UNITED NATIONS

ECONOMIC
AND
SOCIAL COUNCIL

ECONOMIC COMMISSION FOR LATIN AMERICA

Tenth session
Mar del Plata, Argentina, May 1963

GEOGRAPHIC DISTRIBUTION OF THE POPULATION OF LATIN AMERICA
AND REGIONAL DEVELOPMENT PRIORITIES

CONTENTS

Introduction

It is well known that the population of Latin America is now growing more rapidly than that of any other large region at any time in history. The result of censuses taken since 1960 indicate that earlier estimates of an average rate of growth of 2.6 per cent per year were too low; it now appears more realistic to assess the present rate at 2.9 per cent and to expect this rate to rise above 3.0 per cent during the 1960's.[1] Only two of the twenty republics (Argentina and Uruguay) have rates of increase below 2.0 per cent per year, while four others (Bolivia, Cuba, Chile and Haiti) have rates below 2.5 per cent. In some of the Middle American and Caribbean countries the population is now rising by about 3.5 per cent annually.

The socio-economic implications of such high rates of growth have been considered in earlier studies made by the secretariat of the Economic Commission for Latin America.[2] It is obvious that the higher the rate of growth of population the higher the proportion of current income that must be devoted to investment if the increasing numbers of human beings are to maintain a constant level of living. The high rate of dependent children to persons of working age in a fast growing population and the associated need for heavy expenditure on education have also been discussed.

The inferences, however, have been drawn at such a level of abstraction that their utility for economic and social development strategy is limited.

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[1] For estimates based on data available in 1960 see "The Demographic Situation in Latin America", Economic Bulletin for Latin America, Vol. VI, No.2, Santiago, Chile, October 1961. For the more recent data see Statistical Supplement of the Economic Bulletin for Latin America, 1962.

[2] See in particular "The Demographic Situation in Latin America", op.cit., pp. 22-24 and 35-37 and Análisis demográfico de la situación educativa en América Latina (UNESCO/ED/CEDES/8; ST/ECLA/CONF.10/L.8; PAU/SEC/8).

Detailed inference, for purposes of policy guidance, becomes possible only
as a result of detailed study. Understanding is needed of the manner in which
population growth is distributed over the face of the land; the extent of
relocation of the increasing numbers among cities,towns, villages and dis-
persed dwellings; and the nature of changes in the social, educational, and
occupational composition of the populations of specific regions and types
of localities.

If part of a country has a low capacity to absorb additional population,
a high rate of national population growth inevitably entails a disproportion-
ately rapid accumulation of inhabitants in other parts. If educational or
other bottlenecks hinder the formation of manpower of certain categories or
levels of skills, manpower of lower qualifications will accumulate the more
rapidly. If the planning of development is to be really comprehensive and
effective it cannot ignore the relationships of population redistribution
trends to the geographical placing of investments and the types of manpower
called for by these investments. Once national policy makers have at their
disposal detailed information on demographic trends they can decide whether
specific measures are desirable or practicable to promote some trends or to
counteract others. Alternatively,if they find little scope for influencing
the demographic trends themselves, their over-all development policies may have
to be reshaped to bring them into line with inevitable population shifts.

The present paper summarizes the preliminary findings of a study under-
taken by the ECLA secretariat into the geographical distribution of popula-
tion in Latin America. In its earlier stages this study has concentrated
upon the analysis of demographic data. It is clear, however, that the
needed policy guidance cannot be derived from demographic data alone, even
if these were more reliable, comparable and up-to-date than is the case
at present. An exploration is required of the functions and inter-relation-
ships of localities of different types, from the national capital to the rural
hamlet, leading to a consideration of their present strengths and shortcomings
in the Latin American setting and of ways in which they might be helped to
perform their functions more adequately, thus, _inter alia_, promoting a

/better-balanced

better-balanced distribution of the population. Such a study requires the co-operation of economists, regional planners public administration specialists and human geographers as well as demographers. It also requires information based on local monographic studies of which few examples can be found in Latin America as yet. In its present stage, therefore, the study can do no more than set forth the demographic problem, suggest some very tentative hypotheses and policy alternatives, and propose future lines of research.

/I. RATE OF

I. RATE OF GROWTH AND REDISTRIBUTION OF POPULATION; A CALCULATING EXAMPLE

A simplifying model approximating to the trends now present in Latin America may throw into sharper relief the implications of differing rates of population growth for geographical and occupational redistribution.

The following calculations assume, first, that population will continue to grow at present rates, ranging from about 2.0 per cent to 3.5 per cent in different countries. This assumption somewhat understates the present growth trend in Latin America, since birth rates show no significant changes while death rates are likely to decline further. In the longer run, the forms of population redistribution may themselves affect national rates of growth, but such effects are likely to be of a secondary order of magnitude, are not well enough understood for assessment, and need not be taken into account in the present argument.

The second assumption is that net rates of population increase in rural areas will be relatively low and inflexible. In fact, the rates of rural population increase in most Latin American countries in recent years seem to have undergone little change, in spite of the marked acceleration in over-all growth; except in some of the small Central American and Caribbean countries, the rural rate of growth now ranges downward from about 1.5 per cent in such countries as Brazil, Mexico and Peru to small net losses in Chile and Venezuela. The experience of countries farther along the road of economic development, and the continuing diffusion of labour-saving technological innovations in agriculture suggest that the rural areas are not likely to absorb population increases at a higher rate than the present, though tenure reforms and the opening of new areas to settlement may make a difference. However this may be, the following calculations assume that the rural population will continue to grow at a fixed rate of 1.5 per cent, irrespective of whether the national rate is 2.0, 2.5, 3.0, or 3.5 per cent.

In a hypothetical country with an initial population of 10 million - 3 million urban, 7 million rural - the above alternative rates of national population growth would give the following totals in the course of thirty years (in thousands):

Year	Total population, assuming various annual percentage rates of increase				Rural population, increasing uniformily at 1.5 per cent a year
	2.0	2.5	3.0	3.5	
0	10 000	10 000	10 000	10 000	7 000
5	11 041	11 314	11 593	11 877	7 541
10	12 190	12 801	13 439	14 106	8 124
15	13 459	14 483	15 580	16 753	8 752
20	14 859	16 386	18 061	19 898	9 428
25	16 406	18 539	20 938	23 632	10 157
30	18 114	20 976	24 273	28 068	10 942

By substracting the rural from the total population, the urban
population can be calculated to grow as follows, according to the several
assumptions:

Year	Urban population, assuming various percentages rates of increase in total population				Urban per 100 of total population according to assumptions (percent.)			
	2.0	2.5	3.0	3.5	2.0	2.5	3.0	3.5
0	3 000	3 000	3 000	3 000	30	30	30	30
5	3 500	3 773	4 052	4 336	32	33	35	37
10	4 066	4 677	5 315	5 982	33	37	40	42
15	4 707	5 731	6 828	8 001	35	40	44	48
20	5 431	6 958	8 633	10 470	37	42	48	53
25	6 249	8 382	10 781	13 475	38	45	51	57
30	7 174	10 034	13 331	17 126	40	48	55	61

Under the "rigid" assumption that the net rural population increase
will be limited to 1.5 per cent per year, the high and low assumptions for
national population increase produce an enormous difference in rapidity of
urbanization. At a 2.0 per cent over-all rate of growth, the urban
population may double in 23 years, at 3.0 per cent in about 13 years, at

still higher rates within a decade. Such unprecedentedly high rates
of urban growth have, in fact, been recorded recently in some countries
of Latin America.

The apparent inability of the rural environment to absorb population
growth above a "rigid" low rate, however, is paralleled by another kind
of rigidity in the cities, where the rate at which industries and other
forms of productive employment can expand is limited by the availability
of investment funds, the size of the market, and the character of the labour
force. A very rapid increase in the number of persons seeking urban
employment, particularly if their levels of education and skills are
too low to permit ready integration with the urban employment structure,
implies that many of them will have to fall back either on little-
capitalized traditional ways of livelihood or on intermittent and
insecure activities affording incomes so low as to place them in an
economically and socially marginal category. It is well known that this
is occurring on a large scale in the Latin American cities.

Calculations similar to those already made can illustrate the
relationship of rate of national population growth to the size of
this urban marginal population. Let it be assumed that of an initial
urban population of 3 million, 2 million depend on relatively
remunerative occupations, whereas one million are in the occupationally
marginal category. Let it also be assumed that remunerative
employment can expand at a rate of 5 per cent per year. Under these
simplified assumptions, differing rates of over-all population
growth would lead to the following differential increases in the
size of the marginal group:

/Year

Year	Urban population remuneratively employed, increasing at 5.0 per cent a year	Urban population in "marginal" categories, assuming varying percentage rates of increase in national population				"Marginal" per 100 per urban population, according to varying assumptions (percentage)			
		2.0	2.5	3.0	3.5	2.0	2.5	3.0	3.5
0	2 000	1 000	1 000	1 000	1 000	33	33	33	33
5	2 553	947	1 220	1 499	1 783	27	32	37	41
10	3 258	808	1 419	2 057	2 724	20	30	39	46
15	4 158	549	1 573	2 670	3 843	12	37	39	48
20	5 307	124	1 651	3 326	5 163	2	24	39	49
25	6 773	... a/	1 609	4 008	6 702	0	20	37	50
30	8 644	... a/	1 390	4 687	8 482	0	14	35	50

a/ By that date, on this assumption, the entire urban population would have become absorbed in the sectors depending on remunerative employments.

At a moderate rate of population growth the marginal group would disappear after about 20 years. A national growth rate of 2.5 per cent would permit its stabilization within about the same period. At higher rates of over-all growth, the percentage of urban population dependent on marginal low-income occupations would continue to rise.

The assumptions behind these illustrative calculations admittedly do not do justice to the complexity of the real situation. The assumed "rigidities" in growth of rural population and in remunerative urban employment are only relative, and numerous circumstances not included in the calculations can modify the trends considerably. Whatever the qualifications, however, the formidable dimensions of the problem of finding homes and jobs for the growing urban populations of the Latin American countries emerge with sufficient clarity.

It may next be asked what rates of population growth in rural areas would be needed to keep recruitment to the urban marginal groups within dimensions permitting their complete absorption into remunerative employment at the end of, say, 30 years. Under the previous assumption

of a fixed 5-per-cent annual increase in such employment in the cities, the calculations show that national population growth rates of 2.0, 2.5, 3.0, or 3.5 per cent would require rural increase at rates of 1.0, 1.9, 2.7, or 3.4 per cent respectively.

Conversely, if it is assumed that little or nothing can be done to alter the low rate of population absorption in rural areas, what would have to be the rate of expansion in urban remunerative employment in order to bring the marginal category down to zero at the end of 30 years? Calculations indicate that such employment would have to rise by 4.3, 5.5, 6.5, or 7.4 per cent, depending on which of the four rates of national population growth is selected.

If absorption of the marginal population into remunerative employ-ment is accepted as one of the goals of national development policy, the policy-makers must find means either of raising the absorptive capacity of the rural areas or the rate of expansion of urban employment, or both, with the magnitude of the effort required rising sharply with the national rate of population increase.

In practice, of course, the problem does not present itself in so simple a form. An increase in the rural population – if it is to amount to more than a damming-up of the marginal population in rural rather than urban under-employment – may be less a question of the absorptive capacity of the present rural areas than of large-scale population shifts into areas now under-utilized. The urban population increase may be distributed in many different ways among small towns, medium-sized cities, and metropolitan agglomerations, with different implications for investment requirements both in production equipment and in the urban infrastructure. At the same time, the relative advantages and feasibility of alternative policies intended to influence population distribution will depend very largely on the aspirations, social characteristics, occupational qualifications and educational levels of the populations in question .

Before considering these questions in more detail, let us return to the calculating example in order to indicate the dimensions of

rural-urban migration under the previous assumptions. The following
calculation also assumes, for the sake of simplification, that rates of
natural population increase (i.e. births minus deaths) are the same in
urban and rural areas and among migrants and non-migrants. Actually,
urban birth rates are apt to be lower than rural, although the birth
rates of migrants to the towns may be higher - depending on the
composition of the migratory stream - than those of non-migrants.
If such refinements are ignored, the following net movements (i.e.
rural-urban movements minus urban-rural movements) are involved:

Period (years)	Net balances of rural-urban migration per five-year period, with assumed percentage rates of natural increase			
	2.0	2.5	3.0	3.5
0- 5	182	364	546	728
5-10	196	392	588	784
10-15	211	422	633	844
15-20	227	454	681	908
20-25	245	490	735	980
25-30	264	528	792	1 056
Sum 0-30	1 325	2 650	3 975	5 300

The total contribution of rural migrants to the urban population
can be very high. In relation to the total urban population at the end
of 30 years, migrants and their offspring - i.e., those who arrived or
were born in the towns from the year 0 onward, excluding migrants who
may have died - would amount to 24, 37, 45, or 51 per cent, according
to the assumed national rates of increase. Thus, under the last of the
four assumptions, although the natural increase of the urban population
is very high, its size at the end of 30 years would be only half as large
were it not for migrants and their offspring.

It would be an obvious over-simplification to equate the migrants
with the marginal sectors described above. In practice, part of the

migrants might be found more vigorous in seeking new opportunities and
more adaptable occupationally than older marginal groups confirmed in
apathetic poverty. Educational and other handicaps may impede the
absorption of the marginal groups even if migration is limited and
job opportunities for persons at least tolerably qualified are plentiful.
Even in the most prosperous societies marginal groups are known to
persist. Nevertheless, where the rate of rural-urban migration is high,
most of the migrants will be at some disadvantage in adjusting to urban
life. The larger the urban groups already unable to find remunerative
employment and the more rapidly these groups are increasing, the harder
it will be for the migrants to find such employment and the more likely
that they will remain in an economically and socially marginal position.

It may be worth while, therefore, to base a calculation on the
assumption that it is especially the migrant population that is subject
to the marginal conditions of insufficient, intermittent or unremunerative
employment. Accordingly, the numbers of the marginal population,
calculated above, will not be substracted from the calculated population
of migrant origin in order to determine, under the somewhat "rigid"
assumption, what opportunities there may be for the migrant population
to find remunerative urban employment. The following numbers and percentages
emerge:

Year	Population of migratory origin absorbed in remunerative urban activities, with assumed percentage rates of growth in national total population							
	Numbers (thousands)				Percentage of population of migratory origin			
	2.0	2.5	3.0	3.5	2.0	2.5	3.0	3.5
0	0	0	0	0	0	0	0	0
5	241	159	75	−10[a]	20	12	5	−1[a]
10	601	418	226	26	43	23	10	1
15	1 121	813	484	132	67	34	15	3
20	1 851[b]	1 391	889	338	94[b]	46	21	6
25	2 327[b]	2 211	1 492	663	100[b]	58	27	9
30	2 738[b]	3 351	2 362	1 224	100[b]	71	34	13

a/ Accidental result of the assumptions, implying that a small part of the
urban non-migrant population is also displaced into the "marginal"
category.

b/ The assumption implies disappearance of the "marginal" groups, hence
also complete absorption of the population of migratory origin.

/The calculations,

The calculations, at this point, are so schematic as to be open to criticism. Nevertheless the divergence between rates of absorption is too wide to be other than significant. Roughly speaking, one half of the migratory population is likely to become remuneratively employed within 12 years when national population grows at 2.0 per cent per year, and within 22 years when national growth reaches 2.5 per cent. At rates of 3.0 per cent and higher, only a dwindling minority of migrants can expect to find such employment at all.

II. A MULTI-DIMENSIONAL PROBLEM

Population redistribution, once one departs from rigidly simplified calculations such as those made above, reveals such intricate cause-and-effect relationships with other demographic processes and with economic and social change in general as almost to preclude lucid formulation. Nevertheless, its study is essential if satisfactory answers are to be found to some of the important practical questions arising in development policy.

Redistribution of a national population results partly from regional differences in birth rates and death rates, but mainly from inter-regional and rural-urban migration, especially when over all rates of growth are high. Even within these purely demographic terms, the relationships are intricate since birth rates, death rates, and potential rates of migration are conditioned by the sex-age composition of the population, whereas the sex-age composition, in its turn, is the product of past tendencies in birth rates, death rates, and migration. Birth rates and death rates differ in different parts of a country also for a variety of other reasons, economic, social and cultural, and these differences, with time, may widen or narrow. The national population trend can also be affected by internal redistribution, e.g. between high birth-rate and low birth-rate areas.

The amount and direction of internal migration depends upon thousands of decisions made by individuals influenced by a wide variety

/of considerations.

of considerations. Except for persons forced out of their homes by natural catastrophes or by violence, there is always an element of choice. Expectations that impel one person to move made not induce his neighbour, in similar circumstances, to do so. Degree of adventurous spirit, personal aptitudes or their subjective assessment, literacy and access to media of information, advice from friends and kinsmen who have already migrated may all have a bearing on the decision. Yet these non-objective factors that influence migration are also economically and socially conditioned; the aptitudes possessed by the migrants, their information on opportunities elsewhere, etc. depend on circumstances of the most varied kinds.

Economic and social characteristics help to select the migrants who will actually move to a given destination, while the experience of migration tends to transform the economic and social characteristics of the migrants themselves. Migration thus brings about a redistribution not only of numbers of people but also of the proportions of the people who possess given characteristics, between the places of out-migration and in-migration. In this way, the causes of migration can become circular and accumulative, with consequences that may or may not be in harmony with the changes envisaged by economic and social policy.

At the same time, with the growth and redistribution of population, average densities of settlement in different regions rise, the size of cities and towns increases, the relationships between population and resources, the size of the market, and the size and range of qualifications of the labour force become altered. Different policy objectives become attainable, or necessary, in accordance with changes in density and in size of settlement.

Models taking into account the multi-dimensional correlations and inter-correlations indicated above would be of a degree of complexity eluding comprehension, and in any case the nature of the correlations could never be objectively established. In the next stage of the present study, a simpler and more intelligible approach has been attempted through the examination of the observable demographic "structures" that are resulting from present trends in the redistribution of population.

For some purposes of analysis, it is sufficient to divide a national
entity into two or a few clear-cut categories, e.g. "urban" and "rural" popu-
lation, the "primary", "secondary" and "tertiary" sectors of the economy. In
such instances, "structure" can be envisaged in terms of proportions and
balances between the two or several segments. For other purposes,
however, it is more relevant to visualize population structure as a.
continuum, from one extreme to another, distributed according to, e.g.,
"size of community", "level of income", "level of educational attainment",
or "capital-intensity of productive processes", a certain mobility being
implied that continually alters the relative size of different groups
within the continuum. One can then seek norms for the population structure
according to whatever factor is being considered, although such norms
may have no better basis than the structural relationships observable
in countries that have reached the higher levels of economic and social
development. While there is no reason to expect any close uniformity
in the structures of different countries, if a very heavy concentration
of population is found at some levels and a very weak representation at
others, in comparison with what might be expected from the norm, a
presumption appears that there may be a bottleneck or rigidity in the
population structure that impedes the mobility required for a harmonious
adjustment of its parts one to another, and that may deserve the attention
of the economic or social planner.

The present study will next pursue these structural questions in
relation to two different types of geographical distribution of
population: first, its distribution among regions within countries;
second, its distribution among settlements of different sizes. Use
must be made of data from past censuses and these throw only a very
inadequate light on either type of distribution. The study can thus be
no more than exploratory. Some of its shortcomings can be remedied
during the next two years as the complete tabulations of the censuses
conducted around 1960 become available. Other defects must await the
use in future censuses of more adequate and consistent definitions of
regions and localities.

/III. VARIATIONS

III. VARIATIONS OF POPULATION DENSITY WITHIN COUNTRIES

Population density in relation to local natural resources,
especially land, determines the intensity with which such resources
can be, or have to be, used. Since the natural conditions throughout
a country are far from uniform, an even spread of population is not to
be expected. An extremely uneven distribution of inhabitants in relation
to the known disposition of land resources, however, implies that
resources in some areas are heavily drawn upon while resources in other
areas remain under-utilized. The detailed implications of varying
population density among regions within a country can be studied and
specified only when the regions are adequately defined and used in
tabulations of demographic data, and when the resources and forms of
organization, including the functions of the urban centres, in each
region are adequately known. Not even the first of these two conditions
can be met in the present study.

Regions ought to be delimited by the degree of convergence of
economic and social interactions within them. Although such interactions
are in many respects nation-wide or even world-wide, a relatively high
proportion of them are confined within a smaller radius and con-
centrated around some regional centre or group of centres. Only a few
attempts have been made in the Latin American countries, however, to
distinguish standard internal regions for the purpose of separate study
and programming, and in none of them has this regionalization become
systematic and scientific. Regions are rather delimited, to the
extent that they are recognized at all, in terms of administrative
units, the historical boundaries of which do not necessarily coincide
with modern socio-economic convergencies. Since population census data
are commonly tabulated by such administrative units, the present study
has had to rely on them, although they cannot be considered substitutes
for true "regions", except for the purpose of time comparisons within
a fixed framework for each individual country.

The combined area of Latin America is now inhabited at an average
density of about 10 persons per square kilometre. Two small countries,

/Haiti and

Haiti and El Salvador, have reached the high densities of 150 and
120 persons per square kilometre respectively, and are followed by three
other small Caribbean and Middle American countries, Cuba and the
Dominican Republic, with about 60 persons per square kilometre, and
Guatemala, with about 35. Densities in the other small countries of the
Middle American isthmus range from 23 in Costa Rica to 10 in Nicaragua,
while Mexico, a large country, has 18 persons per square kilometre.

In South America, average densities are lower. The small countries
of Ecuador and Uruguay are at the top, each with about 15 inhabitants
per square kilometre, followed by Colombia with 13 and Chile with 10.
The large countries Argentina, Brazil, Peru, and Venezuela have average
densities near 8, while in the two inland countries, Bolivia and Paraguay,
densities are only half that figure.

The wide variations in national population densities really reflect
the different extent to which the national territories have been fully
occupied more than they do generalized national differences in
population density. The averages for all the larger countries are
brought down by their huge expanses of very sparsely peopled land.
Some indication of the extent to which this is true can be obtained by
ranging the major administrative divisions within countries in order
of population density, and then comparing the average density of the
divisions inhabited by one-half the national population — those most
heavily occupied — with the average density of the divisions most thinly
occupied and making up half the national area. Because of the varying
geographical character, number, and size of the administrative divisions,
comparison from country to country is not very meaningful, contrasts in
density being generally sharper where the units are many and small than
where they are few and large. In spite of this lack of comparability,
the following figures are instructive:

/Year of

	Year of census or estimate	A Average density of major units combining one-half the national population at highest densities	B Average density of major units combining one-half the national territory at lowest densities	C Ratio of A to B
Argentina	1960	49.0	1.1	45
Bolivia	1950	7.4	0.7	11
Brazil	1960	43.7	0.7	66
Chile	1960	120.7	1.0	120
Colombia	1960	75.4	0.3	200
Costa Rica	1960	66.4	9.8	6.8
Cuba	1953	86.2	30.7	2.8
Dom. Rep.	1960	120.2	31.0	3.9
Ecuador	1950	33.1	0.4	80
El Salvador	1961	179.3	78.8	2.3
Guatemala	1950	87.1	5.1	17
Haiti	1950	129.0	96.0	1.3
Honduras	1961	31.4	1.9	17
Mexico	1960	64.0	5.0	13
Nicaragua	1950	32.5	1.0	34
Panama	1960	55.8	2.6	22
Paraguay	1960	61.8	0.3	200
Peru	1961	34.7	1.3	26
Uruguay	1958	197.1	5.4	36
Venezuela	1961	63.0	0.5	120

The four small countries Cuba, El Salvador, Haiti, and the Dominican Republic, already noted as leading in national average population density, are in striking contrast to the others in the relative evenness of population distribution between territorial units of greatest and least density. Only one of the large countries, Mexico,

is in an intermediate position in regard to evenness of distribution,
with the density of the most populated group of units only 13 times
that of the least populated. In all the other large countries the gap
between the two groups is much wider. Only one of the countries
with low over-all population density, Bolivia, appears in as much as an
intermediate position in regard to evenness of distribution, and this
position is misleading, since the major administrative divisions of
Bolivia (departments) are few and large, in a country in which the
mountainous terrain accounts for extreme inequality of population
distribution between municirios within the departments. The low average
densities of 30 to 35 for the more densely settled group of units in
Ecuador and Peru are misleading for similar reasons, but similar average
densities in the smaller units of Honduras and Nicaragua reflect more
accurately the fact that in those two countries high-density areas are not
very extensive. The territories of Argentina and Brazil are so large
that, despite heavy population concentration within relatively small areas,
one half the population already includes other areas of quite low density.

To sum up: one half the population of Latin America lives in
administrative units inhabited at an average density of 60 or more to
the square kilometre, while one-half the territory is inhabited at a
density of only 2 persons to the square kilometre or less.

An examination of the data from successive censuses, for the
countries possessing such data, indicates several distinct trends in the
redistribution of population since the beginning of this century:
movements toward a more even spread of population throughout the land
area; movements toward concentration of a rising proportion of the
population within small areas of high density, mainly the biggest cities
and their immediate surroundings; and shifts from high-altitude areas
to areas of lower altitude or coastal plains.

The trend toward a more even spread of population has been most
pronounced in those countries in which relatively large parts of the
national territory were previously occupied at a certain density,
notably Cuba, Ecuador, El Salvador and Haiti. In some other countries,

/including Brazil,

including Brazil, Chile, Costa Rica, and Mexico, there have been important
population shifts towards areas of initially lower but still appreciable
population density, rather than towards the national areas of very low
density. In both groups of countries - with the possible exception of
Brazil, where the data used refer to very large areas - these tendencies
have been increasingly offset, if not superseded, by the rising trend
towards a different kind of concentration of population - no longer
concentration in certain mainly rural regions, but concentration in
and around the largest cities. In Venezuela, the trend towards more even
territorial dispersal of population and the trend towards urban concentration
are simultaneously present, partly offsetting each other in statistical
terms. In Panama and Uruguay, increasing accumulation of population
in the area of the capital city has been the dominant trend since early
in the century.

Population shifts from highlands to lowlands are particularly
pronounced in Mexico, Colombia, Costa Rica, Ecuador, Peru, and Venezuela.
In some of these countries, the location of the chief city in the
highlands tends to offset this movement, which otherwise would appear
even more striking. In Peru and to a lesser extent in Ecuador the
location of the dominant city on the coast accentuates it. In so far as
previously the highlands in these countries were much more densely
populated than the lowlands these displacements in altitude coincide
with a more even spread of population, although in the Andean countries
they affect coastal areas with a previously appreciable population
density to a much greater extent than the nearly empty interior lowlands.

While the conditions affecting population redistribution differ
widely from country to country in ways that cannot be touched upon here,
the following rather broad inferences may be derived from available
data:

(a) tendencies towards a more even spread of population have been
more pronounced in high-density countries than in those inhabited at
lower average density; in nearly all countries these tendencies were
stronger early in the century than in more recent decades;

/(b) tendencies

(b)   tendencies towards concentration of population in small areas
have gained momentum in successive decades and are now important in
nearly every country;

(c)   early in the century, the tendencies towards concentration
were prominent mainly in low-density countries; more recently they have
grown in importance in the more densely inhabited countries;

(d)   settlement of the very extensive areas that have been nearly
empty of population up to the present, particularly in the interior of
South America, though progressing, has absorbed only a negligible
fraction of increases in the respective national populations.

/IV.   URBANIZATION

IV. URBANIZATION AND DISTRIBUTION OF POPULATION BY SIZE OF LOCALITY

The implications of the distribution of population among regions within countries differ according to the degree and kind of urbanization; it has already been suggested that the concentration of population in small areas of Latin America now depends much more on the growth of large cities than on increases in density of rural and small-town settlement. Let us next examine the distribution of population first between urban and rural areas and then among "inhabited localities" of varying sizes.

The difficulties of establishing a satisfactory dividing line between urban and rural localities are well known. The arbitrary figure of 2 000 inhabitants will here be used as the bottom limit for urban localities, although this criterion undoubtedly exaggerates to some extent the size of the population with truly urban traits. Two other difficulties that limit the comparability of data must be kept in mind: first, the countries (and regions within countries) differ in the extent to which "urban" functions predominate in settlements of a given size. Villages devoted entirely to agriculture may have larger populations in some countries (e.g. Mexico) than do many local commercial centres in others (e.g. Argentina). Also the general growth in population combined with improvements in transport and communications may mean that localities of a given size are less likely to have urban characteristics than in the past; strictly rural settlements may grow above 2 000 people without becoming more "urban" in their functions, and small towns may lose their commercial and other urban activities to the larger centres now become more accessible. (Conversely, of course, the improvement of communications is likely to bring about a diffusion of some urban traits into very small localities.) Present demographic data throw very little light on these important questions. In its later stages the present study will attempt to explore more deeply the functions and characteristics in different countries of the localities on the borderline between urban and rural, with their changes over time.

/For present

For present purposes, however, the fixing of a dividing line
between "urban" and "rural" localities is of less interest than the
patterns of distribution of population through the whole range of
localities by size. Further difficulties arise in the comparison ,
whether between countries or over a period of time, of populations
in localities of varying sizes, and these difficulties are greatest with
respect to the largest and the smallest localities. Only in a few
countries of Latin America do the censuses distinguish "localities"
within boundaries defined by strictly geographical criteria such as
extent of definitely urbanized territory, rural nuclei of population
grouped in physical proximity, and dispersed points of habitation in
the countryside. In most cases, localities are delimited by
administrative boundaries.

The smallest unit of administration in the majority of Latin
American countries is the municipio, usually made up of an administrative
centre or cabecera with its own boundaries, plus surrounding territory
that may contain a number of population nuclei but is not further
subdivided for administrative purposes. Since there are few large centres
that are not cabeceras, the distribution of cabeceras by size, within
certain maximun and minimun size-limits, is nearly equivalent to the
distribution of all inhabited places by size. For smaller localities
this system becomes increasingly unreliable because of the existence
of centres without any administrative status that are larger than
the smallest cabeceras. Nor do census tabulations distinguishing
only between the population of the cabecera and that of the remainder
of the municipio throw any light on the general character of the rural
habitat, i.e., whether the people are grouped in villages or smaller
nuclei or live mainly dispersed.

On the other hand, once a cabecera attains a respectable size
its administrative boundaries may no longer correspond to the continuous
urbanized area within the municipio. At a further stage of growth, this
urbanized area may cover the entire municipio and expand beyond its
bounds. The resulting city may eventually come to engulf other nearby
towns, throw out solidly urbanized tentacles along the major highways,

/and establish

and establish such a dominance of its own economic, residential and recreational needs over peripheral towns and rural areas, possibly across the country's major administrative boundaries, that the whole may best be considered a single metropolitan region. To the extent possible the present study deals with some of the largest cities in terms of such geographic rather than administrative boundaries, but this could be done only through rough approximations, at the cost of some loss of comparability among cities of nearly equal size, and also of some loss of comparability over time, since metropolitan areas expand over more and more territory, incorporating cities and towns previously enumerated separately.

The most recent estimates indicate an increase in the urban population of Latin America - i.e., that in localities with 2 000 or more inhabitants · from 61 million in 1950 to 95 million in 1960, or at an average annual rate of growth of 4.5 per cent. Rural population - i.e. the remainder — meanwhile grew from 95 million to 111 million, or at an average annual rate of about 1.5 per cent. In 1950, only Argentina, Chile, and Uruguay had urban majorities, while in eleven countries the urban population was less than 30 per cent of the national total. In 1960, more than half the population was urban also in Cuba, Mexico, and Venezuela, while only in the Dominican Republic, Haiti, and Honduras is the urban population believed to be still below the 30 per cent mark. The rapid rises in percentage of urban population in Brazil, Mexico, Peru, Venezuela, and the Dominican Republic are now documented by new census data, as are the more modest increases in Argentina, Chile and El Salvador. On the whole, the percentage of urban population rose fastest in countries at intermediate levels of urbanization, more slowly both in countries already predominantly urban and in those very little urbanized. If present trends continue, regional urban population will exceed rural from about 1966.

LATIN AMERICA: URBAN AND RURAL POPULATION, 1950 AND 1960 a/

(Thousands of persons)

Country	1950				1960			
	Urban b/	Rural	Total	Per cent urban	Urban b/	Rural	Total	Per cent urban
Uruguay c/	1 452	726	2 178	67	1 764	726	2 490	71
Argentina	11 038	6 151	17 189	64	14 161	6 795	20 956	68
Chile	3 513	2 560	6 073	58	4 801	2 826	7 627	63
Venezuela	2 430	2 544	4 974	49	4 521	2 810	7 331	62
Cuba	2 713	2 795	5 508	49	3 709	3 088	6 797	55
Mexico	11 826	14 000	25 826	46	18 740	16 248	34 988	54
Colombia	4 253	7 426	11 679	36	7 134	8 334	15 468	46
Panama	287	510	797	36	433	622	1 055	41
Brazil	16 021	35 955	51 976	31	27 800	42 800	70 600	39
Costa Rica	232	569	801	29	443	728	1 171	38
Peru	2 388	6 133	8 521	28	3 890	6 967	10 857	36
Ecuador	885	2 312	3 197	28	1 499	2 818	4 317	35
Nicaragua	298	762	1 060	28	501	976	1 477	34
Paraguay	388	1 009	1 397	28	597	1 171	1 768	34
El Salvador	517	1 351	1 868	28	795	1 647	2 442	33
Guatemala	674	2 131	2 805	24	1 167	2 598	3 765	31
Bolivia	778	2 235	3 013	26	1 104	2 592	3 696	30
Dominican Republic	534	1 709	2 243	24	924	2 106	3 030	30
Honduras	247	1 181	1 428	17	438	1 512	1 950	22
Haiti	340	3 040	3 380	10	523	3 617	4 140	13
Total	60 814	95 099	155 913	39	94 944	110 981	205 925	46

a/ Estimates of urban and rural population for mid-year 1950 and mid-year 1960 were first published in the November 1960 issue of the Statistical Supplement of the Economic Bulletin for Latin America, and in partly revised form in the November 1961 issue. The present table contains more extensive revision based largely on new data from censuses carried out in ten countries during 1960 and 1961. Further revisions will be needed when the results of other censuses become available.

b/ "Urban" population means the population of localities with 2 000 or more inhabitants.

c/ As no population census has been taken in Uruguay recently, the urban-rural population estimate is based on the findings of a field survey.

/ For the

For the twenty Republics combined, the estimates show an absolute ten-year gain of 34 million in urban population and of 16 million in rural population. Had there been no transfers of population from rural to urban sectors, urban population would have gained only about 20 million while the rural population would have grown by 30 million, hence a net transfer of 14 million persons over ten years appears to have occurred. Actually, the transfer may have been somewhat larger and rising over the years in relation to general growth of population.[3]

Moreover, available statistics show that the more strictly urban centres with 20 000 or more inhabitants have been growing more rapidly than the urban population as a whole, even when comparisons are made in terms of a fixed number of urban places, so as to eliminate localities that have moved from a lower to a higher size-class between 1950 and 1960. It follows that smaller towns between 2 000 and 20 000 in population must have been growing with relative slowness. Unfortunately, the variations in census definitions are severe impediments to an internationally comparable presentation of trends in the growth of population centres of the different size-classes. The trends must be studied separately for each country with methods modified in accordance with the available statistics.

The most striking advances have been made in the numbers and size of cities - or metropolitan areas - which surpass one million inhabitants each. Buenos Aires was Latin America's only million-city until 1930, when Mexico City passed this mark, soon to be followed by Rio de Janeiro and São Paulo. By 1950, Havana, Lima and Santiago were also above one million, bringing the number of such cities to seven. By 1960, Bogota, Caracas and Montevideo were added. If present trends continue there may be sixteen-million cities by 1970 and twenty-six by 1980.

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[3] The calculation assumes equal rates of natural increase in urban and rural population. In practice, because of higher rural birth rates, natural increase tends to be higher in rural areas. On the other hand, some previously "rural" localities must have entered the "urban" category simply by growing above the 2 000 population limit. It is probable that the numerical effect of the first phenomenon has been greater than the offsetting effect of the second. Accordingly, the roughly calculated transfer of 14 million persons represents a minimum estimate.

The **rising** number of million-cities contained 8 million people in 1940, 16 million in 1950, and 27 million in 1960. If their combined population continues to rise at 6 per cent annually, it will reach 48 million by 1970 and 90 million by 1980.

The high proportions of total urban population concentrated in a single city, usually the national capital, has long been one of the characteristic features of urbanization in the majority of Latin American countries; there are only two countries (Brazil and Colombia) in which the leading city does not contain at least one quarter of the total urban population. In the majority of countries recent population trends are confirming this concentration. Calculations, some of which depend on rather rough estimates, show that between 1950 and 1960 the percentage of urban population increase absorbed by the leading cities in a majority of countries exceeded their previous share of the urban population:

POPULATION (IN THOUSANDS) OF LARGEST CITY (IN BRAZIL AND ECUADOR, TWO LARGEST CITIES),
RELATIONSHIP TO TOTAL URBAN POPULATION, AND PERCENTAGE OF 1950-1960
INCREASE IN URBAN POPULATION ABSORBED BY LARGEST CITY

Country	City	Population		Per cent of urban population of country		Population increase of largest city as percentage of 1950-1960 increase in urban population
		1950	1960	1950	1960	
Argentina	Buenos Aires a/	5 100	7 000 b/	46	49	61 c/
Bolivia	La Paz	320	450 c/	41	41 c/	40 c/
Brazil d/	Rio de Janeiro	2 303	3 200	14	12	18 e/
	São Paulo	2 017	3 250	13	12	
Chile	Santiago f/	1 275	1 900	33	40	49
Colombia	Bogota	620	1 118	15	16	17
Dom. Republic	Santo Domingo	180	365	39	42	59
Ecuador	Quito	210	314	24	21	48 e/
	Guayaquil	259	450	29	30	
Paraguay	Asunción g/	219	311	56	53	44
Peru	Lima-Callao h/	1 075	1 875	45	48	50
Uruguay	Montevideo i/	935 c/	1 150 c/	49 c/	50 c/	51 c/
Venezuela	Caracas g/	694	1 250	29	28	27
Costa Rica	San Jose g/	140	250 c/	60	56 c/	52 c/
Cuba	Havana j/	1 080	1 600 c/	40	43 c/	52 c/
El Salvador	San Salvador g/	162	248	31	31	31
Guatemala	Guatemala	284	400 c/	42	34 c/	24 c/
Haiti	Port-au-Prince	134	240 c/	39	46 c/	57 c/
Honduras	Tegucigalpa g/	100	180 c/	41	41 c/	42 c/
Mexico	Mexico k/	2 884	4 666	24	25	26
Nicaragua	Managua	110	210 c/	37	42 c/	49 c/
Panama	Panama	175 l/	265	56 l/	61	61

a/ Metropolitan region as defined for censuses of 1947 and 1960, respectively.
b/ Estimate very rough; 6 763 000 according to probably incomplete census data; between 7 206 000 and 7 341 000 according to alternative estimate.
c/ Estimate very rough.
d/ Cities not defined as metropolitan regions.
e/ Combined percentage for the two leading cities.
f/ Metropolitan region as defined in 1952 census.
g/ Metropolitan region as defined in 1950 census.
h/ Urban population of the Provinces of Lima and Callao.
i/ Departamento of Montevideo.
j/ Metropolitan region as defined for censuses of 1943 and 1953.
k/ Urban population of Distrito Federal.
l/ Within new administrative city limits; census figure for 1950, within then narrower city limits, is not comparable.

Can the Latin American urban population, with its obviously high
degree of concentration, be measured against any objective standard·
for the "normal" distribution of cities by size? A number of scholars
have examined such distribution patterns in other regions in the course
of their studies of inter-community equilibrium in economic activities.
They have commonly made use of the so-called "rank-size rule" as a
theoretical model of the distribution of cities by size to which actual
observations conform more or less closely.[4] According to the rank-size
rule, the population of each city tends to be in inverse proportion to
its rank by order of size. Thus, the second, third, and fourth largest
city might be expected to have one-half, one-third and one-quarter the
population of the largest city, and so forth.

The theoretical implications of the rank-size model and the
interpretation of observed departures from it in the actual distribution·
of cities in a given country are matters on which agreement has not been·
reached. Cities specialize to varying degree in their functions and
differ in the territorial radius within which these functions are
effective. For many of these functions, concentration and dispersal
of the urban population offer competing advantages and drawbacks, e.g.,
proximity to sources of raw materials and local markets vs. internal
economies of scale and availability of a large and varied labour force.
It is not obvious that the most advantageous distribution of cities
must conform to the rank-size rule; the size, geographical configuration
and level of development of the country may explain considerable deviations·
from it. Nevertheless, very wide deviations from the model distribution,
or very marked discontinuities therein - unless explicable in terms of
some known special features peculiar to the country - are presumptive

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[4] The rank-size rule is virtually equivalent to the "Pareto curve".
Authors who have used these tools to study size distribution of cities
have been cited in The Determinants and Consequences of Population
Trends (United Nations Publication; Sales N°: 1953.XIII.3),
pp. 175-176. See also Walter Isard, Location and Space Economy,
A General Theory relating to Industrial Location, Market Areas,
Land Use, Trade and Urban Structure (Massachusetts Institute of
Technology, 1956), particularly Chapter 3, "Some Empirical Regularities
of the Space Economy".

evidence of some structural anomaly within the country's urban system. This view is plausible, even if one refrains from accepting any doctrinaire interpretation of the matrix of interrelations which might account for the observed approximate conformity of city distribution in many countries to the rank-size rule.

If nothing more, the rank-size rule can be used as a yardstick in relation to which the city distribution of different countries can be compared and time-changes in the structure of each urban system can be noted. This has been done in certain studies referring to industrialized countries: it was observed that, from an initial relative dominance of the largest city, closer conformity of city distribution to the rank-size rule was progressively attained in the course of industrialization. The interpretation of this phenomenon, in terms of "forces of concentration" and "forces of dispersal", admittedly remains controversial.

The distribution of cities by size in the majority of Latin American countries does, in fact, show large deviations from the rank-size rule. The degree of deviation can be indicated by a table comparing the populations in groups of cities which, by the rank-size rule, ought to be equal. These groups are defined as follows:

        Group   I: the largest city.
        Group II: cities 2 and 3 and a fraction of city 4.
        Group III: cities 5 - 10, and fractions of cities 4 and 11.
        Group IV: cities 12 - 30, and fractions of cities 11 and 31.
        Group   V: cities 32 - 82, and fractions of cities 31 and 83.

The relative sizes of these five groups, expressed in index numbers whose inter-group geometric average equals 100, show up as follows:

/Date of

	Date of census	Group I	Group II	Group III	Group IV	Group V
Argentina	1947	370	77	71	65	77
Bolivia	1950	182	112	103	68	70
Brazil	1960	95	128	91	87	84
Chile	1952	232	70	67	97	93
Colombia	1951	101	121	99	92	88
Costa Rica	1950	194	71	111	86	...
Cuba	1953	257	69	77	93	77
Dom. Republic	1950	171	82	85	83	...
Ecuador	1950	152	159	76	80	69
El Salvador	1950	150	84	79	96	103
Guatemala	1950	263	46	59	95	144
Haiti	1950	187	65	93	93	93
Honduras	1961	145	98	77	88	...
Mexico	1950	237	66	69	87	106
Nicaragua	1950	163	94	88	91	81
Panama	1960	328	90	63	58	74
Paraguay	1950	289	55	59	88	120
Peru	1961	396	56	67	81	83
Uruguay	1908	271	47	78	...	...
Venezuela	1961	164	95	82	93	85

Unfortunately, not all the countries that have conducted censuses since 1960 have as yet issued tabulations permitting the use of the most recent urban population figures in the above table.

Detailed study of the figures indicates that neither the size of the country nor the size of its urban system has any systematic influence on its pattern, except in the case of Brazil, where, evidently, in a very large territory, the distribution of urban functions may be quite different from that of the other countries. If Brazil is excepted, the following features emerge from a comparison of the urban systems:

/(a) As was

(a) As was to be expected, the first city towers above the other groups in almost every country. In most instances, first-city dominance is even more striking when group I is compared with group II (the second and third cities, plus two-thirds of the fourth). Group I is 7.2 times the size of group II in Peru; it is more than 5 times the size of II in Uruguay, Guatemala and Paraguay; more than 4 times in Argentina; more than 3 times in Cuba, Mexico, Chile and Panama; more than twice in Haiti, Costa Rica and the Dominican Republic; and between 1.8 and 1.4 times in El Salvador, Nicaragua, Venezuela, Bolivia and Honduras. Group II equals or surpasses group I only in Ecuador, Colombia and Brazil.

(b) While there is considerable variation in the relative sizes of the different groups, groups II and III tend to be the weakest, with combined populations increasing from group III to group V quite markedly in several countries.

(c) There is a positive correlation between the first feature and the second: that is, the more disproportionate the size of the largest city, the more regressive the distribution of population in smaller cities and towns from the third group onward tend to be.

The relatively small size of groups II and III suggests a kind of structural discontinuity, which may have originated in disproportionately rapid growth of the first city or disproportionately slow growth of those next in rank, or both. Data on time-changes in city distribution, to the extent that they exist, have yielded no conclusive evidence on this point, although in a number of countries it appears that marked regressivity in the size of the groups of cities of lower rank has preceded rather than followed the increase in relative dominance of the first city.

Incomplete data from the most recent censuses suggest that in a majority of the countries in which first-city dominance is particularly pronounced the gap between the first city and those of the second and third rank continues to widen. Among the countries in which the largest city (group I) stands above 200 in the table this appears to be true

/of Argentina,

of Argentina, Chile, Panama, and Peru, while information is lacking or
inconclusive for Cuba, Guatemala, Paraguay, and Uruguay. Mexico is the
only known exception in this class of countries; although metropolitan
Mexico City is rising more rapidly than the urban population as a whole,
it is being outdistanced in rate of growth by some vigorous cities in
groups II and III. On the other hand, of the two countries in which
first-city dominance is absent, Brazil shows rates of growth rising
from group I to group V, while Colombia has its highest rates of growth
in groups II and III. Venezuela, with a relatively even initial
distribution in the five groups, shows remarkable even, although very
high, rates of growth from group I to group V.

The cases are too few, the comparability of the data too limited,
and the special factors influencing each case too many and too
imperfectly known to permit this analysis to be carried much farther.
In particular, the causal relationship, if any, between first-city
dominance and regressivity in size-distribution of the smaller cities
cannot be determined at present. Two alternative hypotheses might be
formulated: (i) where populations among all except the first few cities
are initially rather evenly distributed, none of the smaller cities
provide sufficiently strong points of attraction for urban growth,
so that a disproportionate part of it flows into the one or two leading
cities; or, (ii), where one city has become dominant at an early stage,
it inhibits particularly the growth of the second and third rank cities
that compete with it most directly, while not affecting the growth of
smaller cities and towns to such an extent. Or one might hypothesize
that both causal relationships exist and reinforce each other. Present
evidence is clearly insufficient to confirm them or to trace in what
manner -- through bottlenecks in transportation, administration,
distribution of goods, capital or skilled labour force - the present
distribution of urban population has been influenced.

One might expect the kind of discontinuity in the urban system
that has been noted to have unfavourable implications for economic
and social development. The functions of cities of the second and third
rank as regional centres are presumably not being adequately carried out;

/urbanization taking

urbanization taking place largely through migration concentrated upon the largest cities implies a maximum break in cultural and occupational continuity for the migrant, with a likelihood of multiple maladjustments. Various kinds of evidence other than demographic support such conclusions. It is interesting, however, that the table shows no correlation between first-city dominance with accompanying small-city regressivity and either the level or the rate of economic development attained by the different countries, measured by their per capita national incomes.[5]

V. GEOGRAPHICAL REDISTRIBUTION AND OCCUPATIONAL REDISTRIBUTION OF POPULATION

Urbanization in Latin America, as in other predominantly rural and low-income regions, has been associated with a more pronounced growth in the third (commerce and services) than in the second (industry) of the three main groups into which the labour force is conventionally divided. In some countries, in fact, the percentage of the labour force in industry does not seem to have increased at all, in spite of a large-scale movement of workers out of agriculture and into the cities.[6] In high-income economies an increasing share of manpower taken by commerce and services may indicate that this manpower, no longer needed for production, is responding to the varied demands associated with a high standard of living. In economies at the levels typical of Latin America, however, a similar statistical phenomenon can be considered,

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[5] A recent statistical study of 95 countries also concludes that "different city size distributions are in no way related to the relative economic development of countries", although correspondences can be detected between the size distribution and certain characteristics or degrees of specialization in the national economies. (Brian J.L. Berry, "City Size Distributions and Economic Development", Economic Development and Cultural Change, July 1961, pp. 573-587.)

[6] A number of studies have discussed the employment situation and presented the statistical evidence. See, for example, the 1957 Report on the World Social Situation (United Nations Publication, Sales N°: 1957.IV.3.), pp. 125-127, and "Creation and Employment Opportunities in Relation to Available Manpower" in Urbanization in Latin America (UNESCO, Paris, 1962).

/at least

at least in part, as another way of expressing the growth of the urban marginal populations already discussed. Persons unable to find productive employment are taking refuge in miscellaneous service occupations and in petty trade.

Unfortunately, employment data from the censuses conducted around 1960 are not yet available in sufficient detail to indicate the extent to which recent trends bear out the conclusions that have been reached through analysis of 1950 census data. Some recent explorations of the 1950 data give added support to earlier hypotheses on the relationships between urbanization, in-migration and disproportionate growth of the tertiary sector, and suggest promising lines for more intensive analysis once new data are forthcoming.

First, the proportions of the three sectors of the labour force within the major administrative units of several countries have been related to their balance of migration. It appears that an excess of in-migrants is much more consistently associated with an above-average tertiary sector than with an above-average secondary sector. Administrative units with an excess of in-migrants invariably show a tertiary sector much larger than the secondary, even when the unit in question is outstanding for its industrial development, as in the cases of the states of Nuevo Leon in Mexico and São Paulo in Brazil.[7]

Second, the proportions of the three sectors within minor administrative units (municipios) of a few countries have been related to the size of the urban nucleus in each unit.[8] This study confirms the predominance of the tertiary sector in the more urbanized units, and suggests important differences between countries in the size-limit

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[7] See Part I, Chapter IV, in Jaime Dorselaer and Alfonso Gregory, La Urbanización en América Latina, Estudios Sociológicos Latino-americanos No. 2, Centro Internacional de Investigaciones Sociales de FERES, Fribourg (Switzerland) and Bogota (Colombia), 1962.

[8] Study undertaken by the staff of the Centro Latinoamericano de Demografía.

at which the "urban" nucleus ceases to contain an important proportion
of workers in agriculture, but has not as yet led to more specific
conclusions that can be summarized for present purposes. Such an
analysis, when it can be applied to more precisely defined occupational
groups within the three sectors, should provide valuable information
on the relationships between size of the urban nuclei and functions.

In fact, a simple comparison of the sizes of the secondary and
tertiary sectors gives only limited and ambiguous evidence on the
degree of occupational imbalance or on the importance of the marginal
population. The secondary sector itself is known to include many
marginal workers in home industries and sweatshops of low productivity,
and thousands of unskilled, intermittently employed workers in construc-
tion are in no better position. The presence of abundant unskilled
labour may also lead even the larger and more modern industries to
employ many in low-paid manual jobs (such as loading and moving of
materials) that would otherwise be mechanized.

At the same time, the tertiary sector includes various occupational
groups (such as school teachers and public health workers) that are
both essential and commonly under-represented in relation to needs.
Other tertiary occupations, while absorbing a larger proportion of
the labour force than could be justified economically, afford satis-
factory incomes and are not accesible to the marginal population.
Unskilled rural workers are not the only migrants to the big cities.
The flow of middle and upper-class elements from the smaller cities
and towns, particularly in the form of youths with secondary or higher
education, and the consequent inflation of public employment and other
white-collar occupations also contribute significantly to the large
size of the tertiary sector.

It has been argued that the rapid and concentrated nature of
urbanization in Latin America maximizes the difficulty of absorbing the
migrant labour force into productive employment. Industries face a
well-known shortage of skilled workers and qualified foremen combined
with an excess of labour that is not only unskilled but also hindered

from the acquisition of skills by illiteracy, poor physical condition and irregular work habits. The educational and vocational training prerequisites for a better matching of the qualifications of the labour force with industrial needs are formidable.[9] A wider diffusion of small-scale industries and of mechanical occupations in general in the smaller towns would undoubtedly ease the transition between agricultural and industrial labour, in environments presenting less drastic demands for adaptation to a new kind of society than do the big cities. The latter provide their own settings for social transition in the peripheral slums and for occupational transition in the numerous labour-intensive home industries that have sprung up, but under present conditions the extent to which these transitional mechanisms really promote adaptation to industrial work of higher productivity is doubtful.

It can also be argued that the movement of the social strata possessing education, enterprise, or capital from the smaller centres to the largest cities deserves as much attention as the movement of the unskilled marginal groups. The latter can hardly be expected to halt their drift to the city slums unless they are offered real opportunities nearer home, and this can be done only if the smaller cities can hold persons with administrative talents, professionals, entrepreneurs and investors. The cumulative forces influencing the growth of the national capitals have been often described, although detailed studies revealing their relative importance and inter-relations are few. The increasingly concentrated market for consumer goods and services, the large and relatively varied labour force, the proximity of the governmental and financial institutions with which the enterprises need to maintain continuing contact, among other factors, mean that the motives inducing the university graduate and the would-be industrialist to settle

9/ See "Manpower Structure, Educational Requirements and Economic Development Needs" (UNESCO/ED/CEDES/36; ST/ECLA/CONF.10/L.36), study prepared jointly by the Secretariats of ECLA and UNESCO for the 1962 Conference on Education and Economic and Social Development in Latin America. This document shows by means of a graph the wide differences between the typical "profile" by level of skills of the labour force in economically developed and under-developed countries.

in the capital are likely to become ever stronger, unless countered by effective regional planning. Conversely, the ability of the smaller centres to offer attractive employment, to serve as links in a truly national economic system, or to offer the services needed by the rural economy is likely to become ever weaker. In fact, the very predominance of the national capital or other metropolis renders it less capable of influencing the rest of the country in the direction of a nationally integrated economy or social order. For lack of an adequate urban network carrying a two-way flow of goods and innovations between the metropolis and the hinterland, static local social structures, loyalties, and systems of production and trade persist in the latter.

One of the few explorations of this process in a specific setting was made in Central Peru by a mission under the auspices of the Organization of American States.[10] The table on size distribution of cities (p.27 above) has indicated that in Peru first-city dominance has reached an extreme unmatched in any other Latin American country. In relation to the central third of the country, the attraction of the Lima-Callao metropolitan agglomeration is naturally even more overwhelming, with particularly ominous consequences in the Sierra sub-region. Here the population is 70 per cent rural, and it is unlikely that the land can support a much heavier population than at present. The wealthier and better educated elements of the Sierra cities have increasingly been attracted from them to the metropolis. Their populations have grown, but mainly through replacement of the older urbanites by peasants unable to support themselves on the land; thus, they become increasingly "ruralized" and even less capable than before of providing varied job opportunities. Since their capacity to employ their new residents is limited, many of these sooner or later join the current flowing directly from the rural communities to Lima-Callao. The agricultural valleys and towns of the second sub-region, the Costa, are in a healthier position economically,

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[10] Division of Economic Development, Department of Economic and Social Affairs, Pan American Union, Integración Económica y Social del Perú Central, Appendix II, Washington, 1962.

but are unable to absorb their own population increase, and thus contribute another stream of migrants. A counter-movement is under way into the nearly uninhabited third sub-region, the Montaña, involving not only Sierra peasants but also Lima professionals and business men disillusioned with opportunities in the metropolis, but this is on too small a scale to obviate a forecast that metropolitan dominance and provincial stagnation will continue to increase unless vigorous measures are taken to bring new life to the Sierra towns and to create alternative industrial centres along the Costa.

At the same time, the study suggests that one part of the Sierra, the Mantaro Valley with its major city of Huancayo, has avoided the decline found elsewhere, largely because of a more favourable agricultural and marketing situation and a more even distribution of land holdings. The exception is as interesting as the more general confirmation of the unfortunate effects of excessive first-city dominance. A superficial observation of other countries indicates that while some regional economies are drained of vigour by the attraction of the metropolis, others remain capable of healthy growth. Comparative studies of the factors behind these differences are needed as a basis for programmes to bring about a more general strengthening of provincial towns and local economies. The present paper cannot go farther into the complex questions of regional development planning, but it appears that if such planning is to become effective much wider information will be needed than now exists on the functions of cities of differing sizes and geographical positions - on their institutions, the professional and other services they offer, their types of employment, etc.

VI. THE RURAL HABITAT

The paucity of information on rural settlement patterns in Latin America is both surprising and significant. It has already been pointed out that very few of the censuses indicate the groupings of population outside the more or less urban cabeceras of municipios or other local centres with special administrative status. A considerable number of local and regional studies made by anthropologists, rural

/sociologists, geographers,

sociologists, geographers, agricultural economists and other specialists can throw some light on the rural habitat, but these sources have not been systematically combed for the purpose, and at best they can hardly reveal the wide range of local situations that must exist in a region of such geographical diversity, or their relative importance. The detailed maps that have been made of some parts of some countries are another potentially valuable source of information, but their coverage is limited as yet, and it is probably that many of them do not indicate the more scattered or impermanent types of rural dwelling. There is practically no literature focused on the relationships between man, land and community in the region.

The failure to secure systematic nation-wide information on the rural habitat is only one symptom of the neglect of rural problems that has characterized most Latin American countries in the past. Such a deficiency is obviously incompatible with the present goals of comprehensive planning and rural structural reforms. Without accurate knowledge of settled patterns it is impossible to determine the most efficient sizes and locations of rural schools, or public health clinics; the number of farms that can be served by an agricultural extension worker; the needs for feeder roads; the practicability of co-operatives, supervised credit schemes, electrification, or piped water supplies.

Plans for agrarian reform and colonization of vacant land imply a large-scale regrouping of the rural population, and only a better understanding of present settlement patterns and the reasons behind them can lead to the adoption of improved patterns rather than a planless reproduction of the old. Such an understanding is also one of the prerequisites for effective national policies intended to influence population redistribution. The ominous implications of a low and inflexible rate of net rural population growth combined with high national growth rates have been pointed out above. Can reforms in rural settlement patterns help to raise the capacity of the rural areas to absorb their own natural population increase?

Studies of "human geography" carried out in other regions have defined a number of alternative types of rural settlement, from the

/large, compact

large, compact village to the complete dispersal in which each farmer
lives in the middle of his own land, each type having its own advantages
and disadvantages. The larger and more compact the settlement, the
easier is the maintenance of effective community organization and the
provision of the services associated with a modern standard of living,
but the obstacles to agricultural efficiency presented by the long
distance between the farmer's home and his land may offset these advantages.
Conversely, very small nuclei or dispersed farm homes present serious
social disadvantages, unless the transport and communications system
is so highly developed as to prevent their isolation, but may be
agriculturally more efficient.

The present paper can do no more than set forth some hypotheses
concerning the major problem of the rural habitat in Latin America.
These hypotheses can be supported by items of information of uncertain
representativeness, and are in general accord with the present consensus
of informed opinion in the region, but they need to be tested by a
systematic examination of all existing sources of information as well as
by local monographic studies.

(a) In the majority of countries the proportion of the rural
population living on large land holdings is quite high, although very
few of the censuses distinguish this category of settlement. In Chile,
the 1930 census showed 1 124 000 persons, about half the total population
outside the centres of 1 000 or more inhabitants, living on _fundos_. The
survey of Central Peru discussed above estimates that about half the
rural population of the Sierra sub-region live on _haciendas_. The variety
of settlement patterns within the large estates is great, ranging from
modern plantations with workers concentrated in "company towns" built
and supervised by the management to traditional _haciendas_ with families
building their own huts on dispersed plots of land granted in exchange
for labour; but in general the large estates have maintained a limited,
paternalistic community system rather isolated from life outside. The
fact that the estates have provided shops and other services for their
workers - dealing largely through scrip or continuing accounts offset
against wages rather than cash - has also hindered the growth of nuclei
of shopkeepers and other non-agricultural occupations in their vicinity.

/(b) A high

(b) A high proportion of the remaining rural population has consisted of owners of small plots or squatters on the margins of the large estates and dependent on them for seasonal wage labour. The character of their holdings - often on broken hillside land and separated by large holdings occupying the valleys - has hindered their grouping into sizable villages, although in some Indian-populated areas they have maintained strong systems of community organization.

(c) In the more thinly populated areas, geographical conditions and shifting systems of cultivation have favoured very small population nuclei or scattered settlement rather than large villages.

(d) The predominance of large paternalistic estates or of rural nuclei too small and poor to exert influence or offer an inviting market has limited the possibilities for growth of the small towns (mainly municipio administrative centres) and has caused them to turn inward, monopolizing local political functions and government services, rather than acting as effective marketing and servicing centres for the rural areas or sources of employment for the surplus rural population.

The rural settlement patterns that have emerged seem, on the basis of the scanty available data, to show a higher degree of dispersal of rural population and fewer organized community functions (except in Indian-populated areas) than is the case in most other predominantly rural regions. The proportion of rural population living completely dispersed, by single families, however, is probably much smaller in the majority of countries than the population living in very small nuclei ("hamlets") with fewer than 200 inhabitants. In Venezuela, at the time of the 1950 census, two-fifths of the national population lived in 39 753 nuclei with fewer than 500 inhabitants each, and with an average population of 79. This finding coincides with a survey of sample rural districts, according to which the average rural population nucleus in Venezuela (excluding municipio centres) has only 13 houses and 73 people. Nuclei of this size can support only the most rudimentary community services, especially if widely separated.