

THE POPULATION OF THE ARAB REPUBLIC OF EGYPT

Part II

By

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POPULATION DISTRIBUTION AND INTERNAL MIGRATION

Internal migration can be defined as the mobility of citizens from a certain geographical unit to another within the boundaries of the country, seeking for permanent residence in the new locality. This pattern of mobility affects to a great extent population growth, its age and sex composition, its social, economic and cultural structure and all other demographic characteristics of that population. The effects of internal migration on both the expelling and the attracting localities completely depend upon the characteristics of the migrants themselves. In the present chapter a description of population distribution and internal migration in Egypt will be presented. In addition description of the past and present trends in internal migration will be briefed.

Available data show that population growth has not been even in different geographical areas in Egypt. On the contrary, regional growth rates varied markedly resulting in a significant amount of population redistribution during this century. This can be seen from the regional population distribution. For instance, the proportionate share of lower Egypt increased from 59 to 64 percent of the total population between 1927 and 1966. The corresponding figures of Upper are 46 and 41 percent, respectively. The small share of frontier governorates increased from 0.6 to 1.1 percent. However, it may be added that within lower Egypt, the share of urban governorates increased from 13 to 23 percent, whereas the share of non-urban governorates of the region decreased from about 47 to 41 percent during the same period. Table (IV-1) shows the increase in urban and rural population in census years 1907-1966.

Table (IV-1)

Population in Urban and Rural
Areas in Egypt in Census Years 1907-1966

Years	Urban Population	%	Rural Population	%	Total
1907	2125000	19	9058000	81	11183000
1917	2640600	21	10029700	79	12670300
1927	3715840	26	10367436	74	14083276
1937	4382083	28	11429001	72	15811084
1947	6202316	33	12603510	67	18805826
1960	9651097	37	16120368	63	25771495
1966	12036787	40	17687312	60	29724099

From table (IV-1) we notice the upward trend of urban population from 19% in 1907 to about 40% in 1966. A higher proportion of the increase is in metropolitan areas, and in particular Cairo and Alexandria. In 1927, Cairo's share of the total population was 7.6% it increased gradually to reach 14% in 1966. Similarly, Alexandria's share increased from 4.2% in 1927 to 6.0% in 1966. (See table (2) in Appendix for details).

Taking 1907 as a base = 100 we find that Cairo's size is 157 in 1927 and 617 in 1966. Similarly, Alexandria increased from 162 in 1927 to 509 in 1966. As shown in table (IV-2), the increase in other governorates was moderate. In Sharkia in Lower Egypt, it became only 248 in 1966, and Menia (Upper Egypt) became 261 in 1966. This shows a more moderate increase as compared to that in metropolitan areas. The main reason is internal migration from rural to urban areas and in particular to the two main metropolitan areas of Cairo and Alexandria.

Table (IV-2)

Indices of Population Size in Cairo, Alexandria and
some Selected Governorates in Egypt in Census

Year (1927 - 1966)

Governorates	1927	1947	1960	1966
Cairo	127	308	494	617
Alexandria	162	266	423	509
Lower Egypt :				
Dakahlia	123	161	230	266
Sharkia	119	151	213	248
Menia	128	160	239	261
Qena	117	143	175	191
Total Egypt	126	169	231	267

* Source : C.A.P.M.A.S., *Pop. and Dev., op. cit.*

Thus, Cairo and Alexandria's growth was more than twice the national growth. This means that Cairo, which is about 0.6% of the total inhabited area, has more than 14% of the population, while the two largest governorate of Sharkia (13. 2%) and Behera (12.9%) contain only 7.1 and 6.6% of the total population respectively.

Metropolitan growth can then be shown through the very high population densities. The population density in Cairo in 1971 was about 6584 per square kilometer. This density increased gradually to 19594 per square kilometer in 1966 which constitutes one of the highest densities in the world. (See table (13) in Appendix). The next highest density is Alexandria which had a density of 6221 per square kilometer in 1966. Most of the other governorates had a density below one thousand. The total population density in Egypt had almost doubled from 410 in 1927 to 845 in 1966.

According to 1960 census data, approximately 22% of the total population live in cities of 100, 000 and over. Egypt is dominated, in terms of the concentration of her population, by a few large cities are growing at a faster rate than the smaller ones.

From table (11) in Appendix, we see that during the decade 1927-1937, the average annual increase of the metropolitan areas was twice as large as that of the provincial capitals (20,000 and over of the North, and South. They are 50% higher than those of Middle Egypt. During the period 1947-1960 the superiority of the increase in population of the metropolises was 80% greater than that of middle and north Egypt and 64% greater than that of south Egypt's provincial capitals. (See Figure A-2 in Appendix).

From the above discussion we conclude that the metropolitan areas are the centers of immigration. Although these large cities, therefore, do offer so many purely economic advantages, the attractive power of them lies in their capacity to provide jobs.

The total amount of population redistribution can be measured by the sum of positive or negative difference between the actual size of population for each governorate and the expected size if the governorate experience the same rate of growth as the whole population at a final date. The calculated amount between 1927 and 1966 was about 3,631,000. The urban governorates shared with about 2,927,000 out of this total. The rural governorates of Lower and Upper Egypt showed negative differences of 1,279,00 and 1,718,000 respectively. The frontier governorates showed a positive difference of 151,000. It is worth mentioning that population redistribution is a function of differentials in the rates of natural increase of the different geographical areas in a given society as well as the movement of population. In Egypt, the regional differentials in the rates of natural increase are inconclusive in a manner that they do not much explain the problem. In addition, international migration is of minor effect on the Egyptian population where it is considered a closed population. Therefore it is the internal migration that has the major effect on population redistribution in the country.

INTERNAL MIGRATION MOVEMENTS

There are many different types of internal movements in Egypt. These movements may take the following forms :

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1. U.N.. Economic and Social Council, Economic Commission for Africa, *Population Distribution and Internal Migration and Urbanization in Africa*, 1962, pp. 10-20.

1. *The movements of nomads* : The seasonal movements of tribes living in arid or semi-arid areas. Such movements are noticed among the Arab Bedouins in the Eastern and Western deserts.

2. *Migration based on labor contracts* : This type of movement is sometimes sponsored by the responsible authorities, but in the majority of cases, they are outside any form of control.

3. *Migration from rural to urban areas* : This type of migration involves those working in the traditional sector of family and subsistence, agriculture and handicrafts, who move to the modern sector of organized agriculture, commerce and industry. It covers a big proportion of the population. The fact that a large group in the traditional sector is unemployed encourages migration on a big scale. This type of migration in Egypt can be considered as the main form of migration.

4. *Movements of temporary and seasonal nature* : To a considerable extent, they represent an adjustment of labor to the unequal distribution of population in relation to resources. The volume of these movements is vaguely known, but their direction is mainly from subsistence rural areas to cash-crop areas, from rural areas to urban areas as temporary workers during the seasons where there is little to do on the land.

5. *Movements between and within urban areas* : This type of movement is very hard to measure, however it occurs sometimes on a big scale, especially short distance mobility within the same metropolitan area.

Actually, the migration from rural to urban areas is the most important type, not only because it represents a large proportion of the population, but also because of its serious implications on population distribution and economic problems in the country .

Nowadays in Egypt there is a pronounced tendency toward a large proportion of the population to concentrate in few big cities. This phenomenon has been termed by Davis and Golden over-urbanization.

2. Davis, K. Golden, H., «Urbanization and the Development of Pre industrial Areas, *Cities and Societies* (ed. by p. Holt and A. Peirs) Glencoe, Ill., The Free Press, (1957), pp. 131.

Egypt, judged by her industrial employment, is an overurbanized country, i.e., the size of labor force engaged in the industrial sector and related activities is relatively small, as compared to western countries in their early growth period. 3

MIGRATION BETWEEN GOVERNORATES

Although data on migration based on a complete registration system are not available for Egypt, we shall use the scanty and limited information available from the censuses of population of 1927, 1937, 1947, and 1960. Data were collected in these censuses on movements of population during the previous ten years by place of birth and place of residence. Out-migrants are considered those enumerated outside the governorate of birth, while in-migrants are those who were born outside the region of enumeration. 4

It should be pointed out in this connection, that the direct methods based on the use of a sample or on the use of a sample or on the registered population data, has never been used in Egypt.

According to this method, it could be said that a migrant is the person residing in a place different from the place of birth. Accordingly, by using the data of the population census 1960 we can get table (IV-3). Table (IV-3) shows the computation procedures and the net migration and its percentage. Index of migration (last column) is the percentage of net migration to the total number of migrants (in and out) for each particular governorate; it is a measure of the efficiency of migration.

The following findings can be drawn :

1. The pull governorates are the metropolitan or urban governorates, or at least those with more job opportunities.
2. The push governorates are predominantly rural, with less job opportunities.
3. Cairo is the largest receiver of the migrants (30.7% net migration), and Menofia in North Egypt loses the most (-25.3% net migration).

3. I.N.P.C., *op. cit.* Report A, pp. 16-17.

4. EL-Kammash, Magdi, *Economic Development and Planning in Egypt*, Frederick A. Praeger, N.Y., 1968.

4. The most mobile governorate is Aswan with only - 11.5% net migration, but about 14% and 25% in-and out-migration respectively.

5. One exception is the Red Sea governorate with about 47% net migration. The reason is the great job opportunities in this new governorate especially in mining and oil extraction.

TABLE (IV-3)
Internal Migration between Governorates According to 1960
Population Census

Governorate	Pop. Present	Net-Migration Size	%	Index
1. Cairo	3 348 779	1 027 742	30.7	68.0
2. Alexandria	1 516 234	240 319	15.9	54.5
3. Port-Said	245 318	43 680	17.8	39.4
4. Ismailia	384 115	84 037	29.6	59.3
5. Suez	203 610	73 809	36.2	64.8
6. Damiet	387 962	— 12 962	— 3.3	—14.3
7. Dakaliya	2 014 883	— 164 362	— 8.2	—42.6
8. Sharkiya	1 819 788	— 112 310	— 6.2	—42.6
9. Qulyubla	988 055	— 33 820	— 3.4	—14.3
10. Kafr Elsheikh	973 019	3 260	0.3	2.8
11. Gharbya	1 517 212	— 128 051	— 7.5	—36.7
12. Menufia	1 347 953	— 340 177	—25.3	—81.1
13. Behera	1 685 679	— 19 432	— 1.1	— 7.9
14. Giza	1 336 418	203 188	15.1	52.2
15. Beni Suef	859 832	— 43 509	— 5.0	—39.6
16. Fayum	839 163	— 36 208	— 4.3	—40.1
17. Minya	1 560 311	— 29 277	— 1.9	—22.6
18. Asyut	1 329 588	— 147 997	—11.1	—65.3
19. Souhage	1 578 858	— 233 468	—14.7	—75.0
20. Kena	1 351 358	— 186 803	—13.9	—74.6
21. Aswan	385 350	— 44 100	—11.5	—29.1
22. Red Sea	25 452	11 941	46.9	66.8
23. New Valley	33 932	— 14 694	—43.4	—82.3
24. Matrouh	103 453	— 20 125	—19.5	—51.0
25. Sinai	49 769	2 278	4.5	6.8

In general, from Table IV-3, two main directions of migration are clear. The first is from rural to urban governorates and the second is from where low to high job opportunities can be. (See Figure A-3 in Appendix).

Another study on internal migration movement in Egypt in the period 1960-1970 revealed several important facts. First, for the period 1960-1966, the more attracting areas in Egypt were the urban governorates of Cairo, Giza, Alexandria, Suez, Port Said and Ismailia. The reason is that these governorates are characterized by a large degree of development in industry and public services. On the other hand, the more pushing governorates are those of Menoufia, Sohage, Assiut and Kena. Menoufia governorate is considered as the first pushing one, about 20 percent of births of the governorate do not live in it. The number of out-migrants from Menoufia to Cairo governorate is about two millions. The factors behind such position of Menoufia are (1) its high population density, (2) the pattern of land ownership only $\frac{5}{12}$ feddan on the average caused the migration of agricultural manpower, (3) the high educational level caused by the migration of students to other governorates particularly to Cairo. Another example is the case of Aswan which has changed from a sending area in 1960, to a receiving one in 1966. That may be attributed to the construction of High Dame.

When estimating the internal migration in Egypt from 1966 to 1970, on the basis of survival ration method, we notice the following. The governorates of Cairo, Alexandria and Giza are still considered the most attracting ones. The governorates of Port Said, Suez and Ismailia became sending areas as a result of the policy of compulsory migration after the aggression of 1967. It follows that most of the governorates of Lower Egypt, except Menoufia, became receiving areas. Menoufia governorate is still the first among the sending areas, concealing canal governorates owing to their special conditions. Furthermore, most governorates of Upper Egypt are still considered as sending areas except Giza and Aswan governorates as shown in table (IV-4) below. (See details in tables (13) and (14) in Appendix).

Due to the lack of data available, it is difficult to apply any of the direct methods of measuring migration between rural and urban areas in Egypt. However, the balancing equation method can be applied. We can set the following balancing equation⁽⁵⁾.

Urban (or rural) population in 1960 *minus* the urban (or rural) population in 1947 *equals* the natural increase in the urban (or rural) population plus or minus the net migration.

5. Assuming that international migration is negligible.

Table (IV-4)
Population Movement in Receiving and Sending
Governorates in 1966 Census

Governorate	In-migrants	Out-migrants	Total migration	Net migration	Migration index
1. <i>Receiving</i> :					
Gov.					
Cairo	1171228	244635	1425863	936593	.66
Giza	300713	67786	368499	232927	.63
Alexandria	100536	15577	116113	84939	.73
Suez	100536	15577	116113	84939	.73
Port Said	62014	32796	94810	29218	.31
Ismailia	92886	26871	119757	55015	.55
2. <i>Sending</i> :					
Gov.					
Menoufia	25818	355783	381601	—329965	— .87
Sohag	19360	260502	279862	—241142	— .86
Kena	22286	187648	209934	—165362	— .79
Assiut	29094	176323	205417	—147229	— .72

By using the urban population, the equation gave the figure of 957,627 which constitutes the size of migration to urban areas. Although by using rural population, the figure was 773,630 which constitutes the size of migration from rural areas.

The inequality of these figures may be due to lack of registration in the data of the vital statistics and other accumulated errors.

In general, it could be said that a large scale migration from rural to urban areas during the period 1947-1960 amounted to between the range of three quarters to one million persons. (See Figure A-4 in Appendix).

Table (IV-5) below shows a summary of rural to urban net migration in Egypt during the period 1960-1970.

TABLE (IV-5)
Net Internal Migration from Rural to Urban
in Egypt during the Periods 1960-1965 and 1965-1970

Period (000)	Males	Females	Total
1960 — 1965	— 381	— 370	— 751
1965 — 1970	— 208	— 181	— 389

The table shows that net migration in the five years in the decade 1960-1970 was almost double that in the second five years.

MIGRATION TO CAIRO

Ordinarily, the primate city is at least twice as large and more than twice as significant as the second most important city. According to this to definition, Cairo can be considered as Egypt's Primate city. According to 1960 population census, Cairo as the largest city has more than 3.4 million persons. Alexandria, the second largest has about 1.5 million people, which is less than one half of Cairo's population.

As will be shown in chapter seven, Cairo swallows up investment, absorbs labor force, dominates the cultural pattern, has a deleterious effect on the development of other areas and tends to have a high consumption rate as compared with production rate.

As shown before, Cairo absorbs most of the migrants. Although Cairo as a big city does not in fact offer so many purely economic advantages, its attractive power lies in its capacity to provide jobs. The metropolises grow most rapidly when job opportunities are greatest. There is an unusual influx into Cairo because it renders more available service employment in connection with commerce, tourism and as a center of all government administrative ministries. Most of the industrial centers are located within its boundaries or in its suburbs. Moreover, charity and welfare organizations are more accessible in the cities than in the countryside.

As indicated earlier about 31% of Cairo's population are migrants and the percentage of the in-migration far exceeds to percentage of out-migration, 37.9% and 7.2% respectively.

We have concluded before that the most pushing governorate is Menoufia which contributes most to Cairo's population. It contributed about 18% of the total migrants to Cairo, up to 1960.

There rural migrants to Cairo are drawn two extreme types. Abulughod has distinguished these two types as follows:

1. Qualitatively the cream but numerically the less significant, consists of bright youths who migrate in search of education or wider opportunities. These have the drive and the facility for rapid assimilation into the culture of the city.

2. The second type are drawn primarily from the have-not's of the village, Numerically dominant, they are as much driven from the village by dearth of land and opportunity as they are attracted to the city.⁷

Those migrants settle in particular areas. There are usually some social agencies in Cairo to help assimilate their members. Abu-Lughed mentioned that there are vast quarters within the mosaic of Cairo where, physically and socially, the way of life and characteristics of residents resemble rural Egypt.⁸

These previously mentioned factors explain why some sociologists consider migration to Cairo as the process of ruralization of the city.

The typical migrant, to Cairo as elsewhere, is a *young, unskilled male*, whose first contact in the city is often with a friend or relative from his original village, with whom he may even spend the first nights.

MIGRANTS BY AGE AND SEX

When the attention is directed to the study of net migration by age and sex, we conclude that for urban governorates the largest numbers of migrant males are those in the groups 0-9, 20-29, and 30-39 after which they decrease with the growing of age. Most of male migrants in the first age group 0-9 are children who accompany their parents or those who go to cities for house serving. Most of migrants in the age group 10-19 are students and the rest are those coming from rural areas seeking work. The migrants in the ages 20-30 are the basic manpower migrating from rural areas, (see table 16 in Appendix). Regarding females, we notice that most of the female migrants are in the age group 20-29, often representing the wives of male migrants. Female migrants in the age group 10-19 are either wives of male migrants or work in house-serving.

7. Janit Abu-Lughed, «Migrant Adjustment to City Life : The Egyptian Case», *Amer. Journal of Soc.*, Vol. XVII, No. 1, July 1961, pp. 22-33.

8. *Ibid*, pp. 25.

For non-urban governorates, Giza is the only attracting governorate for male migrants in all ages, a total of about 22,600. The rest of nont-urban governorates are considered as sending areas of male migrants, at the top are the governorates of Menia, Menoufia, Kena and Beni-Suef. Some of the governorates showed a net migration in the age group 20-49 such as Kalyoubia and Behira while Sohag attracted male migrants in the ages less than twenty. The governorates of Sharkia, Kalyoubia, Behira and Assiut attracted females migrants in the age group 20-49. The rest of the governorates showed a negative net migration.

CHAPTER V

THE LABOUR FORCE

The objectives of the present chapter is to investigate activity rates in Egypt up to latest available date. Furthermore, we intend to study differentials in activity rates by age, sex, rural urban, economic activities, occupations, and educational status.

The background data for this chapter were obtained from population censuses 1937, 1947, 1960 and 1966. In addition, labor force sample surveys data were available to us.

The Egyptian labor force grew from about 5.8 millions in 1937 to 7.8 millions in 1960, then to 8.2 millions in 1966. This represents an average exponential rate of growth of about 1.27 per year. The contribution of population growth to the changing size of the labor force overshadowed that attributable to the change in socioeconomic factors reflected by the rate of participation in economic activities. In fact, the latter had a negative effect during the 1937-1960 period. The proportion of the total population in the labor force is relatively low, implying a heavy load of dependency. A primary factor in this regard is the young age composition of the population resulting from the high levels of fertility.

The tempo of growth of the labor force varied in the two intercensal periods and for each sex. For instance, the overall annual rate of growth decreased from 1.34% in the intercensal period (1937-1947) to 1.22% in the following period (1947-1960). The corresponding rates were 1.29% and 1.49% for males, and 1.72% and 1.29% for females respectively.

The crude activity rates decreased from the level of 36.5% in 1937 to 30.1% in 1960, to 26.4% in 1966 resulting in increase in the average number of dependents per 100 of economically active persons, i.e. dependency ratio, increased from 147 to 232 then to 281 during the same period. The crude activity rate remained constant during the period 1966-1970. Moreover, the decline in activity rate was faster between 1947 and 1960 than in the preceding intercensal periods, this may be seen from the following table.

TABLE (V-1)
Crude Activity Rates by Sex

Years	Crude activity rates (%)		
	males	females	both sexes
1937	65.1	7.9	36.5
1947	62.8	7.8	35.0
1960	55.2	4.8	30.1
1966	52.2	3.6	26.4

Table (V-2) below shows the activity rates in different regions of Egypt in May 1970.

From table (V-2) we notice that total activity rates are about the same in different regions in Egypt. Though, the activity rates of females are higher in metropolitan and urban areas than in rural areas or governorate in Lower or Upper Egypt. One clear observation is the very low participation rates for females.

TABLE (V-2)
Percentage of Labour Force to Total
Population by Regions in Egypt (1970 May)

Region	Males	Females	Total
Cairo	43.5	5.8	24.4
Alexandria	45.6	6.1	25.6
Total Urban Gov's	44.1	5.9	44.7
Lower Egypt	49.0	3.2	25.9
Upper Egypt	53.3	2.6	28.0
All Areas	49.4	3.6	26.4

The crude activity rate is simply the weighted average of age specific activity rates, where the proportions of the total population in different age groups are used as weights. Hence, the study of the age profile of activity rates and the trends of its components provides further insights and perhaps partial explanation of the level and trends of crude activity rate.

Age patterns of activity for Egyptian males and females for the census years between 1937 and 1966 show in general, certain degree of similarity. For males, the rates are lowest at young ages, increase rapidly during adulthood to reach a maximum level, and then decline slowly at first then faster at the old ages. The rates for females, on the other hand, increase in the teens, decline in the twenties, increase in th thirties and forties, and finally decline again at the old ages.

LABOUR FORCE BY AGE AND SEX : (1960-1969)

Table (V-3) below shows the age-sex activity rates for the period 1960-1969.

TABLE (V-3)
Age-Sex Specific Activity Rates in Egypt (1960-1969)

Age Groups	1960		1969	
	Males	Females	Males	Females
6—11	17.8	6.7	10.9	2.0
12—14	29.2	8.8	39.3	5.3
15—19	68.0	9.5	57.0	5.2
20—29	89.8	6.0	86.3	7.0
30—39	PR.L	4.5	98.8	5.0
40—49	97.2	4.9	98.6	4.5
50—59	94.9	3.9	96.2	4.1
60—64	84.7	3.9	85.1	4.1
65—69	62.2	1.9	63.7	2.0
over				
CAR (69 over)	51.6	3.6	51.6	3.6

From table (V-3), we notice the very low participation rates of females in all age groups. The majority of Egyptian labour force (94%) are males. We notice also, that age specific male activity rates reach a maximum in the middle ages (20-49) and decrease sharply towards the margins.

Rates for age group (6-11) are decreasing, and this may mean that Egypt is developing to a large extent in the field of education since enrollment of pupils in primary education determines the participation rate in labour force for this age group. For ages 65 years and over the rates increased through the sixties from 62.2% in 1960 to 63.7% in 1969. As will be seen, this increase is mostly evident in rural areas in agricultural sector, these rates were 83.3% in rural and 38.7% in urban in 1969, and they were 71.0% in rural and 48.3% in urban areas in 1966. That increase in rural areas may be attributed to migration of young males from rural areas leaving a higher proportion of old persons in farms, and inflating this category in rural areas.

It should be noted that the levels of age-specific activity rates for Egyptian males are significantly higher than those of in industrialized and semi-industrialized countries both around the same times. On the contrary, the female rates are among the lowest.

A summary of the labour force trends in the sixties is shown in the following table.

LABOUR FORCE BY ECONOMIC ACTIVITIES

The agricultural sector has always been the dominating economic activity in Egypt. About 70% of the labour was engaged in agriculture according to the 1937 census data. The proportion of the agricultural labour force has been gradually decreasing since then. It reached about 62% in 1947 and declined to only 56% in 1960. (See table 17 in the Appendix). In general, the period 1937-1960, has witnessed a considerable structural change where the share of agriculture decreased by about 13% and the share of manufacturing increased by about 3%. Services share has also increased by more than 5%.

The pattern of distribution differs between males and females. During the period 1937-1960, increasing proportions of females have turned to services where there was an increase of about 18%. The decline in the agricultural sector proportion was much faster in case of females (23%) as compared to only 12% for males.

TABLE (V-4)
Trends in some Labour Force Parameters
during 1960-1969 (Males only)

Parameters	1960	1966	1969
Crude Economic Activity Rates (6 over)	%	%	%
Total	54.6	52.2	51.6
Urban	47.8	47.8	45.1
Rural	85.6	55.2	56.1
<i>Distribution of age group (6-11)</i>			
Age - specific activity (Rae)	17.8	9.2	10.9
Out of labour force (Rate)	10.1	10.4	3.1
Enrolled at the primary school (Rate)	72.1	80.4	86.0
	100.0	100.0	100.0
<i>Agriculture Workers</i>			
— Percentage of group (20-49) to labour force in the same age groups.	52.6	49.7	=
— Percentage of age group (6-11) to all agriculture workers.	8.5	4.0	=
— Percentage of age group (6-11) to all economic activities in the same age groups.	87.9	72.4	=
<i>Other Rates</i>			
— Age specific activity rate (65 over).	62.2	63.3	63.7
— Percentage of age groups (20-49) in manufacture sector to labor force in the same age groups.	10.7	14.6	=
— Percentage of labour force in urban (6 over).	32.9	37.3	35.2
— Percentage of illiteracy in labour force (10 over).	63.9	61.0	63.1*

= Not available.

* For the age groups (12-64).

* Source : C.A.P.M.A.S., *Pop. and Dev.*, op. cit.

For the period 1960--1969, the volume of labour force had increased by 20.6% and the percentage of change was positive in all economic activities. In agriculture, the percentage had increased by 14.8% which is higher than expected taking into consideration the area of cultivated land, although it is less than the natural increase of population. The increase of non-agricultural activities amounted 28.7% where the increase in manufacture alone was about 66.9%. The percentage of males working in agriculture to all males in labour force had decreased from 56.1% to 53.4%, thus Egypt can be classified among semi-industrial countries. However, it is still far from industrial countries where the rate of male participation in agricultural activities is not more than 30%. Hy

Table (V-5) below shows percentage distribution of labour force according to economic activities for males and females in 1960-1969. From table (V-5) we notice a decline of about 5% in the proportion of males in the labour force in the agricultural activities as compared to 5.5% percent increase in their proportion in manufacturing. The clear change is the distribution of the female labour force. A clear decline in the proportion of females working in agriculture is observed (a decline of more than 20%). This decline was compensated by a clear increase in the proportion working in manufacturing (about 10% increase) and services (7.6% increase).

TABLE (V-5)
Trends in Labour Force (Males and Females) in the
Age Group 12-64, According to Economic Activities
(1960-1969)

Economic Activities	1960		1969	
	Males	Females	Females	Males
Agriculture	58.4	43.0	53.4	22.6
Mining Quarrying	0.2	0.1	0.5	0.1
Manufacturing	9.6	3.3	14.1	13.5
Construction	2.2	0.2	2.4	0.2
Electricity	0.5	0.1	0.5	0.3
Commerce	8.4	9.7	8.9	10.8
Transport	3.6	0.8	4.4	1.6
Services	15.7	40.1	14.6	47.8
Not reported	1.4	2.7	1.2	1.3
Total	100.0	100.0	100.0	100.0
Total	100.0	100.0	100.0	100.0

* Source : C.A.M.P.A.S., Male Economic Activity Rates in A.R.E. in Population, Vol. 1, No. 3 and Women in 20 years, Cairo, 1972.

LABOUR FORCE BY OCCUPATIONS

In the course of economic development, the occupational structure of the labour force shifts as a result of the changes in the demand for goods and services, and the supply of human skills required for various occupations. Therefore, the study of occupational structure and its trends over time occupy an important place in labour force analysis. Before describing the occupational structure in Egypt and its trends during the 1937-1971 period, it should be noted that the data for 1960-1971 refer to persons 15 years of age and over, while those of earlier dates are given for ages 5 and above. In 1960 and 1971 the proportion of workers in white-collar occupation amounted to slightly less than 17 percent of economically active population. (See table V-6).

TABLE (V-6)
Percent of Labour Force in each Occupation
Egypt 1937-1971

Occupation Year	1937	1947	1960	1971
<i>White-Collar</i>	11.7	12.4	16.6	17.06
Professional	2.5	2.7	3.7	4.91
Administrative	.7	.9	1.1	1.40
Clerical	1.8	2.0	3.7	4.94
Sales	6.7	6.8	8.1	7.12
Sales	12.2	15.7	19.3	18.69
Miners	.1	.1	.2	—
Transport workers	2.3	2.4	3.1	—
Craftsmen	9.8	13.2	16.0	—
Craftsmen	9.8	13.2	16.0	—
Farmers	68.6	60.5	53.1	52.63
Service workers	7.2	9.0	8.9	9.06
Not-Classified	3.	2.5	2.2	1.25
Not-Classified	3.	2.5	2.2	1.25
Total	100.0	100.0	100.0	100.00
Total	100.0	100.0	100.0	100.00

The increase in the proportion of white-collar workers was shared by all the four occupational groups comprising this broad occupational category. This observation remains valid when difference in the lower age limit is taken into account. (When professional, administrative, clerical and sales workers 15 of age and over are related to the total labour force 6 years of age and over in 1960, their shares are 3.7, 1.0, 3.3 and 7.2 percent respectively). The shares of the blue-collar occupations as well as service and sport workers also increased during the same period, though the increase in the share of the latter group was less impressive.

Regarding females occupational structure, the sixties have witnessed a dramatic change in their occupational pattern. As mentioned earlier a big shift from agriculture to other sectors was observed. From table (V-7) below, we can see a large increase in the proportion of female white collars in 1969 as compared to 1961. Also an increase is observed in their proportion as blue collars. The only sharp decline was in the female agricultural service occupations.

TABLE (V-7)
Percentage Distribution of Female Labour Force
According to Occupations (1961-1969)

Occupations	1961	1969
White collar	19.4	38.8
Services	27.6	24.4
Agriculture	43.0	22.4
Blue collar	6.7	11.0
Unstated	2.3	4.9

*Source : C.A.M.P.A.S., *op. cit.*, Women in 20 years.

EMPLOYMENT STATUS

The employment status of economically active population reflects the organizational framework of the economy. Thus, it is often true in the early stages of development in many less developed countries, that most activities are carried out in small owned and operated enterprises. As the level of development increases, this system gives way to more complex types of economic organization characterized by large-scale

and mass-production enterprises. These shifts are reflected by changes in the employment status structure of the labour force, the proportionate shares of self-employed persons, unpaid family workers, and perhaps, employers decline, while the proportion of the paid workers increases.

The important role of family enterprises in the Egyptian economy is illustrated by the fact that 40.8 percent of the labour force in 1960 were in the categories of self-employed persons and unpaid family workers as compared to the share of employees which was 49.5 percent. In 1970, the proportion of self-employed and unpaid family workers was 37.86%, as compared to 46.8% for employees. The available data for the 1937-1970 period show a decline in the relative share of employers, self-employed persons and unpaid family workers compensated by an increase in the proportion of employees.

Employment status of the labour force varies significantly between the two sexes as well as by age. Table (V-8) below shows that females, as compared to males, have lower proportion in group of employers and self-employed, and higher proportions of unpaid family workers. However, the trend for each sex follows the same pattern with varying rates of change.

TABLE (V-8)
Percentage Distribution of Labour Force
by Status and Sex, Egypt, 1937-1970

[illegible]

The patterns of status structure by age are quite illuminating. Employers and self-employed persons, i.e., the entrepreneurial groups, prevail among old age groups. In 1960, seven out of ten of economically active persons 65 years of age and over were either employers or self-employed. In contrast, the proportion of both groups was less than one percent of the labour force below 15 years of age. In fact, the proportion of each of these two groups rises from a minimum at young ages to a maximum in the oldest age group. Unpaid family workers, on the other hand, are dominant among children in the labour force. For instance 80 percent of economically active persons aged 6-9 were family helpers. This proportion declines continuously to a minimal level at the oldest age groups. Employees tend to be concentrated in the adult age groups, where above average proportion are found in the age range 20-50.

In general, male and female employment status patterns by age are similar. However, in 1960 the proportions of unpaid family workers among females were lower than those among males in ages below 25, and higher at older ages. The higher proportion for females at ages over 25 were largely due to the number of wives reported as family workers. The under-reporting of economically active females is likely to be highest among adult females helping in family enterprises then the sex differentials of employment by age may be larger than indicated.

The above discussion implies that family enterprises have higher proportions of young and old workers than non-family enterprises have. The decline in the role of such enterprises which accompanies economic development is an important factor in the decline of activity rates in young and old age groups.

Differences between the agricultural and non-agricultural sectors patterns of employment status are clear. The data for Egypt bear out the typical differences between the two sectors. In 1960 the proportion of employees in the non-agricultural sector was roughly twice as much as that in agriculture, the proportion of independent workers was significantly lower in the non-agricultural sector than in agriculture, while the proportion of unpaid family workers in agriculture was nine times that in non-agricultural industries. Therefore, the decline of the agricultural share in the labour force contributed to over-all trend of status structure. In addition, a marked shift in the status distribution within the non-agricultural industries not only influenced the trend but also resulted in a widening gap in the organizational pattern between the two sectors.

EDUCATIONAL STATUS

The rate of illiterate males 10 years and over in labour force was about 64% in 1960, and 61% in 1966. Literacy rate had increased from 28.3% in 1960 to 31.1% in 1966. We notice that the majority of illiteracy is concentrated in agriculture, that is mostly in rural areas. The percentage of illiteracy in urban areas was 24.0% in 1966 and 23.7% in 1969, the constancy of his percentage may be due to the illiterate migrants from rural to urban areas, seeking higher standard of living. Also the percentage of participation in labour force for age group (6-11) had decreased from 17.8% in 1960 to 10.9% in 1969, and at the same time, the percentage of the enrolled pupils in primary education had increased during the same period from 72.1% to 86%. Consequently, those out of the labour force in that age group had declined from 10.1% to 3.1%.

Comparing educational pattern of the female labour force between 1960-1969, we find a large decrease about 20% in the illiterate group and a corresponding increase for females who had some years of schooling.

TABLE (V-9)

Percentage Distribution of Labour Force
(Males & Females) by Education Status 1960-1969
(10 Years and over).

Education Status	1960		1969	
	Male**	Female**	Male**	Female**
Illiteracy	63.9	79.5	63.1	29.7
Read & Write	28.3	6.9	27.2	10.6
Official Schooling	7.8	13.6	9.7	59.7
Total	100.0	100	100	100.5

* (12-64) years age range.

** 10 years and above

Source: *op.cit.*, Population Studies and Researches, No.3, Vol. and Women in 20 years (by C.A.P.M.A.S.)

CHAPTER VI

PULATION PROJECTIONS

INTRODUCTION

It is very important for the countries making efforts for economic and social development to have a full picture of what is projected to be in the future concerning composition, size, and other characteristics of their population. The calculation of future population trends or the making of an outline of unknown course of the vital characteristics, is generally termed by population projections. Thus, a projection is an illustrative calculation initiated from certain given assumptions. We start from an initial time point and proceed to any other desired point permitting the assumed conditions to operate throughout the time of projection.

There are numerous possible methods of calculating such future population estimates, we shall concentrate on the component method. The calculation of a population projection by the component methods requires the establishment of base figures for the population classified by sex and age groups at the date from which the projection departs. with these figures as the starting point, the projection is carried out by means of fertility and mortality rates and assumptions as to their future levels.

Five assumptions concerning the future levels of fertility and mortality were investigated.

First, we assumed that a gradual decline in mortality would occur while fertility would remain unchanged at the level of 1960. The estimated decline in mortality was as follows :

1. A reduction in the specific death rate for ages less than one by the amount of five percent of its initial level.
2. A reduction in the specific death rate for ages 1-4 by the amount of two percent of its level of 1960.

1. Khalifa, A.M. El Rouby, G., «Population aging in Egypt : Past and future trends», *Egyptian Population Family Planning Review*, Vol, 6 No 1, 1973.

3. A reduction in the remaining age-specific death rates by the amount of one percent of their initial levels.

All these reductions were assumed to take place five years for a period of fifty years, after which the rates were fixed at their last levels.

Second, the age-specific death rates were assumed to be constant at their levels of 1960, while fertility rates were reduced by the amount of five percent of their starting levels. This reduction in fertility also occurred every five years for a period of fifty years from 1960, after which the rates settled at their last levels.

Third, we studied a more realistic case in which both fertility and mortality were subjected to a simultaneous decline in their levels. In this case, the reduction in mortality was similar to that occurring in case one, while the reduction in fertility was the same as that of case two.

Fourth, we had to study the impact of constant fertility and mortality conditions by fixing them at the levels prevailed in 1960 all over the whole period.

Finally, the attainment of a replacement level i.e., reducing the net reproduction rate to one, was the last assumption tested and manipulated in this work. It was assumed that the population of Egypt would achieve a replacement level at about the year 2000, i.e. after forty years of the starting point 1960. The age-specific fertility rates were thus assumed to be represented in a straight line relationship, within the period 1960-2000, having a negative slope equal to - 0.75. In addition the age-specific death rates were subject to a gradual decline, similar to that experienced in cases one and three.

These five assumptions will be denoted sim (1) to sim (5) according to the above order.

PROJECTION OF THE TOTAL POPULATION

Table (VI-1) below shows a summary of population size projected according to the different five alternative assumptions.

PROJECTIONS BY BROAD AGE GROUPS

Regarding projections by functional age and sex groups, we found the following under each assumption (detailed tables are in the Appendix). It has been noted that a decline in mortality had only a minor

effect on the age composition. A small amount of decrease in the proportion of population under fifteen years old, and a small amount of increase in the proportion of population at older ages, were observed. The initial levels were 42.50, 54.39 and 3.12 percent for children, adults and aged persons, respectively. After a period of fifty years, they became 41.22, 45.98 and 3.80 percent see table (VI-2).

Table (VI-1)
Projected Total Population Size for Egypt in the
Period 1970-2000 According to Five
Different Assumptions

Year	Projected Pop. Dillions									
	sim (1)		sim (2)		sim (3)		sim (4)		sim (5)	
	M	F	M	F	M	F	M	F	M	F
1970	1.8	16.6	16.6	16.4	16.7	16.4	16.7	16.5	16.6	16.4
1970	1.8	16.6	16.6	16.4	16.7	16.4	16.7	16.5	16.6	16.4
1975	19.1	18.6	18.6	18.3	18.7	18.4	18.9	18.7	18.4	18.2
1975	19.1	18.6	18.6	18.3	18.7	18.4	18.9	18.7	18.4	18.2
1980	21.7	21.4	20.6	20.3	20.8	20.5	21.6	21.1	20.4	20.4
1985	24.9	24.4	22.8	22.3	23.2	22.7	24.5	23.9	22.3	21.9
1990	28.6	27.7	24.9	24.2	25.5	25.0	27.7	27.0	24.2	23.7
2000	26.9	35.7	29.0	28.3	30.2	29.5	34.2	34.1	27.1	26.6

TABLE (VI-2)
Projected Percentage Age Distribution by Broad
Groups after a Period of 50 Years According
to Different Assumptions

age groups	Initial(M 60)	Sim (1)	Sim (2)	(Sim (3)	Sim(4)	Sim (5)
0 — 14	42.5	41.2	28.5	30.1	39.4	25.0
15 — 64	54.4	45.0	66.1	64.6	56.7	28.9
65 more	3.1	3.8	5.4	5.3	3.9	6.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

The case of declining fertility showed larger changes in the age composition than those recorded in the case of reduced mortality. The proportion of population at the mentioned age categories became 28.49, 66.14 and 5.36 percent. From these figures, we can see that a large decline in the proportion of children compared with a large rise in the proportion of people at other ages would, under this assumption take place.

The recorded age composition, in the case of simultaneous decline in fertility and mortality, was 30.09, 64.62 and 5.29 percent for the three broad age categories.

But when mortality and fertility conditions were fixed at their levels of 1960, as made in case four, we did not observe any significant changes in the relative age distribution. The differences between the level at successive time points were negligible. The Egyptian age composition was nearly stabilized at levels of about forty, fifty-six, and four percent for children middle-aged and aged persons respectively.

The most notable change in population age compositions occurred in case of producing $NRR = 1$. The proportion of children was at its lowest level while the proportions of people at both medium and old ages were at their higher levels. That was due to the larger amount of reduction in fertility levels maintained in this case rather in other cases. The composition attained the levels of 24.99, 68.83, and 6.12 percent after the passage of fifty years from the initial time point.

The distribution of individuals at different ages reveals several important aspects and characteristics of population. One of these characteristics is the burden presented by children and aged persons on the productive elements of the population. From the study of the various assumptions about the future fertility and mortality conditions, it was evident that the dependency load or one by the proportion of population in the productive ages failed significantly in cases of declining fertility. That was due to the fact that any reduction in fertility would reduce the number of young people. And since this number always constitutes a large proportion of population, then such reduction in fertility would produce a lighter burden of dependency. From the economic point of view, the increase in the proportion of children, resulting from a decline in mortality which has not been counterbalanced by a corresponding

2. Central Agency for Mobilization and Statistics, «The Increase of Population in the U.A.R. and its Impact on Development», (Ref. No. 50-100, Cairo, September 1969).

decline in fertility, would cause an increase in expenditure in public services, education requirements, social welfare, and such other domains. Moreover, the participation of both children and aged persons in economic activities is very limited compared with that of youth whose productive capacity is very high.

The drop in the dependency ratio was at most in case of reducing the net reproduction rate to one, owing to the larger decrease in the proportion of children and the larger decrease in the proportion of adults.

PROJECTION OF THE LABOUR FORCE

It has been shown earlier, in chapter 5, that activity rates of males in the age group 20-60 are almost stable. Moreover, these rates are high enough to suggest they would remain unchanged, at least in the near future. These basic observations may be utilized in the projection of the labour force by age group to the year 1985 as shown in table (VI-3) below. The figures presented in the table are computed by applying the activity rates to the projected population.

TABLE (VI-3)
Projected Labour Force up to Year 1985
for the Age Group (20-59)

Age Group	Activity Rate	1970		1975		1980		1985	
		Pop. 000	Labour Force	Pop. 000	Labour Force	Pop. 000	Labour Force	Pop. 000	Labour Force
20—24	86.7	1573	1364	1868	1620	1856	1609	2147	1861
25—29	96.0	1126	1081	1550	1488	1840	1766	1829	1756
30—34	97.8	935	914	1105	1018	1522	1489	1808	1768
35—39	98.2	870	854	914	898	1081	1062	1489	1462
40—44	98.0	819	803	846	829	889	871	1051	1030
45—49	97.8	762	745	789	772	815	797	857	838
50—54	96.4	598	576	720	694	746	719	771	743
55—59	94.5	480	454	553	522	666	629	691	653

The decreasing rate of participation of the population in the age group 60 years or more during the period 1947-1960 may be extrapolated to obtain the projected activity rates for the period under study. These rates and the computed labour force are shown in table (VI-4).

TABLE (VI-4)
Projected Labour Force up to the Year
1985 for the Ages 60 or More

Year	Activity Rate %	Pop.	Projected Labour Force
1970	59.7	901	538
1975	53.4	1064	568
1980	47.0	1241	583
1985	40.7	1467	597

A similar procedure is followed to obtain estimates of the labour-force in the age groups 12-14 and 15-19 as shown in table (VI-5) below.

TABLE (VI-5)
Projected Labour Force up to Year 1985
for the Age Groups (12-14) and (15-19)

Years	12 — 14			15 — 19		
	Activity Rate.	Pop. (000)	Labour Force 000	Labour Rates	Pop 000	Labour Force (000)
1970	68.1	1139	776	50.6	1891	1146
1975	64.0	1318	844	57.0	1879	1017
1980	60.0	1385	832	53.6	2172	1164
1985	56.5	1513	855	50.4	2288	1151