

# development and perspectives of the population of Greece, 1920-1985\*

by

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\* This paper is part of the introduction of the first volume of a study under the same title published by the National Centre of Social Research in 1973. This study was carried out in cooperation with Messrs. M. Papadakis, G. Siambos, J. Cavassilas, A. Kouvara, M. Houliarakis.

## a. statistical data, definitions and classifications

### 1. Sources of Statistical Data

The statistical data used in this study are derived from the censuses of the period between 1920 and 1971, as well as from the available vital statistics (births, marriages and deaths) and from the migration statistics.

In this work we have characterized the municipalities and communes from 1920 to 1971 as urban, semi-urban, and rural, according to the definitions of the 1971 census, as indicated below. By summing up the population of the above characterized municipalities and communes, a conclusion was reached regarding the urban, semi-urban and rural population of the censuses between 1920 and 1971.

### 2. Definitions and Classifications

The municipalities and communes, of which the most densely populated locality, according to the 1971 census, had 10,000 inhabitants and over, have been included in the urban population; the scattered parts of the population haven't been taken into account, whereas the thirteen agglomerations, whose population has been considered as urban on the whole, have been included in the final results.

The municipalities and communes of which the most densely populated locality had 2,000-9,999 inhabitants, according to the 1971 census, have been included in the semi-urban population, whereas the scattered population was not included.

The municipalities and communes of which the most densely populated locality had less than 2,000 inhabitants, according to the 1971 census, have been included in the rural population, while the scattered population has not been taken into account.

According to the above mentioned definitions the population in the censuses between 1920 and 1971 has been classified as urban, semi-urban and rural by Regional Administrative Units as follows:

1.	Regional	Administrative	Unit	of	Attica and Islands
2.	»	»	»	»	Central and Western Macedonia
3.	»	»	»	»	Peloponnesos and Western Sterea Hellas
4.	»	»	»	»	Crete
5.	»	»	»	»	Thessaly
6.	»	»	»	»	Epirus
7.	»	»	»	»	Eastern Macedonia and Thrace

— See publications of EKKE on Greek population problems on pages 3 and 4 of the cover.

*Map of Greece by Regional Administrative Units*



This classification of demographic data by Regional Administrative Units and by areas (urban, semi-urban, rural) is used on the one hand for the study of social and economic phenomena and on the other hand for setting forth the orientations and targets of development within the framework of the country's regional planning.

## b. developments between 1920-1971

### 1. Total Population

The population of Greece rose from 5,017,000 inhabitants in 1920 to 8,796,000 in 1971, i.e., an increase of 3,752,000 inhabitants, the average annual rate of increase being 1.10 per cent. This change is not only due to the natural population growth, but also to unusual occurrences such as the inflow of refugees\* for the period 1920-24, the international economic depression of 1929, the Second World War, the annexation of Dodecanese in 1947 and the notable increase in the emigration streams during the postwar period.

The annual rate of population change varies by Regional Administrative Units. In particular, if we exclude the aforementioned period 1920-28 as significantly influenced by the inflow of refugees, we can classify the Regional Administrative Units according to the rate of annual change of their population as follows:

<i>Regional Administrative Units (R.A.U.)</i>		
Order according to the rate of change		Average annual rate of population change, 1928-71 %
	Greece as a whole	+ 0.80
1st	R.A.U. of Attica and Islands	+ 1.80
2nd	» » Central and Western Macedonia	+ 0.95
3rd	» » Thessaly	+ 0.45
4th	» » Crete	+ 0.40
5th	» » Eastern Macedonia and Thrace	+ 0.10
6th	» » Epirus	+ 0.05
7th	» » Peloponnesos and Western Sterea Hellas	- 0.40

From the above classification one concludes that in the long run the actual population increase in the R.A.U. of Attica and Islands is much greater than its natural increase. This R.A.U., due to the fact that it includes the Athens Agglomeration, is the unique area of migratory inflow in the whole country; this area shows a positive remainder.

\* On July 24th, 1923, an exchange of population took place between Turkey and Greece, according to the treaty of Lausanne. About 1,500,000 Greeks came to Greece and 600,000 Turks went to Turkey.

The R.A.U. of Central and Western Macedonia retains the greatest part of the population added by natural increase, whereas the population inflow into the area is counteracted by a respective outflow. The remaining Regional Administrative Units do not retain the population added by natural increase, because migration contributes to a negative remainder. Among them the relatively most dynamic are the R.A.U. of Thessaly and Crete which, however, they manage to retain a little less than half of the population added from the natural increase. The other three Regional Administrative Units can be characterized as demographically problematic. This is due to the fact that the R.A.U. of Eastern Macedonia and Thrace as well as the R.A.U. of Epirus, appear to have quite a negligible increase on the one hand, and on the other hand the R.A.U. of Peloponnesos and Western Sterea Hellas appear to have a decrease.

A result of these long-term developments was a considerable change in the ratio of the population of each Regional Administrative Unit to the total population of the country between 1928-1971. Thus, the rapid rate of increase concerning the population of the R.A.U. of Attica and Islands (from 26.2 per cent to 39.9 per cent) and the rate of slight increase concerning the R.A.U. of Western and Central Macedonia (from 15.4 per cent to 16.4 per cent), have been counteracted by the general decrease in the ratio of the population of other Regional Administrative Units to the total population.

The analysis of the components of demographic change for the whole period 1928-1971 is infeasible, due to the inefficiency of the available statistical data concerning the population movement. Therefore, we will limit the analysis to the period 1951-71.

The natural population increase for the whole country from 963,000 inhabitants for the 1951-61 decade was reduced to 839,000 inhabitants for the 1961-71 decade, i.e., a decrease of 13 per cent. From these data it is estimated that the average annual rate of natural increase diminished from 12 per thousand in the first decade to 9.5 per thousand in the second. On the contrary, the net external migration was increased from 207,000 to 459,000, respectively, i.e., by 122 per cent. Therefore, the average annual rate of actual increase was limited from 9.5 per thousand in the first decade to 4.5 per thousand in the second, 1961-71.

The population change by Regional Administrative Units presents considerable differences compared to that of the whole country. In the R.A.U. of Attica and Islands the net population increase was more than twice the natural population increase. In the R.A.U. of Western and Central Macedonia the net population increase was almost equal to the natural increase for the 1951-61 decade, but considerably

*A Summary of the Population Developments, 1928-1971*

(in thousands)

	Total				Total			
	Population	Urban	Semi-Urban	Rural	Population	Urban	Semi-Urban	Rural
<b>Regional Administrative Units</b>	<b>6,205</b>	<b>2,010</b>	<b>757</b>	<b>3,438</b>	<b>8,769</b>	<b>4,668</b>	<b>1,019</b>	<b>3,082</b>
1. Attica and Islands	1,622	964	178	480	3,496	2,819	262	415
2. C. and W. Macedonia	958	354	119	485	1,440	752	184	504
3. Peloponnesos and W.S. Hellas	1,384	214	183	987	1,324	349	212	763
4. Crete	386	76	29	281	457	153	49	255
5. Thessaly	721	136	108	477	879	274	149	456
6. Epirus	419	71	22	326	428	105	35	288
7. Eastern Macedonia and Thrace	715	195	118	402	745	216	128	401

less than the natural increase for the 1961-71 decade. On the contrary, in the R.A.U. of Peloponnesos and Western Sterea Hellas in the 1951-61 decade as well as in the 1961-71 decade, the population decreased, i.e., the net migration overlapped the natural increase. As far as the remaining Regional Administrative Units are concerned, although the net migration in the period 1951-61 was lower than the natural increase and their population increased, the net migration in the period 1961-71 was higher than the natural increase and their population decreased.

The net total migration results from the balance of differences between the streams of inflow and outflow migration, which vary by Regional Administrative Unit.

*2. Summary of Developments*

The synthetic review of the above examined developments of the urban, semi-urban and rural population by Regional Administrative Units between 1928 and 1971 is summarized in the table above. The analytical review of the period 1920-71 as well as the expected developments for the period 1971-85 are indicated at the end of this study.

**c. expected developments, 1971-1985**

*1. Preliminary Remarks*

Following the historical analysis of Greek population by urban, semi-urban and rural areas, as well as by R.A.U., we shall try to set forth the projections of the expected developments of the population as a whole and by area. These projections are based on the past trends on the one hand, and on the other hand on the population development derived from international empirical data.

The 1971 census will be taken as a starting point and the year 1985 as a terminal point. More specifi-

cally, the projections for the total population are calculated for the years 1975, 1980 and 1985, whereas the projections for the population by R.A.U. are calculated only for the year 1985.

«The component method» has been used for the projection of the whole population, i.e., projections have been made separately for future births, deaths and net external migration. The expected population has resulted from the combination of all these particular projections. «The method of extending the current patterns of total population development» has been used for the population projections by Regional Administrative Units, i.e., demographic trends and other non-demographic factors have been combined accordingly.

From a series of optimistic and pessimistic hypotheses the intermediate ones were finally selected. It is on this base that the births, deaths and net migration have been estimated.

Further, we will consider firstly the projection of the total population and secondly the projection of the urban, semi-urban and rural population not only of the country as a whole but by R.A.U. as well.

*2. Total Population*

The following hypotheses have been adopted for the total population projection:

I) As regards mortality, we have accepted that the expectation of life at birth will be extended by two years for the males and by three years for the females during the period 1971-85 compared to that of 1965-69. This extension of life is expected to occur primarily if the infant mortality rate is controlled and secondly if mortality in general is reduced.

II) As regards fertility, it is expected that the gross reproduction rate will continue the slightly rising trend, shown in the period 1960-70, while the crude fertility rate will present a slight decrease.

III) As regards external migration, it is expected that emigration will decrease considerably whereas the repatriation will increase more rapidly, due to the continuous socioeconomic development of the country. The above hypotheses are summarized in the following table:

Period	Adopted hypotheses			
	Expectation of life at birth		Gross Reproduction Rate	Crude Fertility Rate
	Males	Females		
1960-64	67.9	71.2	1,062	18.1
1965-69	68.6	72.2	1,135	18.0
1970-74	69.4	73.2	1,149	17.3
1975-79	70.2	74.2	1,164	17.1
1980-84	70.9	75.2	1,179	17.0

Source: National Statistical Service of Greece (N.S.S.G.), Life tables, Vital statistics of Center for Planning and Economic Research (ΚΕΠΕ), «The Prospective Plan of Development of Greece».

The population projection technique which has been used is the following:

I) The population pyramid of Greece by sex and age, according to the census of the 14th March, 1971, has been transferred to the 1st of January, 1970, after some adjustments.

II) It is on the basis of the above-mentioned hypotheses regarding the possible future development of the components effecting population changes that the population of Greece has been estimated by quinquennial periods until 1985, as follows:

Years	Population	Average annual rate of change (%)
1920	5,017,000	—
1970	8,780,000	0.57
1975	9,115,000	0.75
1980	9,485,000	0.80
1985	9,900,000	0.85
(1987) <sup>1</sup>	10,070,000	(0.85)

<sup>1</sup>1. «The Prospective Plan of Development of Greece» predicts that the population of the country in 1987 will rise to 9,800,000 according to the pessimistic point of view and to 10,200,000 according to the optimistic point of view.

The population of each Regional Administrative Unit has been estimated on the basis of an intermediate hypothesis between the two extreme hypotheses about the future change, i.e.:

I) The hypothesis that the past trends will continue in the future too, and

II) The hypothesis that an active policy on regional development will be applied.<sup>1</sup>

Regional Administrative Units	1971 Census	Population projection (1985)	Annual average rate of change (%)
<b>Total population of Greece</b>	<b>8,769</b>	<b>9,900</b>	<b>0.85</b>
1. Attica and Islands	3,496	4,600	2.00
2. Central and W. Macedonia	1,440	1,690	1.15
3. Peloponnesos and W. Sterea			
Hellas	1,324	1,255	-0.40
4. Crete	457	444	-0.20
5. Thessaly	879	868	-0.10
6. Epirus	428	380	-0.85
7. E. Macedonia and Thrace	745	663	-0.85

The results of these estimations are given in the table above.

The projection results show that in 1985 the population of Greece will rise to 9,900,000 people. Thus, it is expected that the annual average rate of increase will be 0.85 per cent as estimated on the basis of the initial data of the 1971 census, and 0.80 per cent as estimated on the basis of smoothed and adjusted data on the 1st January, 1970.

If the above-mentioned hypotheses<sup>2</sup> about decreasing emigration and increasing repatriation are not realized, it should be expected that in 1985 the population will be reduced to only 9,740,000 people with an annual rate of increase of 0.75 per cent. It is expected that the rate of population change will show considerable differences by region as it has happened in the past, i.e.:

I) The Regional Administrative Unit of Attica and Islands as well as that of Central and Western Macedonia will continue to develop with a high rate of population increase. However, as compared to the past, the rate of increase shows a certain decline in the former and a certain rise in the latter.

II) Thessaly is expected to develop with an especially slow rate of decrease.

III) The population of Peloponnesos, Western Sterea Hellas and Crete is expected to develop with a slow rate of decrease.

IV) The population of Epirus as well as that of Eastern Macedonia and Thrace is expected to develop with a rather rapid rate of decrease.

The above mentioned population developments appear to be more favourable compared to those in-

1. See K.E.P.E. «Prospective Plan of Development of Greece», Part A', Ch. 14, «The Model of Regional Development», p. 279-300.

2. The already shown inflow of aliens seeking work or permanent residence will partly contribute to the realization of the hypothesis about emigration and immigration in Greece.

cluded in the «picture of trends» of «The Prospective Plan of Development of Greece,» but less favourable compared to those included in the «optimistic picture» of the Prospective Plan in question. This is due, as already stated, to the fact that the intermediate hypotheses about the future demographic development have been taken into account.

### 3. Urban Population

The urban population in 1985 is estimated on the basis of the total population and of the rate of urbanization for that year.

As it is estimated, the urbanization rate will rise, in 1985, by 67 per cent, depending upon the following hypotheses:

I) The participation rate of non-agricultural occupations in the labour force is expected to rise to 80 per cent according to the «Prospective Plan of Development of Greece.»<sup>1</sup>

II) The urbanization trends of the past are projected in the future.

III) None of the 1971 urban centers will turn to semi-urban in the next 15 years (1971-85), though in the same period it is expected that 14 semi-urban centers will become urban.

According to the above mentioned hypotheses and those regarding the future total population of the country, the urban population is expected to rise from 4,668,000 in 1971 to 6,620,000 inhabitants in 1985, i.e., the annual average rate of increase being 2.55 per cent.

The estimated development of urban population for the year 1985 includes on the one hand the popula-

Regional Administrative Units	Urban Population (in th.)			
	1971	1985		
	Total	+A	+B	
1. Attica and Islands	2,819	4,070	4,000	70
2. Central and W. Macedonia	752	1,120	1,105	15
3. Peloponnesos and W. Ste- rea Hellas	349	460	430	30
4. Crete	153	200	190	10
5. Thessaly	274	390	360	30
6. Epirus	105	130	130	—
7. Eastern Macedonia and Thrace	216	250	240	10
Total	4,668	6,620	6,455	165

A: Urban population estimated from agglomerations and cities according to the 1971 census definitions.

B: Urban population estimated from the semi-urban population, which as predicted will turn to urban in the period 1971-85.

tion of the already existing cities, in 1971, and on the other hand the population of those dynamic small towns which as predicted will turn to cities as shown in the previous table.

### 4. Semi-Urban Population

The semi-urban population in the year 1985 is estimated as a ratio to the total population of the country. It is thus accepted that this ratio of semi-urban population to the total will remain almost constant. Thus, according to the definitions of the 1971 census, it is estimated that the semi-urban population will rise to 1,136,000 in 1985, i.e., with an average annual rate of increase of 80 per cent.

However, it is predicted that the aforementioned size of the semi-urban population will be limited to only 1,000,000 people in 1985, due to the expectation that 14 semi-urban centers of 165,000 inhabitants will turn to urban centers<sup>2</sup> in the period 1971-85; on the other hand, certain semi-urban centers of decreasing population will become rural and others from rural will turn to semi-urban.

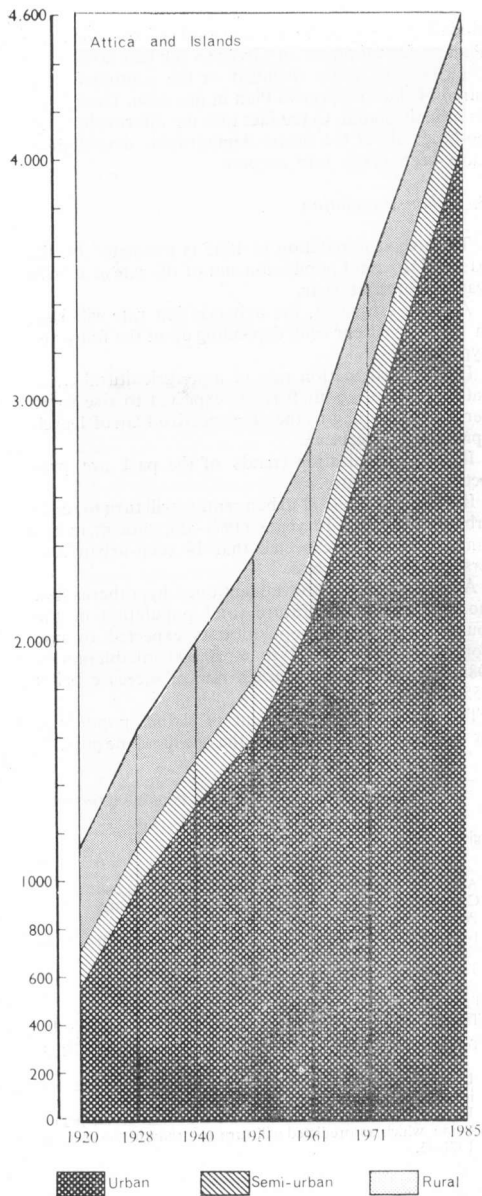
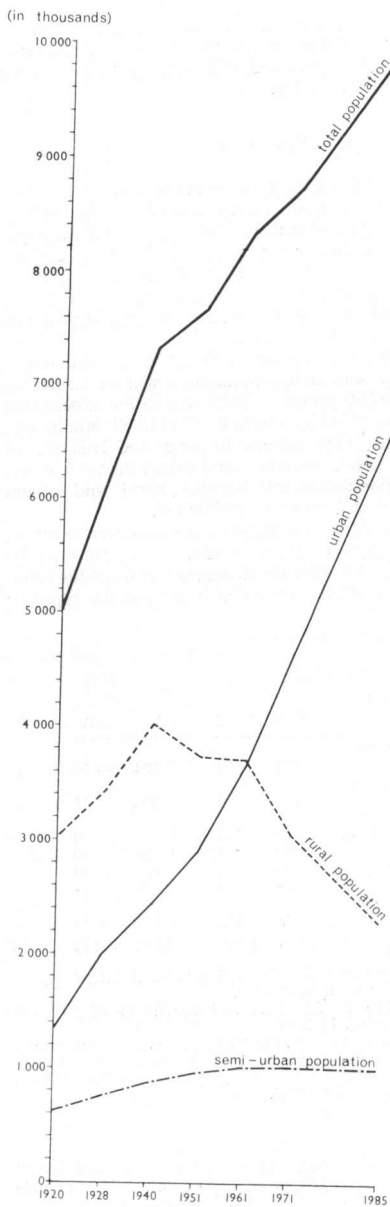
Corresponding hypotheses have also been made on the development of the semi-urban population by R.A.U., i.e., the past development trends of the semi-urban population on the one hand and the rapid or

Regional Administrative Units	Semi-urban population (in th.)				
	1971	Total	+A	-B	±C
1. Attica and Islands	262	260	+ 304	- 70	+ 26
2. C. and W. Macedonia	184	190	+ 208	- 15	- 3
3. Peloponnesos and W.S. Hellas	212	195	+ 222	- 30	+ 3
4. Crete	49	54	+ 59	- 10	+ 5
5. Thessaly	149	138	+ 165	- 30	+ 3
6. Epirus	35	40	+ 40	—	—
7. E. Macedonia and Thrace	128	123	+ 138	- 10	- 5
Total	1,019	1,000	+1,136	-165	+ 29
A: Semi-urban municipalities and communes (according to the 1971 census definitions).					
B: Semi-urban municipalities and communes of 1971 becoming urban in 1985					
C: Difference (±) resulting from the category of rural municipalities and communes of 1971 becoming semi-urban in 1985, as well as from the category of semi-urban of 1971, becoming rural in 1985.					

2. These centers either had a population of around 10,000 inhabitants or presented an exceptional rate of demographic development in the historical period under discussion.

1. Part A, p. 207.

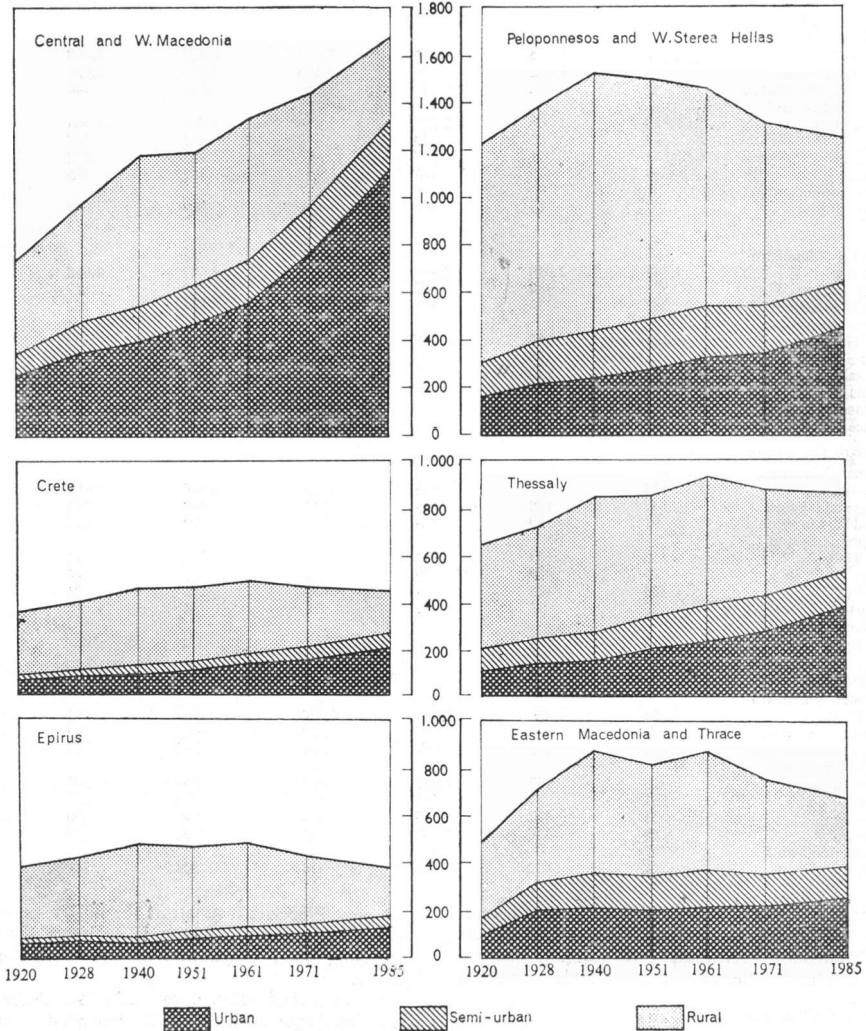
GREECE: Total, Urban, Semi-Urban and Rural Population, 1920-1985



*development and perspectives of the population of Greece, 1920-1985*

GREECE: Urban, Semi-Urban and Rural Population by Regional Administrative Unit, 1920-1985

(in thousands)





*Population by Regional Administrative Unit, 1920-1985* (in thousands)

	1920	1928	1940	1951	1961	1971	1985
<i>Total Population</i>							
<b>Regional Administrative Units</b>	<b>5,017</b>	<b>6,205</b>	<b>7,345</b>	<b>7,633</b>	<b>8,389</b>	<b>8,769</b>	<b>9,900</b>
1. Attica and Islands	1,158	1,622	2,001	2,356	2,816	3,496	4,600
2. C. and W. Macedonia	755	958	1,192	1,186	1,343	1,440	1,690
3. Peloponnesos and W.S. Hellas	1,228	1,384	1,528	1,494	1,464	1,324	1,255
4. Crete	347	386	438	462	483	457	444
5. Thessaly	643	721	837	852	933	879	868
6. Epirus	389	419	474	467	483	428	380
7. E. Macedonia and Thrace	497	715	875	816	867	745	663
<i>Urban Population</i>							
<b>Regional Administrative Units</b>	<b>1,343</b>	<b>2,010</b>	<b>2,444</b>	<b>2,923</b>	<b>3,647</b>	<b>4,668</b>	<b>6,620</b>
1. Attica and Islands	573	964	1,307	1,595	2,087	2,819	4,070
2. C. and W. Macedonia	263	354	388	460	564	752	1,120
3. Peloponnesos and W.S. Hellas	165	214	240	278	316	349	460
4. Crete	61	76	84	104	135	153	200
5. Thessaly	109	136	155	198	237	274	390
6. Epirus	66	71	64	89	95	105	130
7. E. Macedonia and Thrace	106	195	206	199	213	216	250
<i>Semi-Urban Population</i>							
<b>Regional Administrative Units</b>	<b>624</b>	<b>757</b>	<b>875</b>	<b>958</b>	<b>1,015</b>	<b>1,019</b>	<b>1,000</b>
1. Attica and Islands	147	178	194	232	240	262	260
2. C. and W. Macedonia	91	119	146	162	179	184	190
3. Peloponnesos and W.S. Hellas	153	183	207	212	215	212	195
4. Crete	25	29	36	42	45	49	54
5. Thessaly	103	108	124	136	151	149	138
6. Epirus	22	22	25	31	34	35	40
7. E. Macedonia and Thrace	83	118	143	143	151	128	123
<i>Rural Population</i>							
<b>Regional Administrative Units</b>	<b>3,050</b>	<b>3,438</b>	<b>4,026</b>	<b>3,752</b>	<b>3,727</b>	<b>3,082</b>	<b>2,280</b>
1. Attica and Islands	438	480	500	529	489	415	270
2. C. and W. Macedonia	401	485	658	564	600	504	380
3. Peloponnesos and W. S. Hellas	910	987	1,081	1,004	933	763	600
4. Crete	261	281	318	316	303	255	190
5. Thessaly	431	477	558	518	545	456	340
6. Epirus	301	326	385	347	354	288	210
7. E. Macedonia and Thrace	308	402	526	474	503	401	290

slow growth of some of the semi-urban and rural centers of each Regional Administrative Unit on the other hand, have been taken into account. The obtained results are shown in the last table on page 9.

##### 5. Rural Population

Specific projections on the development of the rural population of Greece haven't been made separately in this study. The rural population of the whole country and by Regional Administrative Unit for

the year 1985 has resulted as the difference between urban and semi-urban population from the corresponding total population as shown in the table above.

In the second volume, we shall examine the historical development of the total population of the Prefectures as well as the population of each rural commune of the country from 1920 to 1971 as well as the population trend towards increasing, decreasing or remaining stationary.