

The Current Labour Force Sample Survey in Egypt (U.A.R.)

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The government statistical services of the United Arab Republic have been carrying out a sample survey of the economically active population of the Egyptian Region since November 1957. Their main objective is to assess gradually the size of the labour force as compared with the proportion of the population able to work and of working age, and also as compared with the total population of the Egyptian Region. The survey is also intended to break down the labour force into its constituent elements. The results obtained from the survey up to the present are summarised in the following article, together with a description of the methods and definitions used.

INTRODUCTION

THE human factor is but one aspect of the over-all economic problem. Since time immemorial human efforts have, of course, been needed for the exploitation of the resources provided by nature; but this need increases gradually with the growing ambition of nations all over the world to develop their production so that their populations may enjoy a higher standard of living. More and more attention has inevitably been directed towards the wealth-producing activities of man, the organisation of these activities, and their proper allocation in the general process of production of goods and services. Most nations have, therefore, become deeply interested in investigating the current utilisation of human resources and potentialities as well as the organisation of the labour market. To make any realistic programme of national development it is essential to obtain an accurate picture of the labour market through intensive studies of the economically active population.

Up to 1957 no information was available in Egypt on manpower questions, except what could be gleaned from the six decennial

population censuses that had been taken since 1897. But even this information was both inadequate and out of date, and in view of the demands of its work the Ministry of Social Affairs and Labour approached the Central Statistical Committee for help in providing the required statistics on manpower; it suggested that a sample survey should be made, using as a frame the preliminary lists prepared for the census scheduled to be taken in March 1957, and that the survey should be carried out in the Autumn of 1957 before the frame was out-dated.

The Committee agreed, and the scheme was carefully studied from all angles, especially from the point of view of the sampling technique to be adopted. It was decided that the Ministry of Social Affairs and Labour should be responsible for the collection of data in the field, and that this would later be processed by the Department of Statistics. An executive board was set up to direct the survey on the basis of definitions and concepts adopted by the Central Statistical Committee.

The survey is carried out on a nation-wide basis, one round after another. The first round was taken in the third week of November 1957 and to date a total of 13 rounds have been completed, the latest in August 1960.

Objective

The main objective of the survey is to provide adequate information on the size of the labour force and of total potential manpower, and their distribution according to various characteristics. This information has been used successfully in socio-economic planning and will be of value in studying problems of unemployment and underemployment, as well as in the establishment of a vocational training policy. The design of the survey takes into consideration the measurement of the following variables:

1. Geographical distribution of the labour force.
2. Distribution of labour force by age, sex, marital status, employment and educational status.
3. Distribution of the labour force by occupation according to the two-digit code of the International Standard Classification of Occupations (I.S.C.O.) and by industry according to the two-digit code in local use.
4. Number of working days for each individual during the period of reference. Two reference periods were adopted for this purpose: the week and the month ending on a specified date.
5. Number of hours worked during the week of reference and on Tuesday of the same week.

Other Sources of Manpower Data

A good deal of information on manpower and the labour force is collected, partly by some of the statistical organisations in special operations for which they are responsible, and partly by a number of administrative agencies. These data, however, suffer from certain serious limitations.

The results of the last four decennial population censuses (1917 to 1947) represented the most comprehensive source of manpower data but the ten-year intervals limit the usefulness of these data. Moreover, because of changes of definition, modifications introduced in questionnaires and forms and incompleteness of the information collected, especially in earlier censuses, the data are neither comparable nor adequate for building up workable policies.

Information on farm labour collected in the agricultural censuses suffers from similar defects. Annual estimates of farm labour published by the Ministry of Agriculture between censuses are derived from the findings of the preceding census, usually by the application of technical co-efficients computed on the basis of observation of the organisation of labour in special farms administered by the authorities. Such estimates, therefore, can not be taken to represent the agricultural labour force in general. In addition they are incomplete because they do not cover farm owners, other self-employed persons and unpaid family workers.

Another potential source of information would be the registers of the employment offices under the supervision of the Department of Labour. These could be analysed to obtain data on registered employed and unemployed, but the system has been adopted only recently and the employment offices do not provide complete coverage. This source will therefore remain inadequate for a number of years to come until enough offices have been opened.

Information on government employment is collected directly by the Department of Statistics from the reporting units. Here again the coverage of the data is not complete, the degree of non-response ranging from 15 to 20 per cent., although great efforts are being made to collect the returns effectively.

Finally, the annual statistics on employment, pay-rolls and hours of work collected and compiled by the Department of Statistics provide data on employment and wages in establishments with ten workers and over and cover all major economic activities except agriculture.

The labour force sample survey was initiated to fill in all these gaps and to provide information on the whole population. The survey was planned in such a way as to provide full geographical coverage of the Egyptian region. The sample includes both urban

and rural population, with the exception of nomads in desert areas, the ultimate sampling unit being the household. The definition adopted for the term "household" in this survey excludes, however, all institutional population, i.e. prisoners, hospital residents, etc. Hotel residents are also excluded because of their transient nature. No information on the armed forces was collected in the survey.

THE MANPOWER SITUATION REVEALED BY THE SURVEY

The general study of manpower in Egypt presented hereafter has been derived by averaging the data accumulated from the first four rounds of the survey, which were conducted during the period November 1957 to September 1958.

Of the total population in the whole region only 29.7 per cent. were in the labour force. According to the definition adopted in the survey¹ the labour force is estimated at about 7.03 million persons. Of these 6.31 million are males and 0.72 are females; women thus represent only about 10 per cent. of the total labour force. Employed persons numbered 6.76 million and unemployed 270,000.

Variations in the labour force participation rates are observed between the rural and urban population. While in urban areas 47.5 per cent. of all males are in the labour force, the corresponding proportion in rural areas is about 57 per cent. (table I).

The classification of the population into major demographic groups is of particular importance. The size of the economically active population depends mainly on the age and sex composition of the population, which reveals the potential labour force. Table II illustrates the age distribution of the Egyptian population as derived from the survey results and shows the proportions of adults of working age, children and aged persons.

Children below the age of 12 represent about 36 per cent. of the total population. The proportion below 16 years is very close to 45 per cent. Young persons constitute a higher proportion of the total population in urban than in rural areas.

The population in the age group 65 years and above is relatively low since it represents only about 4 per cent. of the total population—3.2 per cent. in urban and 4.3 per cent. in rural areas.

The remainder of the population, youths and adults under 65, form slightly more than one-half of the total; persons aged 50 to 64 represent about 9 per cent. of the total population.

¹ Under this definition a person was considered to be in the labour force if he is able and willing to work; he may be actually working or unemployed or temporarily absent from work for some reason or other. See below.

TABLE I. URBAN-RURAL DISTRIBUTION OF LABOUR FORCE,
MANPOWER AND TOTAL POPULATION
(Percentages of total population)

Population group	Persons in the labour force	Able-bodied persons aged 6 to 64	Population
<i>Inhabitants of large cities :</i>			
Males	5.5	8.9	11.7
Females	0.6	8.9	11.4
Both sexes	6.1	17.8	23.1
<i>Inhabitants of towns :</i>			
Males	3.1	4.9	6.4
Females	0.3	5.0	6.5
Both sexes	3.4	9.9	12.9
<i>Rural populations :</i>			
Males	18.1	24.4	31.8
Females	2.1	24.6	32.2
Both sexes	20.2	49.0	64.0
<i>Total :</i>			
Males	26.7	38.2	49.8
Females	3.0	38.5	50.2
Both sexes	29.7	76.7	100.0

Table II reveals that the Egyptian population has a young age structure. This tends to result in the participation of children in the labour force with its well-known undesirable consequences.

The whole population is divided into two approximately equal parts according to sex, but the sex ratio differs by age groups. The proportion of male children below 16 is higher than that of female children. The relative superiority of the male percentage of the population in the younger age groups is compensated in the ages between 20 and 50 years, thus giving an almost balanced sex ratio over the total population.

Relatively large numbers of children below the age of 16 are in the Egyptian labour market. This group accounts for nearly 13 per cent. of the total labour force (see table III). The greater part of this is contributed by the rural sector (which, as will be seen from table I contains about two-thirds of the Egyptian population). It should be noted here that the definition adopted for the labour force allows rural children aged between 6 and 12, who should normally be at school but who actually do not attend school at all and instead are helping the family on the farm, to be counted as members of the labour force. On the other hand, rural children who attend school are classified as students even though they also help on the family farm.

TABLE II. PERCENTAGE DISTRIBUTION OF URBAN, RURAL AND TOTAL POPULATION BY AGE GROUP AND SEX

Age group and sex	Urban areas	Rural areas	Total
<i>Under 6 years :</i>			
Males	10.5	10.3	10.4
Females	9.8	9.7	9.8
Both sexes	20.3	20.0	20.2
<i>6 to 11 years ¹ :</i>			
Males	8.5	7.9	8.1
Females	8.3	7.2	7.6
Both sexes	16.8	15.1	15.7
<i>12 to 15 years :</i>			
Males	4.7	4.6	4.6
Females	4.6	4.0	4.2
Both sexes	9.3	8.6	8.8
<i>16 to 19 years :</i>			
Males	3.3	3.1	3.2
Females	3.3	2.9	3.0
Both sexes	6.6	6.0	6.2
<i>20 to 29 years :</i>			
Males	5.7	6.1	5.9
Females	7.4	7.5	7.5
Both sexes	13.1	13.6	13.4
<i>30 to 39 years :</i>			
Males	6.2	6.1	6.1
Females	6.4	7.0	6.8
Both sexes	12.6	13.1	12.9
<i>40 to 49 years :</i>			
Males	5.0	4.7	4.9
Females	4.5	4.8	4.7
Both sexes	9.5	9.5	9.6
<i>50 to 64 years :</i>			
Males	4.7	4.7	4.7
Females	3.9	4.8	4.5
Both sexes	8.6	9.5	9.2
<i>65 years and above :</i>			
Males	1.6	2.0	1.8
Females	1.6	2.3	2.1
Both sexes	3.2	4.3	3.9
<i>Unstated :</i>			
Males	—	0.2	0.1
Females	—	0.1	0.0
Both sexes	—	0.3	0.1
<i>All ages :</i>			
Males	50.2	49.7	49.8
Females	49.8	50.3	50.2
Both sexes	100.0	100.0	100.0

¹ This is the compulsory education age group.

The proportion of the total labour force provided by persons below 20 years of age is about 22 per cent., which is fairly high.

TABLE III. PERCENTAGE DISTRIBUTION OF LABOUR FORCE BY AGE IN RURAL AND URBAN AREAS

Age group (years)	Cairo	Alexandria	Canal	Other towns	All urban	All rural	All areas
6 to 11. . .	2.4	1.5	1.3	2.8	2.3	4.1	3.5
12 to 15. . .	6.7	6.7	7.2	7.7	7.1	10.4	9.3
16 to 19. . .	7.0	8.1	7.2	7.8	7.5	9.3	8.7
20 to 29. . .	20.0	19.7	20.4	18.8	19.5	19.9	19.8
30 to 39. . .	25.2	24.3	26.3	22.0	24.0	20.9	21.9
40 to 49. . .	20.2	19.7	19.8	19.5	19.9	16.2	17.4
50 to 64. . .	16.5	18.0	15.8	18.3	17.3	15.8	16.3
65 and above	2.0	2.0	2.0	3.1	2.4	3.4	3.1
Total . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The rural-urban differential in the age distribution of the labour force is also illustrated in table III. From table IV it will be observed that children in the labour force form a considerably higher proportion of the population below 16 years of age in rural than in urban areas. This is characteristic of the rural economy in Egypt, where children are needed for a number of farm operations. Within urban areas the child labour contribution decreases gradually with the increase in urbanisation and schooling facilities.

TABLE IV. RATIO OF LABOUR FORCE TO TOTAL POPULATION IN EACH AGE GROUP IN URBAN AND RURAL AREAS

(Percentages)

Age group (years)	Governorates (large cities)	Towns	Total urban	Rural areas	All areas
6 to 11	3.1	4.5	3.6	8.6	6.7
12 to 15	16.7	19.8	17.8	35.8	29.1
16 to 19	24.6	26.5	25.3	47.5	39.0
20 to 29	35.0	38.6	36.3	45.1	42.0
30 to 39	48.9	48.0	48.6	49.2	49.0
40 to 49	53.6	51.9	53.0	52.2	52.5
50 to 64	49.2	51.6	50.1	50.8	50.5
65 and above	16.7	21.0	18.5	25.0	23.1
All ages. . .	24.3	25.5	24.7	30.8	29.7

Table V shows the ratio between the actual labour force and total potential manpower (population aged 6 to 64 years) in each

of the nine zones in which the Egyptian region was stratified for the purposes of the survey.

The ratio of the male labour force to total male manpower (males aged 6 to 64 years) is higher in rural areas—Lower Egypt 72 per cent., and Upper Egypt 72.8 per cent. In the highly urbanised zones, i.e. governorates and capitals of provinces, it varies within the very narrow range 57.5 per cent. to 59 per cent. (except in Alexandria, 56 per cent.). In the smaller towns the proportion is a little higher, ranging from 62.3 per cent. to 63.8 per cent. The corresponding ratios for females show greater variability; in urban areas the ratio ranges from 3.4 to 8.0 per cent., while the highest figure (12.2 per cent.) is found in rural Lower Egypt and one of the lowest in rural Upper Egypt (3.7 per cent.), the last mentioned being even lower than those in all urban zones except Canal and Suez (3.4 per cent.).¹

TABLE V. RATIO OF LABOUR FORCE TO TOTAL MANPOWER
(AGED 6 TO 64) BY ZONE AND SEX

Zone	Percentage of total manpower (aged 6 to 64) in the labour force		
	Males	Females	Both sexes
Cairo	57.5	7.0	32.5
Alexandria	56.0	5.5	30.7
Canal and Suez	58.0	3.4	30.4
Capitals of provinces in Lower Egypt . .	58.6	8.0	33.0
Capitals or provinces in Upper Egypt . .	59.0	5.5	32.6
Capitals of districts in Lower Egypt . .	62.3	7.1	34.2
Capitals of districts in Upper Egypt . .	63.8	3.9	33.0
Rural Lower Egypt	72.0	12.2	42.0
Rural Upper Egypt	72.8	3.7	38.0
All zones	67.3	7.6	37.3

Tables VI and VII present breakdowns of the labour force by division of economic activity and by major occupation group with separate figures for the urban and rural sectors.

¹ The ratio of active women to available female labour is notably low in rural Upper Egypt. (3.7 per cent.). This is presumably due to traditions prevailing in this zone. Its inhabitants are conservative and women are restricted by tradition from mixing in public life. Even though a few women participate in remunerative work from time to time it is believed that these are under-reported in the survey, thus contributing to the low percentage figure. It should be added that in rural Lower Egypt, where the ratio is 12.2 per cent., there are many large factories, especially spinning mills, scattered near the villages, which attract female labour and thus help to break old traditions.

TABLE VI. PERCENTAGE DISTRIBUTION OF URBAN AND RURAL LABOUR FORCE BY BRANCH OF ECONOMIC ACTIVITY

Industry division	Governor-ates	Other towns	Rural areas	Total
Agriculture	1.0	2.3	54.1	57.4
Mining and quarrying	0.1	0.0	0.1	0.2
Manufacturing industries	3.9	1.9	2.6	8.4
Construction and building	0.9	0.4	0.6	1.9
Electricity, gas, water and sanitary services	0.1	0.0	0.0	0.1
Commerce	3.6	2.1	4.0	9.7
Transportation, storage and communication	1.8	0.8	0.9	3.5
Services (including public activities)	8.3	4.0	6.5	18.8
Total	19.7	11.5	68.8	100.0

TABLE VII. PERCENTAGE DISTRIBUTION OF URBAN AND RURAL LABOUR FORCE BY OCCUPATION

Occupation ¹	Governor-ates	Other towns	Rural areas	Total
Professional, technical and related workers	1.2	0.7	0.6	2.5
Administrative, executive and managerial workers	0.6	0.2	0.2	1.0
Clerical workers	1.7	0.7	0.4	2.8
Sales workers	2.8	2.0	3.8	8.6
Farmers, fishermen, hunters, loggers and related workers	1.1	2.2	53.6	56.9
Workers in transport and communication occupations	1.3	0.7	0.9	2.9
Craftsmen, production process workers and labourers n.e.c.	6.5	3.1	4.9	14.5
Service, sport and recreation workers	4.4	2.0	4.4	10.8
Total	19.6	11.6	68.8	100.0

¹ Miners, quarrymen and related workers do not appear since the survey did not cover desert areas, to which these occupations are almost exclusively confined.

Table VIII shows the distribution of the labour force by employment status with separate figures for rural and urban areas. Since the majority of the labour force in rural areas is engaged in agriculture, and proprietors and tenants of small farms are principally self-employed, it will be seen that this group represents a much higher proportion of the labour force in rural than in urban areas, whereas the reverse is true of the group "paid employees". Unpaid workers (including family workers) are also relatively more numerous in the countryside than in the town.

TABLE VIII. DISTRIBUTION OF LABOUR FORCE (URBAN, RURAL AND TOTAL) BY EMPLOYMENT STATUS
(Percentages)

Zone	Paid employees	Self-employed persons	Unpaid workers (including family workers)	Total gainfully employed	Unemployed	Total labour force
Large cities	68.3	20.8	3.8	92.9	7.1	100.0
Towns . . .	51.8	32.7	10.7	95.2	4.8	100.0
Villages . .	34.7	36.3	26.2	97.2	2.8	100.0
All zones . .	43.5	32.7	19.9	96.1	3.9	100.0

Of the total labour force 3.9 per cent. are wholly unemployed.¹ Unemployment is most serious in large cities (7.1 per cent.). It is also a problem among inhabitants of smaller towns (4.8 per cent.) but is of minor significance in rural areas (2.8 per cent.).

It is most useful to express the incidence of unemployment with reference to the contribution of different age groups in the labour force. It will be seen from table IX that although the age group 20 to 29 years contains the greatest number of unemployed persons the rate of unemployment is greatest among younger age groups.

The question of full employment and underemployment was approached in the survey by collecting sample information on the number of days worked per week and per month and the number of hours worked per week. No other questions were directed to the informants.

TABLE IX. INCIDENCE OF UNEMPLOYMENT BY AGE

Age group (years)	Proportion of all unemployed persons	Unemployment rate ¹
12 to 15	13.0	6.0
16 to 19	12.4	5.8
20 to 29	22.6	5.4
30 to 39	16.7	3.5
40 to 49	13.9	3.6
50 to 64	19.5	5.4
65 and over	1.9	3.9
All ages	100.0	3.9

¹ Number of unemployed in the age group concerned as a percentage of the labour force in that age group.

¹ According to the definition adopted for the survey a person is regarded as unemployed if he is able and willing to work, and looking for work, but cannot find work, on Tuesday of the reference week.

TABLE X. PERCENTAGE DISTRIBUTION OF EMPLOYED PERSONS IN EACH INDUSTRY GROUP

A. *By Number of Days Worked per Week*

Industry	Number of days worked per week							Domestic servants	On leave	Not stated
	One day	Two days	Three days	Four days	Five days	Six days	Seven days			
Agriculture	0.3	1.2	4.3	7.7	11.1	26.2	48.5	0.2	—	0.5
Manufacturing industries	0.2	1.1	3.5	4.7	6.5	63.8	19.4	—	0.3	0.5
Transportation, communication and commerce	1.0	1.9	3.6	4.8	6.8	41.8	38.8	0.1	0.3	0.9
Services	0.3	0.9	2.2	2.1	2.7	50.3	29.1	9.6	1.5	1.3
Other ¹	1.2	5.4	9.5	12.1	10.5	34.5	13.5	1.0	0.3	12.0
All industries	0.4	1.3	3.9	6.2	8.7	35.9	40.5	1.8	0.4	0.9

B. *By Number of Hours Worked per Week*

Industry	Number of hours worked per week								Domestic servants	On leave	Not stated
	6 to 11	12 to 17	18 to 23	24 to 31	32 to 39	40 to 47	48 to 55	56 or more			
Agriculture	1.5	2.6	3.4	7.6	8.6	13.0	21.0	41.5	0.1	0.1	0.6
Manufacturing industries	0.9	1.8	3.0	4.9	5.2	7.3	46.5	29.5	—	0.3	0.6
Transportation, communication and commerce	1.7	2.6	2.0	5.6	8.3	8.1	23.0	47.5	0.1	0.3	0.8
Services	1.5	1.7	1.7	5.5	16.5	6.3	21.2	33.1	9.8	1.5	1.2
Other ¹	2.1	3.9	4.1	12.2	7.5	8.7	24.6	23.7	0.9	0.2	12.1
All industries	1.5	2.4	2.9	6.8	9.6	10.6	23.6	39.4	1.8	0.4	1.0

¹ Including mining and quarrying, electricity and gas, etc., and construction, as well as "unspecified".

Tables X(A) and X(B) show the proportional distribution of the employed by industry in conjunction respectively with the number of days and hours worked per week. We may consider as fully employed those who spend in gainful work a minimum per week of six days or, correspondingly, 40 hours; the rest of the employed persons, then, were not fully employed and would be suffering from partial unemployment or underemployment provided that they were available for additional work during the survey reference

period. Note was made of persons who worked less than a full week because they were on vacation, but no attempt was made to identify others who may not have been available during the week for more work than they actually performed.

METHODOLOGY AND PROCEDURE

Administrative Organisation

Collection of Data.

For the collection of data the interview method was adopted. Two-hundred-and-fifty investigators on an average are recruited for each round to fill in schedules while questioning the head of each sample household, the interview starting with a simple explanation as to the purpose of the survey. The field workload is an average of ten schedules per investigator per day. The ability to carry this workload, however, depends to a certain extent on the geographical distribution and the distances between the sample villages and households. A total of about 60 scrutiny inspectors, averaging one for each four investigators, check the accuracy of the field work. For each region (governorates and provinces) a general supervisor is assigned to direct the work and attend to administrative organisation, as well as to provide technical advice. An executive board¹ was appointed to tour the provinces during the field operations and to inspect the work and settle any technical questions that may arise. This board is responsible for the arrangements and running of the survey.

For the first four rounds of the survey the following design was adopted. The Egyptian area was divided into nine strata as follows : (1) governorate of Cairo ; (2) governorate of Alexandria ; (3) governorates of the Canal and Suez ; (4) capitals of provinces, and towns with a population of 5,000 households and over, in Lower Egypt ; (5) towns with a population of less than 5,000 households in Lower Egypt ; (6) rural population in Lower Egypt (villages) ; (7) capitals of provinces, and towns with a population of 5,000 households and over, in Upper Egypt ; (8) towns with a population of less than 5,000 households in Upper Egypt ; (9) rural population in Upper Egypt (villages).

This stratification divides the country into nine groups which are different from one another, and each of which is homogeneous within itself as far as available information can show.

¹ The executive board is composed of eight members, three from the Central Statistical Committee's technical secretariat and five from the Ministry of Social Affairs and Labour under the chairmanship of the Under-Secretary of the Ministry, who is at the same time a member of the Central Statistical Committee.

It was thought that the diversity of occupations and industries reached its maximum in Cairo and Alexandria, but was less pronounced in the other towns and least in the countryside. The sample fractions for each one of these categories were consequently different.

In the first two strata (Cairo and Alexandria) a two-stage sampling design was adopted: from each one of the districts (*quism*), half the blocks (*shiakha*) were selected at random. A number of households were chosen systematically from each selected block, proportionately to the total number of households in the block and equal altogether to 1 per cent. of the households within the district.

In the third stratum a similar procedure was adopted, with the slight difference that only 0.5 per cent. of the households were selected.

For each of the other cities and towns with a population of 5,000 households and over (fourth and seventh strata) the same sampling fraction was fixed. A systematic sample of households was selected directly from the population of each of these units.

Of the small towns with a population of less than 5,000 households (fifth and eighth strata) half were selected at random from each province. In the first round of the survey a sample of 0.25 per cent. of the total number of households was selected from the towns proportionately to their size. From experienced gained in this round it was found that better estimates for the population variables would be obtained from the sample if the sampling fraction were doubled. This is due to the fact that the diversity of the occupations of the population forming these two strata is reflected in a frequency distribution of such a nature that reliable estimates could not be obtained from the smaller sample. A sample fraction of 0.5 per cent. was therefore adopted for the following rounds of the survey.

For the sake of convenience and simplification of the field work, a three-stage sampling system was adopted for the two areas comprising the rural part of Egypt, i.e. the sixth and ninth strata. First one-quarter of the districts (*markaz*) in each province (*mudirya*) were selected at random. Ten per cent. of the villages in each selected district were chosen, also at random, and a systematic sample of 10 per cent. of the households in each selected village was taken, thus bringing the ultimate sampling fraction to 0.25 per cent. in the rural strata.

The whole sample for the survey was drawn from a frame derived from the preliminary information recorded by the enumerators at the preparatory stage of the population census which was to have been held in March 1957. This frame was a simple list of households, their detailed addresses and numbers of members of

each household. The census was postponed and, as has been mentioned, it was decided to use the lists as a frame for the survey in 1957 before they became too old to represent the actual picture.

The total number of sample households was 21,000 in each of the four rounds.

Modifications Introduced in the Sampling Design.

After the completion of the fourth round the sampling design was revised in the light of experience gained and the results collected. For the fifth round the sample design adopted was as follows :

(a) The region was divided into the following five strata : (1) Cairo ; (2) Alexandria, Canal and Suez ; (3) capitals of provinces and large towns in Lower and Upper Egypt ; (4) capitals of districts in Lower and Upper Egypt ; (5) villages in Lower and Upper Egypt.

(b) A random sample of 1 per cent. of households was selected from the blocks constituting each of the first two strata. A sample of 0.5 per cent. was similarly selected from the third stratum.

(c) For the capitals of districts (fourth stratum) half the towns were directly selected at random, then 1 per cent. of households were selected from each sample town, thus bringing the sampling fraction to 0.5 per cent.

(d) For the rural areas (fifth stratum) villages were classified into two types : (1) large villages with a population of 2,500 households and over, numbering 88 ; and (2) other villages. From type (1) one-sixth of the villages were selected at random. A sample of households was then chosen from each selected village bringing the ultimate sampling fraction to 0.5 per cent. From type (2) villages only 5 per cent. of the villages of each province were selected at random. A sample of 4 per cent. of the households of each selected village was chosen to bring the sampling fraction for this substratum to 0.2 per cent. This sub-stratification leads to more homogeneity within the population groups investigated. The main characteristics of the population belonging to villages of type (1) were tested beforehand in order to assess its deviation from both the rest of the rural population and that of small town communities. The test was intended to indicate the relevant stratum to which big villages belong. However, no definite results could be achieved and it was therefore decided that the data collected for this substratum in the fifth round should be tested in order to provide a final answer to the question.

Rotation of Sample.

Starting from the seventh round a rotating sampling design was adopted. Two independent samples of households were selected according to the same design as the fifth round. Each of the two samples was divided into three systematic subsamples, thus giving a total of six rotation groups. Three of these subsamples were selected at random, and the households in them were interviewed for the seventh round of the survey. From the eighth round one rotation group, selected at random, leaves the sample for three consecutive rounds and is replaced by another group. In this way one-third of the usual sample is common in three consecutive rounds, and two-thirds in two consecutive rounds.

This system of rotation provides some continuity in the series of data, which facilitates the measurement of changes in the characteristics studied. It helps to reduce sampling errors, resulting mainly from the replacement of unidentifiable households in the original sample by fresh ones drawn especially from the population.

Date and Duration.

The first five rounds of the survey were conducted at three-month to four-month intervals between November 1957 and January 1959, the sixth to ninth rounds at two-month intervals between October 1959 and April 1960 and the tenth to thirteenth rounds at monthly intervals between May 1960 and August 1960.

In each round the reference week was that ending on a Friday and, in most cases, containing the fifteenth of the month; the reference day was the Tuesday of the reference week.

Information was also recorded in the questionnaires on the number of days which the respondent spent at work during the reference week and the month preceding the end of the reference week, as well as on the number of hours he worked and his employment status on the reference day. The field work in each round of the survey is completed in ten days on the average.

General Definitions

In the formulation of the following definitions used for the survey the international recommendations on the subject were taken into consideration.

Manpower.

Manpower is defined as the portion of the population whose energy can be used in economic activity. Excluded therefore are persons who are not able to contribute to the labour market, namely

the very young (under 6 years) and the old (over 65 years) and persons who are permanently disabled because of prolonged sickness or physical disability.

Manpower is divided into two groups, namely (1) the labour force, and (2) those not in the labour force.

1. *The Labour Force.*

The labour force consists of (a) employed persons, and (b) unemployed persons.

(a) *Employed persons.* These include paid employees, self-employed persons, unpaid family workers and unpaid workers in a business not operated by the family. Also included are persons who are temporarily absent from their jobs during the specific period as a result of illness, accident, labour management dispute, vacation or temporary labour disorder. Excluded, however, are persons whose idleness during the survey period is consequent on the seasonal nature of their jobs.

(b) *Unemployed persons.* These include persons who did not work during the day of reference and were able and willing to work and also looking for work. Included in this group are persons who had no job during the survey period, even though they had acquired new jobs which they expected to start after the survey period.

2. *Not in the Labour Force.*

Persons who are able to work but who are neither working nor looking for remunerative work, such as housewives who are wholly engaged in household domestic work during the survey period, students in full-time attendance at educational institutes, pensioners, persons depending on periodical subsidies and persons who are not looking for work since they have private means of support.

Extent and Structure of Employment.

The different phases of employment and unemployment, namely full employment, disguised unemployment, and visible, disguised and potential underemployment, were also taken into consideration. The Central Statistical Committee had decided that it might be quite satisfactory at this early stage of the study of the labour force to classify the population into employed, unemployed and not in the labour force as shown above. In order, however, to throw some light on the extent of employment, four questions were introduced, namely the number of hours worked on the reference day and during the reference week, and also the number of days worked during the reference week and during the month ending with the reference week. The answers to these, when

tabulated, give a measure of the degree of employment or extent of partial unemployment.

Personnel and Equipment

The field workers at all levels were chosen from among government social workers of the Ministry of Social Affairs and Labour. All of them are graduates with a background of social studies. Some of them attended a special six-month course in occupational classification and job analysis given by an I.L.O. expert. Moreover, before starting their work on the survey they received a training course on its scope and concepts, the definitions adopted, the sampling system, the interview approach and other relevant subjects of study. The points included in the questionnaire were explained and each field worker was supplied with a manual containing detailed instructions.

Budget

The costs of the survey were estimated at £E5,000 for each round, broken down as follows : (1) stationery : £E300, (2) selection of sampled households and preparation of list : £E100, (3) field work : £E3,200, (4) processing and tabulation : £E350, (5) about £E1,000 for other expenses such as telephone trunk calls, hire of statistical machines and the use of other government equipment, and other overhead charges.

Response

A very high rate of response was obtained, the rate of non-response dropping steadily from 0.6 per cent. in the first round to 0.1 per cent. in the fourth. No cases of non-response ever resulted from straight refusal or reluctance ; the only reasons were migration and change of address.

This high response was mainly due to the programme of propaganda designed to acquaint the interviewed households with various aspects of the survey.

RESULTS OF THE SURVEY AND FUTURE PROSPECTS

Non-sampling errors do not seem to have had a significant effect on the final results, most of them having been discovered and corrected either during the field supervision or during editing before processing.

Some fluctuations were found in the figures for the labour force and the unemployed in the first four rounds. This is believed

to be seasonal. The group aged 6 to 12 years contributed a large part of this and was, for this reason, separated in the tables so that it might be set aside to give a more clearly defined labour force.

The results obtained in these and subsequent rounds have been used for labour force projections. For long-term projections, however, another source of variation has to be taken into account, namely the proportion of women and girls in the female population of working age. The proportion of women and girls joining the labour force has been increasing steadily for the last 20 years as a result of industrialisation and urbanisation and because of the changing attitudes of fathers and husbands.

Improving health conditions and the consequent drop in retirement and death rates will also have their effect on the rate of increase in the labour force. The estimated annual increase in the labour force for the period 1960 to 1965 is about 175,000 persons.
