A SOCIO-DEMOGRAPHIC APPROACH TO THE STUDY OF GREATER CAIRO

by

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The continued growth trend of Metropolitan Cairo, recently coined Greater Cairo, has been of late, a source of deep concern to the authorities in the United Arab Republic. Cairo's growth rate had rapidly accelerated since the thirtees; resulting in an unexpected population size, and various correlates of demographic, ecological, socio-economic and political implications.

Today's Cairo is in part a result of a long-standing growth trend peculiar to it as a Metropolitan of one thousand years old, in part a result of a war stimulated economy expanded on by industrial plans since the fiftees, and in part a result of a continuing urbanization trend in the U.A.R. Cumulatively, these factors have had a powerful impact on present Greater Cairo.

In this paper a socio-demographic approach to the study of Cairo is presented. As a frame of reference, the trend of urbanization is briefly examined [1] ; in the vein of how much growth and pattern of distribution, and how much Cairo contributes to the phenomena of «over-urbanization» in the U.A.R. A historical exposé of the demographic growth of Cairo, along with future prospects based on three demographic assumptions are delineated. Cairo's functions which serve as pull factors are historically analyzed to serve outline determinants of migration to the metropolitan, and refute the assumption that primates [2] are

(1) For an elaborate study of internal migration and urbanization in the United Arab Republic see : Mohamed A. El-Badry, « Trends in the Components of Population Growth in The Arab Countries of the Middle East: A Survey of Present Information», *Demography* 1965, p. 142; Janet Abu-Lugod, «Urbanization in Egypt : Present State and Future Prospects», *Economic Development and Cultural Change*. XXIII (April, 1965), 315; Haifaa Shanawany, «Some Aspects of Urbanization in The United Arab Republic», *The Egyptian Population and Family Planning Journal*, Vol. I, No. 1, May 1968.

(2) The pattern of urbanization in economically advanced countries follows distributions of the «Rank Size» pattern. Rank size regularities have been associated with the existence of integrated systems of cities. The geographical distribution of these cities and their mutual connections throughout the hinterlands have created in the West a complex network of urbanism that have tended to transform even the residual rural areas in the image of the city. Developing countries are characterized by «primate cities» a great city which dominates the urban situation. These cities are parasitic or considered so in the sense that they tend to obstruct economic growth in the country by retarding the development of other cities and by contributing little to the development of the hinterland. See : Mark Jefferson «The Law of the Primate City,» *The Geographical Review*, XXIX (1939) 226—232.

always detrimental to diffusion of social change. Description of characteristics of Cairo population and living patterns peculiar to «subsistence» [1] urbanization in the heart of the metroplis reflect growth problems. Attempted solutions of Cairo urban sprawl within the context of a comprehensive population policy is finally presented, with recommendations for research projects in the fields of urban sociology and demography.

PATTERN OF INTERNAL MIGRATION AND URBANIZATION IN THE U.A.R.

Over time redistribution of population and of places is the resultant of two distinct factors-namely, natural increase and population movement. In the U.A.R. the population is not evenly distributed among the various regions. The U.A.R. is subdivided into Governorates falling into three regions, Lower, Upper and Urban Egypt, i.e., excluding border areas. Lower Egypt includes Damietta, Dakahliah, Sharkiah, Kaliubiah, Kafr Sheif, Gharbiah, Menufiah, and Beheira. Upper Egypt includes : Giza, Beni Suef, Fayum, Menya, Assiut, Suhag, Kena and Aswan. The urban region includes the Governorates of Cairo, Alexandria, Suez , Ismailia, and Port Said.

TABLE I

Distribution of the U. A. R. Population among the three regions.

	1882	1960
Lower Region	49.9%	42.9%
Upper Region	40.2%	35.4%
Urban Governorates	9.9%	21.7%

It is shown from the above figures that in 1882 Lower Egypt held about half of the population, Upper Egypt 40.2 per cent and the Urban Governorates almost ten percent. The population of each region has been increasing while the share of each region in the total population has changed. By 1960 both Lower and Upper Egypt had lost population. Lower Egypt's share dropped to

(1) This implies urbanization in which the ordinary citizen has only the bare necessities, and sometimes not even those,for survival in the urban environment.Gerald Breese, *Urbanization in Newly Developing Countries*, *Bureau* of Urban Research, Princeton University, Prentice Hall, 1966, p. 5.

42.9 per cent and Upper Egypt's to 35.4. For the same period, the share of the Urban Governorates doubled from 9.9 per cent in 1882 to 21.5 per cent in 1960. Obviously gaining the loss of the other two regions [1].

What is meant by urban ? Over the decades, alternative sets of criteria have been advanced to identify a place as urban or non-urban, but none of these has been considered fully satisfactory because of the unavoidable presence of arbitrary elements in these definitions. The suggestion that size of a place, together with its type of economic development (often measured by the proportion of nonagricultural population), may provide a closer approximation to the estimate of a country's urban population seems logical inasmuch as these can determine, somewhat objectively the status of a place with population of intermediate size categories. It is also felt that such estimates can be further improved by requiring a minimum population size and a minimum nonagricultural population depending on size, that will have the effect of eliminating smaller places with a diversified economic structure on the one hand, and also larger places that lack such characteristics on the other. [2]

In the U.A.R. we consider as urban these communities listed in the census as having at least 20,000 inhabitants. This approximates the official Egyptian definition and permits comparison with the United Nations data.

Urbanization in the U.A.R. has markedly increased since 1927, as shown in the following :

TABLE 2

Percentage Urban and Rural in seven censuses, U. A. R.

Year	Urban	Percent	Rural	Percent	Total
1907	2125000	19	9058000	81	11183000
1917	2[illegible]0600	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	12042030	40	17689630	60	29731660

Source : *Population Increase in the United Arab Republic, and Its Challenges to Development, Central Organization for Mobilization and Statistics, Nov.* 1966, *p.* 115.

(1) *Population Increase in the United Arab Republic, and Its Challenges, to Development Central Organization for Mobilization and Statistics*, November 1966, p. 118.

(2) S. Mitra, «The Impact of Patterns of Population Concentration on Urbanization,» Paper presented at the General Assembly of the International Union for the Scientific Study of Population, 3—11 September, 1969, p. 2.

The percentage urban population has almost doubled in fifty years. Migration has so often attracted attention of the analysts that it is assumed to be, if not the only source of growth, at least the most significant one. In the case of Egypt natural increase has accounted for a substantial growth of the cities since 1940. The rapid decline in mortality since 1946 has been accompanied by the emergence of a marked differential between the major cities and the rural areas. Both crude death rates and infant mortality rates became substantially lower in urban centers. Simultaneously the fertility level remained constantly high in urban centers. There can be little doubt that the Egyptian urban rate of natural increase is considerably higher than the rural rate.

It is often alleged by students of urbanism and demography that Egypt is over-urbanized. The contention has been that Egypt is too agrarian to support this heavy urban super-structure, and that it is comparatively over urbanized in relation to its degree of economic development, and specifically to its level of industrialization as compared to developed countries. Davis and Golden were the main proponents of the idea [1]. Abu-Lugod refutes the assumption. According to her, much of Egypt's urbanization can be traced directly to the city of Cairo itself. This city alone contains one-eighth of the country's total population and more than a third of its urban population. Besides, the tendency has been for the existing rural settlement to absorb increasing numbers of rural people. «This has resulted in villages of over-bloated dimensions that inevitably push their way into the statistical class of urban center, despite a total absence of urban features.» [2]. Thus creating a fiction of overurbanization.

The author contends that the percentage urbanized should be viewed in the light of its contribution to nation building. The main question is whether urban growth sharply contrasts with the backwardness of a stagnant rural economy, creating what has been termed the «dualistic society». The goal of development is not urbanization per se regardless of the type of economy in which the city is embeded, but the development of a wholly integrated and modern nation.

This leads us to the pattern of urbanization. In the U.A.R. over-concentration of the urban population in relatively few cities, rather than over-urbaniza tion per se, appears more serious and likely to emerge as a major bottle-neck in any program of development. These are coined «primates». Immigration in the U.A.R. has favored the very large cities of the country, by-passing those of moderate and small size. In 1947, 55 per cent of all Egyptians living in communities of 20,000 or more inhabitants resided in the major cities of Cairo and

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(1) Kingsley Davis and Hilda Golden, «Urbanization and the Development of Pre-Industrial Areas», *Economic Development and Cultural Change* III, No. 1 (Oct., 1954), 16.

(2) Abu-Lugod, *op. cit.*, p. 315.

Alexandria. If one includes in this computation the population in the highly urbanized sections just beyond these cities administrative boundaries the percentage increases to almost 60. This latter figure is a somewhat truer index to their degree of dominance. Since 1947, although many new communities have been added to the ranks of urban (primarily through oversaturation of village units) there has not been much decline in the dominance of Cairo and Alexandria. According to the 1960 census, these two cities combined still accounted for more than 52 per cent of the urban population, and their metropolitan regions for more than 57 per cent.

There are no large cities occupying a transitional position between the two metropoli and the smaller, middle sized cities containing a few hundred thousand inhabitants. A distinct break in the distribution occurs between Alexandria, the second-ranking city and the urban communities in the Canal Zone with comparatively small populations. In 1960, when Alexandria had about one and half million inhabitants, the third ranking city of Ismailiya had less than 300,000.

Primates aggravated the demographic situation since the flow of internal migration continued to go mainly to the few largest cities. The pattern of migration augmented the burden of the already oversaturated primates, instead of chanelling the surplus human resources into intermediate towns and cities. It defeated th goal of internal migration as an egalitarian redistributive population process. Primate cities have also until the first five Year Plan starting in 1959/1960 affected the economic growth potential of the other cities by attracting and absorbing most investments. Whether they failed to diffuse social change through radiating influence throughout the hinterlands, and the country is questionable particularly in the case of Cairo which had served functionally as gateway to introducing new ideas.

Growth of Greater Cairo

The population of Greater Cairo was reported at 4, 219, 853 in 1966 (at the present administrative boundaries) growing eight times its original size in approximately seventy years. Both natural increase and the endless flow of in migration contribute to its continuous growth. The following table distinctively shows that the rate of growth of metropolis Cairo outstrips that of the country as a whole.

Analysis of the dynamics of Cairo's growth show that the balance between births and deaths, i.e. natural increase significantly contribute to such growth. Crude birth rates for the country as a whole remained remarkably constant at an average of 43 per thousand since the beginning of the twentieth century. On the other hand the recorded crude birth rate of Cairo has ranged between 50 and 55 per thousand in recent decades, while the rate for rural areas served by health bureaus has been around 45 per thousand. While differential underre-

TABLE 3

Population of Cairo, its rate of growth as compared to rate of growth of the country, U.A.R.

Year	Population of Cairo	Annual rate of growth (%) Cairo	U.A.R.
1897	581063	—	—
1907	676798	1.64	1.6
1917	793273	1.72	1.4
1927	1070857	3.50	1.1
1937	1309718	2.20	1.2
1947	2075914	5.90	1.9
1960	3348779	4.50	2.7
1966	4219853	4.60	2.8

Source : Population of Cairo adjusted during the period 1897—1917 according to present administrative boundaries by Greater Cairo Planning Commission. Population during the period 1927-1966 cited from Mobilization and Statistics Organization.

gistration makes it impossible to compare urban and rural fertility directly through birth rates, Cairo, which benefits from the fullest reporting, has a rate so close to the maximum found anywhere that it is difficult to conceive of the rural rate being higher, even if there were full reporting. The picture might have recently been modified with a significant lowering in birth rates reaching 45 per throusand after the initiation of a national family planning programme since 1966, along with other variables. It is important to look into vital registration records since 1966 since lowered births may have significant impact on prospective growth of Cairo in the immediate future.

Mortality has drastically dropped in the metropolitan since the forties and following the second World War. It is lower by at least 6 points than rural rates (around 16 per thousand). Infant Mortality was the first to react to lowered mortality. In 1956-57, for example, the Cairo rate was 115 per thousand. Other urban areas had an uncorrected rate of 117 per thousand, while in the grossly underreported rural areas served by health bureaus, the recorded infant mortality was 125 per thousand [1]. Mortality as a demographic variable is expected to have a further role in the growth of Cairo. There is still a great margin for future declines in mortality to reach the level achieved by developed countries of 5—8 per thousand.

The difference between births and deaths in Cairo is therefore significantly higher than the natural increase for the country as a whole, estimated around 3 per cent annually. The rest of the growth rate (approximately 1.6) is therefore

(1) Estimates corrected by Abu-Lugod, *op. cit.*, pp. 477—479.

attributable to net gains through migration. The contribution of in-migration to the rate of growth of Cairo is inflated somewhat by Greater Cairo Planning Commission at 2%. Such estimate is based on prospectives of Cairo extension to include Giza and Imbaba Sections.

Projections of the population of Greater Cairo at different dates were made by Greater Cairo Planning Commission. Three estimates were made on the basis of three assumptions. First that mortality will lower to 12 per thousand, by 1990 and birth rates will equally lower, allowing for a natural increase of 27 per thousand, and net migration will continue at 20 per thousand. Second, that natural increase will be based on the same assumptions as the first, and rate of in-migration will continue the same till 1970, then lower down to 10 per thousand by 1985. Third, the natural increase will continue the same as in the first and second assumptions, and the rate of in-migration will continue at 20 per thousand till 1970, then lower gradually until it becomes nil by 1985.

On the basis of the first assumption the population of Cairo is estimated to reach 16,600,00 by 1990. On the basis of the second assumption the population of Cairo is estimated to reach 14,350,000 by 1990. On the basis of the third assumption the population of Cairo is estimated to reach 12,930,000 by 1990 [1].

The next sequential question is to ask why does Cairo attract migrants and from where do they come ? What are the determinant factors for the continuous exodus to Cairo, is it the lure of pull factors present in the core of the metroplis or the push from other places ?

Analysis of Factors and determinants of Migration to Cairo

It has to be admitted from the outset that urban studies suffer from lack of direct field research on migrants to Cairo, or any type of longitudinal study on the degree of their adjustment. Attempts were made by different organizations to carry out research projects to this content but no results are so far available. The Sociology committee at the Higher Council for The Arts and Letters and Social Sciences is presently attempting to formulate a research project on Cairo migrants.

Analysis of determinants of migration to the metropolis is compiled by the author through historical evidence.

Cairo is an example of a natural growth of an old city which is usually either located on the coast or navigable waterway and enjoys good communication with the hinterland. It is of indigenous growth. It was built by Gawhar El-Sakaly (970—972 A.D.) as a seat for the government. Although it was not a port, it is a cross road and strategic point of intersection joining the two branches of

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(1) *Al-Ahram*, 13, 1, 1968, p. 3.

the River Nile. Transit trade used to move to Europe from Suez through it (Suez-Cairo-Alexandria). Merchants came to it with their goods navigating in the Nile from Sudan and Upper Egypt. The ports of Athar el Naby at Misr Kadima (Old Cairo) and Rod el Farag were flourishing with ships and commerce[1] Although Cairo ceded its function in commerce to ports,the historical development of the transportation net-work is an important factor which contributed to its growth along with the other primate, i.e. Alexandria. Until recently the Nile and navigable canals as well as a limited network of main railroad connecting Cairo and the ports of Alexandria and Suez, played an important role in carrying cargo and passengers. The roads and inland waterways were neglected to reduce competition with the government owned producing railroads. The railroad extensions eastward and westward from the Delta were for the most part built in response to urgent requirement during the First and Second World Wars to move supplies for allied forces. Eighty per cent of the road system was «packed earth roads». This has been partly responsible for the slow development of motor traffic in Egypt. It is only since World War II that there has been any significant importation or local assembly of motor vehicles. Since 1952, however, new roads have generally received primacy over railroad construction notably in areas where reclamation has been in process or planned; and where farming and industrial districts needed links with existing railroads and navigable waterways[2].

Second, an important historical factor is the unbroken unity of the country throughout its history. This led to the concentration of political and administrative powers in the two main primate cities, Cairo and Alexandria. From the time that Menes unified Upper and Lower Egypt and founded the first dynasty, up to the present day, the land has always-except for brief periods during the old and Middle Empires had a single government. This unity may be explained in several ways. There is, first of all, the small size of the country and the fact that it is in effect a large oasis naturally bounded by sea and desert. There is also the flatness of the land, which makes it difficult for the inhabitants to resist an invader successfully once their sea of desert defences have been broken and ensures a rapid conquest of the country by an enemy who has been able to obtain a secure foothold. There is, finally, the vital fact that irrigation has to be planned and executed in terms of the country as a whole and cannot safely be left to independent authorities [3].

Cairo had always been the seat of Government. Administrative departments are concentrated in the metropolis. Most government employees prefer to work

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(1) *The Caliphate—Its Rise, Declines, and Fall*, From original sources by Sir William Muir, A new revised edition by T.H. Wein, Edinburgh, John Grant, 1924.

(2) Platt and Hefny, Egypt : *A Compendium*, New York; American Geographical Society, 1958, pp. 336—361.

(3) Charles Issawi, *Egypt in Revolution*, New York, Oxford University Press , 1963, pp. 44—45.

and live in the heart of Greater Cairo. Jetting a look on the distribution of active laborforce in the U. A. R. we find urban governorates enjoy the lion's share of university graduates. A study on the distribution of personnel in 1960 shows that although 20% of the population resided in Cairo, Alexandria and Port Said 58 % of the employees worked in these governorates.

Third, industrialization spurred the growth of Cairo. The need to promote some industries began to be realised during the first World War owing to the shortage of imported manufactured goods. Bank Misr was established in 1920 to encourage investment in Egyptian industries with local capital. There was a desire to increase the country's political and economic independence by industrialization. The Second World War greatly stimulated some Egyptian industries. Not only were imports reduced drastically, but large scale expenditures of the allied troops stationed in Egypt (which at its peak represented approximately 25 per cent of the national income) greatly increased the demand for industrial products. The Second World War gave an impetus to industry and brought some prosperity to the nation's economy and stimulated employment in the big cities ; particularly Cairo. Yet such high level of employment was temporary and could not be maintained after the War [1].

Cairo continued to attract industries. With the availability of its infrastrucaure, it was easy to continue to build up new industries in the metropolis. An tnalysis of the locational aspects of the First Five Year Plan 1960-1965 indicates that, far from being a decentralizing force bringing employment and prosperity to the rural hinterlands, it resulted into greater concentration of urban growth. Cairo and Alexandria, along with their metropolitan subsidiaries and fringe areas were to receive more than half the planned installations. Most of the plants were situated not in the central city itself but in surrounding towns, old and new. This was in conformity with the recommendations of the 1956 Master Plan of Cairo, which envisaged a constellation of industrial satellites that would contain, in addition to the major plant or plants, living accommodations and commercial facilities for workers and their families, to create relatively self sufficient units [2].

Ecologically the spatial distribution of mushrooming industries is located far from the heart of Cairo and is sprawling out to the outskirsts. This is a diversion from the old pattern where some industries had by necessity to be close to the centre (example Boulak, an industrial area for car repairs and cast

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(1) *Ibid.*, pp. 44—45. Some 200,000 Egyptians, of whom 80,000 were skilled or semi-skilled workmen, were employed in British army workshops or camps. By 1952, industry accounted for 10 per cent of G N P.

(2) The locational analysis of the five year industrialization program was made by Dr. Alphonse Said, the American University of Cairo, «Implications of Industrialization for Urban Growth in the Egyptian Region of the U.A.R.,» Prepared for the seminar on the New Metropolis in the Arab World, held in Cairo during December 1960, pp. 9—10.

iron foundaries, El Ghamalia and Ghamra are centres for soap manufacturing, and el-Helmiah el Gadida, a centre for manufacturing of house furniture). Helwan, Shoubra Kheima, Imbaba, and Giza are presently booming with industries and considered independent communities planned to merge physically with the metropolis in the immediate future.

Fourth, Cairo is the heart of education, intellecutual, and cultural life. Until quite recently, it was possible only in the city to obtain any education other than the most elementary. Cairo and Alexandria have been the only location of the three largest universities, as well as other higher institutes of learning and research centers until few years ago. Al-Azhar Islamic University, to which scholars the world over flock to, is located in Cairo.

Cairo has been the locus of intellectual life with its opera House, leading dancing troups, Cairo Symphony Orchestra, Cairo Choir Group, Société de Musique d'Egypte, social and sports clubs, councils of art and scientific research, printing and publishing houses, the television and radio, the national museum and the pyramids. It is a gate way for culture transmission and diffusion of new ideas and fads, from rockets and space to hippies and miniskirts.

Fifth, Cairo serves functionally, if not officially, as the regional political capital and central place for North Africa and the Arab World.

These variables operated as pull factors to the metropolis with its lure, attraction and promising comforts. The push factor from rural congested farms equally determine migration to the cities [1]. Whether migrants to Cairo went first to smaller towns and intermediate cities, then decided to select the metroplolitan for permanent residence, is difficult to know ; again for lack of field research.

In the attempt to find out where do migrants come originally from, it will be immediately noted that all governorates, with the exception of the Canal cities and Giza, experience exodus to Cairo. (The picture is modified with respect to the Canal cities since the Middle East conflict in 1967). The pull to Cairo and to the Suez cities (with its oil refineries and varied industries) was balanced. By 1960 the Suez area had grown into a giant industrial area that could have succeeded in attracting migrants from Cairo, but for the 1967 war. Giza has similarly grown into a busy industrial city with its complex of industrial plants, including pharmaceutical factories, chemical industries, cigarette factories, Stella brewery, car repairing workshops, coca cola and pepsi cola factories, cinema studios, cooling and air conditioning plants ... etc. Giza has greatly relieved the pressure of migrants to Cairo, and is responsible for the lower growth rate

(1) Per capita share of the land has been constantly declining. Per capita share of the cropped area has dropped down from .71 in 1897 to .39 by 1960.

TABLE 4

Cairo, In—Migration, Out—Migration And Net Migration, 1917, 1927, 1937, 1960.

Governorate	1917 Migrants			1927 Migrants		
	In-M.	Out-M.	Net.-M.	In-M.	Out-M.	Net-M.
Alexandria	13003	10064	2939	16317	13276	3041
Canal [a]	1481	2185	—704	2337	3062	—725
Suez	765	1344	—579	1036	1435	—399
Ismailia	—	—	—	—	—	—
Port Said	—	—	—	—	—	—
Damietta	2528	167	2361	3501	237	3264
Beheira	5446	3893	1553	8082	3022	5060
Sharkia	12704	5532	7172	21166	3869	17297
Dakahlia	9209	4281	4928	15854	2944	12910
Kafr Sheik [b]	—	—	—	—	—	—
Gharbiah	13749	8741	7005	27977	6359	21618
Menufia	20171	4196	15975	45759	2337	43422
Kaliubia	17765	6079	11686	31767	4470	27297
Giza	38805	8548	30257	46400	11940	34460
Beny Suef	7926	2946	4980	10212	2385	7827
Fayum	5300	1760	3540	6799	1635	5164
Menya	9837	3603	6234	12764	2563	10201
Assiut	31930	3198	28732	48288	2251	46037
Suhag	14249	2177	12072	28162	954	27208
Kena	5286	1992	3294	12520	1527	10993
Aswan	10643	906	9737	18085	776	17309
Border Districts	4516	141	4375	5526	659	4867
TOTAL	227313	71756	158123	362552	65701	299099

Source : Mohsein Edris, Memorandum prepared by the Greater Cairo Planning Commission, 6 April, 1968.

(*a*) Canal included Ismailia and Port Said until 1947.

(*b*) Kafr Sheik was originally part of Gharbia.

TABLE 4 (cont.)

Governorate	1937 Migrants			1947 Migrants			1960 Migrants		
	In-M.	Out-M.	Net-M	In-M.	Out-M.	Net-M	In-M.	Out-M.	Net-M
Alexandria	29856	16445	13411	36511	15368	21143	47220	31049	16171
Canal	309	3882	—792	6242	5812	430	—	—	—
Suez	1249	1711	—482	3040	4056	—1016	7518	7108	410
Ismailia	—	—	—	—	—	—	9518	9813	—295
Port-Said	—	—	—	—	—	—	9464	5293	4171
Damietta	3693	380	2312	5419	535	4884	15087	3768	11319
Beheira	10573	3072	7501	18451	3291	15160	28604	6255	22349
Sharkia	26463	4208	22255	45069	6118	38951	81610	8337	73273
Dakahlia	21161	3332	17829	42467	3338	39129	78955	7178	71777
Kafr Sheik	—	—	—	—	—	—	12587	2340	10247
Gharbia	38732	6670	32062	77613	7048	70565	99179	10034	89145
Menufia	70505	2201	68304	149723	2956	146767	216764	7038	209726
Kaliubia	34094	4788	29306	61668	7068	54600	90668	23837	66831
Giza	41777	11211	30566	48794	23139	75655	64584	88543	—23959
Beni Suef	10884	2664	8220	12836	2648	10188	37669	4151	33518
Fayum	7843	1918	5925	11511	2132	9379	34390	3738	30652
Menya	12861	3061	9800	16391	3168	13223	39285	5322	33963
Assiut	48503	3060	45443	65501	2622	62879	100305	4951	95354
Suhag	30461	1554	28907	42543	1366	41177	100100	2569	97531
Kena	15830	1559	14271	22901	1709	21192	63423	7779	60644
Aswan	20283	1467	18816	27127	1005	22122	43735	3287	40448
Border Districts	5303	1304	3999	7686	1556	6130	13601	4213	9388
TOTAL	430379	74487	360181	701493	94935	604590	1194266	246603	1001171

of Cairo during the period 1960-1966 (see Table 3). Giza and Imbaba sections are part of the prospective extension of Greater Cairo.

The bulk of the migrants come from south of the Delta, mainly from Menufia. Kalubiah, Sharkiya, Gharbyia, and the southern section of Dakahlia. In 1960, 53.5% of the net gain of migrants to Cairo has come from these governorates (510752). Menufiah is the main exporter of migrants to Cairo. 22 % of the net migration to Cairo come from Menufiah, which is marked for its high agricultural density. North of the Delta hardly sends migrants to Cairo. Those prefer to go to Alexandria. Distance may be a determining factor, or similarity of climate.

The rest of Cairo migrants come from Upper Egypt, mainly Aswan, Kena, Suhag and Assiut (31 % of net migration to Cairo) representing 293977 persons. Migration from Aswan might have slackened since 1960 due to the creation of job opportunities with the construction of the High Dam. Migration from Intermediate Egypt, mainly from Beny Suef, Fayum and Menia is small (7.8% of net migration representing 74174 persons). Please see Table 4.

It is noted that there is progressive increase in the volume of net migration to the total population of Cairo over the years (relate table 4 to table 3). Net migration represent 19.9% of the population in 1917, 27.9% in 1927, 27.5% in 1937, 29.1% in 1947, and 29.9% in 1960.

Some Characteristics of Cairo Population

Cairo exhibits almost the same age distribution of the whole country. Table 5 (1960) shows that 42.8% of Cairo population is below 15 years, 52.5% between 15-59, and 4.7 % over sixty. The percentage for the country are : 42.7 for the poulation below 15 years old, 51.2 for the poulation 15-59, and 6.1 for people over 60 years old, i. e., with a slightly higher percentage of aging people than Cairo's. It also signifies a high proportion of available manpower, and a heavy dependency ratio.

TABLE 5

Percentage of Population by age and sex, Cairo and U. A. R. 1960

Population by age	Cairo			U. A. R.		
	Male	Female	Total	Male	Female	Total
0—9 years	30.3	30.3	30.3	31.3	29.8	30.5
10—14 years	12.1	12.8	12.5	12.6	11.8	12.2
15—19 years	8.5	9.1	8.8	8.5	8.1	8.3
20—29 years	15.1	16.7	15.9	13.6	14.9	14.3
30—39 years	14.0	13.0	13.5	12.7	13.3	13.0
40—59	15.3	13.4	14.3	15.6	15.6	15.6
60+	4.7	4.7	4.7	5.7	6.5	6.1

Source : *Population Increase in the United Arab Republic, and Its Challenges to Development*, Central Organization for Mobilization and Statistics, Nov. 1966, Table 10, pp. 30-31.

Despite the fact that the percentage manpower to the total population of Cairo (60.8) is almost synonymous to that for the country as a whole (60.6%), active labor force in Cairo is 23.3% and for the country 26.3% (Based on estimates from Sample Survey of Employement and wages in Governorates, August 1961) [1]. At face value this would have been interpreted as an indicator of

(1) Basic Statistics, Central Statistical Committee, June 1962.

higher unemployment in the heart of the metropolis. But in the light of the fact that Cairo enjoys a markedly higher rate of literacy (53.5%) than that for the country (30.3%) a big proportion of those who go to school do not work.. Such explanation partialy accounts for the lower percentage active labour force. Once we eliminate those between 10-15 years, old, active labor force raises to 48%

The sex ratio shows that more males live in Cairo than in the country as a whole (Table 6). The picture is different from the experience of developed countries where females predominate in cities and males outnumber females in rural farm and nonfarm areas. This is due to differences in selective migration which in turn are related to the types of employment opportunities available in the city and the cultural determinants of labor force participation. Cairo is reflecting the low rate of participation of Egyptian women in the active labor force in general i.e. for the whole country which amounted to 7.77%in 1960 census.

TABLE 6

Males per 100 females in Cairo and the country as a whole, 1960

	1927	1937	1947	1960	1966
Cairo	111	106	104	104	105
U.A.R.	99	100	98	101	102

Source ; *Population Intcrease in the Unted Arab Republic and its Challenges to Development*, Central Organization for Mobilization and Statistics, Nov. 1966, Table. 13, p. 37.

In a selected study of Helwan as a new industrial area for steel, motor car and related industries which is located at the outskirts of Cairo, we find that the ratio of females to males in 1960 was 91.4, although it used to be 100.2 in 1927, 101.8 in 1937, 100.9 in 1947 ; a reversal trend indicative of substituting industries that could employ females with heavy industries with preference to male occupation. The figures for Helwan (Table 7) show that the rapid expansion of industrialization was accompanied by a sharp rise in population (almost seven times the population in 1927) and a drop in the aged.

TABLE 7

Age Distribution, females per 100 males and poulation increase relative to 1927 base Helwan Industial Area.

Population	1927	1937	1947	1960
0—14 years	36.4	38.7	37.7	43.7
15—44 years	47.3	47.6	46.7	45.5
45+	16.2	14.2	15.8	10.8
Sex ratio	100.2	101.8	100.9	91.4
Population increase	100.0	104.8	175.4	688.8

Source : H. M. Husein and A. E. Sarhan, «Effect of Urbanization on population Structure» Paper presented to the General Assembly of the International Union for the Scientific Study of Population, 3-11 September, 1969, Table 6.

During the period 1962—1964 the marital rate for Cairo was 9.8 per thousand, which is slightly higher than that for the country as a whole (9.6 per thousand); a contributory factor for high fertility, unless a lowering trend has recently taken place.

Analysis of the fertility level (age specific reproductive rates for married women in 1960 by the end of the reproductive period) shows differential patterns among the various Administrative Sections (Sheiakas) of Cairo. Cairo as a whole is taken as a basis, and Sections deviate from the average for the metropolis either negatively or positively. Six Sections, namely Kasr el Nil, Heliopolis, Abdin, Azbakiah, El Zaher and El Mouski have lower reproductive rates than Cairo. The remaining sections have higher rates. See Table 8. For the above Sections housing congestion (measured by the number of individuals per room) is positively correlated to fertility, i.e., a contributory factor, though not strictly as cause and effect.

TABLE 8

Age Specific Reproductive Rates for Married women in Cairo Sections, and the percentage deviation from Cairo as a whole, 1960.

Section	Reproductive Rate	Percentage deviation
Kasr el Nil	3.225	— 45.7
Heliopolis	4.254	— 28.3
Abdin	5.133	— 13.5
Azbakiah	5.163	— 13.0
El Zaher	5.309	— 10.5
El Mousky	5.602	— 5.6
El Zeitoun	6.102	+ 2.8
El Waily	6.126	+ 3.2
El Khalifa	6.231	+ 5.0
Maadi	6.232	+ 5.0
Misr Kadima	6.332	+ 6.7
El Derb Ahmar	6.332	+ 6.7
El Sayeda Zeinab	6.343	+ 6.9
Rood el Farag	6.370	+ 7.3
El Gamalia	6.373	+ 7.4
Bab el Shariah	6.377	+ 7.4
Boulak	6.380	+ 7.5
El Matariah	6.395	+ 7.8
Shubra	6.507	+ 9.6
Helwan	6.530	+ 10.1
El Sahel	6.549	+ 10.3
Average for Cairo	5.935	

Source : 1960 Census, Section I on Cairo Governorate.

Other variables related to fertility show the following : The number of male professionals, technical and administrative is negatively correlated to fertility, i.e., the higher the ratio of professionals to total males, the lower the reproductive rates, (See Table 9), the higher the employment rate the lower the fertility (the percentage who have a job). (Please see Table 10), the higher the percentage educated females, the less children born to a family (Table 11), and the higher the percentage divorced and widows, the lower the reproductive rates. (Table 12) The variables are inter-related, and it is difficult to separate the effect of each.

TABLE 9

Age Specific Reproductive Rates for Married Women in Cairo Sections, Related to the Percentage male professionals, 1960.

Section	Reproductive Rate	Professionals Number	Percentage to Male Population
Kasr el Nil	3.255	4645	21.2%
Heliopolis	4.254	9937	13.3%
Abdin	5.133	3712	7.6%
El Azbakiah	5.163	2393	7.0%
El Zaher	5.309	4468	5.7%
El Mouski	5.602	672	3.3%
El Zeitoun	6.102	2771	5.5%
El Waily	6.126	7992	5.1%
El Khalifa	6.231	2167	2.6%
Maadi	6.232	1850	4.1%
Misr Kadima	6.332	6224	3.8%
El Darb Ahmar	6.332	2250	3.0%
El Sayeda Zeinab	6.343	7159	5.6%
Rod el Farag	6.370	7229	5.4%
El Gamaliah	6.373	1045	1.4%
Bab el Shariah	6.377	1765	2.3%
Boulak	6.380	1625	1.7%
El Matariah	6.395	2113	2.6%
Shubra	6.507	4819	9.2%
Helwan	6.536	1859	3.8%
El Sahel	6.549	7203	4.6%
Average for Cairo	5.935	88898	4.9%

Source : Calculated by Marzouk Abd Rehim Arif from 1960 Census, Table 6, p. 16, Section of Cairo . «Factors Influencing Fertility of Married Women, Cairo.» Study presented to the Cultural, Social, Cooperative Centre, Alexandria 1965.

TABLE 10

Age specific Reproductive Rates for Married Women in Cairo Sections, Related to the percentage employed on total population over 15 years, 1960.

Section	Reproduction Rate	Employment Status	
		Number	Percentage to total population of Section (over 15 years)
Kasr el Nil	3 .50	13179	70 .2%
Heliopolis	4 .254	29867	49 .1%
Abdin	5 .133	24875	51 .4%
El Azbkiah	5 .963	18372	53 .5%
El Zaher	5 .309	25733	49 .3%
El Mouski	5 .602	9999	49 .8%
El Zeitoun	6 .102	23511	46 .1%
El Waily	6 .126	71588	45 .9%
El Khalifa	6 .231	41183	49 .4%
Maadi	6 .232	24793	55 .0%
El Derb Ahmar	6 .332	36364	47 .8%
Sayeda Zeinab	6 .343	509403	46 .3%
Rod el Farag	6 .370	63075	46 .7%
El Gamaliah	6 .373	35725	48 .9%
Bab el Shariah	6 .377	37648	48 .3%
Bolak	6 .381	51516	49 .6%
Matariah	6 .395	37716	45 .8%
Shurbra	6 .507	73777	48 .2%
Helwan	6 .536	23956	48 .6%
El Sahel	6 .549	72528	46 .7%
Average for Cairo	5 .935	823620	48 .0%

Source : Calculated by Marzouk Abd Rehim Arif from 1960 Census, Table 3, p. 7, Section on Cairo.

TABLE 11

Age Specific Reproductive Rates for Married Women in Cairo Sections, Related to their level of education, 1960.

Section	Reproductive Rate	Educational level of Married Women: Illite-rate	%	Interme-diary Educa-tion	%	Women High Educa-tion	%
Kasr el Nil	3.255	5762	27.2	2923	13.8	757	3.6
Heliopolis	4.254	17048	26.7	8837	13.8	1116	1.7
Abdin	5.133	16785	36.0	3896	8.4	382	0.8
El Azbakiah	5.163	11510	38.7	1900	6.4	171	0.6
El Zaher	5.309	14453	30.5	4551	5.6	479	1.0
El Mouski	5.602	7943	43.2	644	3.5	31	0.2
El Zeitoun	6.102	19537	39.6	2811	5.7	287	0.6
El Waily	6.126	64809	42.9	7825	5.2	806	0.5
El Khalifa	6.231	36787	46.8	2758	3.5	152	0.2
Maadi	6.232	18490	48.7	1516	4.0	247	0.7
Misr Kadima	6.332	46459	44.2	6151	5.9	292	0.8
El Derb Ahmar	6.332	32387	44.6	3065	4.2	118	0.2
El Sayeda Zeinab	6.343	49436	39.5	8885	7.1	834	0.7
Rod el Farag	6.370	52224	40.2	7789	6.0	752	0.6
El Gamaliah	6.373	34524	0.2	1362	2.0	35	0.1
Bab el Shariah	6.377	35449	47.1	2529	3.4	63	0.1
Boulak	6.380	50876	52.4	2154	2.2	94	0.1
El Matariah	6.395	37472	47.7	2025	2.6	136	0.2
Shubra	6.507	65042	45.5	5277	3.7	524	0.4
Helwan	6.536	20812	46.2	1860	4.1	168	0.4
El Sahel	6.549	61346	41.4	6748	4.5	622	0.4
Average for Cairo	5.935	699151	42.8	85506	5.2	8632	0.5

Source : Calculated by Marzouk Abd Rehim Aref from 1960 Census, Table 5, p. 13, Section one on Cairo.

TABLE 12

Age Specific Reproductive Rates for Married Women in Cairo Sections, Related to their marital Status, 1960.

Section	Reproductive Rate	Marital Status: Married No.	Married %	Divorced No.	Divorced %	Widows No.	Widows %
Kasr el Nil	3.255	7606	53.4	738	5.2	2196	15.4
Heliopolis	4.254	21990	57.4	1162	3.0	5393	14.1
Abdin	4.133	16271	59.4	932	2.4	4239	15.5
El Azbakiah	5.163	10902	61.3	473	2.6	2808	15.8
El Mouski	5.602	6464	64.3	303	3.0	1543	15.3
El Zeitoun	6.102	18061	67.6	707	2.6	3223	12.1
El Waily	6.126	55915	67.5	2301	2.8	10304	12.4
El Khalifa	6.231	28514	67.2	1435	3.4	5947	14.0
Maadi	6.232	14688	70.7	490	2.4	2751	13.2
Misr Kadima	6.332	38054	66.0	1646	2.9	7621	13.2
El Darb Ahmar	6.332	25595	65.7	1162	3.0	5413	13.9
El Sayeda Zeinab	6.343	42902	62.0	2233	3.2	9568	13.8
Rod el Farag	6.370	46770	65.6	1386	2.0	9509	13.3
El Gamalyia	6.373	25341	70.0	207	2.5	2167	14.1
Bab el Shariah	6.277	26520	65.5	1139	2.8	5787	14.3
Boulak	6.380	36580	68.1	1496	2.8	8210	15.3
Matariah	6.395	30891	74.8	877	2.1	5010	12.1
Shubra	6.507	55542	71.3	1290	1.7	9397	12.1
Helwan	6.536	17279	71.4	541	1.9	3109	12.8
El Sahel	6.549	56180	71.4	1403	1.8	9187	11.7

Source : Calculated by Marzouk Abd Rehim Aref from 1960 Census, Table 7, p. 19, Section one on Cairo.

Indexes of Cairo's Over Population

It is quite difficult to estimate the optimum size population that the boundaries of a place can accomodate. This applies to Cairo. Nonetheless, there is concensus among specialists that Cairo is presently over-populated relative to its present administrative boundaries. We hereby use indexes or symptoms of Cairo's overpopulation.

First; Cairo suffers from high population density in general. By 1966, density per square kilometre reached 19594, an exceptional phenomena the world over.

TABLE 13

Cairo, Population Density per square kilometre
1927, 1937, 1947, 1960, 1966

1927	1937	1947	1960	1966
6584	7957	11704	15634	19594

Soures : *Population Increase in the United Arab Republic and its Challengs to Development*, Central Organization for Mobilization and Statistics, Nov. 1966, Table 52, p. 126.

Population density varies among the different administrative Sections. It reaches its incredible peak at Bab el Sharia (136,000). Please see Table 14.

Second, the high population density led in turn to an acute housing problem. The major theme discussed in the 1960 sessions of the National Assembly was shortage of houses. Since then the question was often raised. Urban renewal of squatter and slum areas is of major concern to the authorities. Agricultural areas are wasted in the process of meeting the housing problem.

Third, another symptom of congestion is evident to the bare eye in Cairo's «pregnant» buses, tramways and metros. They absorb more than their capacity and quickly go out of use. Taxi drivers grew arrogant and smobbish since demand is greater than supply. The Government has of late drasticly reduced customs on imported cars to contribute to solve traffic congestion. Rush hours are becoming madning with the influx of laborers working in industrial plants located in the outskirts of Cairo, and having to go through the heart of the city instead by a circular route. It is reported that approximately half a million person commute daily to Cairo by railway from other Governorates, and 64,000 by buses[1]

(1) *Al-Ahram*, 22, 2, 1968, p. 7.

TABLE 14

Population density per square kilometre in the different Section of Cairo, 1960, 1966.

Section	Density, 1960	Density, 1966
El Azbakiah	37666	37455
El Gamaliah	29526	30419
El Khalifa	18832	27403
El Derb Ahmar	53074	53989
El Zeitoun	23899	30987
El Sahel	48968	60754
El Sayeda Zeinab	72471	78417
El Zaher	52430	54580
El Matariah	2368	4606
Maadi	2307	5589
El Mouski	64115	60460
El Waily	18616	21774
Bab el Shaariah	139210	135901
Boulak	74823	74716
Helwan	14748	31434
Rod el Farag	98199	104623
Shubra	40549	55997
Abdin	55864	57853
Kasr el Nil	7182	6764
Heliopolis	3863	5196
Masr Kadima	20807	24864
Density for Cairo	15633	19593

Source : *Population Increase in the United Arab Republic An Its Challenges to Development*, Central Organization for Mobilization and Statistics, Nov. 1966, Table 53, p. 128.

Various committees were formulated to study the transportation problem, by the National Assembly, Greater Cairo Planning Commission, Ministry of Transportation, the Mobilization and Statistics Organization, the Arab Socialist Union, ect ..., and experts from England, the USSR, and Japan were invited over the years to suggest solutions.

Fourth, Cairo is shafing with a variety of urban growth problems. These include down town deterioration, dilapedated obsolete and poor neighborhoods, sewage disposal problems, lack of recreational parks, infested slum pockets ...etc shortage of parking lots, dirt and squalor. Various social ills are normally correlated with residence in blighted areas, namely high delinquency rates, school drop outs, high mortality ... alcholism, drug addiction, family breakdown, mental illness and child neglect ...

Fifth, so little data is available on migrants' adjustment. Yet the pressing problem of unemployment and the concentration of unskilled migrants in the heart of the metropolis is a boiling threatening force that may errupt at any moment. The revolution of rising expectations is greatest among the migrant groups. They come with cherished aspirations and hopes; they are close to the heart of the supposedly affluent city, yet feel most unjustly deprived. So far they are not unified or organized into a coherent body through labour unions, (though some of them have their own societies, like the Nubians;) which can give expression to their demands or defend their rights. Individuals from among them can be easily instigated, irritated and directed to participate blindly into destructive riots; like what happened in many cities in February 1968. It is reported that only 8 % of the migrants seek education in Cairo, the rest are non-skilled or semi-skilled, seasonal laborers, construction workers who come in the hope of finding a job. These usually cluster in neighbourhoods where their relatives reside, and shun the impact of city social change.

A Comprehensive Population Policy

Rapid urban growth is part of the phenomena of population explosion and overcongestion of the cultivated land in the U.A.R. Solutions to problems arising from accelerating rates of urbanization should therefore be part of a comprehensive national population policy. Until 1967, the population policy in the U.A.R. was limited to a national family planning programme. In 1967, the government started to encourage international emigration. Since then emigration became part of the population policy. Family planning will have an impact on one demographic variable mainly reducing births. Emigration will have an impact on the demographic equation of Birth-Deaths plus net migration, by indirectly reducing births; on the assumption that migrants are the young adventurous, and minimizing growth rates in general.

Along with this the internal distribution of population should be governed by an urbanization plan, as integral component of the population policy. Population pressure in a country is usually related to its resources in general and the tempo of its socio-economic development. But within a country population congestion varies in individual governorates and communities, since it is equally related to regional resources. Therefore internal egalitarian spatial redistribution of population can help mitigate population pressure within a country.

On regional basis, Cairo's urban growth problems can be met by future and immediate plans. Greater Cairo Commission is presently working on a preliminary plan, which will soon crystalize into a final one, for expanding the present administrative limits of the metropolis to include parts of Giza and Kalubyia. The geographical extension of the metropolis is envisaged in the light of population extrapolation for the coming fifty years. Well studied criteria are taken into consideration; these include the nature of topography, and the socio-economic functions of prospective extension areas. It is still debated whether the pattern of extension could follow concentric zonation, or multicentered pattern of inde pendent satellites. The proposed plan ensures a comprehensive approach to meeting the requirements of the growing population.

Immediate solutions embrace Cairo in its entirety and meeting general shortages in services. It should also seek revolutionary measurements directly focused on blighted areas and migrants' quartiers involving generating directed social change. Such measurements should include concentrated campaigns against illiteracy, training of the unskilled, creating job opportunities for the unemployed, propagating manual handicrafts, and extensive birth control services.

Cairo urban plan cannot be only regional. It should be viewed in the context of a national plan and integrated with other regional plans, that can be self autonomous without overlooking complimentarity with other regions.

What should be the ingredients of a national plan and an urbanization policy ?

First : there should be a long term comprehensive policy aiming at decentralization of services, administration, education and industry. This along with improvement in transportation can give rise to cities of small and intermediate size, alleviating the burden from saturated primates. Creating new pull urban centers can automatically do away with the difficulty of applying restrictive measures against unwanted migrants by force of legislation.

Second : More attention should be given to land reclamation and resettlement projects which can greatly relieve pressures from cities and divert migration

to new agricultural areas. Balanced development in urban and rural areas is the only possible long term solution.

Third : small rural and food processing industries should be developed in the villages to help employ excess labour. The labour problem should find part of its solution in the countryside.

Fourth : Legislation should support attempts of urban planners. Incongruent legislation that discourage individuals from investing in buildings should be modified or changed, and private sectors and companies should be encouraged to participate in urban renewal.

Fifth : What is needed is a breakthrough for a broadened multidisciplinary approach to urban planning Though the awareness does exist, isolated examples of professionals from diverse disciplines work with each other in this field. We must think about the totality of the individual and the interrelatedness of his wants, his needs and aspirations. We must think in terms of human as well as urban renewal and attempt to bring together physical, social and social welfare planning. This is not only a more integrated response to our urban conditions, but one which attacks them in a concentrated rather than a piecemeal manner. If the urban professions are to serve society, planning must become meaningful to man, and that means making the P in planning stand for people.

Suggested Research Issues

Finally, the following are suggested research issues in the fields of urban sociology and demography in the U A R :

1. There is an immediate need for carrying out sample surveys and longitudinal studies on migrants. By such studies an opportunity is afforded for examining the adaptation to urban life and the concomitant changes taking place within the city itself. A «synthetic cohort» approach in which a cross-section of persons distributed by duration-of-residence are examined, would provide an approximation for studying the adaptive process. Such studies should not be limited to big cities.

2. Studies on the demographic consequences of urbanization. For example, would the influx of migrants to cities causing residential overcrowding incur higher incidence of mortality and higher fertility ?

3. Studies in terms of the possible health effects of migration upon the individuals.

4. Studies on the pattern of migration, and whether it by pass small towns and goes directly to primates, what are the factors that may lead the people to one or two steps of migration ?

5. A coordinated effort should be continuously made to obtain data relating migration, vital and health statistics with supplementary sample studies.