment for economic development, and the balance of payments difficulty as a result of increased import requirements have been mentioned as serious obstacles which Egypt is facing in its road toward economic progress. These obstacles may restrict the dynamic evolution of the development forces and defeat the development drive.

Similarly, there are basic structural obstacles towards the economic development program of Egypt which are inherent in the social, administrative organizational and economic frame work, and which militate against any initiative for development. They could be classified into the following main categories:

First, those obstacles relating to social conjuncture the most important of which is the rapid rate of increase in the population of Egypt. This may seem a paradox on

the basis that it cannot be a problem and an obstacle at the same time. In fact an increase in population over and beyond the capacity of the country to provide for the essential goods acts as a serious retarding factor to economic development. Increase in population are in effect increases in present consumption and serve in addition to channel the limited available domestic savings to consumption for a considerable length of time. Population growth puts a premium on consumption rather than on investment which results in a further reduction in the per capita quantity of capital available for production.

Therefore, a high rate of population growth is bound to affect adversely the rate of economic advance. Given the overall shortage of land and capital equipment relatively to population the conclusion is inescapable that an effective curb on population growth is an important condition for rapid improvement in the standard of living. This is particularly so, if one bears in mind the fact that the effect of improvements in public health conditions is to bring about a decrease in mortality rates. It is for this reason that a proper solution of the economic problem facing Egypt has to take note of both aspects of the problem. At the same time as the government is embarking on development projects that will increase the agricultural and industrial capacity, it is important to devise ways and means by which

the rate of population growth is kept in reasonable check. If the aspect of the problem is neglected then the success of development projects in increasing the agricultural and industrial production would soon be defeated on account of a large increase in population.

The two possible means which can check the increase of population are birth control and emigration. As it was explained in a previous chapter, these two means are not yet tapped by the Egyptian Government and therefore do not constitute a part of the population policy. There are economic and social factors which hamper the use of such means as was explained in chapter III. Thus as long as this part of the problem is neglected, the development program will have to meet the obstacle of rapid population growth.

A second obstacle to the development program is the limited size of the domestic market, which is deterrent to the establishment of industries on a large scale to absorb the surplus agrarian population. This obstacle is likely to lead to a relatively high cost of production which will make it difficult for the industrial products of Egypt to compete on world markets with products of countries already well entrenched in industrial production. Industrialization, therefore, must rely to a large extent on the expansion of local markets. Since the bulk of population in Egypt is engaged in agriculture, expansion of local markets means

principally increasing agricultural productivity and raising rural per capita income. Therefore until the rural per capita income is raised, the limited size of the local market will remain an obstacle to the economic development program in general and industrialization of Egypt in particular.

B. The Impact of the Main Development Projects on the Population Problem.

This section is an attempt for appraising the main development projects which are believed to be effective in providing the possible solutions for the population problem. It will be followed by an appraisal of the whole development program.

1) Land Reform:

The aims of the Land Reform as stated in the preamble to the Land Reform Law are three: the redistribution of land ownership, the reduction of rent, and the raising of agricultural wages. In this connection, since our interest is concentrated on the relationship and effect between land reform and economic development programs the discussion will be limited to the distribution and growth effects of Land Reform. For this purpose three criteria are used for the appraisal of the project:

- a. The effect of Land Reform on agricultural production.
- b. The effect of Land Reform on the distribution of income.

c. To what extent can Land Reform help in diverting capital from agriculture to industry, and to what extent can it help to mitigate the effects of overpopulation?

In the following each of the above mentioned criteria is dealt with separately.

The Effect of Land Reform On Production:

The effect of Land Reform on production forms the basis for much heated discussion among economists as to whether it will increase or decrease agricultural productivity.

The opponents of the project argue that the redistribution of land will reduce the productivity of the land on the following grounds:

First, this measure disregards, the advantages of mass production, discourages investment, and results in less production. by distributing the expropriated land to small farmers who do not have enough capital to invest in the land. Moreover, by fixing agricultural rents at lower levels than could be obtained under supply and demand conditions, landowners will discontinue their normal function of bearing the greater share of investment in agriculture.

Second, the redistribution of land cannot be of any great effect in the productivity of labor, for productivity depends mainly on technical and human factors - i.e. on factors relating to methods of production, use of machinery and the technical efficiency of laborer.

On the other hand the advocates of Land Reform consider it as an essential factor to achieve agricultural development. Their argument is based on the contention that a big landowner is less often the cultivator of his land while a tenant has no incentive to maintain the natural productivity of the soil or to avoid its exhaustion. Thus by providing a wider base of private ownership the Land Reform may increase the effectiveness of incentive on the attitude toward work.

As to the fear of disruptive effects, as stated by the opponents of the Reform, the advocates maintain that such a fear would exist if the redistribution was large and sudden and not where the scope and rate of transfer are limited. What the effects on production in general are likely to be will depend mainly on whether the land expropriated will be transferred to small tenants, and the extent to which it will be transferred to labor without any capital. But the Law has provided cooperatives to extend capital, seeds and fertilizers and other facilities to meet any arising problem from the redistribution of requisitioned land, and therefore there is no fear of a decline in the productivity of land.

Official statements as revealed by the Higher Committee of Agrarian Reform concerning the effect of Land Reform on production supports the argument that it

resulted in an increased productivity, although these figures shown in Table XX apply to a short-period which is not decisive in determining its effect.

TABLE XX
AGRICULTURAL YIELD BEFORE & AFTER THE REFORM
(Quintals per hectares)

<u>Harvest Year</u>	<u>Cotton</u>	<u>Wheat</u>	<u>Rice</u>	<u>Maize</u>
1950	4.6	17.7	42.2	21.4
1951	4.4	19.2	30.3	20.4
1952	5.4	18.5	32.9	21.0
1953	5.7	20.6	36.7	21.9
1954	-	22.9	-	-

SOURCE: UNRWA, Economic Bulletin, No.10
(September 1954) p-98

The Effect of Land Reform On Distribution

The most effective relationship between land reform and economic development appears when both aspects of land reform, the redistribution of land and agricultural income is carried out on a large scale in a country depending mainly on agriculture. In such a case, land reform greatly affects the consumption of national income.

There is no doubt that the redistribution of land is the main core of Land Reform in Egypt. But in fact the

redistribution of agricultural income as a result of altering the rents and wages represent a more significant change in the distribution of wealth than land. This is due to the fact that the total area subject to expropriation¹ does not constitute more than 7 per cent of the cultivable land, and therefore the distribution effects are insignificant.

On the other hand as a result of fixing rents and wages some income distributional effects have arisen. Statistics reveal that during the 1951-1952 and 1952-1953 seasons average cash rents fell from LE.29.9 to LE.20.2.² Those tenants who rent about 3.5 million feddans will receive an increment of LE.35 million. "In 1953 cultivators' incomes were LE.185 million or 23 per cent higher than they would have been prior to the Reform".³ Thus the income distribution effect is in favor of the present class. Landlords, on the otherhand, as a consequence of Land Reform suffered a capital loss as a result of the deterioration in the value of land holdings. This deterioration is attributed to the fall of cash rents, the fear of another round of expropriation at a lower level than the present level, and the levy of a tax on land subject to expropriation amounting to five times the normal land tax.

1- The total area subject to expropriation is 567,000 feddans.

2- William Thweatt, "The Egyptian Agrarian Reform" Middle East Economic Papers (Beirut: Economic Research Institute; 1956) p.156.

3- Ibid. p.156

The Diversion of Capital from Agriculture to Industry

(The diversion of capital from agriculture to industry is one of the aims of Land Reform as stated in the preamble to the Law. "The Reform was intended to increase investment in industry by breaking the landowners desire to hold wealth in the form of land, thus increasing the amount of new investment.) It was the original intention to make the land bonds negotiable to achieve this result. However as the bonds are not negotiable (except for the purchase of land and reclamation), the payment of compensation cannot cause the landowners to reinvest".¹

Thus the Land Refom has an economic purpose which aims at the stimulation of economic development by removing two main obstacles standing in its way: the tendency to invest the major part of savings in land and the presence of large agrarian surplus population. (It is believed that the reform will divert capital into industrial, mining and commercial enterprises since it is expected that part of the indemnity paid to landlords will be invested in other branches of the economy. (Such a diversion of capital will reduce the pressure of population on the cultivated area by shifting the surplus labor from agriculture.)

There are certain limitations on the attainment of such a goal. One limitation arises from the fact that any attempt for removing the surplus of manpower from

1. Doreen Warriner, Land Reform & Development in the Middle East (London: Royal Institute of International Affairs; 1957) p.41.

agriculture and to raise their standard of living will only be possible if there can be a big expansion of industrial employment. Since the industrial sector of Egypt is extremely limited, and since the government bonds paid to landlords in exchange for expropriated land is practically not negotiable the the possibility of a big industrial expansion as a result of capital diversion is very remote.

There is no doubt that the ultimate aim of both land reform, and economic development programs in underdeveloped countries is to wipe out disguised unemployment by creating new industries and increasing agricultural production. Taking this aim as a criterion for appraising the Land Reform in Egypt the following observations can be denoted:

a) Land Reform, even on a scale vaster than the present scale provides no solution to the basic problem facing Egypt which is the continuous disproportion between the size of population and the resources exploited. Land Reform cannot increase productivity substantially so as to keep pace with population growth. This is due to the fact that the scope of the Reform is limited to 7 per cent only of the total cultivable area. This requisitioned land is not enough to hold the excess rural population

which is estimated at 5 million.

b) The purpose of Land Reform is more political rather than economic. However in studying the economic side of the project, one discovers that although Land Reform was started and carried out as a political measure it also moved towards a solution of an economic problem; the maldistribution of land and income. ✕

2) The High Dam Project:

The High Dam Project comprises the long-term program for the expansion of the cultivated area, and for industrial expansion. In other words it constitutes the cornerstone for the future industrialization of Egypt, and in this sense it is regarded by the Egyptian Government as the main outlet for the chronic problem of population.

Thus the success or failure of this project reflects to a great extent the possibility of success or failure of the whole development program in solving the population problem of Egypt. (For if industrialization and the increase of agricultural production, through the expansion of cultivated area and the increase of agricultural productivity per feddan, constitute the two main possible solutions for the population problem, (the High Dam project is the main project of the whole development program which is assumed to solve the problem.) A brief review of the economic advantages of the project, as mentioned in Chapter IV,

will indicate this fact.

- a) The High Dam would ensure an agricultural expansion of 2,000,000 feddans which means an increase of about 30 per cent more than the present cultivated area. The importance of this arises from the fact that during the last thirty years the cultivated area has increased 600,000 feddans only.
- b) The Dam would ensure irrigation of 100,000 feddans for the cultivation of rice regardless of the annual discharge of the Nile.

Rice at present is the second exportable commodity in Egypt. The importance of extending the range of rice cultivation arises from the fact that the Egyptian economy depends entirely on one crop, cotton, in spite of the fact that it is subject to violent fluctuations both in yield and in prices. Thus by extending the range of export crops, the High Dam will enable Egypt to produce new crops on an export scale alongside with cotton; such crops that could be in more regular demand, and that could insure more firm receipts, and that could thus relieve the country of the cotton crisis since cotton would not be the only source of foreign exchange.

- * c) The generation of electric power of about 6 billion k.w- Hour¹ a year which will be utilized

1. Statistics reveal that the annual consumption of electric power in 1954 amounted to 1.3 billion K.W- Hour.

for increasing the productivity of the synthetic fertilizer factory at Asswan, and will provide cheap power for different industries.

The above mentioned economic advantages indicate that the High Dam Project is an attempt for solving the population problem by increasing the cultivated area, reducing the extreme dependence of the Egyptian economy on cotton by extending the range of export crops, (and industrializing Egypt by providing the necessary power at a cheap price.)

The question that arises in this connection is to what extent can the High Dam, by increasing agricultural production and industrializing Egypt, mitigate the population problem? In other words is the increase in agricultural production and the degree of industrialization sufficient to alleviate the pressure of population on the available resources of Egypt? In answering this question which determines to a great extent the usefulness of the project it is important to deal separately with the agricultural and industrial parts of the project.

Concerning the agricultural side of the project it is doubtful whether an increase of 30 per cent of the cultivated area will in the long-run reduce the pressure of population on the limited area of land. Because by the

time the Dam is completed (a period of not less than 10 years) the total population of Egypt will have increased by 5 - 6 million, so that the prospective increase in areas cultivated and cropped will provide only for the prospective increase in population. Even if the project proved to be a success for a period of time that success would prevail through a span of a few years, after the clapse of which the same problem would reveal itself again.

The conclusion that can be drawn from the above discussion is that even with much fuller utilization of the Nile water, there is not prospect of relieving pressure on the land so long as Egypt is an agricultural country. However this does not mean that there is no need for agricultural development. On the contrary it is necessary and it should prlude industrial development in order to create a favorable atmosphere to such development by increasing the purchasing power of the agrarian population.

Progress in agriculture creates the conditions favourable to progress in industry through the supply needed for industrial expansion. Moreover, Egyptian industry will certainly remain mainly dependent on the local market for the disposal of its production. The rate of local consumption in Egypt's agricultural economy depends largely on the purchasing power of the farming population comprising the majority of the people. Thus every increase in the per-capita

income of the farming population and every relative increase of their purchasing power will naturally stimulate the demand for industrial products and help industry to prosper.

The main point that emerges from the previous discussion is that the High Dam can reduce the pressure of population on the farm land for a short-period after which the same problem will reveal itself again. But on the other hand it can develop the agricultural sector in order to create a favourable atmosphere for the industrialization of Egypt.

In so far as the industrial part of the project is concerned, (it is claimed that the High Dam will provide a solution to the population problem through generating imperative electric power at a very cheap price and thus helping to industrialize Egypt. Electric power is considered as a basic factor in an industrialization program. "It is mainly considered as a major contributor to the cost of production of heavy industries where it is estimated to constitute 80 per cent of the total cost"¹. Thus the provision of huge electric power at a cheap price will open wide vistas for the establishment of new industries, and the expansion of the existing industries even if the necessary raw materials have to be imported as the case in some European countries. For example, Italy and Switzerland import large amounts of raw material which are re-exported

1. Ministry of National Guidance, The National Production Council (Cairo Government Press, 1955) p. 257.

in the form of final products. This is due to the fact that both of these countries has adequate electric power at a cheap cost.

(It is undoubtedly true that electric power is a corner stone on which industry is built, and that it is a pre-requisite for industrial development.) But there are other factors which will limit any large scale plan for the industrialization of the country. The following are some of these factors: (shortage of capital, deficiencies in skilled labor; shortage of able enterprenurs; limited size of the domestic market; difficulty of access to foreign markets, and inadequate standards of health and education.) Unless these obstacles are removed the benefits accruing to the industrial development through the High Dam project will be limited. The Government is making every effort to remove these obstacles by encouraging foreign capital to flow into Egypt, increasing the purchasing power of the agrarian population through agricultural development in order to expand the domestic market, and providing better health conditions for the masses. The success or failure of the Government to remove these obstacles will effect to a great extent the industrial benefits of the High Dam.

Therefore it is not desirable to overestimate the opportunity which the High Dam project provides for a large scale industrialization of Egypt. The Dam ensures one

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pre-requisite of industrialization (i.e. electric power) but it cannot guarantee all the pre-requisites. But the Dam can none-the-less reduce the demographic impasse by greatly increasing industrial capacity and could absorb part of the surplus agrarian population through increased employment in industry.

3. The Impact Of the Whole Development Program.

As mentioned previously, the impact of the whole development program on the population problem will be analyzed with respect to its contribution to the agricultural expansion and (the industrialization of the country so as to keep pace with population growth, or to check population increase by reducing the fertility rate to the extent necessary to stabilize the population at a level consistent with the requirements of the national economy.)

Development projects are divided into three groups the first group are those aiming at increasing agricultural production by increasing the yield per feddan and by extending the cultivated area. (The second group include all projects aiming at the industrialization of the country, while the third group aims at providing education and better health conditions. Although these three groups are complementary to each other, it is more appropriate to discuss the impact of each group on the population problem separately.)

a) Agricultural Development

The importance of agricultural development as a possible means for solving the population problem is due to the fact that Egypt is basically an agricultural country and that the majority of the population are engaged in agriculture.

Concerning the first component of agricultural development namely, increasing productivity per feddan it provides a limited solution for the population problem. It is true that the population on land is now increasing faster than production, and it is essential to increase agricultural production if a further fall in the living standard is to be avoided. But because the land productivity is already so high, there is a limited scope for increasing agricultural productivity on the present land area.

The existing land area is used very efficiently where the Nile valley holds the world's land productivity record. One fourth of the land (which is irrigated perennially) three crops are harvested annually. Yield per hectare is high and rank among the highest in the world. Table XXI shows the yield of cotton, maize and wheat in Egypt as compared with other developed economies such as the United States, United Kingdom and the European countries.

TABLE XXI

CROP YIELDS IN EGYPT & OTHER COUNTRIES.

(100 kg. per hectare)

	<u>Cotton</u>	<u>Maize</u>	<u>Wheat</u>
Egypt	5.5	24.9	18.0
U.S.A.	3.2	24.6	11.1
U.K.	-	-	26.8
Europe	1.5	14.3	15.4

SOURCE: FAO, Yearbook Of Food & Agricultural Statistics

Table XXI shows that cotton yield per hectare is the highest in the world, the maize yield as high as the United States level, while wheat yields are comparatively low though they exceed the European average.

The most obvious conclusion which is drawn from the above table is that the possibility of increasing agricultural productivity per unit of land to mitigate the continuous increase in population is ruled out. There is not doubt that development projects such as the propagation of selected seeds, the provision of more fertilizers and the extension of agricultural credit can increase the agricultural yield per unit of land, but that it is a minute increase which is ineffective

if compared with the increase in population. In the view of the Population Commission the maximum possible increase in output per acre might be 25 per cent above the level of 1947 - 1951.

However this high level of land productivity is accompanied by a very low productivity of labor. Thus while gross and net output per acre are extremely high, output per man is extremely low.¹ Therefore, the possibility of increasing agricultural productivity through the improvement of farmers nutrition standard is great. Experience in the advanced countries has shown that increase in agricultural productivity per man is the real key to the growth in agricultural production. "In Western Europe, for example, the sustained expansion of agricultural production of roughly 2 per cent per annum in the past decades has been the result of an increase in productivity per man".²

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1. Estimates of Egyptian national income show that in 1953 the average gross agricultural output per acre amounted to £ 63, and the average net output per acre (i.e. gross output less estimated inputs of materials) to £ 45. Net income per head of active agricultural population amounted to £ 34 as compared with £ 190 in European countries.

Broadly speaking, Egypt land produces twice as much per acre as European countries while its labor earns only one-seventh as much.

2. United Nations, World Population Conference (New York: United Nations, 1955) p.107.

It is believed that the calories which an Egyptian farmer gets are 20 per cent less than the normal although he consumes so much calories in his daily energies as to increase his need to a higher ratio of calories than the minimum. Should the agricultural development projects succeed to raise his nutrition standard to the normal level, it is possible to increase agricultural production. But that increase will be so minute if compared to the great increase in population.

The three dominant conditions in Egypt; the extreme and growing congestion on the land, the limited land area and the high level of land productivity which rules out any possibility for increasing agricultural production on a large scale mean that the fall in the living standard can be checked only by greatly extending the area cultivated and by increasing employment in industry to absorb the surplus agrarian population.

The extension of cultivated area is an inevitable measure to alleviate the continuous pressure of population on the available resources by shifting part of the surplus agrarian population to newly reclaimed areas especially that this surplus is adding nothing to agricultural production since their marginal productivity is zero. Such a transfer will lead to an absolute increase in agricultural production by the amount produced on the new reclaimed area, and may increase the agricultural income per man of those remaining on the existing cultivated area. This increase is due to

The fact that the surplus agrarian population are sharing the agricultural income without adding anything to production. It is expected that the increase of agricultural production resulting from the extension of cultivated area will sustain the future increase in population for a certain period of time after which population increase would outstrip production and the same problem will reveal itself again. This period is determined by the scale of irrigation schemes through which the extension of cultivated area is realized.

As far as the impact of agricultural development projects on the second component of the population problem, the rate of population growth, is concerned agricultural development may alter the composition, structure and growth of the population. Through improvements in living standards either the fertility or mortality rate, or both, may change. For example, the experience of the more developed countries shows that in their earlier stages of development the immediate effect of the rising living standards was to stimulate population growth. This was partly due to improved living conditions, better sanitation, and medical facilities which resulted in lower mortality rates. In due course, however fertility rates began to decline in most of these countries.

However, it is doubtful that agriculture development in Egypt will take the same course in reducing the fertility rate since it is determined to a great extent by deep rooted traditions which are difficult to be changed. It is expected that the impact of agricultural development on the rate of population growth in Egypt is likely to be unfavorable, because it will reduce mortality rate without a corresponding reduction in fertility rate. Thus the possibility of rapid growth continuing for a long period must be taken into account in planning the agricultural development of Egypt.

2. The Impact of Industrialization Program:

In discussing industrialization as a possible means for solving the population problem in Chapter III it was stated that the absorption of a part of the surplus agrarian population should be one of the primary targets of industrialization, and that industrial expansion should be maintained at a rate which is sufficient to absorb the surplus labor in agriculture and the continuous increase in population if a positive improvement in the standard of living of the masses is to be realized.

The question that arises in this connection is that to what extent can the industrialization program planned by the Egyptian Government satisfy the above mentioned aims? In other words in order to be effective in raising the standard

of living, industrialization has to be related to the magnitude of the population problem. It is thus necessary to test the quantitative aspect of industrialization program by estimating the amount of surplus labor in agriculture and the increase in population during the industrialization period in order to predict with reasonable confidence the impact of industrial development projects on the population problem.

In considering quantitatively the amount of surplus agrarian population in Egypt at present, one is bound to be arbitrary because there is no such thing as an objective criterion for the measurement of the phenomenon in question. It all depends on what is regarded as the subsistence income for the farm community and the amount of land and equipment necessary to yield such an income.

However recent estimates indicate that 40-50¹ per cent of the total agrarian population are regarded as superfluous in the sense that they do not contribute anything to production; their marginal productivity is zero. On the basis of 1947 census and according to the occupational distribution of population, the number of those

1. This figure is an estimate given by Ragner Nurkse. Another economist, W.W. Cleland estimated that half the Egyptian farm population appears to be regarded as surplus.

dependent on agriculture are 7.5 million¹. Applying the ratio mentioned above, a surplus of about 3.7 million will have to be taken off the land, which leaves 3.7 millions on the area of 5.9 million feddans. Evidently this is a very reserved estimate of the extent of overpopulation in Egyptian agriculture.

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The next step is to estimate the growth of population over the period of industrialization, taken to be ten years. Assuming that the population of Egypt will increase at an average rate of 1.4 per annum the increase in population over ten years would amount to 3.1 million. (On the basis of 22 million in 1955).

(Therefore the total number that has to be absorbed by the industrialization program is $3.7+3.1=6.8$ million.) The first figure being the surplus agrarian labor while the second is the expected increase in population during the industrialization period which is assumed to be ten years.

However, a part of the population surplus could be transferred into the extended cultivated area which is expected to increase by 2,000,000 feddans upon the completion of the High Dam project. But such an increase in the cultivated area is not sufficient to support a large

1. It is estimated that at present there are 9 million who are engaged in agriculture.

population. It is estimated that an increase of 2,000,000 feddans can be made to support, at a relatively small capital outlay, about 200,000¹ persons which leaves 6.6 millions to be employed outside agriculture.

Not all of these will have to be engaged in secondary occupations. As a consequence of expanding the industrial sector, services will automatically expand, thus absorbing a part of the combined surplus. It is therefore, necessary to find out the ratio of "relevant"² services to industrial employment in Egypt in order to know how the surplus will be absorbed by different occupations. This ratio is estimated at 40 per cent³, which means that for every 100 persons employed in secondary occupations, 40 will be absorbed in services. (It is, therefore, assumed that the expansion of secondary occupations will lead partly to a demand for the new employees in the service industries) and partly to a fuller utilization of existing capacity. Applying a ratio of 40 per cent to the total number of 6.6 millions would imply the creation of approximately 3.9 millions new jobs in manufacturing, mining, and construction. The remainder being taken by tertiary occupation.

* (The question that arises is whether the Egyptian economy can maintain such a rate of expansion, Expansion

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1. Said El-Naggar, Industrialization and Income (Cairo: Fouad University, 1952) p.141
 2. "Relevant" services refer to those created through the manufacturing activities of the country.
 3. This ratio is arrived at by M. Mandelbaum in his book the Industrialization of Backward Areas. To determine this ratio he worked out the formula $\frac{200s}{a+2i}$ where "s" is the percentage of total employment absorbed by all services, "i" the percentage absorbed by industry "a" that absorbed by agriculture.

at such a rate will require capital which cannot be assessed without reference to the broad distribution of the new labor inflow. "Assuming that 2.5 present (of 3.9 million) will go to mining, 60 per cent to manufacturing proper, 37.5 per cent to construction, and assuming that capital per head is LE. 750, LE 350, LE. 150 in the three categories respectively, capital requirements of secondary occupations will amount to LE.1045 millions to which must be added LE.408 million in services"¹. Total capital requirements in ten years will be thus in the neighborhood of LE. 1453 millions.

The capacity of the Egyptian economy to finance industrial expansion of this magnitude will depend on the rate of domestic savings and the possibilities of taxation and public borrowing. Capital expenditure on the existing industrial development projects fall short of the above mentioned capital requirements. Statistics of the annual development budgets as prepared by the National Production Council reveal that an average sum of LE 40 millions² is spent annually on the whole development program. Thus in a period of ten years the total sum which will be spent is in the neighborhood of LE 400 millions. This amount falls short of the capital requirements for an effective industrialization program that can absorb the surplus labor.

1. Op. Cit. p.142

2. See Chapter I, section E .

In the light of the above comparison between the capital requirements of an industrial expansion program that can absorb the surplus labor and the existing rate of expansion, it is denoted that the present industrial program can absorb only a part of the surplus that does not exceed one third. This part will be absorbed mainly by the secondary occupations and partly by tertiary occupations.

In addition to the problem of capital shortage, there are other obstacles which limit any industrialization program on a large scale the most important of which are:

- † the limited size of the domestic market, deficiencies in skilled labor and difficulty of access to foreign markets.

These obstacles must be removed if industrialization has to affect the population problem favorably. (Unfortunately these obstacles are still prevalent in the Egyptian economy which are rendering the present industrial development program to be ineffective in solving the population problem.)

Industrialization is likely to exercise a powerful influence on the rate of population growth in agricultural countries. (The industrializing country will undergo economic, sociological and cultural changes.) It is noticeable that (countries which suffer from "overpopulation" are characterized by rates of birth rate which almost reaches the biological maximum. As explained earlier, family form, religious doctrine

and community customs are all focused on the maintenance of high fertility.)

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It is difficult to predict with reasonable confidence the impact of industrial atmosphere on the behaviour of these forces. (It is true that some factors may reduce birth rates. With the development of urban life and the spread of education conditions will become gradually unfavourable to early marriages. Moreover, the gradual improvement in the standard of living will impair the inducement to make use of child labor. People become imbued with the desire to give their children better education and better living conditions. (However, it is probable that a long time will have to elapse before these factors assume any importance. During the early stages of industrialization it is likely that birth rates will remain constant.)

While birth rates are rather stable, death rates are not. Physical conditions are the most potent factor that determines death rate. (It is believed that with the rise in the standard of living and the improvement in the hygienic conditions these rates will inevitably fall. In this case the effect is likely to be immediate.)

The combined operation of probably changes in births and deaths will accelerate the rate of population growth. On the one hand, death rates and infant mortalities will

decline following the improvement in the standard of living and hygiene. On the other hand, birth rates being determined less by physical conditions and more by deep-rooted sociological and cultural traditions, are likely to remain at their present high levels.

The acceleration in the rate of population growth may wipe out the benefits of existing industrial development program. It is necessary to counteract this effect by maintaining the industrial expansion at a rate that can account for the incessant increase in population. But as shown previously there are certain obstacles which render the Egyptian economy incapable of maintaining such expansion.

To conclude, it seems that the impact of existing industrial development projects on the population problem is likely to be unfavourable. On the one hand, the industrialization program as related to the magnitude of the population problem is incapable of absorbing the surplus population due to the shortage of capital, the limited size of home market and the rapid rate of population growth during ~~the~~ industrialization period. On the other hand, the existing industrialization program tends to accelerate the rate of population growth by reducing the mortality rate, as a result of better health conditions, while the fertility rate will tend to remain constant since it is determined more by deep-rooted sociological and cultural traditions which are unlikely to be affected.

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C. Conclusions:

In view of what has already been discussed regarding the impact of development projects on the population problem of Egypt few generalizations can be formulated:

First, the increase in agricultural production as a result of increasing the agricultural yield per unit of land and extending the cultivated area, does not provide an adequate solution for the population problem although it may help in alleviating the pressure of population on the available resources for a certain period.

The possibility of increasing productivity per unit of land to an extent that can mitigate the incessant increase of population is ruled out. The fact that the existing yield per unit of land is considered among the highest in the world as indicated in Table XXI will leave little room for any substantial increase in productivity to counteract the increase in population.

On the other hand, the extension of cultivated area by approximately 30 percent upon the completion of the High Dam project will undoubtedly result in a favorable effect for a period of time because it will absorb at least part of the existing surplus agrarian population. Such a transfer of population to the new cultivated area will lead to an absolute increase in agricultural production by the amount produced on the reclaimed land,

and may increase the agricultural income of those remaining on the existing cultivated area since the surplus agrarian population is sharing the agricultural income without contributing to production.

However there are two limitations for such a possible solution. In the first place, the magnitude of extending the cultivated area is determined by the available irrigation schemes. On the assumption that the High Dam Project provides the biggest irrigation scheme the expected increase in the cultivated area (i.e. 2,000,000 feddans) is not sufficient to sustain a large proportion of the surplus labor. In the second place, the agricultural yield per unit of the extended area is likely to be below the yield of existing area since most of the reclaimed land is a desert or a semi desert. But these two limitations do not deny the fact that the extension of cultivated area is a necessity in order to reduce partially the pressure of population on the existing cultivated area.

Second, although industrialization of overpopulated countries is considered (a necessary measure for relieving population pressure on land, for augmenting total national production, and possibly for affecting a rise in the level of living, the existing industrial development program is likely to be inadequate to absorb the surplus agrarian population and to counteract the effect of the)

increase of population during the industrialization period. (There are certain obstacles inherent in the Egyptian economy which render it incapable of maintaining industrial expansion at a rate sufficient to absorb the surplus labor. Thus until these obstacles are removed the existing industrial development projects may seem to be ineffective in solving the population problem. There is no doubt that it provides a partial solution on a limited scale.

(On the other hand, the existing industrial program may intensify the population problem by affecting unfavorably the rate of population growth. It may reduce mortality rate while the birth rate tends to be constant and thus accelerate the rate of population growth.)

The above mentioned generalizations regarding the impact of existing development projects on the population problem points out to the importance of resorting to measures that can check the incessant increase in population so as not to wipe out the benefits of agricultural and industrial expansion. Two measures are suggested in this respect:

First, international emigration to sparsely populated areas. Theoretically, as explained in Chapter III, this measure may be as effective in tackling the population problem as industrialization. If the incessant increase of the Egyptian population is artificially stopped in this way, there would be a much better chance of coping effectively

with the present surplus of population through agricultural and industrial expansion.

Second, the adoption of a birth control policy in an attempt to reduce the fertility rate which is considered among the highest in the world. There is no doubt that there are many difficulties which impede the adoption of such a measure, but it is an inevitable step if the existing development projects are to help in solving the chronic population problem.

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