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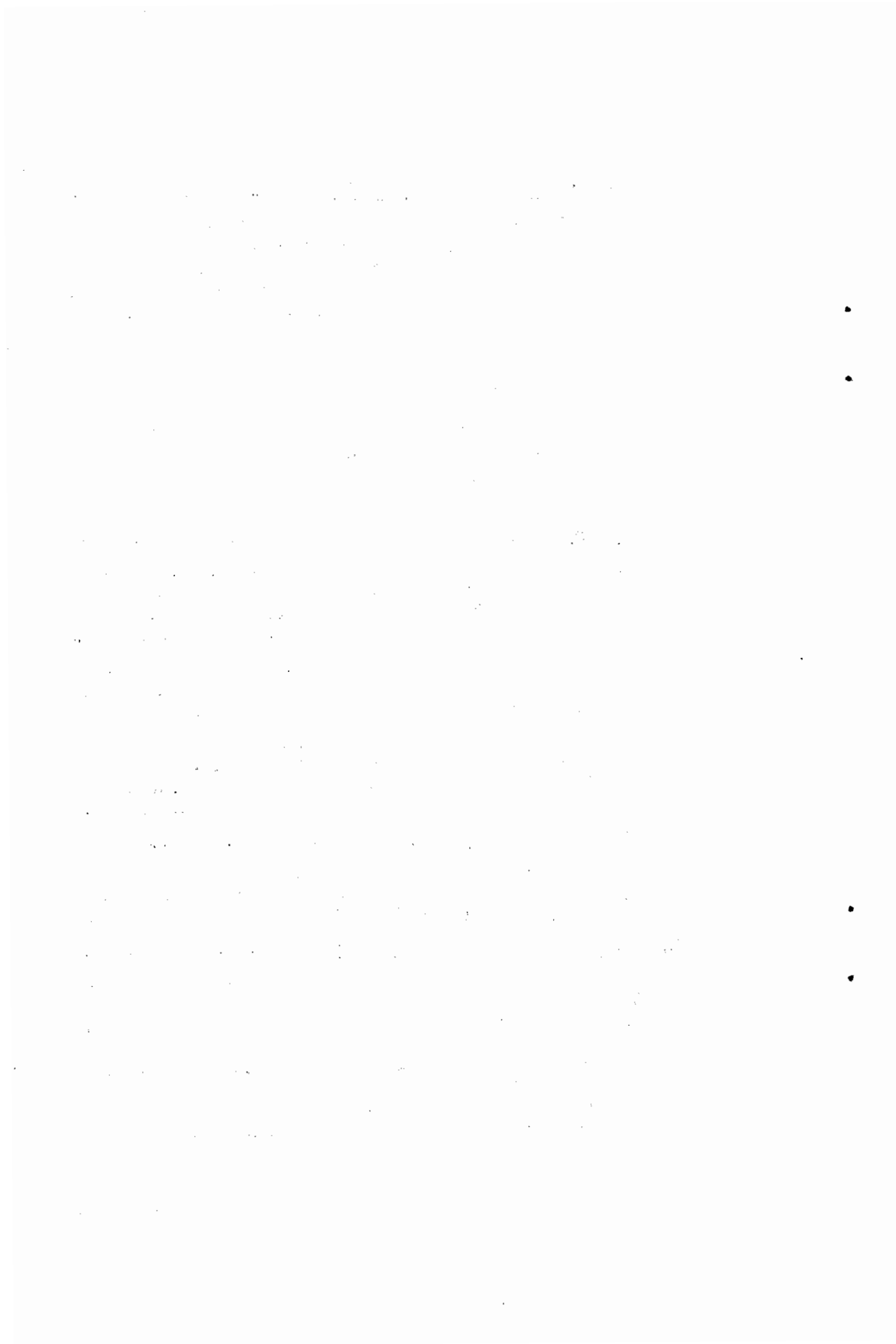
ECONOMIC COMMISSION FOR LATIN AMERICA
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Santiago, Chile, May 1961

PRELIMINARY STUDY OF THE DEMOGRAPHIC
SITUATION IN LATIN AMERICA

Note: This text is subject to editorial revision.

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The present report is neither a complete nor a definitive survey of demographic conditions in Latin America, since many of the estimates used in it will shortly have to be revised on the basis of new population census results. The report should be considered in relation to the document entitled Population trends in Latin America in relation to economic and social policy (E/CN.12/583) as it illustrates and substantiates some of the arguments presented there; especially those in section II (Salient features of Latin America population trends).

I

POPULATION SIZE AND RATE OF GROWTH

1. Latin America and the rest of the world

The population of Latin America, now about 200 million, is increasing faster than that of any other region of the world of comparable size. The current annual increase of about 5 million (2.5 to 2.6 per cent) exceeds the annual increase in the population of the United States (about 3 million) and in that of the Soviet Union (about 3.5 million). The population of Africa may now be increasing by 4 million annually, and that of Europe (excluding the Soviet Union) by about 3 million. The annual increments in the populations of India and China (mainland) are larger, but these two big countries have twice and three times as many inhabitants as Latin America.

In 1850, the combined number of inhabitants of all the Latin American countries probably totalled about 33 million^{1/}, i.e. less than the population of France at the same time. Today, the population of Brazil alone equals at least that of France, Belgium and the Netherlands in conjunction. Argentina, with 1.7 million in 1869, which was then about the same as the figure for Denmark, is now more populous than Denmark, Finland, Norway and Sweden combined. Mexico's population has recently become larger than that of Spain, although, in the more distant past, Spain alone was the main source of settlers for the greater part of the entire Latin

^{1/} Estimates by Willcox and Carr-Saunders.

/American region.

American region. Other Latin American countries which were hitherto no more heavily populated than some province of a European country, may now be compared to countries like Czechoslovakia, Greece, Portugal or Sweden.

The prodigious increase in the population of Latin America is also of relative importance, despite the considerable growth of population elsewhere in the world. The 33 million Latin Americans of 1850 represented 3 per cent in a world population of about 1.1 billion. Today, more than 200 million strong, they constitute almost 7 per cent in a world population that falls slightly short of 3 billion. By all indications, this increment, both relative and absolute, may be expected to continue.

As calculated by the United Nations,^{2/} the population of Latin America may well exceed 300 million by 1975 and almost attain 600 million by the end of the century (see table 1). As a result, it will successively exceed other populations, even though they are also growing. The population of the United States was overtaken in 1942, and that of the United States and Canada together in about 1955. Latin America may overtake the Soviet Union by 1965, Africa by 1975, and Europe (excluding the Soviet Union) towards the end of the century. The accuracy of these estimates may be debatable, but they are in any case indicative of the comparative growth potentials inherent in current trends and observations.

2. Recent and expected population growth of Latin American countries

Rates of population growth are not uniform throughout the region. For a very exact comparison of current national rates of population increase, it will be necessary to wait for the new census results. The selected official and unofficial population estimates recently published in the Statistical Supplement of the Economic Bulletin for Latin America vary in accuracy, partly in respect to the dates at which censuses were taken. Errors of comparison have been reduced to the minimum by a

^{2/} The future growth of world population (ST/SOA/Ser.A/28), New York, 1958. In addition to the population of the twenty republics, the figures include that of dependent areas in the Caribbean, and of the Guianas.

Table 1

POPULATION OF LATIN AMERICA AND OTHER WORLD REGIONS 1900-1960, AND
PROJECTIONS FOR 1975 AND 2000

(Millions)

Year	Latin America <u>a/</u>	Northern America <u>b/</u>	Soviet Union	Africa	Europe <u>c/</u>	Asia and Oceania <u>c/</u>	World
1900	63	81	115 <u>d/</u>	120	308	863	1 550
1925	99	126	165 <u>d/</u>	147	340	1 030	1 907
1950	163	168	181	199	393	1 393	2 497
1975	303	240	275	303	476	2 231	3 828
2000	592	312	379	517	568	3 899	6 267

Source: United Nations estimates.

a/ America South of the United States; b/ America North of Mexico; c/ Not including any part of the Soviet Union; d/ Rough estimate, according to present boundaries.

selection of estimates and projections for the middle of each decade, such as those presented in table 2. While not highly accurate, the comparison is undoubtedly significant.

During 1935 to 1955, when the population of the entire region increased at an average annual rate of 2.2 per cent, higher than average rates prevailed in Mexico, Colombia, Venezuela, Ecuador, the Dominican Republic, and most Central American countries. In Haiti, Bolivia and Uruguay, on the other hand, the rates were considerably lower.

The expected acceleration of growth in the entire region is reflected in the population projections for almost every country, with the significant exceptions of Argentina and Uruguay, where the rate of population growth is relatively slow and diminishing. Again, the countries with increases that are expected to be above average rates are Mexico, Colombia, Venezuela, Ecuador, the Dominican Republic and Central America.

At the current rates, the population increases by 1.5 million persons each year in Brazil, and by one million in Mexico. In Argentina and Colombia the annual increments are about 400,000 persons respectively, and in Guatemala 100,000. Uruguay's population, which is the slowest in growing, is being surpassed successively by the populations of Guatemala, the Dominican Republic and El Salvador.

3. Acceleration of population growth and its causes

The rate of population growth in Latin America has been rising with increasing momentum for some time. The regional population (including that of the dependent areas) grew, from perhaps 20 million in 1800 to 33 million in 1850 and 63 million in 1900 at an annual rate of 1.0 per cent during the first half-century and of 1.3 per cent during the second. According to calculations by the United Nations, it reached 99 million in 1925, 163 million in 1950, and may reach 303 million by 1975. These figures imply average rates of 1.8, 2.0 and 2.5 per cent for the three quarter-centuries, with a significant acceleration from about 1950 onwards.

Table 2
POPULATION ESTIMATES FOR THE TWENTY LATIN AMERICAN REPUBLICS,
1935-1975 AND AVERAGE ANNUAL RATES OF INCREASE

Country	Estimated population (thousands)					Average annual rates of increase (percentages)	
	1935	1945	1955	1965	1975	1935-55	1955-75
Brazil	37 150	46 215	58 456	74 572	95 788	2.3	2.5
Mexico	18 089	22 576	29 679	40 635	53 561	2.6	2.9
Argentina	13 044	15 390	19 122	22 959	27 120	2.0	1.7
Colombia	8 199	10 152	12 836	16 985	22 702	2.3	2.9
Peru	6 483	7 727	9 396	12 420	16 382	1.9	2.8
Chile	4 700	5 541	6 761	8 581	10 800	1.9	2.4
Cuba	4 221	4 932	6 131	7 553	9 183	1.9	2.0
Venezuela	3 300	4 267	5 882	8 081	10 779	3.0	3.0
Haiti	2 581	2 928	3 388	4 133	5 209	1.4	2.2
Bolivia	2 540	2 850	3 334	4 152	5 299	1.4	2.4
Ecuador	2 296	2 781	3 691	4 912	6 446	2.5	2.8
Uruguay	2 030	2 256	2 615	2 896	3 143	1.3	0.9
Guatemala	1 996	2 438	3 258	4 320	5 902	2.6	3.1
El Salvador	1 531	1 742	2 109	2 730	3 571	1.7	2.7
Dominican Republic	1 484	1 889	2 454	3 319	4 605	2.6	3.2
Honduras	1 042	1 261	1 660	2 179	2 819	2.5	2.7
Paraguay	988	1 247	1 498	1 779	2 214	2.0	2.0
Nicaragua	728	923	1 245	1 692	2 269	2.8	3.0
Panama	546	703	914	1 206	1 587	2.6	2.8
Costa Rica	551	695	951	1 335	1 827	2.9	3.3
Total twenty republics	113 499	138 513	175 380	226 459	291 206	2.2	2.6

/ESTIMATED AND

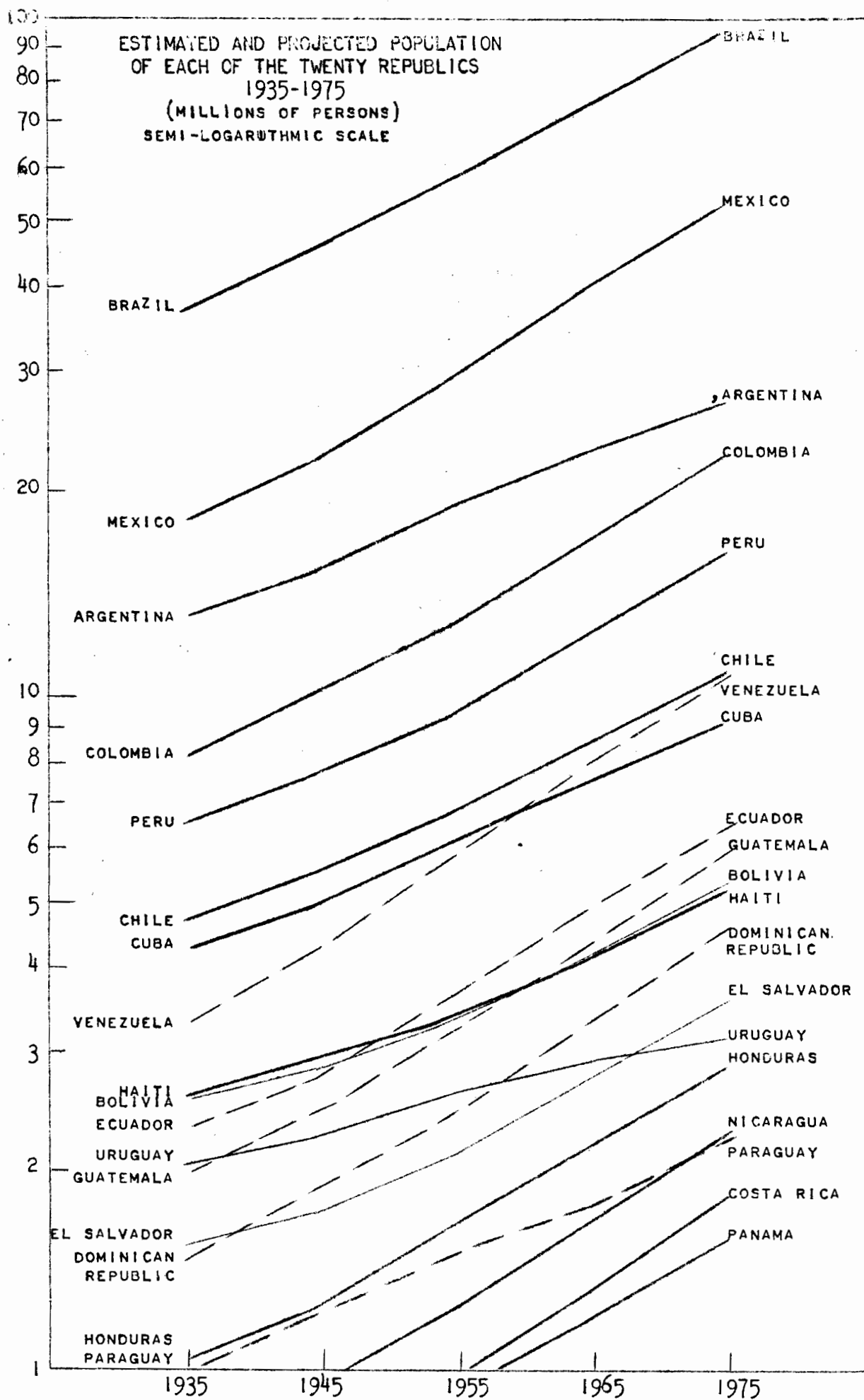


Table 2 gives the following indications for Latin America as a whole:

Year	Population (millions)	Average annual increase (Percentage)
1925	94	...
1935	113	1.9
1945	139	2.0
1955	175	2.4
1965	226	2.6
1975	291	2.5

The sharp acceleration which occurred about 1950 and is still continuing, may eventually come to an end, at least according to the population projections selected for the Bulletin. What are the reasons for the recent marked recovery and what possibility is there of attaining a peak rate in the near future?

Rates of population growth are determined by birth rates, death rates and, in relation to Latin America, by inter-continental migration.

Immigration from Europe, especially to Argentine and Brazil, occurred on a large scale mainly from about 1880 to 1930. This movement may have considerably accelerated the growth of a regional population which, at the turn of the century, was still comparatively small. The temporary revival of immigration about 1950, mainly to Argentina and Venezuela, had an appreciable effect on these two countries, but comparatively little on a much enlarged regional population.

According to the information available, birth rates were very high throughout the region of the order of 45 per mil if not more, until early in the present century. In most Latin American countries, they are still at that level, no significant modification having taken place. If, despite immigration, rates of growth were no more than about 10 to 15 per mil, the death rates must generally have been more than 30 per mil, or even attained 35 per mil. Expectation of life at birth must have averaged little more than 30 years in the region as a whole.

/There has

There has probably been no significant rise in birth rates in any country of the region. True, in some instances the statistics seem to point to one, but the evidence is open to doubt.^{3/} On the other hand, birth rates fell sharply around 1930 in Argentina and Uruguay, and less decisively or more recently in Chile, Cuba and Southern Brazil.

The acceleration of population growth, in relation to the declining importance of inter-continental migration and constant or, in some countries, falling birth rates, is predominantly the result of sharp reductions in mortality.

Earlier in the century, reliable vital statistics were an exception in Latin America. For 1911-13, the following recorded birth rates are perhaps indicative: 49.0 per mil in El Salvador, 47.0 in Costa Rica, 39.9 in Chile, 37.4 in Argentina and 32.4 in Uruguay. In the same period, the following death rates were recorded: 31.0 per mil in Chile, 25.0 each in Costa Rica and El Salvador, 16.8 in Argentina and 13.5 in Uruguay. It is probable that birth rates of the order of 45 and death rates of the order of 30 per mil were the general rule in Latin America at the beginning of the century, and in most of the countries even more recently.

In many Latin American countries, the registration of births and deaths has now improved, and independent estimates of birth and death rates have also been made. Nevertheless, additional estimates are still needed where the available data are not up-to-date or fully reliable. The following data and range estimates have been assembled for the 1960 Statistical Supplement of the Economic Bulletin for Latin America, Vol. VI, N° 1, (see table 3).

In at least fifteen of the twenty republics, the most likely estimates of the birth rate remain within the range of 40 to 50 per mil; in Guatemala

^{3/} Rising birth rates were recorded in several countries during 1945 to 1955. As the registration of vital statistics was becoming more accurate at that time, the rise may simply reflect the increasing completeness of statistical coverage. In some instances (e.g. that of Venezuela), it may have been partly the result of a real increase in fertility associated with the eradication of malaria and consequent improvement in the people's health. It is admitted that a slight or temporary rise in the birth rate may have been due to this improvement, but the evidence is inconclusive.

Table 3

BIRTH RATE; DEATH RATE, AND NATURAL INCREMENT, 1953-57

(Per 1 000 inhabitants)

Country	Birth rate		Death rate		Natural increment	
	A	B	A	B	A	B
Argentina	24.1	24-25	8.5	8-9	15.6	15-16
Bolivia	31.0	41-45	11.0	18-25	20.0	18-25
Brazil	43.0 <u>a/</u>	42-45	20.6 <u>a/</u>	16-19	21.4 <u>a/</u>	24-28
Colombia	40.4	44-45	13.0	15-17	27.4	28-29
Chile	34.4	35-37	12.6	13-14	21.8	22-24
Ecuador	46.0	44-48	15.3	15-17	30.7	28-32
Paraguay	46.6 <u>b/</u>	45-50	10.6 <u>b/</u>	12-18	36.0 <u>b/</u>	30-35
Peru	36.9	42-48	13.0	15-22	23.1	22-30
Uruguay	19.0 <u>c/</u>	18-20	7.4 <u>c/</u>	7-8	11.6 <u>c/</u>	10-13
Venezuela	<u>46.5</u>	<u>44-47</u>	<u>10.1</u>	<u>12-15</u>	<u>36.4</u>	<u>25-32</u>
<u>Total</u>	38.3	39-41	15.7	14-17	22.6	23-26
Costa Rica	48.0	44-48	10.5	10-15	37.5	30-36
Cuba	25.1 <u>d/</u>	30-32	5.8 <u>e/</u>	10-11	...	20-21
El Salvador	48.0	44-48	14.1	14-18	33.9	28-32
Guatemala	49.9	46-52	20.5	18-25	29.4	25-30
Haiti	...	45-55	...	25-35	...	15-25
Honduras	42.2	44-48	11.0	15-20	31.2	25-32
Mexico	46.4	45-47	13.6	14-17	32.8	29-32
Nicaragua	42.6	45-50	9.2	14-18	33.4	28-35
Panama	39.2	38-42	9.3	9-12	29.9	28-31
Dominican Republic	<u>41.1</u>	<u>45-50</u>	<u>8.8</u>	<u>15-20</u>	<u>32.3</u>	<u>25-32</u>
<u>Total</u>	43.4 <u>f/</u>	43-46	12.5 <u>f/</u>	15-18	30.9 <u>f/</u>	26-30

Source: Economic Bulletin for Latin America, Vol. V, N°. 1 "Statistical Supplement for 1960", table 3.

A= Recorded rate or official estimate.

B= ECLA estimate.

a/ Estimates for 1940-50.b/ Estimates for 1950.c/ 1953-54.d/ 1952.e/ 1956.f/ Excluding Haiti.

/and Haiti,

and Haiti, they are probably nearer 50, while in Bolivia and Panama they might be nearer 40. On the other hand, the birth rate in Chile may now be about 35-37, that in Cuba 30-32, that in Argentina 24-25, and that in Uruguay as low as 18-20. In 1940-50, birth rates of 38.5, 38 and 25 have been estimated for the Brazilian States of Rio Grande do Sul, São Paulo, and the Federal District.^{4/} Despite the lack of precise data, a death rate as high as 30 per mil may still conceivably exist in the case of Haiti though, no doubt, progress has been made in that country. In Bolivia, Guatemala and, possibly, Peru, average death rates may still exceed 20 per mil. In most of the countries, death rates now fluctuate between 12 and 20 per mil, while the lowest rates are those of Panama (9-12), Cuba (10-11), Argentina (8-9) and Uruguay (7-8). With the given age structures, such diverse death rates correspond to expectations of life at birth varying between 40 and 65 years.^{5/} At this level of mortality conditions, the existence of modern sanitary methods can bring about an unusually rapid decline in the death rate. With a birth rate of 45 per mil, a population increases at a rate of nearly 3 per cent when life expectancy reaches 50 years and of 3.5 per cent when it attains 60 years.

4. Future prospects

Efficient methods for the control and eradication of death-dealing diseases have recently become available and have been applied with conspicuous success. Death rates have been sharply reduced in poor countries which have only small staffs of fully qualified doctors and limited hospital equipment. The desire to avoid disease and postpone a premature death is universal and irresistible, especially since it is now common knowledge that practical measures to that effect can be taken

4/ A.V. de Carvalho, A População Brasileira (Estudo e Interpretação), Conselho Nacional de Estatística, 1960.

5/ For the several federal divisions of Brazil, expectations of life at birth in 1940-50 were estimated by Carvalho as ranging from 36 to 53 years, op.cit. With probable sanitary progress, the federal divisions of Brazil may now comprise about the same range of mortality conditions as is to be found among the several Latin American republics.

at comparatively small cost. Even in poor countries, an expectation of life of nearly 60 years has been reached, a result which, sooner or later, will prevail in every part of Latin America. Meanwhile, the rate of progress might be retarded at certain times and in certain places by difficulties of communication, unsanitary living habits, an unpropitious climate, superstition, and other handicaps to effective administration. On the other hand, mortality is already very low in Argentina and Uruguay, where some of the more expensive medical services have been available on an extensive scale for some time past.

There is more room for speculation concerning possible future changes in birth rates, despite the seemingly almost constant rates observed so far in most of the Latin American countries. A distinction must be made, however, between factors which can induce radical change and those which result in relatively small modifications only.

The comparatively low birth rates of Argentina and Uruguay are the result of a profound change of attitude in regard to family formation, similar to the change that has occurred in all the technologically advanced regions of the world. For the past 25 years or so, the Argentinian birth rate has fluctuated slightly from 23 to 25 per mil. Very much the same situation has prevailed, since the end of the Second World War, in areas such as the United States, Canada, the Soviet Union, Australia and New Zealand. There is no need to look for any significant change in the near future, as it may be assumed that the transformation of the respective social attitudes has run its full course. A minor reduction in the rates of population growth in Argentina and Uruguay may result from the declining effect of immigration and the change in age composition.

A cultural tradition of the European type, commercialization, urbanization, industrialization, a high degree of literacy, and the prevalence of industrial and white-collar employments are some of the factors underlying the comparatively low birth rates of Argentina and Uruguay. To a lesser but perhaps increasing extent, most of these conditions also exist in other Latin American countries and there is at least a possibility that, sooner or later, they may produce similar effects on the

/personal and

personal and social attitudes affecting family formation. The precise combination of the conditions which produce this effect cannot be determined and, in view of the almost complete absence of indications, forecasts of possible decreases of fertility in some of these countries cannot be made at this moment.

In Chile, Cuba and southern Brazil, the conditions which are apt to lead to a marked decrease in the birth rate have perhaps already had an effect, as witnessed by birth rates which are lower than 40, though still higher than 30 per mil. In Puerto Rico as well, birth rates declined recently during a period of rather extensive social and economic changes. But it is not clear, at the present time, whether the apparently "incipient" fertility decline in these cases is continuous. The most likely development is a further decline in the birth rates in Chile, Cuba and southern Brazil, but as yet there are no clear indications of a continuation in the downward trend.

There is no evidence in any of the areas where the current birth rate is higher than 40 per mil that marked changes are imminent. On the other hand, minor changes may take place without any significant modification of the attitudes towards family formation in the given environments. In this connexion, both the decrease in mortality and progressive urbanization may have some effect.

A minor change in the age composition of a population derives from the reduction of specific death risks. Chances of survival are thus increased in early childhood and at advanced ages in particular, with the result that a slight reduction takes place in the relative numbers of adults of early to middle age in the population, i.e., the groups capable of procreation. In respect to the total population of all ages, the birth rate is therefore slightly decreased.^{6/}

6/ As calculated in theoretical population models, decreases in mortality can produce the following reductions in the birth rate while fertility remains constant at a level where, on an average, three daughters are born to each woman in the course of her reproductive life: when expectation of life is only 30 years, the birth rate is 47.7 per mil; when expectation of life rises to 40, 50 and 60 years, the birth rate falls to 46.0, 44.9 and 43.8, per mil. Meanwhile, the death rate falls far more rapidly, from 33.7 per mil when expectation of life is 30 years to 23.3, 15.8 and 9.6 per mil. (The future growth of world population, United Nations Publications, Sales No.: 58.XIII.2.)

In every country of the region birth rates are markedly lower in urban than in rural areas, evidently because of the differences in living conditions between the two types of environment. As the proportion of the population that lives in urban areas is increasing rapidly, the maintenance of the same birth rates in urban and rural areas pushes down the average birth rate for the region as a whole.^{7/}

Decreases in the birth rate resulting from these circumstances will in no case be rapid. So long as there is room for a sizable reduction in the death rate, the possible small reduction in the birth rate will be far from sufficient to offset the tendency towards accelerated population growth. Eventually, however, death rates will be so low that, despite continued improvements in health conditions, they can no longer be reduced to any great extent. As urbanization continues to progress the decrease in the birth rate may then begin to compensate for possible additional decreases in the death rate. When this occurs, the population continues to increase rapidly but no longer at an ever-quickenening pace. No significant reduction will take place in the rate of population growth without profound changes in social and individual attitudes, such as those which have occurred in Argentina and Uruguay.

These are some of the considerations which governed the calculation of population projections and their selection for the Statistical Supplement of the Economic Bulletin. In addition, it was also thought that immigration would probably continue in the cases of Argentina and Venezuela whereas there might be persistent emigration from Bolivia and Paraguay. New census data, when available, may partly confirm these estimates and will, in any event,

^{7/} The following relationship, for example, might be considered. In a population with high fertility, the rural birth rate might typically be of the order of 50 per mil, while the urban birth rate, even more typically, might be about 40 per mil. So long as only 30 per cent of the population is urban, the average birth rate for the country is 47 per mil. When half the population has become urban, the national birth rate may average 45 per mil. Actually, of course, the relationship is not so precise. Since, in Latin America, urbanization usually involves the movement of large numbers of young women from rural to urban places, the corresponding decrease in the national birth rate may be somewhat greater. Furthermore, fertility is generally lower in large cities than in small towns. The increase in the size of towns and cities may thus contribute to reducing a country's average birth rate.

provide the criteria for their revision and improvement. It is unlikely that current trends and expectations for the near future have been severely misjudged.

In short, then, the Latin American population is now growing at an annual rate of 2.5 to 2.6 per cent. This average will probably be maintained for some time but will no longer be exceeded to any great extent. In several countries, annual rates of 3 per cent have been, and will be, significantly improved upon. In some countries, the already reduced birth rates will result in future rates of increase that are nearer 2 per cent or, in the cases of Argentina and Uruguay, even lower. High mortality or emigration may still result in less-than-average rates of growth in Bolivia, Haiti and Paraguay. On the whole, little future change in the average rate of growth of the Latin American population is foreseen.

5. Problems relating to population size

Owing to its rapid growth, Latin America's population has doubled in the past 32 years from 1928 to 1960. It will probably double again within the next 25 to 30 years. Each time, the new generation is twice that of the fathers. As growth requires certain changes in structure, rapid adaptations to increased size are necessary within each generation.

(a) Latin America and other regions of the world

Superficially, it might safely be asserted that sheer size of population is not the outstanding problem of the Latin American countries. This appears to be the case, at least from a comparison of populations among groups of world regions with land areas that are similar in size.

More precisely, these six areas of roughly equal land surface do not possess an equal variety of natural resources or of suitable land for different uses. According to summary statistics compiled by FAO, the comparative position of Latin America in the latter respect is not unfavourable.^{8/} Only 29 per cent of the entire land surface is waste land in Latin America as against 59 per cent in the Near East, 46 per cent in the Far East, 45 per cent in North America, and 43 per cent in Africa. Apart

^{8/} FAO, Production Yearbook, 1959. The statistics are, of course, not fully comparable for a variety of reasons.

Table 4

POPULATION AND AVERAGE POPULATION DENSITY OF GROUPS OF WORLD
REGIONS WITH LAND AREAS COMPARABLE TO THAT
OF LATIN AMERICA, 1958

Regions	Land area (thousands of km ²)	Population (millions)	Persons per square kilometre
Latin America <u>a/</u>	20 537	197	9.6
Northern America <u>b/</u>	21 497	1 193	9.0
Soviet Union	22 403	206	9.2
Tropical and Southern Africa <u>c/</u>	19 961	155	7.8
Europe and Mediter- ranean <u>d/</u>	20 872	568	27.2
Southern and Eastern Asia <u>e/</u>	21 535	1 519	70.5

a/ America South of the United States.

b/ America North of Mexico.

c/ Africa South of the Sahara.

d/ Europe West of the Soviet Union, Africa North of the Sahara and Asia West of Pakistan.

e/ Asia South of the Soviet Union and East of Iran,

from two thirds of the land area in Latin America are forested - more than in any other major world region - and one quarter is dedicated to permanent meadow and pastureland. It follows that only 7 per cent of the currently productive land is under crops, and even within that percentage rather extensive systems of crop rotation and shifting agriculture are still widely practiced. Viewed in this perspective, Latin America's land resources seem abundant, even though the eventual productivity of land that is potentially suitable for more intensive use is still a matter of speculation and depends in addition on the development of appropriate techniques.

It has often been pointed out that the comparative abundance of extensive land resources has facilitated rapid economic development in both the United States and the Soviet Union. In this respect, Latin America can scarcely be considered at a disadvantage as compared, for instance, with Europe, though the particular types of resources may be differently distributed in each area. If sheer weight of numbers relative to land resources is a severe disadvantage, the resulting problem cannot conceivably be as acute in Latin America as it is in Asia.

(b) Differences among the Latin American countries

It should be recognized, on the other hand, that the distribution of the population is highly uneven among the Latin American countries as a whole, as well as within each country. The figures in table 6 show population densities in 1958 ranging from 3 persons to the square kilometre in Bolivia to 129 in Haiti. Both the low and the high densities give rise to special problems.

The low average density in some countries is evidence that settlement is exceedingly scant over vast areas although other parts of the same countries are inhabited quite thickly. Ceteris paribus, where population density is low, the overhead charges involved in expanding transport and communications, markets, or the educational network are so high as to discourage economic development. Under certain conditions, a larger population might be accommodated, with less relative cost, in an economy affording higher levels of living. Considerable further increases in the population might then be positively desirable, especially if the economic and social structures were such as to permit a more advantageous redistribution of the population in relation to a rational exploitation of the natural resources available.

Table 5
LAND AREA, POPULATION, AND POPULATION DENSITY OF THE TWENTY
LATIN AMERICAN REPUBLICS, 1958

Country	Land area (square kilometres)	Population, (thousands)	Persons per square kilometre
Brazil	8 513 844	62 725	7.4
Argentina	2 778 412	20 248	7.3
Mexico	1 969 269	32 518	16.5
Peru	1 285 215	10 213	7.9
Colombia	1 138 355	13 968	12.3
Bolivia	1 098 581	3 551	3.2
Venezuela	912 050	6 499	7.1
Chile	741 767	7 298	9.8
Paraguay	406 752	1 570	3.9
Ecuador	270 670	4 048	15.0
Uruguay	186 926	2 700	14.4
Nicaragua	148 000	1 378	9.3
Cuba	114 524	6 541	57.1
Honduras	112 088	1 828	16.3
Guatemala	108 889	3 546	32.6
Panamá	74 470	995	13.4
Costa Rica	50 900	1 076	21.1
Dominican Republic	48 734	2 679	55.0
Haiti	27 750	3 583	129.1
El Salvador	20 000	2 276	113.8

/High, or

High, or considerable, population densities prevail in the Central American and Caribbean countries. But even the density in Haiti (129 persons to the square kilometre) is greatly surpassed by that in Puerto Rico (261) and by still higher densities in some of the tropical island and river delta areas of Asia. Problems of population pressure are, nevertheless, felt in less densely inhabited areas, especially if the given density has been attained rapidly and recently. Under these conditions, there has been too little time and opportunity to accommodate social and economic organization and techniques to the requirements of more efficient utilization of resources. Again, the problem is not directly determined by numbers of population, but rather by the difficulties encountered in attaining the needed levels of efficiency. Meanwhile, the scarcity of resources may be keenly felt, and any amelioration of the situation obviated by further increases in the population.

Though, in a world-wide perspective, Latin America still seems favoured by a comparatively low average density of settlement, it has problems of population pressure and population shortage because of unequal geographic distribution. It is clear that these problems cannot easily be dismissed if a specific and detailed examination is made of the possibilities and obstacles in the social and economic development of the different countries. With the prospect of further increases in the population, some of these problems will tend to be mitigated while others will be intensified,

(c) Geographic distribution within countries

Within many of the countries, the geographic distribution of habitation is even more strikingly uneven. Comparisons to this latter effect have been made in a previous United Nations publication regarding South America,^{9/} use being made of data and estimates for 1950, and projections for 1980, in respect of the major administrative divisions of South American countries^{10/}

^{9/} The Population of South America, 1950-1980 (ST/SOA/Series A/21, New York, 1955).

^{10/} Provinces and Territories of Argentina; Departments of Bolivia; States and Territories of Brazil; Provinces of Chile; Departments, Intendencias and Comisarias of Colombia; Provinces and Territories of Ecuador; Departments of Paraguay; Departments of Peru; Departments of Uruguay; States and Territories of Venezuela; Counties of British Guiana. In addition, capitals forming a separate federal entity, and a selected group of districts (partidos) with high population density in the Buenos Aires-Rosario area of Argentina. Territorial divisions are those of 1950.

(see the two maps reproduced here from the document cited).

In 1950, a belt of intermediate and, in places, relatively high population densities can be seen to have surrounded a vast interior region in which human settlement was exceedingly scanty. The southern extremity of the continent, likewise, was very thinly inhabited. As a result, almost every South American country comprised both areas of fairly dense population and huge tracts that were all but uninhabited.

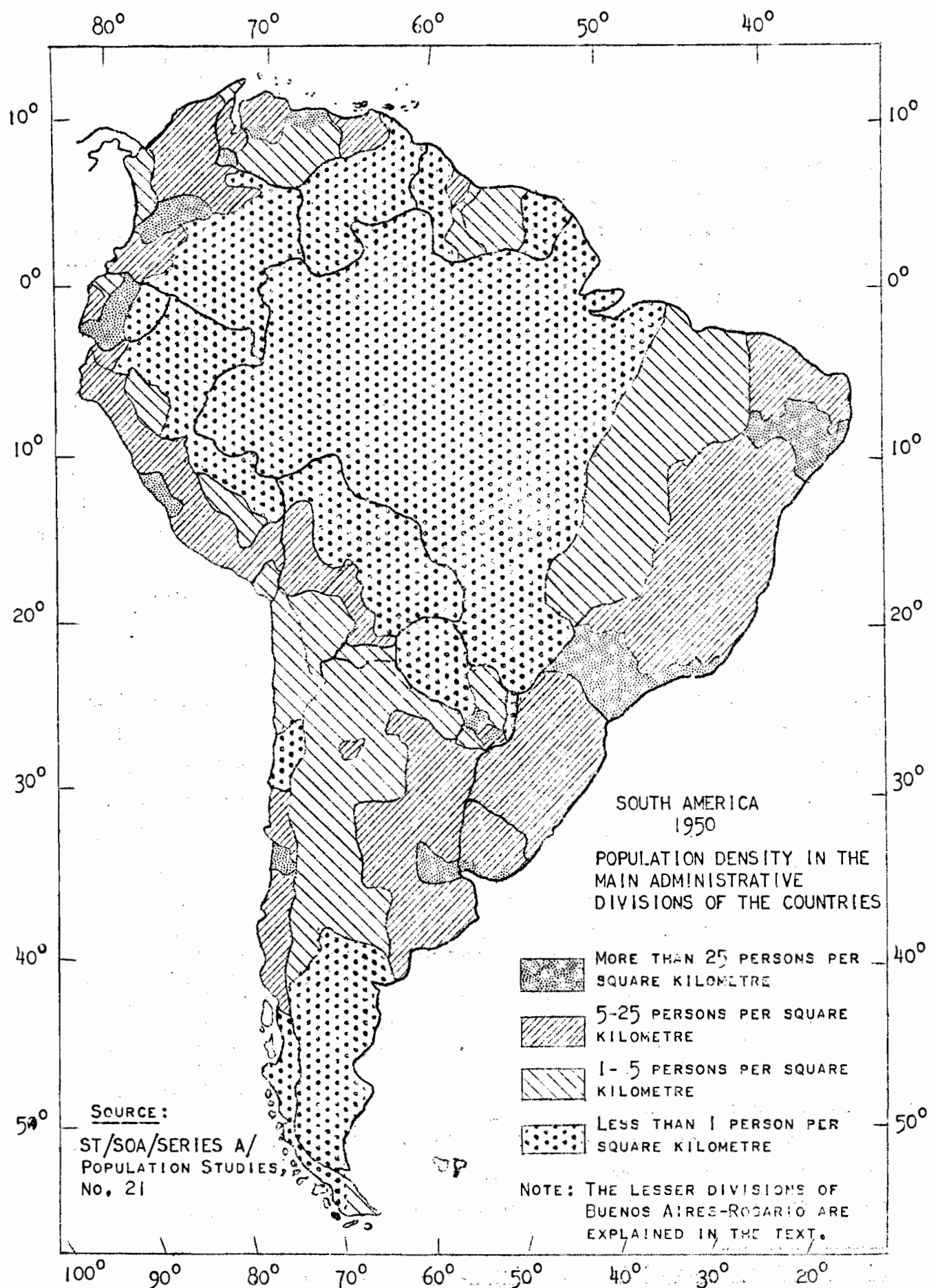
By 1980, contiguous solid zones appear in the outer ring of relatively dense settlement, comprising long belts with densities of 25 or more inhabitants alongside both the Atlantic and the Pacific littoral; in 1950, areas of such density appeared in patches only. Nevertheless, the trends calculated suggest little reduction by 1980 in the vast areas of the interior and the extreme South where settlement is most sparse.

In terms of the territorial units selected for the comparison, the following observations can be made. One half of the respective national population is found within 1/8 of the land area of Colombia, 1/11 of the area of Brazil, 1/20 of the area of Chile, and 1/40 of the area of Argentina and Paraguay; the other half of each national population is widely scattered over the remainder of the national territories. When the areas with lowest population densities are selected, it can be noted that one half of the national territory has only 1/11 of the population in Argentina, only 1/20 in Brazil and Chile, 1/30 in Paraguay and Venezuela, and barely 1/70 in Colombia and Ecuador.

"These great inequalities in the geographic distribution of the population of South American countries are only in part the result of differences in topography, climate and soil. It is, of course, evident that agricultural settlement is greatly favoured by the natural advantages of some areas and severely discouraged by the natural obstacles of other areas. Nevertheless, to an important extent the present distribution of the population is also the result of historical accident and of transportation difficulties hitherto found insuperable." 11/

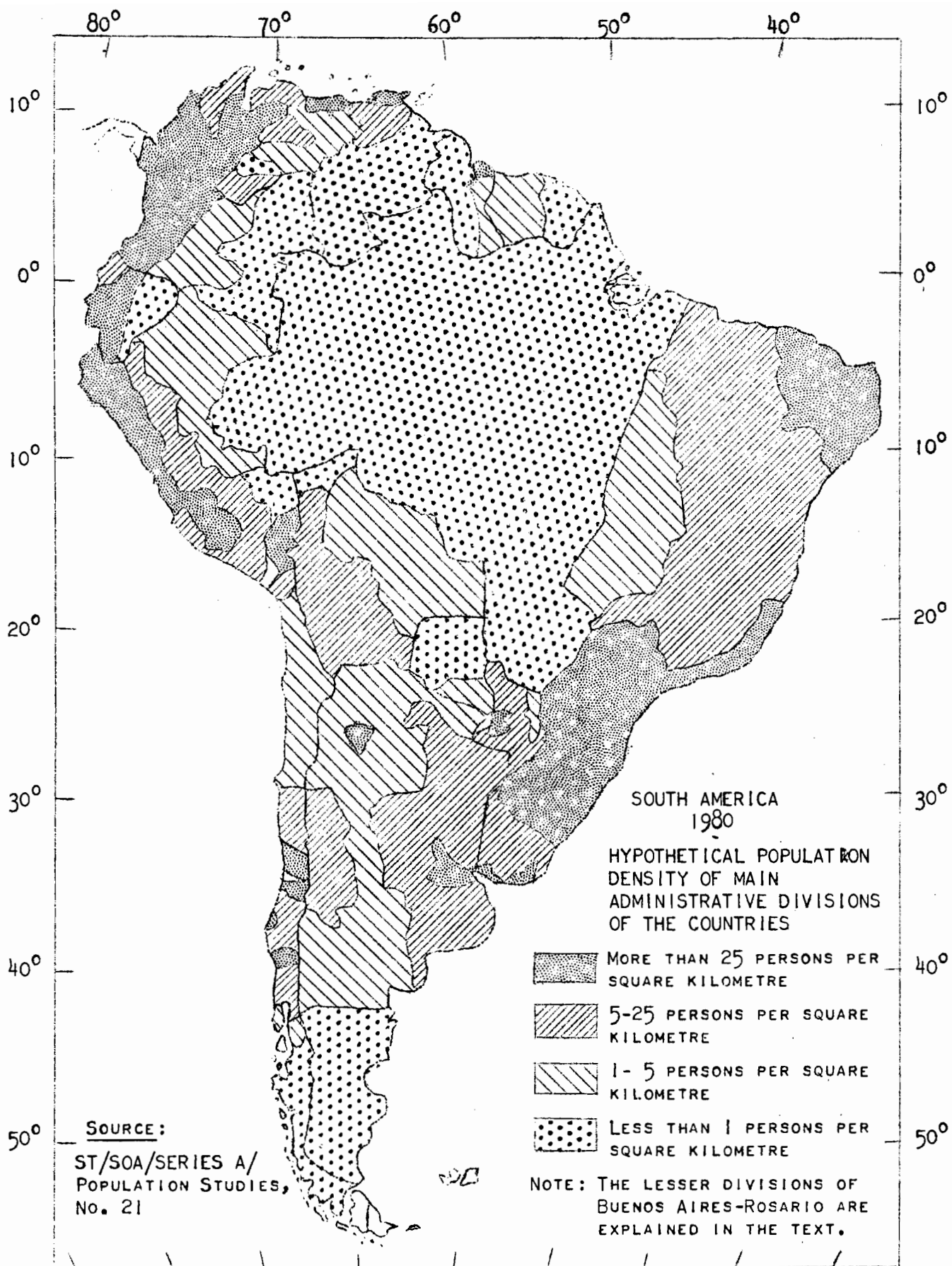
In the same publication, it was calculated how many inhabitants lived in areas of a given average population density in 1950, and how many persons may be expected to inhabit areas with an equal average density in 1980. The

11/ The Population of South America, 1950-1980, op.cit.



THE FRONTIERS MARKED ON THE MAP ARE NOT NECESSARILY OFFICIALLY ACCEPTED OR
SUPPORTED BY THE UNITED NATIONS.

/SOUTH AMERICA



THE FRONTIERS MARKED ON THE MAP ARE NOT NECESSARILY OFFICIALLY ACCEPTED OR SUPPORTED BY THE UNITED NATIONS.

/areas are

areas are not the same at the two dates since a contraction occurs in the areas of thinnest settlement, an expansion in relatively densely-settled areas, and various shifts in areas of intermediate population density. As shown in the results below, areas of very sparse, sparse and moderate population density will contain approximately equal numbers of inhabitants in both 1950 and 1980, whereas the population of areas with a more appreciable density (25 or more persons to the square kilometre) will increase more than three-fold. In fact, virtually the entire population increment of South America, i.e., more than 100 million, will be reflected in the growth and expansion of areas of the latter type. The population of areas with a significant density, hitherto a minority, will become a decided majority. Very nearly the same results were also obtained in the calculation for each individual country.

As a check on the plausibility of this calculation, we may consider census data for Mexico, including the provisional results of the 1960 census which are now available. It can be noted that, from 1930 to 1960, the population of Mexico increased by 18 million (i.e. more than doubled, as might the population of South America between 1950 and 1980). At the same time, the population of federal States of Mexico having, at each given date, average densities of at least 25 increased by more than 14 million, and, in fact, almost quadrupled.

These calculations for South America, roughly confirmed by observations for Mexico, are of great significance. The emergence of large contiguous areas of appreciable or high population density favours economic development of a modern type. Transport difficulties can be overcome with increased ease. A large and diversified labour force can be more readily assembled in centres specializing in better integrated productive processes. Local markets can be organized on a larger scale. The cost of education and public health services can be distributed more equitably.

Opportunities for more intensive, co-ordinated and efficient economic organization are thus coming into being which have not hitherto existed, in the same areas, to a comparable degree. The forms of economic and social organization, naturally, should also be adapted to the opportunities for greater integration in production, distribution, social services and

Table 6

POPULATION INHABITING MAJOR ADMINISTRATIVE DIVISIONS OF SOUTH
AMERICAN COUNTRIES WITH SPECIFIED POPULATION
DENSITIES, 1950 AND 1980

(Millions)

Density per sq. kilometre	1950	1980
Total (all densities)	<u>110.3</u>	<u>222.6</u>
Under 1	4.2	5.0
1-5	10.3	10.2
5-25	53.3	57.7
25 and over	42.5	149.7

Table 7

POPULATION INHABITING FEDERAL ENTITIES OF MEXICO WITH SPECIFIED
POPULATION DENSITIES, 1930, 1940, 1950 AND 1960

(Millions)

Density	1930	1940	1950	1960
Total (all densities)	<u>16.6</u>	<u>19.7</u>	<u>25.8</u>	<u>34.6</u>
Under 5	2.2	2.3	2.5	1.1
5-25	9.0	10.8	10.8	13.7
25 and over	5.4	6.6	12.5	19.8

/cultural advancement.

cultural advancement. Earlier forms of organization, which may have served well in an extensive type of economy where the human factor was relatively scarce, must be superseded by patterns more appropriate to changed and changing conditions.

In this context, efforts made for the increased use of the remaining tracts of scarcely inhabited lands can acquire added significance. Urbanization, industrialization and intensified uses of certain lands may profitably be supplemented with extensive uses derived from other lands, in a growing and diversifying economy.

Land settlement plans have long been entertained by the Governments of countries having extensive vacant areas available, and projects are now being carried out on a considerable scale. Still, the number of settlers involved remains small when it is compared, e.g., with the large increases in the population of already settled lands. Nor can the process be expected to become as dynamic as the opening up of the inner frontiers in North America during the last century. Migrant farmers, determined to live under pioneer conditions, are no longer so numerous as they were then, and this is a vital consideration.^{12/} In South America, obstacles to internal transportation are far more severe. Furthermore, experience in remunerative commercial farming methods, suited to tropical conditions of soil and climate, is still in its infancy. These adverse circumstances notwithstanding, additional benefits, especially through a resulting diversification of products, may nevertheless result from the extended use of newly settled areas, especially if this supplements the more important developments in the sections of the country where the majority of the population is situated and where density of settlement, already appreciable, is increasing further.

The contiguous zones of relatively dense settlement, as has been shown, are themselves expanding as a mere function of local natural increases in the population. Meanwhile, a process of urbanization is under way in those same areas and the implications of this for economic and social development prospects merit the closest study.

^{12/} "An isolated plantation in the midst of empty country might fail where millions of people on many plantations might succeed." P. James, Latin America (revised edition), New York, 1950, p.510.

6. The problem of a high rate of population growth

If the rate of population growth is a major problem, the world wide comparison shows that the situation in Latin America, in this respect, is rather serious.

Viewed in the abstract, the economic problem of population growth appears in the following terms. As an increased generation of children replaces that of its parents, the available durable goods, and the factors of production to secure a flow of products for current consumption, must be increased proportionately to ensure at least the maintenance of a given level of living. These so-called "demographic" investments, i.e., those which merely prevent a deterioration in living conditions, must be met by increased savings.^{13/} Consequently, particularly where incomes are low, little extra savings can be effected to provide for an increased efficiency of production and, thereby, a rise in the level of living. Economists often express the needed "demographic" investments - i.e., those needed merely to offset the economic effect of population growth - by the formula

$$r = \frac{b}{a} ,$$

where r is the rate of population growth (per cent per year), a is an estimated or assumed capital-output ratio, and b is the percentage of annual national income which must be saved.

In Latin America, typical rates of population growth are between 2 and 3 per cent per year while capital-output ratios may be variously estimated in the order of 2 or 3. According to the formula, then, between 4 and 6 per cent of national income will have to be saved merely to maintain the level of living if population grows at 2 per cent per annum, and between 6 and 9 per cent, if the growth is 3 per cent.

^{13/} The savings in question are "net savings", deduction being made for the portion of savings necessary to offset depreciation of existing capital.

Table 8

POPULATION, 1950 AND 1958 AND RATE OF POPULATION
GROWTH, 1950-1958, IN MAJOR REGIONS
OF THE WORLD

Region	Population (millions)		Average annual increase, 1950-1958 (percentage)
	1950	1958	
Latin America <u>a/</u>	163	197	2.4
Africa	198	231	1.9
Asia <u>b/</u>	1 376	1 591	1.8
Northern America <u>c/</u>	168	193	1.7
Soviet Union	181	206	1.6
Europe <u>b/</u>	395	420	0.7

a/ America South of the United States.

b/ Not including any part of the Soviet Union.

c/ America North of Mexico.

Greater savings than these are required to effect improvements. The formula in which this further relationship can be quantitatively examined is

$$k = \frac{1}{R} - (1 + y)(1 + p) - \frac{1}{R} = \frac{y + p + yp}{R}, \text{ where}$$

k is the annual capital requirement in percentage of national income; y is the desired rate of increase of per caput income; p is the rate of population growth; and R is the incremental capital-output ratio. ^{14/}

For simplicity, let us take 2.5 per cent as the rate of population growth, actually observed as the Latin American average. The capital-output ratio then becomes a determining factor either as regards savings needed to effect a given rate of growth in national per caput product, or as regards the rate of growth in per caput product attainable with a given rate of savings. What actually is the average capital-output

^{14/} ECAFE/28, 28 February 1958, "Demographic Aspects and some related economic problems in the ECAFE region", p.116. For simplicity, yp can be omitted from the formula; the quantity is insignificant for practical purposes when y and p are both small. "The capital output ratio itself is not a significant concept. It depends on the gestation period, which varies according to the type of investment, and the utilization of the equipment."

ratio, under present Latin American conditions, has not yet been unequivocally determined. As a plausible assumption, let us suppose that it equals 2.5,^{15/} in which case 6.25 per cent of national income will have to be saved - deduction made for capital depreciation - in order merely to maintain the given level of average per caput income. With these assumption the following relationship then obtains for population growth at 2.5 per cent and a capital-output ratio of 2.5:

Net savings required (per cent of national income)	Increase in <u>per caput</u> income (per cent per year)	Increase in total national income (per cent per year)
6.25	0	2.5
10	1.5	4
15	3.5	6
20	5.5	8

Since the capital-output ratio is unlikely to change much within a short time, considerable savings and an appreciable rate of growth in total national income are necessary to prevent a deterioration of per caput income in the face of population growth at the given rate. An increase in savings, however, can bring about significant changes. According to the above, net savings at ten per cent of national income can result in a doubling of total income in 18 years, consistent with a doubling in per caput income in 47 years; savings at twenty per cent of national income will result in a doubling of national income in 12 years, consistent with a doubling in per caput income in 20 years.

^{15/} This assumption is made merely because it is consistent with certain available approximate estimates. Gross savings, on the Latin American average, are of the order of 15-20 per cent of national product. Net savings, accordingly, may be of the order of 10-15 per cent or, as a mid-point of the estimated range, 12.5 per cent. During certain recent years, an average rate of growth in gross national product near 5 per cent has been observed. With the formula, presently discussed, a net savings rate of 12.5 per cent, a growth in gross national product by an annual 5 per cent, and population growth at an annual 2.5 per cent, are mutually consistent when the capital-output ratio equals 2.5.

While domestic savings are not the only factor determining economic growth, their role can be decisive. However, given present levels of income, the pressures for a rising standard of living, and the rate of population growth, how high a rate of savings can be obtained?

The calculation at this level of abstraction appears simple, but actually many factors intervene. Incomes and propensities in their disposal are variously distributed, local resources are of diverse kinds, and details of economic strategy, in relation to international conditions and internal social pressures, will have to be arranged in greatly varying ways. The terms of international trade, external loans and interest payments, the substitution of imports, etc., further blur this picture. Even then, among the many factors affecting the capacity to save, the rate of growth of the population and the concomitant age composition can play a large part. In the rapidly growing populations of Latin America, the ratio of children to adults is high and will remain so unless or until population growth is slowed down via a significant reduction of the birth rate. In the concrete conditions, the particular circumstances of each situation have to be kept in full view.

Detailed illustrations of the economic effects of population growth have been provided in a study by Coale and Hoover.^{16/} In this study, alternative population projections were made assuming declines in mortality and either a maintenance of the high level of fertility or, alternatively, sharp declines in fertility. It was then calculated how the several economic sectors might develop in relation to each of the alternative population trends. At the end of 30 years, the population will, of course, be larger, if fertility remains high than if it decreases. Nevertheless, this larger population, according to the calculated economic prospects, would then have a smaller total aggregate income than the smaller population, calculated on the alternative assumption. The difference in income per head of the population would accordingly be even greater. How does this happen?

^{16/} A. Coale and E. Hoover, Population Growth and Economic Development in Low-Income Countries (Princeton University Press, Princeton, U.S.A., 1959). The calculations were carried out with data for India and for Mexico, but it was concluded that the findings are relevant under a variety of conditions.

Decreases in fertility reduce the proportion of children while, for a period of 15 or 20 years, the number of adults remains unaffected. An equal potential labour force can then divert an increased proportion of the product to productive rather than the strictly "demographic" investments with cumulative effects on the economy. So far as the economic and demographic argument is concerned, a high rate of population growth constitutes a definite brake on the rate of economic growth and, more particularly, on the rise in personal and family levels of living.

This conclusion is of great force and almost inescapable when economic and demographic variables - but no others - are taken into the joint calculation. But whether this actually happens in practice does not depend on economic and demographic forces alone. It depends, in part at least, on a concurrent change in individual and social attitudes as they affect production, consumption, savings and investments and on the existence of adequate economic machinery that will encourage savings and channel them into investments which enhance the efficiency of production.

The attainment of economic goods, which would motivate the requisite economic behaviour, is not the precise substitute for traditional social values associated with the raising of larger families. It is then uncertain whether that transformation of attitudes, which causes the hypothetical decline in birth rates, results precisely in those changed propensities to save on which depend the calculated economic gains. Children might, e.g., be compensated for by an increased scale of current personal consumption, rather than by the calculated release of savings. In fact, the problem is also one of motivations and cannot be solved in economic and demographic terms alone. If the economic motivations predominate and the stimulus for added savings is keenly felt, a decline in sizes of families, allowing for the desired savings, might sometimes result. Not the decrease in birth rates, but rather the attitudes which provoke it, are decisive.

Of course, whatever the speed of population growth, and whichever the attitudes that support it, economic and social policy will have to face the consequences. An effort that might be sufficient where population growth is slight will be highly inadequate where population grows rapidly.

II

THE PHENOMENON OF URBANIZATION

1. Nature of the phenomenon

There is no generally accepted criterion for distinguishing urban from rural localities. Forms of settlement and types of activity vary so that, in some instances, relatively small population nuclei exhibit more typically "urban" features than do much larger population clusters in other instances. In many parts of Latin America, for example, the rural habitat is widely dispersed, while in the Andean highlands and some parts of Mexico and Guatemala villages of considerable size may often be found. However, regardless of the criterion adopted, the world-wide upsurge in urban populations is one of the most outstanding revolutions of the modern epoch.

Estimates of the world's urban population, covering a long period, have been assembled by Davis and Hertz.^{17/} Some figures, reproduced below, are very instructive. The world's total population has been growing at an ever faster rate, with increments per half-century equal to 30 per cent in 1800-1850, nearly 40 per cent in 1850-1900, and nearly 50 per cent in 1900-1950. The growth in urban population has accelerated even more significantly. Selecting, for instance, the 20,000-limit as the criterion for urban areas, one finds that the 1850 total is 2.3 times that of 1800, the 1900 figure 2.9 times that of 1850, and the 1950 urban population 3.4 times that of 1900.

A different observation is made for the rural population, if that is equated with the population of localities of less than 20,000 inhabitants. By subtraction from the above figures, this "rural" population would have grown from 884 million in 1800 to 1,121 million in 1850, 1,460 million in 1900, and 1,898 million in 1950. The increases, in successive half-centuries are by 27, 30 and 30 per cent respectively. If a lower size limit of 5,000 inhabitants is adopted, the growth in rural population is seen to have been 25, 27 and 21 per cent, respectively. Great precision cannot be

^{17/} Kingsley Davis and Hilda Hertz, Patterns of World Urbanization, quoted in UNESCO, Urbanization in Asia and the Far East, Proceedings of the Joint UN/UNESCO Seminar, Bangkok, 8-18 August 1956, p.56.

Table 9

WORLD'S URBAN POPULATION COMPARED TO WORLD'S TOTAL POPULATION, 1800-1950

Year	World popula- tion (millions)	5 000 and over		20 000 and over		100 000 and over	
		Population (millions)	Percent of world population	Population (millions)	Percent of world population	Popula- tion (mil- lions)	Percent of world popula- tion
1800	906	27.2	3.0	21.7	2.4	15.6	1.7
1850	1 171	74.9	6.4	50.4	4.3	27.5	2.3
1900	1 608	218.7	13.6	147.9	9.2	88.6	5.5
1950	2 400	716.7	29.8	502.2	20.9	313.7	13.1

attributed to this calculation, but the striking fact remains that growth in the world's rural population has changed little in the course of time despite marked acceleration in the growth of the world's total population.

The phenomenon is caused by many and varied factors which can be summarized in three categories, namely: (a) progressive change in the character of given localities, e.g., where a growing village attains urban status; (b) "pull" factors owing to the attraction exerted by urban areas which induces rural inhabitants to migrate to towns; and (c) "push" factors resulting from limitations in the rural environment which compel the rural migrants to move into towns.^{18/} Under changing conditions, the combination of these factors may vary.

The observations presented above suggest that, on the world-wide scene and over the long period, "push" factors may have predominated over "pull" factors. The rural environment is characterized by inherent rigidity and accordingly is more likely to absorb added population at constant, rather than at accelerating rates; the general acceleration of population growth then expresses itself in the ever more rapid growth of cities. True, the opposite interpretation is not excluded and it may well be that, over the

^{18/} In a perfectly fluid society, the "push" and "pull" factors become merged into differential advantages (or disadvantages) of the two respective environments, e.g., the difference between urban and rural wage levels. However, the speed of the movement cannot be thus accounted for, nor are the transitions between rural and urban activities and residence free from considerable "friction". It is not a fluid, but rather a highly viscous substance, whose movement is being observed.

past century and a half, the attraction of cities has been increasing; the resultant nearly constant growth of rural population may have been no more than accidental.

The question whether "push" or "pull" factors predominate in rural-urban movements cannot be resolved in these pages. But a clear understanding of the activating forces and motives is increasingly needed because of the large momentum which the movement has already acquired and because the implications for policies of economic and social development may sometimes be decisive.

2. Urbanization in Latin America

In a recent study of urbanization trends in Latin America,^{19/} the limit of 20,000 was selected to distinguish urban and rural populations. According to this rather high limit, 25 per cent of Latin America's population was "urban" in 1950. This percentage varied considerably from country to country, according to recent censuses. The highest percentages of population in localities with 20,000 or more inhabitants were recorded in Argentina in 1947 (48), Chile in 1952 (43), Cuba in 1953 (36) and Venezuela in 1950 (31); the percentage estimated for Uruguay in 1950 was 36. Low percentages were registered in 1950 censuses in the following instances: Haiti (5), Honduras (7), the Dominican Republic and Guatemala (11 each), El Salvador (13), and Nicaragua and Paraguay (15 each); in the 1940 census of Peru, 14 per cent of the population was found in localities of 20,000 and over.

Varying definitions are employed in Latin American population censuses to distinguish urban from rural populations. On the whole, a rather small size limit, such as 1,500, 2,000 or 2,500 constitutes the usual distinction as between the two categories of localities. In many countries, the administrative status or other characteristics of the given locality are taken into account. Generally, the census definitions include in the

^{19/} "Demographic Aspects of Urbanization in Latin America", Population Branch, Social Affairs, United Nations. Paper submitted to the Seminar on Urbanization Problems in Latin America, Santiago, 6-18 July 1959 (E/CN.12/URB/18).

"urban" category a large number of localities whose population is very much less than 20,000.

In the above-quoted source, population trends are examined for the groups of urban places which at the last census (usually 1950) had 100,000 and more, or 20,000 to 100,000 inhabitants. When the varying census definitions are taken into account it remains possible to discern the population trend of other localities - of less than 20,000 inhabitants in about 1950 - which at each census date were regarded as "urban", as well as the trend in "rural" population on the basis of the census criteria. Some of the average annual rates of increase in these four distinct population segments are brought together in the table below.

Special circumstances, such as the absence of medium-sized towns or of suburban development interfere with the dominant pattern in the smaller countries (e.g. Panama). Apart from such exceptions, it is generally apparent that big towns tend to increase faster than small and medium-sized towns and these, in turn, tend to grow faster than the rural communities. There is also some evidence of accelerated growth in urban populations, as against declines in the rate of growth of rural populations. Comparable census data, unfortunately, are not yet available in sufficient amount to measure precisely to what extent this generalization is warranted. In recent years, increases in the population of cities of the order of 5 per cent a year are characteristic of many countries in Latin America, except in those where there already exists a high degree of urbanization (Argentina, Chile and Cuba). Rural populations, on the other hand, now increase at rates ranging mostly from 0 to 2 per cent per year.

These and other observations were taken into account in preparing the estimates of urban and rural population presented in the 1960 Statistical Supplement of the Economic Bulletin for Latin America, reproduced in table 11. But the estimates depend on the assumption of fixed rates of increase in the rural population, estimated as follows: 2.5 per cent per year in Costa Rica; 2.0 per cent in Ecuador, British Guiana, Guatemala, Honduras, Nicaragua, Panama and the Dominican Republic; 1.5 per cent in Bolivia, Brazil, El Salvador, Mexico and Peru; 1.0 per cent in Argentina, Colombia, Cuba, Haiti and the West Indies; 0.5 per cent in Chile, Paraguay and Venezuela;

Table 10

AVERAGE ANNUAL PERCENT RATES OF INCREASE IN THE POPULATION OF LARGE CITIES,
SMALLER CITIES, OTHER "URBAN" LOCALITIES, AND THE RURAL POPULATION,

Country	Intercensal period	Average annual rate of increase in the population of localities having the following criteria			
		100 000 or more inhabitants at last census	20 000 to 100 000 inhabitants at last census	Others "urban" according to varying census definitions	"Rural" according to varying census definitions
Argentina	1895-1914	4.8	3.9	8.1	2.2
	1914-1947	2.5	2.5	0.8	1.4
Bolivia	1900-1950	2.9	2.0	0.4	1.0
Brazil	1940-1950	4.2	4.0	3.4	1.6
Chile	1930-1940	2.4	1.8	2.5	1.0
	1940-1952	2.6	2.4	2.5	0.0
Colombia	1938-1951	5.4	4.9	2.0	1.4
Cuba	1919-1931	3.4	2.5	3.1	2.3
	1931-1943	2.2	1.9	1.9	1.2
Dominican Republic	1920-1935	5.4	4.6	3.2	3.1
	1935-1950	5.8	3.2	3.5	2.0
El Salvador	1930-1950	2.9	1.6	0.4	1.4
Mexico	1940-1950	4.5	3.0	7.0	1.5
Nicaragua	1920-1950	4.7	...	1.1	1.8
Panama	1930-1940	3.8	...	3.9	2.3
	1940-1950	1.3	...	9.8	2.2
Venezuela	1936-1941	4.8	4.5	5.2	1.0
	1941-1950	6.8	7.3	5.8	-0.1

Table 11

URBAN, RURAL AND TOTAL POPULATION, 1950 AND 1960

(Unofficial mid-year estimates in thousands of persons)

Country	1950				1960			
	Urban a/	Rural	Total	Urban as per- centage of total	Urban a/	Rural	Total	Urban as percent- age of total
Argentina	11 038	6 151	17 189	64	14 203	6 795	20 998	68
Bolivia	1 013	2 006	3 019	34	1 381	2 328	3 709	37
Brazil	16 021	35 955	51 976	31	24 134	41 728	65 862	37
Chile	3 574	2 499	6 073	59	5 007	2 627	7 634	66
Colombia	4 360	6 274	11 334	38	7 066	7 705	14 771	48
Ecuador	885	2 312	3 197	28	1 468	2 819	4 287	34
Paraguay	388	1 009	1 397	28	564	1 060	1 624	35
Peru	2 973	5 548	8 521	35	4 418	6 439	10 857	41
Uruguay	1 893	514	2 407	79	2 246	514	2 760	81
Venezuela	<u>2 430</u>	<u>2 544</u>	<u>4 974</u>	<u>49</u>	<u>4 259</u>	<u>2 674</u>	<u>6 933</u>	<u>61</u>
<u>Total</u>	44 575	65 512	110 087	40	64 746	74 689	139 435	46
Costa Rica	232	569	801	29	415	729	1 144	36
Cuba	2 713	2 795	5 508	49	3 731	3 088	6 819	55
Dominican Republic	458	1 673	2 131	21	806	2 039	2 845	28
El Salvador	517	1 351	1 868	28	829	1 567	2 396	35
Guatemala	674	2 131	2 805	24	1 157	2 598	3 755	30
Haiti	312	2 800	3 112	10	633	3 093	3 726	17
Honduras	247	1 181	1 428	17	492	1 440	1 932	25
Mexico	11 003	14 823	25 826	43	17 423	17 203	34 626	50
Nicaragua	298	762	1 060	28	536	929	1 465	37
Panama	<u>337</u>	<u>460</u>	<u>797</u>	<u>42</u>	<u>491</u>	<u>561</u>	<u>1 052</u>	<u>47</u>
<u>Total</u>	16 791	28 545	45 336	37	26 357	33 403	59 760	44
<u>Total for twenty countries</u>	61 366	94 057	155 423	39	91 103	108 092	199 195	46

Source: Economic Bulletin for Latin America, Vol. V, "Statistical Supplement", table 6.

a/ Unless otherwise indicated, "urban population" is defined as that of localities with 2 000 or more inhabitants; the remainder being considered as "rural".

/and even

and even less in Uruguay. In so far as possible, the 2,000 population limit was adopted to distinguish between urban and rural populations but, as data are not available in this form for all countries, some of the estimates are not strictly comparable on such a basis, as pointed out in the footnotes. The estimates are not entirely comparable nor very reliable, but they are indicative of the trends implied in the available observations.

If these estimates were reliable, it might be inferred that in the 1950-1960 period the absolute increase in Latin America's urban population - including that of small towns -, of about 33 million, was twice as great as that of the rural population, of about 17 million. A continuation of this trend would make the urban and small-town population exceed the total of rural inhabitants in the course of the 1960's. However, the assumptions on which these estimates depend and the lack of consistent comparability must be borne in mind. It is to be hoped that more reliable estimates can be made in the near future on the basis of new census data.

The continuance of rapid urbanization is already indicated by the provisional results of the 1960 census of Mexico. From 1950 to 1960, the population of the Federal District, i.e. Mexico City and its suburban surroundings, increased from 3,050,000 to 4,829,000 i.e., at an annual rate of 4.7 per cent. The population of the remaining State capitals grew from 2,273,000 to 3,653,000 i.e., at a rate of 4.8 per cent. The rest of the country's population, part of which is also urban, increased from 20,468,000 to 26,144,000. These latter figures are consistent with an increase in rural population at the rate of 1.5 per cent - as estimated in the Economic Bulletin - if the population of the remaining urban localities increased at 4.7 per cent, i.e. about the same rate as that noted for the Federal District and the State capitals.

More data from new censuses are still needed to verify whether the estimates made for other countries are as realistic as they seem to be in the case of Mexico.^{20/}

^{20/} According to advance releases, provisional results of censuses in the Dominican Republic and Venezuela indicate another doubling in the national capitals of each of these two countries from 1950 to 1960. In the Dominican Republic, 342,000 persons inhabited towns and cities of 10,000 and more inhabitants in 1950, and 700,000 in 1960, an increase at a rate of 7.4 per cent per year; the population of other localities (1,794,000 in 1950 and 2,314,000 in 1960) increased at an average rate of 2.6 per cent. Population estimates for the Dominican Republic presented in this report will have to be revised.

3. Concentration in large towns

In several Latin American countries, the urban population is largely concentrated in one or two large towns. The next towns in size, in the same country, are usually much smaller. A comparison is made in table 12 showing the grouping of urban populations according to size classes of towns, for countries where census data in this respect are somewhat comparable.

In countries like Canada, the Netherlands and Sweden, numbers of persons inhabiting cities of four distinct size groups (5-20,000; 20-100,000; 100-500,000; and 500,000 or more inhabitants) are fairly similar. By comparison, the size class distribution of the urban population in countries like India and Turkey is regressive: inhabitants of small towns are relatively more numerous than those of big cities. The opposite pattern can be noted in Latin American countries, particularly in Argentina and Chile.^{21/} In Brazil, the combined population of the two largest cities (São Paulo and Rio de Janeiro) is not followed by nearly equal numbers in the next class of cities. In the smaller countries, rather few persons inhabit cities in the 20-100,000 class, and the population of the capital city alone generally exceeds the combined numbers of inhabitants of small towns (5-20,000).

For Latin America as a whole, it may be observed that the phenomenon of urban concentration reproduces itself in modified form. Unfortunately, comparable data for all countries cannot be assembled for the same date. In nearly all countries, towns are listed according to the population living within their administrative limits, and as a result the size of the large agglomerations is usually underestimated.^{22/}

^{21/} At the 1950 census of Venezuela, the population of Caracas, within the administrative city limits, was returned as 495,000, hence the seemingly regular population distribution appearing in table 13. The urban conglomeration of Caracas then contained 694,000 inhabitants, a criterion which would place the city in the above-500,000 class, leaving only 141,000 inhabitants in the 100-500,000 class.

^{22/} E.g., in 1947 there were 2,981,000 inhabitants within the administrative limits of Buenos Aires, as compared with 4,603,000 in the Greater Buenos Aires agglomeration; in 1952, the municipality of Santiago had 665,000 inhabitants, while the agglomeration of Greater Santiago had 1,348,000.

Table 12
INHABITANTS OF URBAN AREAS, GROUPED BY SIZE, IN SELECTED COUNTRIES

Country	Census date	Population inhabiting towns and cities with specified number of inhabitants (Thousands of persons)			
		5 000 to 20 000	20 000 to 100 000	100 000 to 500 000	500 000 and over
Canada	1951	1 440	1 655	1 584	1 698
Netherlands	1947	1 328	1 639	1 162	1 983
Sweden	1950	871	956	576	928
India	1951	32 435	19 359	12 827	10 724
Turkey	1950	1 654	1 315	739	983
Argentina	1947	1 359	1 776	2 924	2 981
Brazil	1950	3 432	3 619	2 041	4 832
Chile	1940	423	667	209	961
Costa Rica	1950	68	...	140	...
Dominican Republic	1950	158	57	182	...
Ecuador	1950	201	101	469	...
El Salvador	1950	162	79	162	...
Guatemala	1950	156	28	285	...
Haiti	1950	95	24	134	...
Honduras	1950	69	93	...	...
Nicaragua	1950	68	52	109	...
Panama	1950	67	...	201	...
Venezuela	1950	555	722	636	...

/But it

But it is interesting to compare combined urban populations by size class of towns and cities in the majority of Latin American countries with the corresponding distribution in the United States. The latter country shows a concentration in agglomerations of two million or more, as compared with smaller numbers of the population in agglomerations having from one-half to two million. In Latin America, the concentration in cities having within the administrative limits more than two million and in those having between 200,000 and 500,000 inhabitants, is very great if judged by the populations in towns and cities of less than 200,000, or between one-half and two millions.^{23/}

As already noted, the population of large towns tends to grow more rapidly than that of smaller towns. Accordingly, the "top-heaviness" of urban population structures, in Latin America, probably still is on the increase.^{24/}

4. The possible future trend

(a) Detailed projections

Urbanization is proceeding with such momentum that a major alteration of the trend is hardly likely to occur in the foreseeable future. But the detailed process is complex, both demographically and in respect of the economic variables which may further affect it.

From the demographic standpoint, the following factors relate to the shift of population from the rural to the urban sector:

- (a) differences in mortality between urban and rural areas;
- (b) differences in fertility between urban and rural areas;

^{23/} The 1950 population of agglomerations of more than 2 million inhabitants (Buenos Aires, Mexico, Rio de Janeiro and São Paulo) probably totalled about 13 million. The agglomerations of Havana and Santiago then exceeded one million inhabitants each, while those of Lima and Montevideo may then have come close to the million limit (census data for Peru and Uruguay for about 1950 are not available). On the other hand, the agglomeration of Caracas was greater than half a million, though the city, within administrative limits, was smaller; the same may also have been the case with several other cities reported smaller than 500,000 in 1950.

^{24/} Between 1950 and 1960, the population of Mexico City, within the administrative limits increased only from 2,235,000 to 2,698,000. Meanwhile, the population of the Federal District, outside the city limits increased from 816,000 to 2,131,000. The agglomeration of Buenos Aires 4.6 million in 1947, is reported to have attained 5.8 million in 1960, according to an advance release on the recent Argentine census.

Table 13
COMBINED NUMBER OF INHABITANTS IN URBAN PLACES, GROUPED BY SIZE, IN A
MAJORITY OF LATIN AMERICAN COUNTRIES, AND IN THE
UNITED STATES, ACCORDING TO CENSUSES TAKEN
IN OR ABOUT 1950

(Thousands)

Size of towns and cities (inhabitants)	Latin America (within administrative limits)		United States	
	Thirteen Republics <u>a/</u>	Eighteen Republics <u>b/</u>	Within administra- tive limits	Agglomerations
2 000- 5 000	4 235	...	...	6 490 <u>a/</u>
5 000- 10 000	3 270	...	...	8 139
10 000- 20 000	3 211	...	...	11 867 <u>d/</u>
20 000- 50 000	3 708	...	...	8 808 <u>e/</u>
50 000- 100 000	2 895	...	...	8 931
100 000- 200 000	2 559	2 832	7 424	8 393
200 000- 500 000	5 043	7 641	10 301	11 171
500 000-1 000 000	512 <u>f/</u>	2 610 <u>g/</u>	8 385	8 751
1-2 million	0	0	3 820 <u>h/</u>	6 766 <u>i/</u>
2-5 million	7 304 <u>j/</u>	9 638 <u>k/</u>	5 693 <u>l/</u>	15 833 <u>m/</u>
5 million and over	0	0	7 892 <u>n/</u>	12 296 <u>n/</u>

a/ Argentina, Brazil, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Paraguay and Venezuela.

b/ Including, in addition to the above, Bolivia, Chile, Colombia, Cuba and Mexico, but not Peru and Uruguay; for the latter two countries, there are no census data for 1950.

c/ Size limit: 2 500-5 000.

d/ Size limit: 10 000-25 000.

e/ Size limit: 25 000-50 000.

f/ Recife.

g/ Bogota, La Habana, Recife and Santiago.

h/ Detroit and Los Angeles.

i/ Baltimore, Cleveland, Pittsburgh, St. Louis and Washington.

j/ Buenos Aires, Rio de Janeiro and Sao Paulo.

k/ Buenos Aires, Mexico City, Rio de Janeiro and Sao Paulo.

l/ Chicago and Philadelphia.

m/ Boston, Chicago, Detroit, Los Angeles, Philadelphia and San Francisco.

n/ New York.

/(c) the

- (c) the volume and incidence, by sex and age, of net migratory transfers from the rural to the urban areas;
- (d) the attainment, by localities previously rural, of urban status; and
- (e) the territorial expansion of urban territory over areas that were previously rural.

The two last-mentioned factors depend on the definitions used to distinguish urban populations. As regards the first three, they both determine and are partly conditioned by, the age composition of urban and rural populations, respectively. Because birth rates are lower in urban areas, and because migratory transfers involve large numbers of adolescents and young adults, the age composition of urban populations - and other things being equal - favours higher crude birth rates, and sometimes lower crude death rates, than in the rural population.

Actually urban birth rates are lower than rural because the fertility of persons of reproductive ages is usually very much lower in urban areas. The difference between urban and rural death rates, if any, would hardly ever offset the difference in birth rates. Hence, natural increase in the urban population is almost invariably lower, and sometimes markedly lower, than in the rural population. Apart from factors (d) and (e) above, whose importance is secondary, maintenance of higher rates of urban growth depends on high rates of net rural-urban migration. On the latter, crucially important in urban and rural population trends, statistical data are scant and estimates made indirectly not very reliable. Efforts are under way to develop more adequate techniques for estimating and projecting urban and rural population trends as soon as new population census data become available.

Increasing urbanization can appreciably effect the trend in total national population for, as the proportion living under urban conditions increases, some decrease in the average birth rate for the country as a whole is likely to result. This could be so even if specific conditions, in urban and rural areas separately, remain unchanged.

Two detailed projections of urban and rural population have been made so far by ECLA, one for Colombia, the other for Cuba. Of the two countries, Colombia is more representative of prospects of urban and rural

/population change

population change in most Latin American countries. In Cuba, mortality is now very low, urbanization is far advanced, urban fertility has attained a comparatively low level and rural fertility, still high, is decreasing; this set of conditions is not very typical for Latin America.

In the projections for both Colombia and Cuba the assumption was made that migratory transfers from rural to urban areas would be such that, despite higher natural increase, the rural population would continue growing at the annual rate of one per cent, in broad agreement with some observations for the past. The following results were obtained.

Colombia had 11,459,000 inhabitants in 1951, of which 4,416,000 were urban and 7,043,000 rural. By 1981, a total population of 27,269,000 may be reached, of which 17,772,000 will be urban and 9,497,000 rural. In this case, the percentage of urban population in the total would thus increase during the thirty-year period from 38.5 in 1951 to 65.2 in 1981 and, while the rural population is assumed to increase by one per cent each year, the average annual increase in the urban population would be 4.8 per cent. The urban population would double between 1951 and 1965, and again between 1965 and 1981.

Cuba had 5,886,000 inhabitants in 1953, of which 2,664,000 were in localities of 5,000 or more inhabitants, and 3,222,000 in smaller localities regarded, for the purpose of the projection, as rural. By 1983, 6,289,000 of a total population of 10,632,000 would be urban, and 4,343,000 rural, according to this definition. The percentage of urban population would thus rise from 45.3 per cent in 1953 to 59.2 per cent by 1983, and the increase in the urban population would be at an average rate of 2.9 per cent, while the rural population continued growing by 1 per cent annually. In the 24 years from 1953 to 1977 the urban population would double.

The decisive difference between the two examples is that Cuban birth rates are lower in both urban and rural areas, and that a continued decrease in the rural birth rates is assumed. Less migration to cities is then needed to maintain rural population growth at the assumed level. A constant annual increase of 1 per cent in the rural population was assumed in both cases. Whether this latter assumption is also tenable in the long run depends on the part played by concurrent economic and social changes. Consideration of the economic implications may result in population projections

/such as

such as the two referred to here having to be revised in relation to some foreseeable consequences. In fact, demographic and economic projections should be made by successive mutual approximations.

(b) Rough estimates

Pending the receipt of new data and further experimentation with methods, trends in the urban and rural population of most countries have to be estimated roughly, on the basis of projections initially carried out in respect of the total population. Since progressive urbanization can entail a decrease in the average national birth rate, projections of total population in some of the more urbanized countries must take this possible effect into account. In fact, from available sets of alternative projections, selections were made with this criterion in view.^{25/}

Estimates have also been made, on the basis of evidence that is neither accurate nor complete, of probable trends in urban and rural population during 1950-1960.^{26/} In particular, the assumed constant rates of rural population increase may, in some instances, prove unrealistic. To assume that the same rates of rural population growth will be maintained over a future period is even more hazardous. No doubt new censuses will soon necessitate changes in some of the assumptions. But with the present limited information they may at least indicate the magnitude of possible future changes in Latin American urban and rural populations.

The estimates for 1975, given in table 14, have been calculated on this basis and hence should be regarded with due reserve. They can be compared with the estimates for 1950 and 1960 given in table 12.

According to the estimates for 1975, between 1950 and 1975 the urban population of the twenty republics could increase by almost 100 million. In all countries except Uruguay, Argentina and possibly Cuba, it will at least double; in Colombia, Ecuador and some Central American countries it may more than treble, and in Venezuela, the Dominican Republic and Haiti it may increase four-fold, if not five-fold.

^{25/} See the projections in table 3 and discussed in Section I, 3.

^{26/} See the estimates in table 12 and discussed in Section II, 3. So far as possible, the urban population has here been defined as that of localities with 2,000 or more inhabitants.

Table 14

ROUGH ESTIMATES OF URBAN, RURAL AND TOTAL POPULATION IN 1975

(Thousands)

Country	Urban	Rural	Total	Percent urban	Urban 1975 per 100 urban 1950	Rural 1975 per 100 rural 1950
Argentina	19 231	7 889	27 120	71	174	128
Bolivia	2 389	2 910	5 299	45	236	145
Brazil	43 620	52 168	95 788	46	272	145
Colombia	13 757	8 945	22 702	61	316	128
Chile	7 969	2 831	10 800	74	223	113
Ecuador	2 653	3 793	6 446	41	300	164
Paraguay	1 072	1 142	2 214	48	276	113
Peru	8 332	8 050	16 382	51	280	145
Uruguay	2 629	514	3 143	84	139	100
Venezuela	7 897	2 882	10 779	73	417	113
<u>Total</u>	<u>109 549</u>	<u>91 124</u>	<u>200 673</u>	<u>55</u>	<u>246</u>	<u>139</u>
Costa Rica	771	1 056	1 827	42	332	186
Cuba	5 598	3 585	9 183	61	206	128
El Salvador	1 612	1 959	3 571	45	311	145
Guatemala	2 405	3 497	5 902	41	357	164
Haiti	1 618	3 591	5 209	31	519	128
Honduras	881	1 938	2 819	31	357	164
Mexico	32 054	21 507	53 561	60	291	145
Nicaragua	1 019	1 250	2 269	45	342	164
Panama	832	755	1 587	52	247	164
Dominican Republic	1 861	2 744	4 605	40	406	164
<u>Total</u>	<u>48 651</u>	<u>41 882</u>	<u>90 533</u>	<u>54</u>	<u>290</u>	<u>147</u>
20 Republics	158 200	133 006	291 206	54	258	141

/Meanwhile the

Meanwhile the rural population of the twenty republics may increase by nearly 40 million. In some countries, these calculated increases are rather slight (Uruguay, Chile, Paraguay and Venezuela); in others they may amount to 50 per cent (Bolivia, Brazil, Mexico, Peru), and in some others to 66 per cent (Ecuador, The Dominican Republic and Central America). However, as the rural estimates depend rather closely on the assumptions made - with respect to estimates of urban and total population - they are, however, plausible partly in the nature of "foregone conclusions".

The urban population is here defined as including that of small towns (generally with at least 2,000 inhabitants) as well as big cities. It is calculated as constituting 54 per cent of total population by 1975, as against 39 per cent in 1950 and 46 in 1960. In 1950, the only countries where the urban population was larger than the rural one were Argentina, Chile and Uruguay; by 1960, Cuba, Venezuela and possibly Mexico may have joined this group; by 1975, Colombia, Panama and Peru will also have predominantly urban populations. Even Haiti and Honduras, where the urban proportions of the population were the smallest in 1950, may by then have become as urban as Brazil was in 1950.

This last-mentioned estimate, however, does not imply that Haiti and Honduras will soon possess cities as large as some in Brazil. The estimate presented here include small-town populations which, in the smaller countries will still constitute a large proportion of the urban totals.

(c) Small towns and big cities

The faster growth of big cities, as compared with small towns, has already been noted. Projections relating to cities of varying size can also be made, but the methods are still untested.

A report is now in preparation on some implications of the projected population growth in Colombia.^{27/} According to this, the composition of the urban population - defined here as that of population centres with 1,500 or more inhabitants - has undergone a substantial change which is bound to continue.

^{27/} ECLA, Division of Social Affairs, Some aspects of population growth in Colombia, (in preparation).

In 1938, 620,000 of the urban population of 2,534,000, or about a quarter, lived in cities with over 100,000 inhabitants (Barranquilla, Bogotá and Medellín); 499,000 in towns of 20,000 to 100,000 inhabitants; and 1,415,000, or well over half, in small towns of 1,500-20,000 inhabitants.

In 1951, of an urban population enumerated as 4,366,000, almost two-fifths, or 1,697,000, lived in the cities of 100,000 and over (Barranquilla, Bogotá, Bucamaranga, Cali, Cartagena and Medellín), 870,000 in the medium-sized towns, and 1,799,000, or slightly more than two-fifths, in the small towns with less than 20,000 inhabitants.

By 1965, when the urban population may total 8,891,000, more than half of the total, or 4,850,000, are likely to inhabit the cities of 100,000 and over (by then, to the above-mentioned cities would be added, Armenia, Cúcuta, Ibagué, Manizales, Palmira, Pasto and Pereira); the population of medium-sized towns might then total 1,601,000, and that of small towns, 2,440,000, not much more than a quarter of the urban total.

The inter-censal (1938-1951) and projected (1951-1956) changes are, in fact, similar. In each of the two periods, the population of large cities nearly triples, that of medium-sized towns nearly doubles, and that of small towns increases at a rate comparable to the increase in the total (urban and rural) population. The net result is a vast change in the composition of urban population by size of community.

No such detailed calculations have been made for other Latin American countries, but it is evident that a tremendous growth in big-city populations is to be envisaged.

Of an urban population totalling, for the twenty republics, 61 million in 1950, about 26 million lived in big cities (100,000 and over); also between 16 and 17 million persons then lived in metropolitan agglomerations greater than one million. The calculations for Colombia, as well as other observations, make it at least conceivable that the big-city population (100,000 and over) of Latin America could attain 80 million or more by 1975. By then the agglomerations in excess of one million inhabitants alone may comprise a combined total of 40, or even 50 million inhabitants.

5. Problems of rapid urban growth

The problems arising, almost visibly, as a result of the rapid city growth in Latin America are legion, while not all of these have been subject to quantitative study, they have already struck the concerned attention of many responsible observers. ^{28/} Urban facilities, such as public transport, sanitation, education, recreation, wholesale and retail trade in food and other essentials, repair and maintenance of streets, buildings and sewerage, social services, the treatment and prevention of crime, etc., barely keep up with the rapidly rising needs. Existing administrative frameworks are often inadequate for the increasing scope of their responsibilities. Municipal budgets are chronically depleted, while little revenue can be raised from the expanding group of under-skilled, under-employed families, as yet ill-adapted to urban careers and meeting few opportunities for attaining economic solvency. The needs of the new inhabitants, it appears, precede their ability to contribute effectively to the urban economy, and an acceleration in their rate of arrival increases the ratio of social charges on municipal income. To effect savings available for productive re-investment takes time, and though some city immigrants may eventually gain material success, substantially increased capital resources do not thereby become available in the period during which numerous immigrants continue to arrive.

The Organization of American States has estimated that there is a need for 4.5 million dwelling units to be rebuilt in Latin America's towns and capital cities to meet present shortages; "this is approximately the same as the number of families living in the urban slums and marginal shanty towns, which have been improvised in the vicinity of the population centres". ^{29/}

^{28/} Many economic, social, administrative and sociological problems were reviewed in the contributions made to the Seminar on Urbanization Problems in Latin America, Santiago, 6-18 July 1959 (see E/CN.12/URB/2 t 25, also conference papers submitted during the proceedings, and the Report of the Seminar, E/CN.12/URB/26/Rev.1; UNESCO/SS/URB/LA/26/Rev.1). A more systematic, but much shorter review, was made in Chapter IX ("Urbanization in Latin America") of the United Nations Report on the World Social Situation (E/CN.5/324/Rev.1; ST/SCA/33, Sales No: 1957.IV.3 pp.170-192).

^{29/} The Pan American Union, (Programme of Planning, Housing and Building, Department of Economic Affairs), Programmes of the Organization of American States connected with urbanization in Latin America, submitted as Conference Paper No.2 at the Seminar on Urbanization Problems referred to in footnote ^{28/}.

The Peruvian National Office of Planning and Urbanization has calculated that in the Greater Lima area only 45,712 dwellings were built between 1949 and 1956, while the population increased by 76,000 families.^{30/} If similar trends persist in other cities, the combined shortage of urban dwellings in Latin America could easily increase by a million every few years.

Though education is more adequate in cities than in the countryside, the task of keeping up with population increase, despite lower urban birth rates, is formidable. It has been calculated by ECLA^{31/} that in 1951, 457,000 urban children and 418,000 rural children attended elementary schools in Colombia, as compared with totals of 514,000 urban children aged 7.5 to 12.5 years and 778,000 rural children aged 7.5 to 11.5 years.^{32/} A policy of complete elementary enrolment in urban and rural schools by 1971 would produce, in that year, 1,560,000 elementary school children in urban areas and 1,128,000 in rural areas. Despite the present relative lag in rural education, urban school enrolment would have to increase by more than a million in twenty years, while rural school enrolment would not have to expand to quite the same extent.

What is true in respect of education and housing is also true as regards various other needs arising in comparable proportions. Demographic calculations can be carried out to determine needs for urban water supplies, hospitals, transport terminals, prisons, slaughterhouses, etc. Other calculations might be made - if the requisite statistics or estimates can be established - concerning savings, both private and public, from which capital resources could be generated while the urban population continues to grow. Even then there is the further complication that the very provision of urban services, however inadequate, might cause a further acceleration in the rate at which they are needed. Many facilities, however necessary, that are found to some extent in the large towns, are even less

^{30/} Luis Dorich T., Urbanization and physical planning in Peru (E/CN.12/URB/5), Ibid.

^{31/} Some aspects of population growth in Colombia (in preparation).

^{32/} In Colombia, a five-year elementary curriculum is provided for urban schools, and a four-year curriculum for rural schools.

/adequate, or

adequate, or totally absent, in small towns and the country-side. Even insufficient urban services may then provide added incentive for migration to the towns and, as a result, become still less sufficient. In this context, a pressure is also generated which tends to raise the capital-output ratio, itself a determining factor of economic growth in relation to population growth.^{33/}

"There is a minimum volume of urban services which must be provided if economic development is not to be distorted. On the other hand, an attempt to meet such requirements on too generous a scale also acts as a brake on economic development. For example, in Latin America a fixed capital investment of 100 dollars generates on an average a production amounting to 40-50 dollars per annum. The same 100 dollars invested in residential building generates only 10 to 12 dollars annually. It may well be that the yield on investment in other urban services is also low. Consequently, the greater the proportion of investment resources earmarked for urban services, the slower - up to a point - will be the pace of economic development. But, as the more plentiful provision of urban services increases the town's attraction for the country dweller, over-urbanism tends not only to slow up development, but also to accelerate urbanization."^{34/}

6. Problems of urban concentration

It is at least doubtful that the marked trend towards concentration in Latin America's large cities can be attributed to economic factors alone. An "urban bias" may be inherent in Latin civilization, or illusions may be widely held about the social and cultural advantages of the metropolis. Small-town residents may be more attracted to some of the leading cities than economic grounds would warrant. Entrepreneurs may often neglect, and even disdain, existing development opportunities in some of the smaller towns.

In an economic model, factors tending towards urban concentration can be singled out from others which tend to produce urban dispersal. For example, added investments in transport facilities may reduce per-unit transport costs, result in more traffic, and therefore stimulate further

^{33/} See the discussion in Section I, 6.

^{34/} Report of the Seminar on Urbanization Problems in Latin America
(E/CN.12/URB/26/Rev.1), p.31.

transport investments; where such factors are dominant, the tendency is for large centres to grow rapidly while small centres stagnate. On the other hand, high wages in one locality might stimulate the adoption of a capital-intensive mode of production, thereby reducing local employment and hence local wages, whereas the opposite cycle might occur in another locality with an initially low wage level; subject to such influences, the urban population would tend to be more widely distributed among several centres. In the long run, tendencies towards excessive concentration would encounter increasing costs, thereby eventually giving greater weight to those factors which favour dispersal. Nevertheless, early operation of this balancing principle does not seem ensured for, "if the process of transition is uncontrolled, there seems to be a tendency for those industries intrinsically less tied to cities, to develop nevertheless in the vicinity of the major urban centres."^{35/}

Studies have been made of the role of inter-community equilibrium which, in relation to the functions of industrial and commercial location, tends to bring about empirically verified distributions of the population among cities of varying size. The precise functional relationships remain obscure, but the scholars agree that to an adequate distribution of economic functions corresponds, ordinarily, a fairly regular population distribution by size class of community.^{36/} If, as is so often the case in Latin America, city distributions are far from regular, it may well be inferred that non-economic factors interfere to a considerable extent and, furthermore, that the existing population distributions impede the growth and equitable spread of economic benefits within those countries.

As against this scheme - which implies some homogeneity of the economic system - one may note in many countries the prevalence of comparatively inefficient, pre-modern, economic processes and the relative smallness of the modern productive sectors where processes are incomparably more efficient.

^{35/} T. Vietorisz, Urbanization and economic development, (E/CN.12/URB/24), p. 7.

^{36/} The findings of relevant studies have been summarized in The determinants and consequences of population trends (United Nations publication, Sales No: 1953.XIII.3; ST/SOA/SER.A/17), pp. 175-176.

These modern sectors, for a time, may be small and therefore isolated in a few cities, though other sectors, employing the bulk of the labour force, are not competitive. But such compartmentalization between modern and traditional segments of the economy cannot be sustained in the long run. The cities, which are the nuclei of efficient forms of activity, while not yet offering a large amount of employment of a modern type, are already massively invaded by migrants proceeding directly from the more primitive forms of economic organization which languish, or perish, in the competition.

From the sociological point of view, economic and social development involves a transition of persons from the less organized, or less integrated, activities still proper to the countryside and small towns, to the more co-ordinated and specialized transactions which emanate from the larger centres. In this continuum, the range of appropriate skills, attitudes, work habits, living patterns and inter-personal relations vary immensely from one extreme to the other. The transitions made by individuals are facilitated as they pass from rural to small-town activities and, in turn, from a small-town environment to that of bigger cities. Rural-urban migration in the countries of earlier technological development, in fact, has largely proceeded by such successive steps. In the presence of adequate "intervening opportunities"^{37/} offered presumably by a sufficient group of lively small towns, the successive passages are eased; but, where small towns are few and stagnant, the passage from one extreme to the other can become very difficult. A large and insufficiently assimilated proletariat is then suddenly immersed in the big-city environment where its economic and social integration can pose problems that seem almost insuperable.^{38/}

^{37/} Stouffer's theory of migration and "intervening opportunities" is discussed in The determinants and consequences of population trends, op. cit., p.128.

^{38/} Some sociological considerations involved in this order of problems were discussed in "Three sociological aspects of economic development", Economic Review of Latin America, special issue (Bogotá, August 1955), pp.56-65.

7. Urbanization and employment problems

The employment problems associated with the growth of cities are not readily illuminated by available statistics of a conventional type, and at present, can only be effectively examined on the basis of a large number of local investigations and descriptive study. An extensive review of studies of urbanization problems in Latin America and other parts of the world appeared in the United Nations Report on the World Social Situation.^{39/} Whereas superficial examination shows most potential workers to be found associated with some type of employment or other, closer analysis reveals that the given types of employment are often a disguise for what should rather be described as under-employment. While wide-spread under-employment also characterizes the rural areas of the countries concerned, it is not known whether this wastage of available manpower is being significantly reduced as a result of urbanization.

"Open unemployment is not a serious problem in most of the Latin American countries, either among the permanent city population or the migrants, (Cuba and Puerto Rico, in which a high proportion of the labour force depends on seasonal plantation work, are the known exceptions). However, ... with the probable exceptions of Argentina and southern Brazil, the growth of the cities 'has multiplied considerably the unsalaried sector of the urban lower class: poor artisans, shopkeepers on a small scale or with semi-permanent places of business, ambulatory pedlars and workers many of whom have occupations that constitute incredibly poorly paid forms of underemployment'. As in other less-developed regions, there has been a transfer of rural underemployment to the cities, where it may be statistically concealed under "services" or "activities not defined".^{40/}

This statement needs qualifying as regards service employments. Where the standard of living is high and rising, services destined for direct consumption can be very productive and expand accordingly. Also some services (transport, commerce, banking, etc) are ancillary to industries, especially those of large scope and complexity, where such co-ordinating

^{39/} op. cit., see footnote 28.

^{40/} Ibid., p. 181. The quotation included in this passage is from José E. Iturriaga, La Estructura Social y Cultural de México (México, D.F., Fondo de Cultura Económica, 1951), p.40.

functions are increasingly required; at an advanced level of industrialization these might profitably expand more rapidly than the industrial employments themselves. Such conditions would be more likely to exist, if at all, in such a country as Argentina - whose levels of living and industrialization are at least comparatively high - than in most other Latin American countries.

With lower degrees of industrialization, it no doubt remains true that the establishment or expansion of industry is a factor which stimulates urban growth. But here, the stimulus would seem excessive when the resulting population influx greatly exceeds the rate of growth in industrial employment. Contrary to what might be expected, data for seven of nine countries ^{41/} show indices of urbanization which range from 14 to 31, with corresponding indices of industrialization in the narrow range of 13 to 18, there being no observable relationship between the two. By contrast, industrialization and urbanization in Argentina and Chile are at a distinctly higher level. (See table 15)

As a measure of industrialization, the crude index shown is inadequate. First, because the variable relationship between industry and ancillary services is left unexplored. Secondly, because industrial employment itself has a greatly variable composition. In the above, Paraguay, half as urbanized as is Venezuela, nevertheless has a comparable number of industrial jobs. It would seem - though detailed statistics are more difficult to obtain - that in the countries of limited industrial development there exists a proliferation of handicrafts and dwarf industries, with minimal amounts of capital, labour employed in workshops, and incomes earned which, nevertheless, provide some employment for relatively large numbers of persons.

A somewhat better index of industrialization is the percentage of active workers in manufacturing who earn salaries and wages. Indices of urbanization are compared below with indices of industrialization of the

^{41/} "Demographic aspects of urbanization in Latin America", paper submitted by the Population Branch Bureau of Social Affairs, of the United Nations to the Seminar on Urbanization Problems in Latin America, (E/CN.12/URB/18) p.53.

Table 15

INDICES OF URBANIZATION AND INDUSTRIALIZATION FOR SELECTED LATIN AMERICAN COUNTRIES, IN THE LATEST CENSUS YEAR

Country	Census year	Indices of	
		Urbaniza- tion a/	Industria- lization b/
Argentina	1947	48.3	26.9
Chile	1952	42.8	24.2
Venezuela	1950	31.0	15.6
Colombia	1951	22.3	14.6
Brazil	1950	20.2	12.6
Bolivia	1950	19.7	15.4
Ecuador	1950	17.8	17.8
Paraguay	1950	15.2	15.5
Peru	1940	13.9	13.2

Source: Official census data.

a/ Percentage of total population in places of 20 000 or more inhabitants.

b/ Percentage of economically active males engaged in manufacturing, construction, gas and electricity.

Table 16

URBANIZATION AND STRUCTURE OF EMPLOYMENT

Country	Census year	Urbanization index <u>a/</u>	Industrial employment index <u>b/</u>	Second index as a percentage of the first
<u>Latin American countries</u>				
Costa Rica	1950	10.9	8.2	75
Puerto Rico	1950	27.1	16.2	60
Haiti	1950	5.4	2.0	37
Argentina	1947	48.3	17.3	36
Mexico	1950	24.0	8.4	35
Bolivia	1950	14.0	3.8	27
Venezuela	1950	31.0	7.1	23
<u>European countries</u>				
Switzerland	1950	31.2	33.4	107
Sweden	1950	34.5	28.7	83
Finland	1950	24.0	18.4	77
Western Germany	1950	45.3	27.6	61
France	1946	31.4	18.9	60
Great Britain	1951	67.7	38.6	56
Austria	1951	39.8	21.5	54

a/ Percentage of total population in places of 20 000 or more inhabitants.

b/ Percentage of total active labour force working as salaried employees or wage earners in manufacturing.

/latter type,

latter type, for seven Latin American and eight European countries. Whereas in European countries the proportion of industrial wage and salary-earning workers is at least 50 per cent of and sometimes almost equal to the proportion of urban population, in Latin American countries other than Costa Rica and Puerto Rico one proportion is only one-quarter to one-third as great as the other.^{42/}

Not only are Latin American countries less industrialized than European countries are, or were, at similar levels of urbanization, but the increase in Latin America's urbanization - as distinct from Europe, North America, or the Soviet Union - was not accompanied by a commensurate increase in industrialization. This fact has been illustrated with a set of figures including those below.^{43/} Again, the possible expansion of ancillary service employments (notably in the United States) should not be lost sight of, but the Latin American observations are contrary to those made in technologically more advanced areas.

It is doubtful that reported industrial employment some 40 years ago was composed similarly as that reported more recently. Industrial output and labour efficiency have, of course, increased. The result can sometimes be a smaller proportion of machine-equipped workers, producing far more than did a previously large number of artisans who, meanwhile, have been supplanted. At high levels of economic development, contractions in the proportion of workers in secondary (i.e. mainly industrial) employment, in fact, occur, while there is a corresponding expansion of tertiary (i.e. service) employments of an industry-supporting type. In a less advanced economy, the expansion of the tertiary sector can be a very different phenomenon requiring most careful study.

It is to be noted that service jobs are of greatly varying types, ranging from the polishing of shoes in the street to the presidency of a republic. Some service employment, e.g., in banking, insurance, large-scale commerce and transportation, reinforce a more integrated industrial

^{42/} Data according to U.N. Report on the World Social Situation (E/CN.5/324/Rev.1), p.129, op. cit., table 11.

^{43/} Ibid., p.125.

Table 17

SELECTED INDICATORS OF TIME CHANGES IN URBANIZATION AND INDUSTRIALIZATION

Country	Census year	Urbaniza- tion a/	Indus- trial- ization b/
Chile	1920	28	30
	1950	40	30
Cuba	1919	23	20
	1943	31	18
Mexico	1910	11 <u>a/</u>	22
	1950	24 <u>a/</u>	17
Sweden	1910	16	27
	1950	30	41
United States	1910	31	31
	1950	42	37
Soviet Union	1928	12	8
	1955	32	31

a/ Percent of total population living in localities of 20 000 or more.

b/ Percent of total labour force engaged in mining and quarrying, manufacturing, construction and utilities (electricity, gas and water).

c/ Percent of total population living in localities of 100 000 or more.

/economy. Other

economy. Other branches of employment, e.g., doctors, teachers, entertainers, etc., minister to the demands of a rising standard of living. Unfortunately, as is well known, services that are unsolicited or only in small demand are being performed in Latin America by a low class of urban workers so numerous that their earnings are not far superior to those of beggars. This class of work, the most obvious form of under-employment, may or may not have been increasing in the course of time. The phenomenon is not satisfactorily measured by conventional statistics. While there are no systematic data of direct relevance, some information is provided in descriptive reports; the following account is from Uruguay, a country long urbanized and of slow population growth where, presumably, this type of problem would be less acute than in many other countries of Latin America: ^{44/}

"... a group that aptly call themselves the "changas" (odd job) men. There are many of these. They take whatever work comes along, spend a little time at it, and go on to do a series of different jobs. They are always tired after a short time, because they have a very limited education and absolutely no knowledge of the work they are doing, so in spite of the goodwill they had in the beginning they fail, and eventually they lose their geniality. Many of these workers are people who come from the country, hoping to find work in new factories. After they arrive, they realize that even for this they need some preparation. They accept these very temporary jobs and seem to lose all chance of ever becoming steady workers. Many of the suburban areas are made up of these people who live there with their families. The improvement of their status, or at least of that of their children so that they may become efficient industrial workers, is one of the most difficult tasks ahead."

8. The problem of urban-rural balance

The inordinate effects of rapid growth in big cities, produced by high rates of natural increase in the rural population, epitomize the population problem of Latin America. Paradoxically it is a region of under-utilized resources. Except in certain limited areas, population

^{44/} Report of the Uruguayan National Committee to the Eighth International Conference of Social Work, Munich, August 1956, quoted in United Nations Report on the World Social Situation, (E/CN.5/324/Rev.1) op.cit., p.180-181.

is not generally in excess. But the large annual population increments, not automatically redistributed in desirable directions, now cause appreciable damage to the economy and society.

Merely to deplore the adverse consequences of population growth does not ease the conscience while remedial action is possible. So long as population is not believed to be growing in excess of available resources, the remedy will have to be found through a restoration of balances. In big cities, small towns and rural areas alike, a balance is needed between the rate of population growth, the absorptive capacity of a growing economy, and the social and institutional framework which assists in bringing these several trends into closer equiparity. The several regional balances, furthermore, must be mutually consistent because a relative imbalance in one area, through dislocations of population or of economic and social initiatives, provokes disequilibria in other areas as well.

While in the case of international migration, controls on the movements of persons can be, and are being, applied, this can hardly be done with movements inside a country. Not only would it be difficult to establish the official machinery for this, but such direct interference with free movement would be resented as an intolerable infringement of human freedom. The movements can nevertheless be influenced by various economic and social incentives or action programmes.

Likewise, while there is a system of free initiatives in economic enterprise, stimuli as well as dampers can be instituted which encourage the unfolding of certain initiatives in some areas and discourage it in others. Where population movements are uncontrollable, the plan of economic and social development will have to accept them as they occur and distribute its projects accordingly. Where appropriate economic and social measures fail, other means would have to be found to influence the non-conforming migratory tendencies. Where some measure of influence can be gained on each of several components in the balance, a convergent approach in which economic, social and demographic tendencies are affected simultaneously might sometimes be the most commendable procedure. "Population policy" then becomes a corollary of a well-designed policy of balanced economic and social development.

/The action

The action to be taken in a given case cannot be determined without detailed demographic, economic and sociological study, account being taken also of the ways in which demographic, economic and social change mutually affect each other. On the basis of such studies, which have scarcely yet been made, an adequate policy aiming at the needed balances may conceivably be drawn up. Listed below are some of the possible elements of such a policy^{45/} though, of course, it can never be said a priori in what proportions they ought to be applied in any given instance:

1. Policies designed to increase rural employment: land settlement, land reform labour-intensive processes, rural industries (e.g., food processing, cottage crafts, repairs, etc);
2. Policies designed to increase rural purchasing power: improvement and diversification of agricultural produce; improved marketing; improved implements; irrigation, drainage, electricity; improved transport; etc.
3. Policies designed to improve rural social conditions: improved education, housing and health; cooperatives and other communal actions integrative of communal inter-personal relations; recreational facilities; etc.
4. Policies aiming at a wider dispersal of industries, the intensified commercialization of small towns, and the improvement of small-town social conditions;
5. Policies tending to raise the qualifications, orient the direction and develop the requisite attitudes of migrants or potential migrants moving towards towns and cities;
6. Policies aiming at the assimilation and economic and social integration of city immigrants, including the re-habilitation of under-privileged groups, and the orientation and guidance of the children of socially less successful former immigrants.

This sketchy review of types of policy programmes which, under some given conditions, may profitably be resorted to, merely underlines the

^{45/} The points considered here mainly from a standpoint of population balances are consistent with agricultural development and utilization of rural manpower as considered in document E/CN.12/592, also before this Session.

necessity for studies of the problem of urban-rural balance, in which the several approaches made by economists, demographers and other experts are brought into convergent focus. That the study problem has great complexity can be easily recognized but, in view of its urgency, foreseeable difficulties ought not to discourage the attempt.

At the same time, the need for a high over-all rate of economic growth must not be lost sight of, for:

"The pressure of population on land, which contributes to what is judged to be over-urbanization in so many of the less developed countries, means... that these same countries are in a similar sense "over-ruralized"; i.e., there are too many people for the existing modes and levels of production in both the urban and the rural sectors. Both sectors are economically under-developed; "over-urbanization" is but another way of describing the economic under-development that characterizes the cities and their relation to the countryside." 46/

46/ United Nations, Report on the World Social Situation, (E/CN.5/324/Rev.1) op.cit., p.124

III

SEX-AGE COMPOSITION

1. Composition of national populations by age

Little need to be said about the composition of national populations by sex. Large military losses have not been incurred by a Latin American country in any recent war. Ordinarily, the two sexes are very nearly balanced though in some countries, where international migration has been important, there is a slight relative excess of males. Internal migration, on the other hand, tends to re-distribute men and women in less equal proportions among the regions and segments of a country.

The age composition of a national population reflects mostly the past trend of the birth rate. The effects of variations in mortality on age structure are, in comparison, small. While, with lower death rates, more persons survive to advanced ages, infant and child mortality are reduced simultaneously; more persons also survive to the ages of parenthood, with the likely result that more children are born. Hence, the effects of decreasing death risks on numbers of persons alive at each age, on the whole, are nearly proportionate, though not entirely so.^{47/}

Inaccuracies of age statement and incomplete enumeration of children affect most of the national census data. These errors have been partly eliminated in the population projections selected for the 1960 Statistical Supplement of the Economic Bulletin for Latin America.^{44/} The resulting estimates for 1960, as regards composition by sex and age, may in some instances be more accurate than the census data themselves. Projections into the more distant future depend on uncertain assumptions as to the future trend in fertility and mortality. Consistent estimates of the

^{47/} As demonstrated, for example, in "The cause of the ageing of populations: declining mortality or declining fertility?" Population Bulletin of the United Nations, No. 4, Dec. 1954 (ST/SOA/Ser.N/4), pp. 30-38.

^{48/} Volume VI, No. 1, table 5 of the Statistical Supplement mentioned.

Table 18
LATIN AMERICA: AGE COMPOSITION OF THE POPULATION,
BY COUNTRIES, 1960 AND PROJECTION FOR 1975

(Estimated percentage of total population)

Country	Year	Percent of total population aged		
		Under 15	15-64	65 and over
Guatemala	1960	44.7	52.9	2.4
	1975	46.6	51.0	2.4
Nicaragua	1960	44.6	53.0	2.4
	1975	45.2	52.2	2.6
Colombia	1960	44.3	53.0	2.7
	1975	42.6	54.3	3.1
Peru	1960	44.1	52.9	3.0
	1975	44.3	52.4	3.3
Costa Rica	1960	44.1	53.2	2.7
	1975	44.3	52.6	3.1
Ecuador	1960	44.0	52.9	3.1
	1975	44.9	52.0	3.1
Dominican Republic	1960	43.9	52.8	3.3
	1975	45.1	51.6	3.3
Mexico	1960	43.7	53.5	2.8
	1975	42.4	54.3	3.3
El Salvador	1960	43.1	54.3	2.6
	1975	43.5	53.5	3.0
Venezuela	1960	42.5	54.7	2.8
	1975	39.8	56.9	3.5
Paraguay	1960	42.4	54.2	3.4
	1975	44.2	51.9	3.9
Brazil	1960	42.3	55.0	2.7
	1975	41.8	55.0	3.2
Honduras	1960	42.0	54.7	3.3
	1975	42.7	54.1	3.2
Bolivia	1960	41.9	55.1	3.0
	1975	43.0	54.0	3.0
Haiti	1960	41.6	55.8	2.6
	1975	42.5	54.5	2.9
Panama	1960	41.5	54.6	3.9
	1975	40.2	55.4	4.4
Chile	1960	38.8	57.1	4.1
	1975	38.2	57.2	4.6
Cuba	1960	36.0	59.6	4.4
	1975	32.5	61.8	5.7
Argentina	1960	30.4	64.5	5.1
	1975	28.7	64.3	7.0
Uruguay	1960	26.2	65.9	7.9
	1975	24.3	64.7	11.1
Combined population of 20 Republics	1960	42.7	54.3	3.0
	1975	40.6	55.6	3.8

/percentages of

percentages of population in three broad age groups are presented below, for 1960 and 1975.

The countries in table 18 have been arranged according to the estimated proportion of children (under 15 years of age) in 1960, which ranges from 45 per cent in Guatemala and Nicaragua to 26 per cent in Uruguay. With the trends in birth rates which can be plausibly foreseen, this percentage may rise slightly in some instances,^{49/} and decline slightly in others.^{50/} Significant decreases in the percentage of children appear plausible in the cases of Argentina, Cuba, Uruguay and Venezuela.

The percentage of persons of advanced age is generally small, between 2.5 and 3.0 in the high birth-rate countries with high percentages of children. It attains 4 per cent in areas of somewhat lower birth rates (Panama, Chile and Cuba), 5 per cent in Argentina, and probably almost 8 per cent in Uruguay whose birth rates have for some time past been the lowest. Declining mortality may raise this percentage only slightly. The ageing of the population becomes significant in the countries of lowest birth rates (Cuba, Argentina and Uruguay).

Persons in the age range from 15 to 64 years are generally most able to participate effectively in productive work. But the proportion of this "active" age segment is generally small, between 52 and 55 per cent in the majority of the countries. Nor is this proportion expected to change much. In some countries with past declines in the birth rate, the relative size of the "active" population is greater and rising, attaining about 65 per cent in Argentina and Uruguay. A rise beyond two-thirds is not to be expected because progressive ageing of

^{49/} With constant fertility and decreasing mortality, especially child mortality, a slight rise in the percentage of children occurs.

^{50/} Reasons for possible future declines in fertility have been discussed in section I-4 of this report. The possible declines in the birth rate, however, would not be fully reflected in the decrease of the percentage of child population because declining mortality results in the survival of a relatively increased proportion of children.

the population eventually counteracts this tendency. From an economic point of view, the populations with high proportions in the 15 to 64 year age bracket are more "efficient", there being almost two potential workers per non-working dependent. In the populations of many Latin American countries, on the other hand, the number of potential workers barely exceeds that of the dependents.^{51/}

What the populations of countries with lower birth rates gain in structural efficiency they may lose by a reduced flexibility. Persons past a certain age, such as perhaps 40 years, are less adaptable to the changing requirements of a growing economy than younger workers. The percentages of persons aged less than 40 years within the 15-64 year age group can be estimated from the population projections as follows (the countries being arranged in the same order as in table 19).

The specific adaptability of younger workers to new tasks, however, depends also on the education which they have acquired. This makes it doubtful whether the potentially greater flexibility of a youthful labour force, in most countries, can be used to good advantage. Panama, Chile, Cuba, Argentina and Uruguay are precisely among the countries where the educational level is more distinctly above the Latin American average. The potential advantage of those countries where seven or more out of ten persons in the 15-64 year age group are under 40 will be largely lost unless early efforts are made to provide better education on a larger scale. These efforts will draw more heavily on the economic capacity of the high birth-rate countries because the number of children to be educated is relatively large. To obtain a comparative measure of the needed educational investments we may proceed as follows.

^{51/} The proportion of population between 15 and 64 years of age is not a measure of the actual labour force. In particular, the economic activity rates of women can vary widely and there are varying degrees of active labour force participation on the part of children, adolescents, and aged persons. The comparison is one of potentially "active" persons - whether their activity be "economic" or domestic and unremunerative - rather than actual labour force. It is also to be considered that in high-birth-rate countries women can generally devote less time to economic activities than they can in countries with lower birth rates.

Table 19
PERSONS AGED 15-39 YEARS PER 100 PERSONS AGED
15-64 YEARS IN LATIN AMERICAN COUNTRIES,
1960 AND PROJECTION FOR 1975

Country	1960	1975
Guatemala	72	73
Nicaragua	73	72
Colombia	71	71
Peru	71	71
Costa Rica	71	71
Ecuador	71	71
Dominican Republic	71	71
Mexico	71	72
El Salvador	71	71
Venezuela	70	69
Paraguay	70	71
Brazil	70	70
Honduras	70	70
Bolivia	71	70
Haiti	70	70
Panama	69	70
Chile	67	67
Cuba	66	65
Argentina	62	59
Uruguay	57	55
<u>Combined population of 20 Republics</u>	<u>69</u>	<u>69</u>

/Let it

Let it be assumed that one school teacher is required for every 50 children aged 5-14 years.^{52/} The "educational burden", to be assumed by the population of "active" ages, can then be comparatively measured as the number of persons who would have to be school teachers relative to every 1,000 persons aged 15-64 years. This comparative measure, is presented in table 20, according to the same order of countries as in the two preceding tables.^{53/}

2. Urban and rural population structures

In Latin America, more women than men leave the countryside to live in the cities.^{54/} Women generally outnumber the men in the urban population, whereas a relative excess of men remains in the rural population. Sex ratios, indicating the numbers of males per 100 females, are brought together in table 21 for Latin America and some other countries. The Latin American countries appear in the order of their degree of urbanization, at the last census, as measured by the percentage of total population in places with 20,000 or more inhabitants.

As the data of table 21 suggest, urban sex ratios are usually higher in the more urbanized countries of Latin America than in the less

^{52/} The required minimum school curriculum is shorter than 10 years. One teacher for every 50 children aged 5-14 years is roughly equivalent to, say, one teacher for every 30 children aged 7-12 years (assuming, e.g., a 6-year school curriculum), which might be a desirable standard. Of course, the intention of this calculation is only to provide a comparative measure.

^{53/} The relative "educational burden" of the high birth-rate countries is even heavier when it is considered that, owing to the presence of large numbers of small children below school age fewer women can make themselves available as teachers than, say, in Argentina or Uruguay where women are less engaged with the care of children below school age. Actually, a more extensive school curriculum, aiming at higher standards has already been in effect for a longer period in some of the low birth-rate countries as compared with many of the high birth-rate countries.

^{54/} In that respect, this region is similar to Europe and other areas of European settlement. In Asia and Africa, the opposite result is observed.

Table 20

NUMBER OF SCHOOL TEACHERS HYPOTHETICALLY REQUIRED PER 1 000 PERSONS
AGED 15-64 YEARS IN LATIN AMERICAN COUNTRIES,
1960 AND PROJECTION FOR 1975

Country	1960	1975
Guatemala	9.7	10.6
Nicaragua	9.7	10.5
Colombia	10.2	9.5
Peru	10.0	10.1
Costa Rica	9.8	10.2
Ecuador	9.9	10.4
Dominican Republic	10.0	10.5
Mexico	10.1	9.5
El Salvador	9.3	9.8
Venezuela	9.3	8.7
Paraguay	9.4	10.2
Brazil	9.2	9.4
Honduras	9.2	9.6
Bolivia	9.1	9.6
Haiti	8.9	9.4
Panama	9.4	8.9
Chile	8.4	8.3
Cuba	7.6	6.6
Argentina	6.1	5.8
Uruguay	5.2	5.0
<u>Combined population</u> <u>of 20 Republics</u>	<u>9.0</u>	<u>8.9</u>

Table 21

MALES PER 100 FEMALES IN THE URBAN AND RURAL POPULATIONS OF COUNTRIES
OF LATIN AMERICA AND SELECTED OTHER COUNTRIES

Country	Census year	Males per 100 females	
		Urban <u>a/</u>	Rural <u>a/</u>
<u>Latin America</u>			
Argentina	1947	97	120
Chile	1952	85	110
Cuba	1953	96	118
Venezuela	1950	99	107
Mexico	1950	90	103
Panama	1950	94	111
Colombia	1951	86	108
Brazil	1950	91	104
Bolivia <u>b/</u>	1950	86	103
Ecuador	1950	91	103
Costa Rica	1950	87	107
Nicaragua	1950	79	108
Paraguay	1950	89	99
Peru <u>c/</u>	1940	102	97
El Salvador	1950	87	105
Guatemala	1950	93	105
Dominican Republic	1950	85	106
Honduras <u>d/</u>	1950	93	101
Haiti <u>d/</u>	1950	72	96
<u>Other countries</u>			
Sweden	1950	93	108
United States	1950	94	106
India	1951	116	104
Turkey	1950	108	99
Union of S. Africa	1951	119	93

a/ Urban and rural as defined in each census, except where stated otherwise

b/ Urban: municipios of La Paz and Cochabamba. Rural: rest of country.

c/ Urban: six predominantly urban districts; rural: rest of country.

d/ Urban: localities with 20 000 or more inhabitants. Rural: rest of country.

/urbanized ones,

urbanized ones, but the comparatively high ratios in Argentina, Cuba and Venezuela are partly due to the effect of international immigration where males predominate. Because of geographic features, perhaps, internal migration has had a similar effect on the balance of the sexes in the city population of Peru.

Rural surpluses of males likewise are the greatest in some of the most urbanized countries, especially Argentina, Cuba, Panama and Chile. This is to be expected for with a persistent pattern of sex selection in rural-urban migration, continued urbanization tends increasingly to distort the sex balance in the rural population where the number of females is constantly decreasing. Experience confirms that this process has generally been at work.

Greater attraction of women by cities, or greater retention of men by the countryside, is a feature of social mechanisms in the European culture sphere. The opposite tendencies prevail in regions of non-European cultures. The phenomenon has rarely been studied in much detail. In Latin America, it appears that sex selectivity of migration already appears at the earliest ages: often more children aged 5-9 years are female in the urban population, while more are male in rural areas. More girls than boys accompany the group of migrants, mostly young adults, in which women are more numerous than men. Migrant women, on an average, are younger than migrant men. From some middle adult age onward, there appears to be a net balance of return movements to the country on the part of men, but there seem to be no significant return movements in the case of women.

All Latin American countries exhibit nearly the same striking difference between urban and rural age composition. Rural areas have comparatively more children whereas in urban areas the proportion of young adults is much greater. Urban areas also have slightly higher proportions of middle-aged persons, but not of persons of advanced age. In this respect, the big cities contrast more sharply from rural areas than do the smaller cities and towns. In a recent study, data for 18 Latin American countries have been assembled from recent censuses,

Table 22

AVERAGE PERCENTAGE OF TOTAL, URBAN AND BIG-CITY POPULATION IN
FOUR BROAD AGE GROUPS

(Unweighted averages, based on recent census data of 18
Latin American countries)

Population	Under 15	15-39	40-59	60 and over
Total	41.1	39.4	14.0	5.5
Urban <u>a/</u>	34.2	44.9	15.4	5.5
Big cities <u>b/</u>	30.8	46.2	17.6	5.4

a/ Defined to coincide so far as available data permit, with the population of localities of 20 000 or more inhabitants.

b/ Federal District of Mexico, Greater Buenos Aires, Federal District of Brazil, São Paulo, Greater Santiago, Bogota, Lima and Caracas Metropolitan Area.

invariably showing the same contrasts.^{55/} These data are summarized above by means of the unweighted averages of the percentages noted in each of the eighteen countries.

Considering the definitions used in that study, about one-quarter of the combined regional population is "urban", while about one-third of the combined "urban" population is that of big cities. One can then reconstruct separately the age groupings that would be typical of rural areas, the smaller towns and large cities. Such schematic figures, of course, do not reflect the precise conditions of any one country. Since, with the definitions used, the "rural" population includes towns smaller than 20,000 inhabitants, it is probable that in the strictly rural population, excluding those small towns, the proportion of children is even higher, and that of young adults even lower, than in the reconstructed percentages shown below.

^{55/} "Demographic Aspects of Urbanization in Latin America" (E/CN.12/URB/18; UNESCO/SS/URB/LA/18), op.cit. The two republics not included are Cuba and Uruguay for which, at that time, recent census data were not available.

Population	Age groups (years)			
	Under 15	15-39	40-59	60 and over
Rural	43.5	37.5	13.5	5.5
Medium-size towns	35.5	44.5	14.5	5.5
Large cities	30.8	46.2	17.6	5.4

Such figures - not exactly the same in every country - have important implications for a variety of policy problems, including employment, education, vocational training, housing, public health, industrial location, etc. City populations, with many young adults, would be more "active", economically or otherwise, than rural populations, if the partly rural origin of their inhabitants could be disregarded. For instance, for every 10 young adults there are nearly 12 children in the countryside, but less than 7 children in the large cities. The burdens of education and child care which must be assumed within the cities might seem comparatively light. Many migrants, however, come precisely from those regions where these burdens, in relation to local resources and manpower, are particularly heavy. As these migrants swell the urban labour force, it is only fair to consider that the cost of education in rural areas should be borne partly from incomes produced in the cities, in order to raise the qualification of urban manpower.

At the same time, the need for rural education directed towards specifically rural requirements must be given equal consideration. If the persons lost to the countryside are precisely those who have also obtained at least some education, it is to be feared that persons who remain in the country have too little training or other capacities to become adapted to local economic and social improvements. A vicious circle can then result in which the rural exodus becomes its own perpetuating cause.

3. Trends in urban and rural population structure

It is not sufficient to regard the structures of urban and rural populations from a static point of view. With a given incidence of
/migration to

migration to cities, and with given rates of growth in either the rural or the urban population, the structures are apt to change in the course of time. Education, apprenticeship or vocational guidance are also directed at future manpower needs while existing resources must be invested in order eventually to meet these requirements.

In this respect conditions vary from country to country. There is the need for separate national projections of the population by urban and rural segments, with assumptions related to observed demographic trends and also to economic opportunities, prospects or programmes. Methods for such projections are being currently developed by the Demographic Centre at Santiago and ECLA, and ought to become ready for application when the more detailed results of new population censuses are available.

In the population projections for Colombia and Cuba, already referred to, the age composition of urban and rural population, respectively, seem apt to change as indicated in table 23.

In both instances, the proportion of children increases in urban areas; their relative decrease in rural areas is the calculated result of the continued emigration of many young women and, in Cuba, also of decreases in rural fertility. A considerable ageing is indicated for the rural population in both instances, as also for the urban population of Cuba, because of past decreases in birth rates. In both countries the sex balance of the urban population tends to become more nearly even, while in the rural population it becomes more distorted with time.

It follows that particular sex-age segments, in the urban as well as the rural population, can increase at quite different rates. For instance, the increase in the population of elementary school age is very rapid in urban areas, but quite slow, in comparison, in the rural areas. There is also a particularly rapid growth in the segment of urban adolescents, or young adults, since these are the ages at which numerous additional migrants arrive from rural areas.

The assumption can, of course, be varied to illustrate the possible consequences of any different course of events. Changes in the trends of urban or rural birth rates, in the intensity or the composition of rural-urban migration, and in the economic circumstances conditioning

Table 23

COLOMBIA AND CUBA: CHANGES IN SEX AND AGE COMPOSITION OF URBAN AND RURAL
POPULATION, AS CALCULATED IN POPULATION PROJECTIONS

Year	Percent of population in age groups indicated						Males per 100 females	
	Urban population			Rural population			Urban	Rural
	Under 15	15-64	65 and over	Under 15	15-64	65 and over		
<u>Colombia</u>								
1951	40.3	56.8	2.9	45.5	52.0	2.5	86	108
1961	42.5	55.1	2.4	46.0	51.0	3.0	88	113
1971	42.6	55.1	2.3	43.2	53.0	3.8	91	116
1981	42.7	54.9	2.4	42.8	52.2	5.0	93	118
<u>Cuba</u>								
1953	29.7	65.1	5.2	43.0	53.5	3.5	86	112
1963	30.9	63.8	5.4	40.8	55.8	3.4	88	116
1973	30.6	63.2	6.2	38.0	57.7	4.4	91	117
1983	30.0	62.9	7.1	35.0	58.9	6.0	95	116

/them, may

them, may have a number of different results. The methods and assumptions to be used in this context are now under intensive study. In addition, a generalized model of urban-rural population changes is being constructed in order to enable the probable effects of any change in a basic assumption to be assessed.

The calculations carried out so far on the rather inflexible assumption of a constant rate of increase in the rural population have produced results which are not entirely consistent in some details. This is particularly true of the age groups most affected by rural-urban migration, such as adolescents and young adults. A further refinement of method is becoming necessary.

There are special reasons for focussing attention on changes in the segment of population group aged about 15-19 years. Persons of these ages, if well informed and adequately trained, might constitute the main source of transitional changes in the structure of the labour force according to occupation, locality and level of skill. These same persons, if frustrated in their search for jobs and earnings of the kind which they had been led to expect, are liable to become an important source of social unrest. The existence of proper channels for persons about to enter the labour market may then be of crucial importance, in both a positive and a negative sense. Through training and guidance, therefore, it becomes possible not only to avert severe social discontent but to undertake more readily a constructive transformation of the economy.

IV

MANPOWER TRENDS AND CHARACTERISTICS

1. Percentage of manpower in agriculture

Statistics on the economically active population, based on censuses taken about 1950 in eighteen Latin American countries, Canada and the United States, have recently been presented in one publication.^{56/} To facilitate a comparison, it is useful to list the countries according to the degree of industrialization.

But industrialization may mean different things, depending on the point of view. From the standpoint of the national economy, for instance, the most significant index of industrialization is probably the percentage contribution made by manufacturing to the national income. According to the national statistics for 1958 for major countries in the region, as assembled by ECLA, Latin American countries might be listed by degrees of industrialization as follows:

Country	Percentage of national income contributed by the manufactur- ing sector (1958 data)
Brazil	27.1
Argentina	23.4
Mexico	19.8
Colombia	18.9
Chile	17.5
Peru	16.8
Ecuador	15.8 ^{a/}
Venezuela	10.8 ^{b/}

a/ Including artisan products.

b/ Excluding extraction and processing of petroleum.

^{56/} Inter-American Statistical Institute, La estructura demográfica de las naciones americanas: Análisis estadístico-censal de los resultados obtenidos bajo el Programa del Censo de las Américas de 1950, Vol. II, Nos. 1 and 2 (Washington, Pan American Union, June 1959).

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In this list, the structure of manufacturing industry may be classified by degree of capital intensity, output per worker, or output per unit of capital. There may be different degrees of integration among branches of industry, or between these and the remainder of the national economy. Finally, a greater relative contribution made by industry may sometimes reflect the low average income produced by a large agricultural sector no less than the degree of development attained by industry as such.

From the standpoint of the present analysis, which is demographic, it would seem more relevant to differentiate between degrees of industrialization on the basis of manpower employment. But the percentage of manpower engaged in manufacturing is not in itself a good index, for the reasons already mentioned. Also some of the activities carried on in the services sector are industry-supporting. The percentage of manpower remaining in agriculture, on the other hand, seems to be a more positive measure, at least of the extent to which a country is not yet industrialized. The problem of manpower absorption, whether in industry or in services, is also more closely related to the percentage of manpower still retained by agriculture.

In accordance with this criterion, four groups of countries will be dealt with in this section. Countries with 60 per cent or more of their labour force (both sexes) engaged in agriculture will be in Group I, those with 50-60 per cent in Group II, those with 25-50 per cent in Group III, and Canada and the United States, where the percentage is even lower, in Group IV. The census data refer mainly to 1950 and, in the interim, the relative position of some countries - where industrialization has been more rapid than in others - may have changed. The countries and percentages of the labour force in agriculture are listed below. When the census did not relate to 1950, the census year is also indicated.

/Haiti

			55.8
Haiti	71.6 ^{a/}	Panama	49.8
Honduras	71.4 ^{a/}	Cuba (1953)	41.5
Guatemala	68.2	Venezuela	41.3
Nicaragua	67.7	Chile (1952)	30.1
El Salvador	63.1	Argentina (1947)	25.2
<u>Group I</u> ^{b/}	68.4	<u>Group III</u> ^{b/}	37.6
Brazil	59.6	Canada (1951)	19.0
Mexico	57.8	United States	11.6
Bolivia	57.1 ^{a/}	<u>Group IV</u> ^{b/}	15.8
Dominican Republic	56.5		
Costa Rica	54.7		
Colombia (1951)	53.9		
Paraguay	53.8		
Ecuador	53.2		
<u>Group II</u> ^{b/}			

^{a/} Adjusted for excessive reporting of women as unpaid family helpers in agriculture (as explained further on).

^{b/} Unweighted average for group.

Actually, in the censuses of Haiti, Honduras and Bolivia, 83.2, 83.1 and 71.6 per cent of the reported economically active population appeared under agriculture. However, as distinct from other countries, large numbers of women were reported there in agriculture, as unpaid family helpers, a practice which was not followed in other American censuses of 1950. A proportionate adjustment was made in the figures for these three countries to obtain more comparable percentages.

This listing of countries is maintained in some of the analyses which follow. In each instance, an unweighted Group average is calculated for purposes of ready comparison. Countries will be excluded from the grouping in those instances where the type of data to be compared was not found available.

2. Labour force as percentage of total population

The percentages of the total population, and of males and females of all ages, reported as economically active are shown in table 24.

Apart from minor sources of non-comparability^{57/}, the discrepancy

^{57/} The minimum age for which economic activity was reported varied among countries, from 10 to 14 years; unemployed persons seeking work and young persons seeking work for the first time were treated variously in the censuses; in some censuses, activity status was determined according to a fixed time period preceding the census date, and in others this was not done.

Table 24

PERCENTAGES OF TOTAL POPULATION, MALES AND FEMALES, OF ALL
AGES, REPORTED AS ECONOMICALLY ACTIVE IN CENSUSES OF
1950 FOR EIGHTEEN LATIN AMERICAN REPUBLICS,
CANADA AND THE UNITED STATES

Country	Both sexes	Males	Females
Haiti	56.4 <u>a/</u>	59.2	53.8 <u>a/</u>
Honduras	47.3 <u>a/</u>	52.8	41.8 <u>a/</u>
Guatemala	34.7	59.8	9.0
Nicaragua	31.2	54.5	8.6
El Salvador	35.2	59.3	11.6
<u>Group I</u>	<u>33.7 b/</u>	<u>57.1</u>	<u>9.7 b/</u>
Brazil	33.0	56.4	9.6
Mexico	32.4	56.8	8.7
Bolivia	50.3 <u>a/</u>	58.8	42.2 <u>a/</u>
Dominican Republic	38.7	64.9	12.3
Costa Rica	34.0	57.6	10.4
Colombia	33.4	54.7	12.4
Paraguay	32.9	51.9	14.7
Ecuador	38.6	55.6	21.7
<u>Group II</u>	<u>34.7 c/</u>	<u>57.1</u>	<u>12.8 c/</u>
Panama	35.2	55.3	14.2
Cuba	33.8	57.5	9.0
Venezuela	33.9	55.0	12.2
Chile	36.9	56.4	18.1
Argentina	40.6	63.4	16.6
<u>Group III</u>	<u>36.1</u>	<u>57.5</u>	<u>14.0</u>
Canada	37.9	58.4	16.9
United States	39.7	58.1	21.8
<u>Group IV</u>	<u>38.8</u>	<u>58.2</u>	<u>19.4</u>

a/ Not comparable in respect of women reported economically active.

b/ Average excluding Haiti and Honduras.

c/ Average excluding Bolivia.

/in the

in the reporting of economic activity of women in the cases of Haiti, Honduras and Bolivia is readily apparent. In Haiti, 30.1 per cent of all females had been reported in the status of unpaid family workers, and in Bolivia, 28.5 per cent; though no equivalent information has been provided for Honduras, it is most probable that the non-comparability there stems from the same source. In no other American country did the proportion of females reported as unpaid family workers exceed even 2 per cent. Data for females and for total population, for these three countries, were accordingly excluded from the Group averages.

As indicated by the Group averages, the percentage of total population which is economically active rises with the degree of industrialization, from 33.7 per cent for little industrialized countries, to 38.8 per cent for the highly industrialized ones. The rise in the percentage of economically active males is very slight (from 57.1 to 58.2). The percentage of economically active females rises substantially (from 9.7 to 19.4). These observations, however, obscure the effects of substantial differences in age composition. As noted in a previous chapter, the more industrialized countries are precisely the ones where birth rates are comparatively low and where the resulting age structure is economically more efficient. A different picture emerges when activity rates are considered by separate age groups.

As shown in table 25, male activity rates, age group by age group, are highest in the least industrialized countries, falling off systematically as the degree of industrialization increases. The decrease is most marked at ages 15-19 (from 87.7 to 51.6 per cent) and at ages 65 and over (from 80.9 to 40.0). But even at ages 35-44, where activity rates are invariably highest, there is some decrease, though slight (from 98.1 to 95.6 per cent).

This observation is contrary to the figures shown in table 24, but not in contradiction with them. Higher activity rates, age by age, compensate in part for the less favourable age composition of the little industrialized countries. The numerical compensation is incomplete for, despite higher specific rates, the overall activity

Table 25

PERCENTAGES OF MALES IN EACH OF SEVERAL AGE GROUPS REPORTED AS ECONOMICALLY
ACTIVE IN CENSUSES OF 1950, IN FOURTEEN LATIN AMERICAN
REPUBLICS, CANADA AND THE UNITED STATES

Country	Age group (years of age)						
	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Haiti	83.6	95.6	98.6	99.0	98.6	97.1	87.2
Guatemala	90.6	96.6	97.8	97.9	97.2	94.7	73.1
El Salvador	88.9	95.6	97.1	97.5	95.4	95.4	82.4
<u>Group I</u>	<u>87.7</u>	<u>95.9</u>	<u>97.8</u>	<u>98.1</u>	<u>97.1</u>	<u>95.7</u>	<u>80.9</u>
Brazil	80.6	93.4	96.7	97.9	96.8	92.7	71.8
Bolivia	78.9	94.5	98.1	98.3	97.3	94.4	78.8
Costa Rica	91.1	96.7	98.4	98.6	97.6	94.8	74.0
Colombia	84.8	95.4	97.6	97.9	96.8	92.7	71.8
Paraguay	82.7	96.6	98.3	98.3	97.9	95.9	76.5
Ecuador	80.6	93.0	96.7	97.3	96.9	95.5	86.1
<u>Group II</u>	<u>83.1</u>	<u>94.9</u>	<u>97.6</u>	<u>98.0</u>	<u>97.2</u>	<u>94.3</u>	<u>76.5</u>
Parana	68.3	94.8	97.8	98.2	97.1	89.2	70.0
Cuba	73.2	90.6	94.1	95.3	94.7	89.6	68.8
Venezuela	79.3	93.2	95.7	96.1	95.0	90.5	71.9
Chile	72.2	93.3	97.1	97.2	93.7	88.2	70.2
Argentina	76.8	91.0	96.3	97.8	96.4	87.9	57.7
<u>Group III</u>	<u>74.0</u>	<u>92.6</u>	<u>96.2</u>	<u>96.9</u>	<u>95.4</u>	<u>89.1</u>	<u>67.7</u>
Canada	58.5	92.4	96.4	96.7	94.5	85.7	38.6
United States	44.6	81.9	92.1	94.5	92.0	83.4	41.5
<u>Group IV</u>	<u>51.6</u>	<u>87.2</u>	<u>94.2</u>	<u>95.6</u>	<u>93.2</u>	<u>84.6</u>	<u>40.0</u>

/rates in

rates in the less industrialized countries nevertheless remain lower. The practical compensation is far less complete when it is considered that the productive contribution made by the additional youngest and oldest workers is, no doubt, below average, and that early commencement of economic activity precludes the achievement of adequate levels of education and, therefore, of high productive efficiency even in the "best" working ages.

How early does economic activity begin on an average? Comparable data are not readily secured, as there are variations in the lower age limit for which activities (if any) are reported, in the statistical treatment of persons doing occasional work while still attending school, or of persons seeking work for the first time. In Guatemala, 44.3 per cent of males aged 10-14 years were reported as economically active, as against 1.4 per cent in Canada. The Group averages for this very early age group are: 28.2 per cent for Group I, 26.4 for Group II, 12.1 for Group III, and 2.0 for Group IV, but the comparison is probably vitiated by the variations in definition.

For females (see table 26), the specific rates for Haiti and Bolivia cannot be compared, because, apparently, a majority of housewives, elsewhere not regarded as "economically active", were returned here as unpaid family helpers. These two countries, therefore, had to be omitted from the Group averages.

A comparison of group averages for women aged up to 54 years of age shows fairly consistent rises in specific activity rates with rises in industrialization; but, whereas the rises are considerable as between Groups I and II and Groups III and IV, the rise between Group II and Group III is hardly significant. At relatively advanced ages, women are economically most active in Group II, and least in Group IV.

There are also differences in the patterns of distribution in each Group. In the less industrialized countries, the youngest women^{58/}

^{58/} For ages 10-14, the group averages are: Group I, 7.5; Group II, 7.6; Group III, 3.7; Group IV, 0.6. However, for reasons stated, the comparability of these figures is doubtful.

Table 26

PERCENTAGES OF FEMALES IN EACH OF SEVERAL AGE GROUPS REPORTED AS ECONOMICALLY
ACTIVE IN CENSUSES OF 1950, IN FOURTEEN LATIN AMERICAN REPUBLICS,
CANADA AND THE UNITED STATES

Country	Age group (years)						
	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Haiti a/	81.2	85.9	85.5	86.6	86.3	81.5	59.0
Guatemala	15.8	14.9	13.1	13.9	13.5	12.3	8.7
El Salvador	20.7	20.9	17.4	17.3	15.9	13.5	10.6
Group I b/	<u>18.2</u>	<u>17.9</u>	<u>15.2</u>	<u>15.6</u>	<u>14.7</u>	<u>12.9</u>	<u>9.6</u>
Brazil	23.4	18.9	12.8	10.9	10.1	8.7	5.4
Bolivia a/	66.9	65.1	65.3	66.3	66.2	36.0	21.8
Costa Rica	22.5	22.6	17.2	15.7	13.3	9.1	5.6
Colombia	23.6	23.9	19.7	19.1	18.0	15.7	10.3
Paraguay	25.8	27.7	24.7	25.5	24.9	19.9	12.5
Ecuador	33.9	34.9	33.8	35.6	36.6	34.9	28.2
Group II c/	<u>25.8</u>	<u>25.6</u>	<u>21.6</u>	<u>21.4</u>	<u>20.6</u>	<u>17.7</u>	<u>12.4</u>
Panama	23.4	29.6	25.2	24.6	20.8	14.8	8.3
Cuba	10.5	15.9	16.3	16.1	14.4	10.7	6.8
Venezuela	22.0	23.5	20.2	19.7	18.2	15.2	10.2
Chile	30.0	35.6	29.4	27.6	25.6	21.0	13.2
Argentina	36.7	31.3	22.3	21.6	19.5	14.2	7.3
Group III	<u>24.5</u>	<u>27.2</u>	<u>22.7</u>	<u>21.9</u>	<u>19.7</u>	<u>15.2</u>	<u>9.2</u>
Canada	37.9	46.9	24.2	21.8	20.4	14.5	5.1
United States	26.3	43.2	31.8	35.0	32.9	23.4	7.8
Group IV	<u>32.1</u>	<u>45.0</u>	<u>28.0</u>	<u>28.4</u>	<u>26.6</u>	<u>19.0</u>	<u>6.4</u>

a/ Data do not conform to comparable definition.

b/ Excluding Haiti.

c/ Excluding Bolivia.

/(aged 15-19)

(aged 15-19) are most active and activity rates fall off fairly consistently with age. In more industrialized countries, particularly in North America, the peak of female economic activity appears at ages 20-24. In the United States, a secondary peak appears at ages 35-44, presumably as some women, after having cared for their young children, are then able to resume remunerative work.

It is probable that in the countries of high birth rates, family obligations prevent women from engaging in economic activities. Nevertheless, even in those Latin American countries whose birth rates are comparatively low and whose level of industrialization is comparatively advanced (e.g. Cuba, Argentina), female activity rates are still rather low, hence the noted discontinuity in the rises of group averages in Group III.

Generally speaking, in agrarian and high-fertility countries males begin work early in life and seldom retire before reaching advanced age while women are not to a great extent engaged in extra-domestic economic activity. In Latin America these features are more pronounced though some degrees of industrial advancement have been achieved and birth rates, in some countries, have fallen off. Thus, in a regional average, only 14 per cent of all Latin American females are economically active, in comparison with 28 per cent in an average of Asian countries. In Asia, 66 per cent of males aged 15-19, and 58 per cent of males aged 65 and over are economically active; in the average of Latin America, the corresponding percentages are still as high as 77 per cent, and 70 per cent, respectively.^{59/} Differences in definitions and census concepts may partly account for this, but it is probable also that a traditional pattern of economic activity has been preserved in Latin America which lags behind its present economic and social status.

^{59/} These several figures were taken from a study being prepared by the Population Branch, Bureau of Social Affairs, at United Nations Headquarters.

Later commencement of male economic activity in technologically advanced countries corresponds on the whole to a more extended school education, including secondary and higher education for a significant number of young persons. Earlier cessation of economic activity of males in such countries is conditioned by competitive employment practices, retirement funds, and urban and industrial conditions which impede the economic activity of older men. But though spending on an average fewer years of their life-span in actual employment, better educated workers undoubtedly are more efficient.

The higher level of female economic activity in industrial countries is due in part to the greater opportunity for the productive employment of women in towns and in industries, partly to greater social acceptability of their working status, and partly to easier domestic conditions, making smaller claims on the time of women in their household occupations. This greater activity of women more than compensates the somewhat reduced activity of men. In some instances, it actually helps pay the way for a more complete education of children and young persons.

It is to be thought that the activity patterns of Latin America are moving gradually in such a direction. In particular, the majority of rural migrants to cities are women, hence their activity rates are no doubt rising. This makes it probable that the economically active population - men and women combined - is growing relatively more rapidly in many or most Latin American countries, than is the total population. How much faster it is growing, or at what rates, would have to be calculated in detailed projections, especially when new census data become available.

If the growth of the labour force is indeed more rapid than that of the total population, the following effects require consideration:

- (a) employment opportunities will be needed at a rate that is higher than that of population increase;
- (b) the dependency ratio, i.e. the number of dependents per active person, will tend to decline;
- (c) fewer women will stay at home to give the needed care to large numbers of small children though, in the circumstances,

/an increased

an increased motivation to limit family size might eventually show its effect;

- (d) the ratio of women to men, in the economically active population, may increase rather appreciably.

3. Educational level

Of 97 million persons in Latin America aged 15 years and over in 1950, between 40 and 42 million were estimated as still illiterate.^{60/} While progress in literacy comes mainly through the formal education of children and young persons, it is most likely that the absolute number of illiterates is still increasing. For instance, in Brazil there were 10.4 million literate and 13.3 million illiterate adults in 1940, as against 14.9 million literate and 15.2 million illiterate adults in 1950. In countries with rapid population growth, an absolute increase in the number of illiterates continues for some time despite progress in the average literacy level.

The 1950 level of adult illiteracy in Latin America, about 42-43 per cent, can be compared with 60-65 per cent in Asia, but only 7-9 per cent in Europe.^{61/} Relative to its present status in industrialization and urbanization, Latin America's illiteracy is rather high. There is also a correlation between percentages of adult illiterates and manpower engaged in agriculture. (See table 27.)

Progress in literacy has not been uniform in the course of time, as witnessed by percentage literacy rates specific for age groups. In Cuba, for instance, illiterates were only 18 per cent among those aged 25-29, but still 22 per cent among those aged 15-19, in 1953, indicating that there had been a reversal in educational progress.

Literacy, i.e. the mere ability to read and write, is closely linked to school enrolment. School enrolment ratios, or the percentage of children aged 5-14 years enrolled in elementary school, have been

^{60/} UNESCO, World Survey of Education, Vol. II ("Primary education"), 1958.

^{61/} Ibid.

Table 27

PERCENTAGE OF MANPOWER ENGAGED IN AGRICULTURE AND OF ILLITERATES
AMONG THOSE AGED 15 YEARS AND OVER, 1950

Country	Percent in agriculture	Percent illiterate
Haiti	71.6 <u>a/</u>	89
Honduras	71.4 <u>a/</u>	65 <u>b/</u>
Guatemala	68.2	71
Nicaragua	67.7	62
El Salvador	63.1	61
<u>Group I</u>	<u>68.4</u>	<u>70</u>
Brazil	59.6	51
Mexico	57.8	43 <u>c/</u>
Bolivia	57.1 <u>a/</u>	68
Dominican Republic	56.5	57
Costa Rica	54.7	21
Colombia	53.9	38
Paraguay	53.8	34
Ecuador	53.2	44
<u>Group II</u>	<u>55.8</u>	<u>44</u>
Panama	49.8	30
Cuba	41.5	22
Venezuela	41.3	48
Chile	38.1	20
Argentina	25.2	14 <u>d/</u>
<u>Group III</u>	<u>37.6</u>	<u>27</u>

a/ Estimate adjusted for excessive reporting of female unpaid family helpers.

b/ Ages: 10 and over.

c/ Ages: 6 and over.

d/ Ages: 14 and over.

/assembled by

assembled by UNESCO, showing considerable progress (see table 28).^{62/} While elementary school enrolment is not the only road to literacy - adults can also learn to read and write through special courses, or on their own initiative - it is decisive for the general literacy of the population. Progress is undoubtedly being made in this direction, although it is not uniform.

The school systems of many countries, however, are still largely ineffectual in another respect. Often only a fraction of those initially enrolled in the first grade eventually complete their elementary schooling. Even smaller numbers continue at secondary or vocational schools. Desertions during the school year, failures to move from one grade to the next, complete abandonment of further education, and the lack of rural schools offering more than, say, two or three elementary grades, are among the chief causes of wastage. And despite the marked increases in gross enrolment no conspicuous progress has been made in any of these respects.^{63/}

For instance, among those who have completed at least one school grade, median numbers of school grades completed can be calculated from census data in respect of various age groups. If this ratio is higher among young persons than among an older generation, then the school progress, on the part of those enrolled, has improved; otherwise it has not. According to certain data^{64/}, over a very

^{62/} Ibid., up to 1954. Ratios for 1956-59 have been calculated by ECLA, by relating data supplied by UNESCO to corresponding population estimates. Since the ratios refer to a 10-year age group whereas the official school curriculum is generally one of 5 to 7 years, the ratios should, ideally, come to approximate from 50 to 70 per cent, or somewhat more to allow for repetition of grade by some pupils.

^{63/} This problem is now being studied intensively at the Santiago Demographic Centre (CELADE).

^{64/} G. Zarzewski, "Características educacionales de la población en el censo de las Américas de 1950", Inter-American Training Centre for Economic and Financial Studies, (CIEF), Santiago, Chile, 15 March - 15 June 1958, CLEE/Doc.ref.21.

Table 28

ELEMENTARY SCHOOL ENROLMENT RATIOS PER 100 PERSONS AGED 5-14 YEARS
IN SIXTEEN LATIN AMERICAN COUNTRIES, 1950-1959, AND AVERAGE
ANNUAL GAINS IN THE RATIO

Country	1930-34	1950-54	1956-59	Average annual gain
Haiti	12 <u>a/</u>	20 <u>b/</u>	24	0.8
Honduras	13 <u>a/</u>	27	36	0.9
Guatemala	19 <u>d/</u>	23	28	0.4
El Salvador	14 <u>a/</u>	33	51	1.5
<u>Group I</u>	<u>14 f/</u>	<u>26</u>	<u>35</u>	<u>0.9</u>
Brazil	22 <u>a/</u>	34 <u>g/</u>	44	0.9
Mexico	43	47	50	0.3
Bolivia	16 <u>d/</u>	28 <u>h/</u>	38	0.9
Costa Rica	40	51	64	0.9
Colombia	26 <u>d/</u>	30	39	0.5
Paraguay	43	57	72	1.1
Ecuador	24	42 <u>g/</u>	49	1.0
<u>Group II</u>	<u>31 i/</u>	<u>41</u>	<u>51</u>	<u>0.8</u>
Panama	38	56	58	0.8
Cuba	42 <u>j/</u>	43 <u>g/</u>	58	0.7
Venezuela	28 <u>k/</u>	43	47	0.7
Chile	50	56	63	0.5
Argentina	53	68	69	0.6
<u>Group III</u>	<u>42 i/</u>	<u>53</u>	<u>59</u>	<u>0.8</u>

a/ 1941-43.

b/ 1952-54.

c/ 1932-34.

d/ 1934.

e/ 1931-33.

f/ Average date: 1935.

g/ 1950-53.

h/ 1950-52.

i/ Average date: 1933.

j/ 1944.

k/ 1940-44.

l/ Average date: 1936.

/long period

long period improvement, if any, has been negligible. For those aged 15-24 years in 1950 who had had at least one grade of schooling, the medium number of grades completed was 2.5 in El Salvador, 2.7 in Nicaragua, 3.1 in Costa Rica, and 3.2 in Venezuela; the corresponding figures for those aged 65 and over - who had been in school before the end of the last century - were 2.9, 2.8, 2.8 and 3.0, respectively.

These observations give occasion to consider two alternatives in the use of the inevitably limited school budgets. A budget can be spent on a concentrated effort to make school enrolment universally applicable, or on a concentrated effort to improve the educational progress of those already enrolled. According to available records, school enrolment in most countries has become more nearly universal, while the average progress of those enrolled has improved little if at all. It is open to question whether this type of school policy is the most conducive to securing a supply of manpower with the qualifications urgently needed for economic and social development.

It is a commonplace that Latin American manpower is especially deficient in persons of at least intermediate levels of skill and responsibility. While the supply of such personnel is short, the available skill of highly educated persons (professionals, technicians) cannot be advantageously used. Nor can a large labour force of low levels of skill and education then be advantageously employed. If school policies continue the past trend, there will be an increase in the supply of barely literate manpower, but the proportion of those with a substantially better education will not be noticeably larger.

4. Socio-economic characteristics of the labour force:

The census data classify the labour force by branch of activity, personal occupation and occupational position (employer, wage-earner, etc.), as well as by cross-tabulation among these socio-economic characteristics.

It would be most useful to possess in addition cross-classifications of some economic characteristic - especially occupations - with educational attainment. The Educational deficiencies of the labour force in various categories might then be more directly inferred, and also the educational needs to be met in accordance with needs for labour in various categories. Manpower projections and educational projections might then be compared and mutually reconciled, permitting a convergent approach of employment policy with educational policy. Unfortunately, data permitting linkage between educational and manpower characteristics are scarce.

The occupational, activity and occupational-status classifications themselves throw no direct light on employment or productivity levels in the particular jobs. While most economically active persons are identified in the census under the categories provided, it is well known that the activities of numerous persons are intermittent and of low productivity. Unemployed persons seeking work can be readily defined in the technologically advanced countries where most work is performed on a labour-contract basis, and when such work is lacking the fact is quite obvious. In countries where intermittent activity is wide-spread and where numerous persons try to earn a living, however inadequately, by personal efforts outside the contract system, the concept of unemployment is rather vague. Nor can there be a clear-cut definition of under-employment, except in relation to desirable numbers of hours worked, or some minimum of income earned. For the most part, there is also a dearth of this type of statistics.

In the analyses which follow, characteristics of manpower are examined irrespective of sex. This has the disadvantage that in Bolivia, Haiti and Honduras incomparably larger numbers of women are included, most of them rural housewives.

/The classification

The classification by branch of activity is simplified when only three sectors are distinguished, namely:

- I. Primary activities (agriculture, forestry, hunting and fishing, mining and quarrying);
- II. Secondary activities (building, manufacturing industries, and public utilities);
- III. Tertiary activities (commerce, transport, storage and communications and services).

Activities of an unspecified character or not otherwise defined will be included among the tertiary, since they are probably mainly of that type. This has been done in table 29, in which all the data are assembled from the same source.^{65/}

Since most of the primary activities are agricultural, the percentage in primary activities follows the order of countries adopted very closely. Corresponding to the decrease in primary activities, there is a very systematic increase in secondary activities, except in countries with high percentages under unspecified activities (the Dominican Republic, Panama and Venezuela), many of which are no doubt, of a secondary type. Little systematic change has taken place in the ratio of tertiary to secondary activities. On an average, this ratio is equal in moderately industrialized countries (Group II) and highly industrialized countries (Group IV), but higher in Group III. The comparability of the data for the United States is also perhaps rather doubtful, as 7.8 percent of the labour force was recorded under unspecified activities there. With more nearly comparable criteria, the ratio of tertiary to secondary activities may be lower in the United States than in some of the less industrialized countries of Latin America. It certainly is lower than in Brazil, for example, where the category of unspecified activities was only 0.3 per cent.

Roughly speaking, it may be said that, throughout the American continent, there are three service workers to every two industrial workers, irrespective of the degree of industrialization.

^{65/} See footnote 56.

Table 29

PERCENTAGES OF ECONOMICALLY ACTIVE POPULATION ENGAGED IN EACH OF THREE
MAIN BRANCHES OF ACTIVITY IN CENSUSES OF 1950 FOR EIGHTEEN
REPUBLICS OF LATIN AMERICA, CANADA AND
THE UNITED STATES

Country	Primary	Secondary	Tertiary	100 time ratio (2)/(1)	10 times ratio (3)/(2)
	(1)	(2)	(3)	(4)	(5)
Haiti <u>a/</u>	83.2	5.6	11.2	7	20
Honduras <u>a/</u>	83.6	6.9	9.5	8	14
Guatemala	68.4	14.3	17.3	21	12
Nicaragua	68.7	14.2	17.1	21	12
El Salvador	63.4	14.4	22.2	23	15
<u>Group I a/</u>	<u>73.5</u>	<u>11.1</u>	<u>15.4</u>	<u>15</u>	<u>14</u>
 Brazil	 60.3	 13.5	 26.2	 22	 19
Mexico	59.0	14.7	26.3	25	18
Bolivia <u>a/</u>	74.8	12.9	22.3	17	17
Dominican Republic	56.5	9.5 <u>b/</u>	34.0 <u>b/</u>	17 <u>b/</u>	36 <u>b/</u>
Costa Rica	54.9	15.9	29.2	29	18
Colombia	55.5	16.1	28.4	29	18
Paraguay	53.9	18.7	27.4	35	15
Ecuador	53.6	21.7	24.7	40	11
<u>Group II a/ c/</u>	<u>58.9</u>	<u>16.2</u>	<u>24.9</u>	<u>28</u>	<u>15</u>
 Panama	 49.9	 9.8 <u>d/</u>	 40.7 <u>d/</u>	 20 <u>d/</u>	 42 <u>d/</u>
Cuba	42.0	20.3	37.7	48	19
Venezuela	43.9	15.7 <u>e/</u>	40.2 <u>e/</u>	36 <u>e/</u>	26 <u>e/</u>
Chile	34.8	24.7	40.5	71	16
Argentina	25.7	27.8	46.5	108	17
<u>Group III f/</u>	<u>34.2</u>	<u>24.3</u>	<u>41.6</u>	<u>71</u>	<u>17</u>
 Canada	 21.0	 33.5	 45.5	 160	 14
United States	13.1	32.9	54.0	251	16
<u>Group IV</u>	<u>17.0</u>	<u>33.2</u>	<u>49.8</u>	<u>195</u>	<u>15</u>

a/ Data for Haiti, Honduras and Bolivia, included in the group averages, are affected by relatively excessive reporting of women in agriculture.

b/ Included in "tertiary" are 19.2 per cent reported in unspecified activities; probably, many of these were of a "secondary" type.

c/ Excluding data for the Dominican Republic.

d/ Included in "tertiary" are 16.1 per cent reported in unspecified activities; probably, many of these were of a "secondary" type.

e/ Included in "tertiary" are 8.5 per cent reported in unspecified activities; probably, many of these were of a "secondary" type.

f/ Excluding data for Panama and Venezuela.

/Much has

Much has been made of the schemes of Clark and others^{66/} in which the rise of service industries in relation to general industrialization is well documented. In fact, the more complex the industries, the larger their scope and the more intricate their inter-relations, the greater the need for co-ordinating services such as transport, marketing, banking, insurance, etc. Furthermore, a rising standard of living can absorb additional consumer services. The comparatively constant proportions of manufacturing and services observed in the Americas, strongly suggest that many of the services in the less industrialized countries are neither industry-supporting nor indicative of a high standard of living. Much of the Latin American under-employment is, no doubt, to be found there.

The occupational classification under which comparable data have been assembled obscures the fact that levels of skill or responsibility vary enormously. Some categories, nevertheless, are indicative of conditions under varying degrees of industrialization. The selected categories, as percentages of the labour force, are brought together in table 30.

Aside from probable sources of incomparability, all the six categories examined show a rise as the dependence on agriculture decreases. As can be gleaned from Table 30, "industrialization", as measured by percentages of secondary employments, in comparison with Group I, is half as much again in Group II, twice as much in Group III, and three times as much in Group IV. The rise in professionals and technicians, from 1.6 per cent in Group I to 7.6 per cent in Group IV, is more than proportionate, as is also the increase in managerial staff. The expansion of office personnel is prodigious as industrialization increases, and the increase in transport workers is very considerable.

Unfortunately, not much is known quantitatively about the composition of the segment described as "service workers". The expansion of this category, from 6.4 per cent in Group I to 10.6 in Group III, followed by a decrease to 10.2 in Group IV, is far less than proportionate with the rise in industrialization. Even in Colombia, this segment is as large

^{66/} Colin Clark, The conditions of economic progress, London, 1940;
Jean Fourastie, Le grand espoir du XXeme siecle, Paris, 1949.

Table 30

PERCENTAGES OF ECONOMICALLY ACTIVE POPULATION BY SELECTED TYPES OF OCCUPATIONS
IN CENSUSES OF 1950 FOR FOURTEEN REPUBLICS OF LATIN AMERICA, CANADA
AND THE UNITED STATES

Country	Professionals and technicians	Directors managers and administrators	Office personnel	Sales personnel	Workers engaged in means of transportation	Service workers
Honduras	0.9	0.6	1.5	9.3 ^{a/}	0.9	3.0
Guatemala	1.6	1.5	1.8	3.3	1.2	6.3
Nicaragua	2.1	2.9	2.2	1.2	1.3	7.6
El Salvador	1.7	2.8	2.4	2.0	1.2	8.8
Group I	<u>1.6</u>	<u>2.0</u>	<u>2.0</u>	<u>2.2^{b/}</u>	<u>1.2</u>	<u>6.4</u>
Brazil	2.0	3.6	4.1	3.2	2.3	5.8
Bolivia	1.5	2.7	1.6	2.5	0.9	1.7 ^{a/}
Costa Rica	3.4	3.5	4.1	3.8	1.7	9.8
Colombia	2.3	5.7	2.4	1.7	2.0	10.6
Paraguay	2.4	4.3	3.1	2.2	1.8	8.1
Ecuador	1.9	3.8	2.2	2.3	1.2	6.9
Group II	<u>2.2</u>	<u>4.0</u>	<u>2.9</u>	<u>2.6</u>	<u>2.4</u>	<u>8.2^{c/}</u>
Panama	3.7	2.8	4.0	1.8	2.8	10.5
Cuba	4.4	4.7	7.2	6.3	4.4	8.1
Venezuela	3.3	5.9	3.6	2.7	3.8	9.4
Chile	4.4	6.5	7.6	2.6	2.5	14.2
Group III	<u>4.0</u>	<u>5.0</u>	<u>5.6</u>	<u>3.4</u>	<u>3.4</u>	<u>10.6</u>
Canada	7.1	7.7	12.0	6.4	6.5	9.8
United States	8.2	8.4	11.5	6.5	3.4	10.6
Group IV	<u>7.6</u>	<u>8.0</u>	<u>11.8</u>	<u>6.4</u>	<u>5.0</u>	<u>10.2</u>

^{a/} Apparently not comparably reported.

^{b/} Excluding data for Honduras.

^{c/} Excluding data for Bolivia.

/as in

as in the United States, although, as measured in Table 30, the United States is twice as industrialized. Again it appears that this is a category which, in Latin America, is over-stocked by persons who have difficulty in finding more regular and remunerative employment. In passing, it is worthy of note that the occupational "service" sector accounts for over 30 per cent of the female labour force in at least these countries: Colombia, Costa Rica, Cuba, Chile, El Salvador, Guatemala and Venezuela, and possibly in some others where this datum was not found; it is known that many Latin American women engage in domestic services.

The composition of the labour force by occupational status is summarized in Table 31. As evidenced by footnotes, there are several sources of non-comparability. The conclusions are accordingly uncertain.

There are variations in the reporting of employers, possibly as some employed administrators, in their turn, engage wage and salary workers at the lower levels. Employers, wage and salary labour taken jointly constitute the occupations carried out on the basis of labour contracts. This socio-economic segment comprises about one-half of the labour force in less industrialized countries, about two-thirds in countries of Group III, and three-quarters or more in North America. However, conditions vary considerably among particular countries. At any rate, persons working outside the system of contracts constitute a larger proportion in the less industrial countries than in those where industrialization has progressed far.

The ratio of wage and salary labour to employers might provide an index of average sizes of cash-contract establishments, if data were comparable. It is probable that the size of establishments tends to increase with industrialization.

The ratio of family helpers to self-employed tends to decrease with industrialization. Evidently in the presence of industries, family members may find wage and salary employment which, otherwise, would be constrained to aid in the enterprise of the family head. In industrialized countries where birth rates are lower, families are also smaller and there are fewer potential family helpers.

/Table 31

Table 31

PERCENTAGES OF ECONOMICALLY ACTIVE POPULATION UNDER EACH OCCUPATIONAL STATUS
IN CENSUSES OF 1950 FOR SIXTEEN REPUBLICS OF LATIN AMERICA,
CANADA AND THE UNITED STATES

Country	Labour contract status			Other status		Ratios	
	Employers	Wage and salary workers	(1)+(2)	Self employed	Unpaid family helpers	(2)/(1)	(5)/(4)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Haiti	1.5	12.3	13.8	42.5	41.0 <u>a/</u>	8	0.96 <u>a/</u>
Guatemala	2.7	40.0	42.7	38.9	18.4	15	0.47
Nicaragua	13.5	55.0	68.5	25.0	6.5	4	0.25
El Salvador	2.8	55.5	58.3	25.7	12.9	20	0.50
Group I <u>b/</u>	<u>6.3</u>	<u>50.2</u>	<u>56.5</u>	<u>29.9</u>	<u>12.6</u>	<u>8</u>	<u>0.42</u>
Brazil	3.6	50.0	53.6	28.1	16.8	14	0.60
Mexico	0.8 <u>c/</u>	45.9	46.7	40.7	11.7	57 <u>c/</u>	0.29
Bolivia	2.3	30.8	33.1	14.2	51.9 <u>a/</u>	13	3.65 <u>a/</u>
Dominican Republic	1.4	27.5	28.9	38.4	13.9	20	0.36
Costa Rica	10.1	66.5	76.6	10.9	9.5	7	0.87
Colombia	10.3	52.5	62.8	23.7	8.3	5	0.35
Paraguay	4.9	33.0	37.9	45.4	13.9	7	0.31
Group II <u>d/</u>	<u>6.1 <u>e/</u></u>	<u>45.9 <u>e/</u></u>	<u>51.1</u>	<u>31.1</u>	<u>12.4</u>	<u>8 <u>e/</u></u>	<u>0.40</u>
Panama	1.8	37.7	39.5	36.5	15.1	21	0.41
Cuba	...	...	72.1	24.0	3.9	...	0.14
Venezuela	3.8	54.0	57.8	27.3	8.2	14	0.30
Chile	2.1	72.5	74.6	21.6	2.3	35	0.11
Argentina	15.7 <u>e/</u>	70.2	85.9	6.8	2.8	4 <u>e/</u>	0.41
Group III	<u>2.6 <u>f/</u></u>	<u>54.7 <u>f/</u></u>	<u>66.0</u>	<u>23.2</u>	<u>6.5</u>	<u>21 <u>f/</u></u>	<u>0.28</u>
Canada	4.3	77.1	81.4	15.1	3.2	18	0.21
United States	...	...	75.8	16.0	1.9	...	0.12
Group IV	<u>4.3 <u>g/</u></u>	<u>77.1 <u>g/</u></u>	<u>78.6</u>	<u>15.6</u>	<u>2.6</u>	<u>18 <u>g/</u></u>	<u>0.17</u>

a/ Relatively excessive number of female family helpers were reported.

b/ Excluding data for Haiti.

c/ Number of reported employers appears non-comparable.

d/ Excluding data for Bolivia.

e/ Excluding data for Mexico as well as Bolivia.

f/ Excluding data for Cuba and Argentina.

g/ Canada only.

/Within the

Within the labour contract system, there are some limits to under-employment: a labourer would not indefinitely be maintained on a payroll unless there is a minimum amount of productive work for him to do. Under-employment can be more frequent among some of the self-employed and unpaid family assistants. Of course, conditions vary, as do also the precise criteria applied in national censuses. Nevertheless, it is of interest to compare the percentage of self-employed among the labour force engaged in each major branch of activities, as is done in Table 32. For more efficient summarization, the Group averages are brought together in table 33.

Comparing the averages of Group I with those of Group IV, one notes rises in percentages of the self-employed, with rising industrialization, only in the cases of agriculture, building and services. Only in agriculture is the rise pronounced, but here the definition of "self-employed" may vary widely with systems of land tenure, types of crops and terrain. The population census, of course cannot describe the diverse structures of agriculture, in all their complexity. In the case of "services", it is to be noted that female domestic servants while not economically very productive nevertheless are salary earners, some highly skilled professionals, e.g. doctors and lawyers, on the other hand, are self-employed, as are also some barbers, bootblacks, etc.

In all other categories, the percentages of self-employed decline with rising industrialization though not regularly in each instance. In the case of mining, the decline is continuous; here, the cash-contract system does not become all-embracing until the degree of industrialization is quite high; much mining, in some countries, is probably still done with small capital equipment. In manufacturing, the self-employed represent, on the whole, the artisan group though, in highly industrialized countries, some repair services are also carried on by workers on their own account; it is worthy of note that this decline is rather slowed down from Group II to Group III, but precipitous between Group III and Group IV: evidently, in some Latin American countries, despite considerable industrialization, many manufacturing jobs are still those of small shops. The same observation can be made for commerce; the very high ratio of self-employed in less industrialized countries, no doubt, is a significant index of under-employment. In transport, the

Table 32

PERCENTAGES OF SELF-EMPLOYED AMONG THOSE ECONOMICALLY ACTIVE
IN EACH MAJOR BRANCH OF ACTIVITIES, ACCORDING
TO CENSUSES OF 1950 FOR TWELVE REPUBLICS
OF LATIN AMERICA, CANADA AND
THE UNITED STATES

Country	Categories							
	Agricul- ture, for- estry, hunt- ing and fishing	Mining and quar- rying	Manu- factur- ing in dustries	Building	Commerce	Trans- port, storage and com- munica- tions	Services	Activi- ties not well defined
Haiti	44.1	24.4	47.7	20.6	77.3	18.1	10.2	1.0
El Salvador	28.1	8.6	30.8	6.3	56.1	11.7	6.0	7.7
Group I	<u>36.1</u>	<u>16.5</u>	<u>39.2</u>	<u>13.4</u>	<u>66.7</u>	<u>14.9</u>	<u>8.1</u>	<u>4.4</u>
Brazil	34.1	...	...	...	33.2	15.3	18.7	16.7
Mexico	52.3	5.1	26.2	10.5	63.6	11.8	12.1	7.0
Bolivia	9.7	2.5	36.6	5.1	58.2	10.6	4.5	4.6
Costa Rica	9.1	25.7	19.9	3.4	32.2	8.6	4.8	...
Colombia	24.1	26.3	32.9	11.0	50.2	14.9	8.3	35.4
Group II	<u>25.9</u>	<u>14.9 a/</u>	<u>28.9 a/</u>	<u>7.5 a/</u>	<u>47.5</u>	<u>12.2</u>	<u>9.7</u>	<u>15.9 b/</u>
Panama	59.9	30.1	33.1	19.8	28.4	26.9	7.4	16.2
Cuba	29.0	7.0	14.8	17.8	41.5	19.6	14.7	6.3
Venezuela	42.3	4.2	27.4	13.2	46.8	30.2	3.5	6.3
Chile	24.2	3.3	27.2	12.5	45.5	14.9	11.9	12.0
Argentina	4.0	0.8	10.7	4.1	11.3	4.7	6.1	2.4
Group III	<u>31.9</u>	<u>9.1</u>	<u>22.6</u>	<u>13.5</u>	<u>34.7</u>	<u>19.3</u>	<u>8.7</u>	<u>8.6</u>
Canada	52.8	1.0	2.7	11.1	10.4	7.0	6.9	2.4
United States	62.3	3.8	4.4	18.9	19.2	5.4	10.5	2.0
Group IV	<u>57.6</u>	<u>2.4</u>	<u>3.6</u>	<u>15.0</u>	<u>14.8</u>	<u>6.2</u>	<u>8.7</u>	<u>2.2</u>

a/ Average excluding Brazil.

b/ Average excluding Costa Rica.

Table 33

UNWEIGHTED GROUP AVERAGES OF PERCENTAGES OF SELF-EMPLOYED AMONG THOSE
ECONOMICALLY ACTIVE IN EACH MAJOR BRANCH OF ACTIVITY IN FOUR
GROUPS OF COUNTRIES

Activities	Group I <u>a/</u>	Group II <u>b/</u>	Group III <u>c/</u>	Group IV <u>d/</u>
Agriculture, etc.	36.1	25.9	31.9	57.6
Mining, etc.	16.5	14.9	9.1	2.4
Manufacturing	39.2	28.9	22.6	3.6
Building	13.4	7.5	13.5	15.0
Commerce	66.7	47.5	34.7	14.8
Transport, etc.	14.9	12.2	19.3	6.2
Services	8.1	9.7	8.7	8.7
Unspecified	4.4	15.9	8.6	2.2

a/ Haiti, Honduras, Guatemala, Nicaragua and El Salvador.

b/ Brasil, Mexico, Bolivia, Dominican Republic, Costa Rica, Colombia, Paraguay and Ecuador.

c/ Panamá, Cuba, Venezuela, Chile and Argentina.

d/ Canada and United States.

/situation is

situation is ambiguous: the percentage of self-employed rather tends to rise with industrialization in Latin America, being highest in Group III, in fact very high as compared with North America. As for unspecified activities, the fact that they could not be well determined by the census alone makes them suspect, but data are scarcely comparable, as some censuses have succeeded better than others in allocating this miscellaneous group among more definite headings.

Somewhat analogous findings are obtained from cross-classifications of manpower by occupation and occupational status. Presentation of the data is omitted to save space. However, there is an added interest in an examination of the cross-classification of occupation by branch of industry, at least where technical and managerial personnel is concerned.

Commenting on Table 34, we may note steep rises in the proportion of technical personnel in every branch of activity, as the degree of industrialization advances. Agriculture in highly industrialized countries is 25 times as well provided with technicians as it is in those countries which still mainly depend precisely on agriculture. Manufacturing is ten times as well staffed with technical persons in the industrial countries. Fairly industrialized countries, in Group III, appear to be relatively advanced in the technical staffing of mines, but relatively backward as regards technicians in transport and in the "services"; in these latter respects, they seem hardly better staffed than the less industrial countries of Group II.

As shown in Table 35, managerial and administrative personnel increases regularly and steeply in nearly every branch of activity as the degree of industrialization advances, with the notable exception of commerce, where the progression is in the reverse order. Again, Group III, for its level of industrialization, appears relatively backward with respect to transport and "services". Commerce, as has been noted, may conceal many under-employed persons, including the "managers" of small, or one-man, businesses; here also, Group III still seems relatively over-staffed, as compared with the far more efficient organization of commerce in North America.

Table 34

PROFESSIONALS AND TECHNICIANS PER 1 000 PERSONS ECONOMICALLY ENGAGED IN EACH
MAJOR BRANCH OF ACTIVITY, IN THIRTEEN REPUBLICS OF LATIN
AMERICA, CANADA AND THE UNITED STATES

Country	Agriculture forestry, hunting and fishing	Mining and quarrying	Manufacturing industries	Building	Commerce	Transport, storage and communications	Services
Haiti	0.1	4	13	2	3	1	97
Guatemala	0.6	17	8	3	18	13	140
Nicaragua	0.1	11	12	7	7	17	182
El Salvador	0.1	12	11	3	14	5	131
Group I	0.2	11	11	4	6	9	138
Brazil	0.1a/	...	...	12b/	15	4	110c/
Mexico	0.2	31	25	18	5	10	191
Costa Rica	0.9	5	12	6	8	16	209
Colombia	0.1	13	8	13	20	10	120
Ecuador	0.4	9	5	3	7	12	148
Group II	0.4	14d/	12d/	10	11	10	156
Panama	1.0	17	28	19	14	10	222
Cuba	1.2	16	12	15	14	4	189
Venezuela	0.6	75	26	25	10	10	126
Chile	4.1	24	21	23	22	16	140
Group III	1.7	33	22	20	15	10	169
Canada	3.5	52	16	34	23	17	263
United States	6.6	37	38	46	22	26	303
Group IV	5.0	44	27	40	22	22	283

a/ Includes mining and quarrying.

b/ Includes building.

c/ Includes public utilities.

d/ Not including Brazil.

Table 35

MANAGERIAL AND ADMINISTRATIVE PERSONNEL PER 1 000 PERSONS ECONOMICALLY ENGAGED IN
EACH MAJOR BRANCH OF ACTIVITY, IN THIRTEEN REPUBLICS OF LATIN
AMERICA, CANADA AND THE UNITED STATES

Country	Agriculture forestry, hunting and fishing	Mining and quarrying	Manufacturing industries	Building	Commerce	Transport, storage and communications	Services
Guatemala	0.3	15	10	5	209	20	20
Nicaragua	0.1	4	15	2	563	12	16
El Salvador	0.0	16	1	4	478	4	8
Group I	<u>0.1</u>	<u>12</u>	<u>9</u>	<u>4</u>	<u>417</u>	<u>12</u>	<u>15</u>
Brazil	3.2a/	...	...	44b/	333	38	36c/
Costa Rica	0.3	27	10	23	334	25	33
Colombia	2.6	17	15	24	493	43	66
Ecuador	0.2	21	25	8	506	38	27
Group II	<u>1.0</u>	<u>22d/</u>	<u>17d/</u>	<u>18</u>	<u>416</u>	<u>36</u>	<u>40</u>
Parana	0.5	19	6	27	257	31	39
Cuba	2.6	49	28	23	278	25	35
Venezuela	0.9	20	9	13	613	50	60
Chile	1.8	11	57	50	404	24	33
Group III	<u>1.4</u>	<u>25</u>	<u>25</u>	<u>28</u>	<u>388</u>	<u>32</u>	<u>42</u>
Canada	5.2	27	65	53	232	41	81
United States	0.9	41	86	53	225	74	62
Group IV	<u>3.0</u>	<u>34</u>	<u>76</u>	<u>53</u>	<u>228</u>	<u>58</u>	<u>72</u>

a/ Includes mining and quarrying.

b/ Includes building.

c/ Includes public utilities.

d/ Not including Brazil.

5. Trends in the sectoral composition of manpower

For the study of detailed manpower trends, population censuses with comparable criteria are virtually indispensable. In many Latin American countries, the 1950 censuses were the first in which modern economic definitions were applied. The data of one census do not establish a trend although in some instances internal structural features permit the calculation of a manpower projection.

Some segments of manpower have also been recorded at other dates, in occasional censuses or surveys of industrial, commercial or agricultural establishments. But the surveys of establishments are not comprehensive and inevitably fail to account for large segments of manpower not currently working within the statistical units so identified. Estimates for residual manpower segments can be made consistent with population trends, output, average output per worker, or other criteria that have a relative inertia. With checks and consistency tests, estimates of this type can attain a certain degree of plausibility. This kind of effort was the basis of an ECLA study on manpower trends in the period of 1945-55.^{67/} However, as more time passes since the latest censuses, such estimates become increasingly insecure. While new population census data are soon to be expected systematic projections from the estimated 1945-1955 series would be rather unwarranted by this time.

In the study referred to, it was estimated that, from 1945 to 1955, the population of the twenty republics increased from 138 to 174 million, that is by 27 per cent. At the same time, manpower increased from 47 to 60 million, or by 28 per cent, at a rate slightly higher than that of total population.

The population dependent on agriculture, 79 million in 1945 and 90 million in 1955 increased by 14 per cent; and agricultural labour force, 26 million and 30 million at the two dates, increased by 15 per cent. These increases were very unevenly distributed among countries, negligible in the instances of Cuba, Uruguay and Chile, but exceeding 25 per cent in Ecuador, Costa Rica, Nicaragua, Paraguay and Guatemala. In the twenty republics combined, 56 per cent of the labour force was agricultural in 1945, and 51 per cent in 1955. It is most probable that since 1955

^{67/} "Changes in employment structure in Latin America, 1945-1955", Economic Bulletin for Latin America, Vol. II, No.1, February 1957.

/agriculture has

agriculture has come to engage less than one-half of the available manpower supply and that Latin America as a whole has ceased to be a "predominantly agrarian region".

The slow absorption of added manpower in agriculture reflected itself in the growth of secondary and tertiary occupations. When mining is excluded^{68/}, the secondary labour force (manufacturing, building) is calculated at 8 million in 1945 and 11 million in 1955, an increase of 38 per cent; the tertiary labour force (commerce, transport, services, and unspecified activities) at 12 million in 1945 and 18 million in 1955, shows an increase of 49 per cent. The ratio of tertiary to secondary occupations, 15 to 10 in 1945, rose to at least 16 to 10 by 1955.

Two periods could be distinguished. During 1945-1950, secondary occupations increased by 21 per cent, and tertiary employment by 22 per cent; during 1950-55, secondary occupations increased by only 14 per cent, and tertiary by as much as 27 per cent. A slow-down in the expansion of industrial jobs, it appears, caused an accelerated accumulation of manpower in services. The growth of the service sector, then, was disproportionate with industrial growth.

Actually, less than one-half of manufacturing jobs in 1950 were estimated to be of the factory type (less than 20 per cent in Ecuador, Haiti and Nicaragua; more than 55 per cent in Argentina, Venezuela and Uruguay). While factory employment increased rapidly in some countries - at annual rates approaching 9 or 10 per cent in Mexico and Venezuela - there was a shrinkage, relative if not also absolute, in the production of artisan and cottage industries.

The tentative conclusion was that - despite rises in industrial output - the slow growth of employment in agriculture, and the limited group of factory-type jobs, may have resulted in an accelerated accumulation of manpower in positions where under-employment and low productivity are known to be prevalent.

^{68/} Mining accounted for slightly over half a million jobs, a figure that apparently changed little over the ten-year period.

/It remains

It remains to be confirmed by new population censuses whether trends of this type have persisted, and whether jobs at lowest levels of productivity are indeed growing at a disturbingly high rate. The implications for industrial policy might be serious. Care would have to be taken, for instance, that industrial growth remained consistent with an adequate increase in the number of jobs where levels of employment and productivity are at least tolerable.

Because of possible implications, the use of new census data for the calculation of manpower projections can acquire much importance. The new censuses, furthermore, might provide sampling frameworks for subsequent manpower surveys carried out on a population (or household) basis, rather than on the basis of identifiable economic establishments.

6. A further reflection on the demographic problem as related to employment

The creation of employment of a given type depends on the accumulation of requisite capital. The institution of at least minimal levels of employment among the population at large requires, rather, an allocation of capital resources - whether large or small - among various sectors in requisite proportions. The employment problem, in part, must be attacked by a high overall rate of economic growth; in other respects, it is also to be reduced in terms of balances, re-allocations, and the overcoming of bottlenecks. Particularly in these latter respects, the comprehensive - or demographic - study of all sectors of manpower supply is most relevant.

Aspects of the general employment problem have been mentioned in relation to various population phenomena, e.g.:

- (a) the distribution of population among big cities, small towns and the countryside;
- (b) the distribution of the population by high, intermediate and low levels of educational attainment;
- (c) the composition of manpower engaged in highly capitalized processes of production, and in processes where moderate, or negligible, amounts of capital are brought into use.

Under each of these aspects, it might appear that the middle term is usually the one least developed in Latin America. Since relative shortages in one economic sector cause a relative redundancy in others, the middle term, very often, may be precisely the one which causes the bottleneck.

/If there

If there are such bottlenecks, population in the relatively redundant categories can accumulate very rapidly indeed while the overall rate of population growth is high. Action aimed at overcoming the bottlenecks, accordingly, may have to be taken rapidly.

There are still other ways in which the rate of population growth affects the employment situation, namely by:

- (a) the high rate of savings required to produce a greater per capita supply of capital;
- (b) the difficulty to effect savings while children are numerous and many women must inevitably attend to their household chores.

However, even in the employment problem, which may well prove to be a thorny one, a high rate of population growth can bring some incidental advantages.

First, there is a strong pressure for innovation and inventiveness. Though it does not necessarily follow that appropriate inventions will be made, the pressure is certainly there. Its nature can be illustrated as follows.

Population models have been calculated in which one factor is varied at a time.^{69/} Thus, two populations may be compared, one of which has a birth rate of 18 per 1,000, while the other has one of 38 per 1,000, mortality conditions being the same in both.^{70/} In the low birth-rate population, the entry rate into the labour force - i.e. young persons attaining the ages of economic activity - is 23.9 per 1,000 the rate of departures - deaths or retirement from jobs in the working population - is 24.9 per 1,000, and jobs are being vacated at a higher rate than they are being applied for; no new jobs would, in fact, have to be created for employment purposes. In the high birth-rate population, the entry rate into the labour force is 39 per 1,000, and the departure rate 14.5 per 1,000;

^{69/} United Nations Population Division, "Les facteurs de variation de la population active", Proceedings of the World Population Conference, 1954, (E/CONF.13/415); Monographs: Vol. III. United Nations Publication, Sales No.: 1955.XIII.8 (Vol. III), pp. 597-611.

^{70/} Birth rates corresponding to gross reproduction rates of 2.5 and 1.25, respectively. Mortality is represented by an expectation of 52.5 years of life at birth.

accordingly, 39 jobs must be found where only 14.5 jobs are being vacated by death or retirement; in other words, nearly two out of three of the jobs sought by the young entrants will have to be new jobs.

Secondly, as against the need for new jobs, the very youthfulness of the labour force in a growing population is a factor which gives it great flexibility. The structure of a growing economy will have to change substantially under any conditions. If jobs of a new type can be created - whether thanks to provision of capital, education, guidance, or inventiveness - then the structure of the entire economy can be changed at a very rapid rate.

It is the young persons, still on the look-out for new jobs, who are most ready to take on occupations which differ from those of their fathers, or to move to other localities. Older workers, more wedded to a given environment, work habits and inter-personal relations, are less disposed and less able to effect major changes in their personal careers. Provided it can be utilized, the high rate of entry in Latin America's youthful working population can result in a rapid transformation of the economy. It can be readily calculated that only 13 or 14 years have to pass before the new job entrants, from a certain date onward, come to form the majority of the working population.^{71/}

These potential assets of a rapidly growing population may become effective under favourable conditions. However, the drawbacks are numerous, and the conditions to be met are problematic.

^{71/} Assuming a median age of entry into economic activity of 17 years, and a medium age of about 30-32 years in the economically active population, and that little change in age structure will occur, 13 or 14 annual generations of job entrants form one-half of the working population. Such conditions are approximated in some Latin American countries.

