

THE URBANIZATION PROBLEM IN THE LESS DEVELOPED COUNTRIES:  
Causes, Impacts and Policy Implications for the Bank Group.

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April 1970

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INTRODUCTION<sup>1/</sup>

The developing nations are urbanizing far more rapidly than they can create or borrow resources to accommodate their urban population. This is the heart of what is generally termed an acute and universal urban crisis. The pace of economic development is not sufficient to cope with the problem. The economic growth of the cities does not provide sufficient modern employment opportunities for the growing urban labor forces. The demand for resources for urban overhead and public service systems is far greater than the supply of internal resources and transfers from higher levels of government. A "critical" situation is thus created as the sharply rising demand for urban services cannot be met and the quality of urban life declines for the lower income groups who are forced to live in the mushrooming slums and shanty towns.

An examination of several case histories and the relevant literature as well as visits to a number of the world's urban trouble spots lead one to question whether the words "urgent" and "critical" properly describe the urbanization phenomena. It is the thesis of this paper that the urban problem cannot be dealt with by urgent measures and that it is not critical in the sense that the social structures of the less developed world will soon collapse without quick remedial action. The urbanization process involves the economic and social transformation of the less developed world. It is an unbalanced

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1/ I would like to acknowledge the assistance of Miss Pamela Brigg who made an important contribution by collecting and organizing the statistics on which this study is based, by analyzing the sources for the basic figures and by calculating the labor force projections.

transformation. This unbalance will probably worsen given the present demographic trends, economic growth rates and constraints on resources in the less developed world. Yet urbanization cannot be stopped; it is at the core of the development process. The economic growth of urban areas, where most industry is centered, determines that of the nation. The task then is to develop a long-run plan for the most efficient spatial and economic organization of the system of cities in the less developed world in order to maximize growth. Related issues involve minimizing the cost of urbanization, improving the mobilization of urban resources and greatly improving the management of urban centers.

This paper is divided into three main parts. The first sets the stage for discussion and analysis of the problem. It reviews the historic process of urbanization and urban demographic characteristics from 1920 to 1960 as well as possibilities for the future. It contains projections of urban population in the less developed countries through the year 2000 and implications of these projections for the growth of urban labor forces and the growth of non-agricultural employment and output.

The second section analyzes the problem. Urban-rural relationships are explored, as well as the implications of migration for stability and for distribution policy. The relationship between urbanization and economic development is analyzed. Relevant theoretical and empirical findings are discussed. The costs associated with urbanization are examined. The urban economy, regional development, and such issues as equity and efficiency in resource allocation, optimal city size and growth poles are explored in terms of strategies for development. Finally, section three analyzes the main policy implications of urbanization for the Bank Group in terms of the national economy, the metropolitan regional economy, and resource mobilization.

## PART ONE: THE SETTING

### I. THE HISTORIC PROCESS OF URBANIZATION

#### A. Why Cities?

We may view the process of urbanization and changes in the nature and size of urban centers over time as part of the response of society to technological advance. This view is not all inclusive, rather it is intended to focus on the role of the urban center as a mode of organization for increasing efficiency in economic activity.<sup>1/</sup>

The essential factor in creating urban settlements was the production of agricultural surpluses. Cities of antiquity (pre 1000 B.C.) were of small size. They were supported by agricultural surpluses stemming from such inventions as animal drawn plows, domesticated plants and water control. Sjoberg stresses the key role of urban social organizations in managing surpluses and labor forces. An ideology, usually religious in character, and a favorable environment were required. Literacy was a critical factor in making possible complex systems of administration and thought.<sup>2/</sup> The main cities were religious and administrative centers.

"He who controlled the annual agricultural surplus exercised the powers of life and death over his neighbors. That artificial creation of scarcity in the midst of increasing natural abundance was one of the first

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<sup>1/</sup> For a fuller discussion of the cultural determinants of technological change in the growth of cities, see Eric Lampard, "The History of Cities in the Economically Advanced Areas," Economic Development and Cultural Change, Vol. III, No. 2, January 1955, pp. 81-136.

<sup>2/</sup> Gideon Sjoberg, "The Origin and Evolution of Cities," Scientific American, September 1965, pp. 55-62.

characteristic triumphs of the new economy of civilized exploitation."<sup>1/</sup>

Large urban populations could not be maintained because of the high cost of transporting goods, particularly agricultural products. During the Roman Empire agricultural advances enabled an estimated 2 percent of the Empire's population to live in urban areas. This in turn led to the development of many secondary and tertiary activities including a great increase in land and sea transport. A bureaucracy developed which was able to control population over a wide area. Rome itself probably contained upwards of 300,000 people at the peak of the Empire.

After the 14th century, European cities became centers of commerce and industry. They were, in essence, city states not dependent on large interior hinterlands but rather linked with each other by a growing movement of goods and by increased specialization of production. By the 16th and 17th centuries the industrial revolution had become the main impetus to urbanization.<sup>2/</sup> Whereas the towns of pre-industrial Europe were largely local in function and constrained by stratified societies, the growing advances in industrial technology led to a concentration of production and capital in towns and cities, as well as to the factory system. In turn a host of secondary industrial activities developed in the same urban centers.

The history of industrialization and urban growth in the West is one of increasing specialization. This changed the technical-organizational

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<sup>1/</sup> Lewis Mumford, The City in History, Harcourt, Bruce and Wald, Inc., New York, 1961, p. 36.

<sup>2/</sup> Bert Hoselitz, "The Role of the City in Historical Perspective," The Urban Explosion in Latin America, ed. C. Beyer, Cornell University Press, Ithaca, 1967, pp. 17-33.

base of society and with it the spatial ordering of economic activity.

"Areal differentiation is, in fact, the spatial corollary of functional specialization and logically serves the same end -- the economy."<sup>1/</sup>

## B. Characteristics of Urbanization

### 1. Development Patterns

The pattern and rate of city growth differ greatly among countries, depending on culture, historical circumstances and economic structure. Industrialization in France made much less use of historic administrative and commercial centers than was the case in England. France's industrial growth took place more slowly in specialized centers and was strongly resisted by the guilds; the economy remained heavily under the influence of Paris and a few large regional cities. America's pattern of urban centers in the early 19th century still reflected colonial economic dependence and therefore was mainly based on a few port cities. Later with the opening of the continent through the railroad, the port cities turned inward and became industrial and service centers for the growing interior economy which in turn developed its own major urban centers along transport nodal points.<sup>2/</sup>

Africa is experiencing the most rapid rate of urban growth today. Urbanization is a very recent phenomenon here. A good part of the urban growth in Africa occurred after World War II with an influx of western capital and western experts, who provided the necessary organizing and managerial talent. Administrative capitals and port cities were of relatively

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<sup>1/</sup> Lampard, op. cit., pp. 88-92.

<sup>2/</sup> Ibid., pp. 114-123.

small size during the colonial period. The migrant comes to the city from a tribal society with little education and no knowledge of the discipline needed to live and to work effectively in large cities.

Many of India's great cities are foreign creations, responses to external economic forces rather than to India's own social structure. The Indian elite, which dominates these cities today, is western in outlook, training and language, whereas the elite in the still predominantly rural areas speaks a vernacular language and participates in the religious and social customs of one of the numerous disparate groups existing in India. Communication between the elite urbanite and the rural migrant is difficult.

When rural migrants become urbanized, they bring the culture of the village with them. In effect, they reconstitute village society in the city. Institutionally, Indian cities are quite different from their European counterparts. The tradition of the free citizen enjoying a large degree of urban self-government has never existed.<sup>1/</sup> Urban political and administrative institutions are thus less well equipped to cope with the complicated problem of modern city growth.

In Latin America, towns and cities were established in a highly organized way by conquerors. First, regions and their resources were defined. Then the main cities and systems of towns were established for each region. There "was no frontier."<sup>2/</sup> A city began as a center of administration, religion,

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<sup>1/</sup> Bert Hoselitz, "The Role of Urbanization in Economic Development: Some International Comparisons," India's Urban Future, ed. Roy Turner, 1962, pp. 271-276.

<sup>2/</sup> Ralph Gakenheimer, "The Peruvian City in the Sixteenth Century," in The Urban Explosion in Latin America, ed. Glenn Beyer, Cornell University Press, 1967, p. 34.

military control and marketing. It was essentially a political creation rather than a function of indigenous economic or social forces. Rights to land were derived from the colonial urban administrators. The dominance of the town by conservative landowner classes discouraged the immigration of others. Financial resources were limited and municipal works were slow to be built.<sup>1/</sup>

A system of port cities was built in which each city looked toward Spain. Contacts between cities were discouraged. The interior of the continent with its wealth and natural resources remained largely unexploited. After independence there was little change in the social and economic structure. Greater international exposure made the cities less provincial as they imitated Europe and the U.S. Immigration from Europe was a major factor for change. It led to the opening of the interior, the beginning of modern technology in agriculture, the creation of urban industries, the construction of interior lines of communication, and the emergence of a new professional class.<sup>2/</sup> Yet still today the large, dominating, central city is more a center for the preservation of traditional society even on the part of the middle class, than a force for national integration.

## 2. Urban Growth: 1920-60

Around 1800 an estimated 2.4% of the world's population lived in cities of 20,000 and over. By 1850 this percentage had risen to 4.3%, by 1900 to 9.2%, and by 1920 to 14%. By 1960 almost a quarter of the world's population lived in such cities.

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<sup>1/</sup> Ibid., pp. 36-56.

<sup>2/</sup> See J. Hardoy, "The Role of the City in Historical Perspective," The Urban Explosion in Latin America, p. 61.

The rate of urbanization seems to depend on a region's level of development, density of habitation and existing level of urbanization. In the 40 years from 1920 through 1960 the less developed regions of the world experienced higher population growth rates than those of the more developed regions and considerably higher urbanization rates. The big city population of the less developed world showed the most dramatic increases of all.

a. Analysis by Level of Development and Regional Density

From 1920 to 1960 the world's population rose from 1.7 billion to some 3.0 billion, a rise of 61%. The population of the more developed regions rose by 45% and that of the less developed regions by 70%. In this period the world's urban population (defined as 20,000 and over) rose from 270 million to 750 million, a rise of 185%. The urban population of the more developed countries rose by 125% and that of the less developed regions by 330%. The world's rural population rose from 1.6 billion to 2.2 billion or by 40% in the same period largely in the less developed regions.<sup>1/</sup>

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<sup>1/</sup> The figures used in this section are derived from UN sources and are subject to a number of qualifications with respect to definition, accuracy and interpretation. For a full statement of the sources and qualifications see: United Nations, Growth of the World's Urban and Rural Population, 1920-2000, Population Studies, No. 44, New York, 1969. The very definition of urban is open to question. The size of 20,000 and over is probably a close approximation although the characteristics of urban centers of this size in different regions can vary greatly. Further, settlements of less than 20,000 can have all the attributes of urban centers and yet are classified here as rural areas.

Among the less developed regions of the world, as among the developed regions, those of low density experienced higher total and urban population growth rates during this period.<sup>1/</sup>

	<u>Rate of Total Growth 1920-60</u>	<u>Rate of Urban Growth (20,000 and over)</u>
World total	61	185
Developed regions high density	36	83
Developed regions low density	57	205
Less developed regions high density	60	321
Less developed regions low density	108	440

Possibly the higher population growth rates in regions of low density are a result of higher birth rates. The crude birth rate of the less developed regions of high density was estimated at 39.2 per 1,000 in the period 1960-65 and 43.6 per 1000 in the less developed countries of low density. A similar relationship holds for the more advanced countries.<sup>2/</sup>

Approximately 30% of the increased population of the less developed regions was located in urban centers during this period. In contrast, about 70% of the increased population of the more developed regions resided in urban areas. While urbanization rates were much greater in the less developed regions from 1920 to 1960, the level of urbanization was still much higher in the developed countries.

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<sup>1/</sup> These statistics were derived from UN Population Division, "Urban & Rural Population Growth, 1920-1960 with Projections," Working Paper 15, September 1967. A revised and shorter published version may be found in "World Urbanization Trends 1920-1960," International Social Development Review. See Annex Table 1 for definition of regions.

<sup>2/</sup> See UN Working Paper No. 15, p. 37.

Urban Population (20,000 and over) As a Percentage of Total Population

	<u>1920</u>	<u>1960</u>
World total	14	25
Developed regions high density	33	45
Developed regions low density	25	48
Less developed regions high density	5	14
Less developed regions low density	8	20

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Source: See Annex Table 2.

b. Analysis by Recency of Urbanization

The level of urbanization significantly influences the rate of urbanization over a given time period. The world may be divided, for purposes of this analysis, into three groups of countries. They are I regions at least 25% urbanized by 1920, II regions at least 25% urbanized by 1960 but not by 1920, and III regions not yet 25% urbanized by 1960.

Group I consists of developed countries mainly European and N. American whereas Group II contains developed countries such as Japan and the Soviet Union as well as countries still regarded as underdeveloped. Group III consists of less developed countries.<sup>1/</sup>

In countries with high levels of urbanization, moderate rates of urban population growth and low rates of rural population growth were experienced from 1920 to 1960.

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<sup>1/</sup> See Annex Table 3 for a full definition.

In countries in Group II with intermediate levels of urbanization and intermediate total population growth rates, urban population rose quite rapidly and rural population somewhat more rapidly than in the case of Group I. Urban population growth rates and rural growth rates were highest in the least urbanized countries as their urban base was small and the bulk of the increased population was absorbed in rural areas.

<u>Type of Region</u>	1920 Level of <u>Urbanization</u>	<u>Average Annual Rate of Population Growth 1920-60</u>		
		<u>Total</u>	<u>Urban</u>	<u>Rural to Small Town</u>
I early urbanized	39	1.0	1.8	0.4
II recently urbanized	15	1.2	3.2	0.6
III least urbanized	5	1.2	3.8	1.0

Source: ISDR No. 1, p. 15 and Annex Table 3.

The acceleration of population growth in the most recent decade to be recorded from 1950 to 1960 showed an intensification of the observed responses in the three regions as the following illustrates.

<u>Type of Region</u>	1960 Level of <u>Urbanization</u>	<u>Average Annual Rate of Population Growth 1950-60</u>		
		<u>Total</u>	<u>Urban</u>	<u>Rural to Small Town</u>
I early urbanized	52	1.3	2.3	0.3
II recently urbanized	34	1.7	4.0	0.8
III least urbanized	13	1.9	4.5	1.5

Source: ISDR No. 1, p. 15 and Annex Table 3.

The nature of the problem created by these rates and patterns of population growth may begin to acquire perspective when it is realized that Group III is the lowest income group of the underdeveloped world.

c. Parameters of Urban Growth

Statistical analysis of urban population growth in the developed and less developed countries from 1920 to 1960 indicates four parameters of urban growth. First, where total population grew slowly, urban population had a tendency to grow at more than twice the total population growth rate, until about half the population was urbanized. After this total urban growth rates showed less divergence.

Second, constant urban population growth rates were more likely with low than with high levels of urbanization.

Third, constant rural population growth rates were more likely with high than with low levels of urbanization.

Fourth, the rise in the urbanization level conformed most closely to an average formula, where population grew rapidly.<sup>1/</sup>

In both the developed and less developed countries rural and small town populations did not decline although their growth rates were relatively low. In the less developed countries the decennial rates of urbanization rose from 1920 through 1950 although decennial population growth rates remained fairly stable (see Annex Tables 4 and 5). The virtual doubling of population growth rates in the decade of the 1950's caused a further sharp acceleration in the rates of urbanization. In view of the relatively low proportion of total population in cities in the less developed regions the bulk of the

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<sup>1/</sup> Growth of the World's Urban and Rural Population, 1920-2000, pp. 55 & 56.

increased population is located in rural areas and small towns. The countries with the highest urbanization levels also have the best records in terms of economic growth and the volume of resources per capita.

### 3. Concentration in the Big Cities

One of the most striking characteristics of the rapid urbanization of the less developed regions is the extent to which urban growth is concentrated in large cities of 500,000 and more people. Big cities absorbed about one-half of the urban growth in the less developed regions, slightly less than in the developed regions from 1920 to 1960. They absorbed about one-half of the urban growth in East Asia, about one-third in South Asia and Latin America and about one quarter in Africa.<sup>1/</sup>

Whereas the city size structure of the urban population of the developed regions changed little during the forty-year period, it changed quite markedly in the less developed regions.

#### Distribution of Urban Population

	<u>Developed</u>		<u>Less Developed</u>	
	<u>1920</u>	<u>1960</u>	<u>1920</u>	<u>1960</u>
20,000 - 99,000	30.4	26.8	53.1	33.3
100,000 - 499,999	22.6	23.9	26.9	24.7
500,000 - 2,499,999	29.0	28.1	19.9	27.2
2,500,000 and over	18.0	21.2	--	14.9

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Source: UN Working Paper No. 15, p. 36.

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<sup>1/</sup> Ibid., p. 52.

In the less developed areas the cities in the 100,000 to 500,000 category grew faster through 1940, thereafter cities of 500,000 and over grew rapidly lowering the proportion of people living in the cities of the first two categories. The most rapid growth was in the multimillion person city in the less developed countries from their first appearance in 1940 through 1960. From 1920 to 1960 the number of cities in the developed areas of 500,000 and more rose from 70 to 139. In the less developed areas the number rose from 13 to 95, half of which attained their size after 1950.<sup>1/</sup> The location of the world's big cities and multimillion cities by geographic areas is shown in Annex Table 6.<sup>2/</sup>

Study of the growth of cities over the four decades to 1960 shows no evidence that the larger cities reach points of saturation but this pattern of growth may change considerably. Cities such as London exhibit tendencies for their outer rings to expand rapidly. This same tendency may be observed in Calcutta and Bombay where central cities stagnate or decline in population and the outer fringes grow rapidly.

The largest cities historically and at present are seaport cities. This is due to the importance of maritime transport in spreading industry and commerce and the necessity to have seaport interchanges with land transport. Slightly over one-half of the world's big cities were seaports from 1920 to

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<sup>1/</sup> Ibid., p. 54.

<sup>2/</sup> To some extent the definition of city size is arbitrary and varies with the criteria used for measurement. There is some doubt whether the figures cited fully reflect the growth of major cities over time. See UN Working Paper No. 15, p. 42 for a discussion of the measurement problem.

1950 compared to slightly under one half in 1960. In the less developed world, seaport big cities constituted two-thirds of big city populations in 1920 but less than half in 1960 due to the growth in inland cities.<sup>1/</sup>

#### 4. Urban Pull and Rural Push

The best evidence available indicates that the natural rates of population increase in the less developed countries are equal in urban and rural areas. Assuming this, the figures on p. 9 imply that more than half of the urban growth in the less developed areas is accounted for by migration from other areas, primarily rural.<sup>2/</sup> Factors accounting for migration may be categorized as urban pull and rural push.

Among the pull factors, studies show that people come to the larger urban areas for expected wider work opportunities, for education for their children, for health services, and for social and psychological reasons related to the comparative social freedom of town life and the superior amenities offered in urban centers. In Lima, Peru it was found that conditions of employment were the primary factors, motivating 61% of the respondents in a census taken in 1956 of heads of families born in the provinces, despite "crushing" problems of living conditions. Achieving the higher social status of living in the more modernized city and education for children were secondary motives.<sup>3/</sup> In the case of Buenos Aires, migrants were mainly under

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1/ See Growth of the World's Urban and Rural Population, 1920-2000, pp. 42 & 43 for a further analysis of the role of seaports in big city growth.

2/ An analysis of some internal migration statistics for selected countries is included in Annex II.

3/ See Jose Matos Mar, "Migration and Urbanization," Urbanization in Latin America, ed. Philip M. Hauser, Joint UN/UNESCO Seminar on Urbanization in Latin America, Santiago, Chile, 1959, UNESCO, Paris, 1961.

30 years of age and were motivated primarily by the belief that the city offered opportunities for better jobs. Most were assisted by relatives or friends already there, usually in the form of housing.<sup>1/</sup> Examples of such "chain migration" also abound in Asia.<sup>2/</sup>

Similarly studies of Africa show that the positive motivation of money and a higher standard of living has been stronger than the negative motivation of intolerable village conditions for the majority of migrants. In Ghana, the majority of villagers surveyed referred to the adequacy of rural employment as reason for not migrating coupled with a fear of life in an alien town. This might be termed a form of "urban push."<sup>3/</sup>

Rural push factors include both relative and absolute disadvantages of rural life. Lack of opportunity, of education and of health services is often cited. Primarily economic factors include the mechanization of farms and the further impoverishment of workers made redundant, soil exhaustion and lack of farming incentives.<sup>4/</sup> For example, about two-thirds of the migrants to the city of Sao Paulo, Brazil come from the interior of the State

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- <sup>1/</sup> Gino Germani, "Inquiry Into the Social Effects of Urbanization in a Working Class Sector of Greater Buenos Aires," Urbanization in Latin America, pp. 212-214.
- <sup>2/</sup> UN Economic Commission for Asia and the Far East, Report of Expert Working Group on Problems of Internal Migration and Urbanization, and selected papers, Bangkok, 1967, p. 32.
- <sup>3/</sup> J. C. Caldwell, "The Movement to Ghana's Towns," African Rural-Urban Migration, Australian National University Press, Canberra and London, 1969, pp. 87-119. This is based on survey done between 1962 and 1964 of 582 urban households and 1,782 rural ones by the Demography Unit of the Univ. of Ghana.
- <sup>4/</sup> Beyer, The Urban Explosion in Latin America, p. 97.

of Sao Paulo. Many were small landowners and sharecroppers of coffee and cotton lands which had become depleted and then abandoned as new areas opened to the West. The rest of the migrants were mainly from the Northeast where they had been engaged in marginal subsistence agriculture. They were usually predisposed to move although they retained strong ties to family remaining behind.<sup>1/</sup>

A prevalent theory supported by case studies is that a good deal of migration occurs in a series of steps. Rural migrants go first to small towns and then proceed to larger ones, making a relatively short journey in any given phase. There may be exceptions such as Bogota, Colombia where the majority of migrants have moved directly.<sup>2/</sup>

#### 5. Urban Population Composition

The sex and age distribution of urban population varies according to level of development and volume of migration. Census data for individual countries vary in reliability and completeness. From studies done so far it appears that there were 40 million more females than males in the more developed regions and 40 million more males than females in the less developed regions. There is some indication that the differences may be explainable in terms of male and female mortality rates and in some cases war losses. Urban areas in the less developed urban areas exert a greater attraction for male migrants

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<sup>1/</sup> James Rubens Brandon Lopez "Aspects of the Adjustment of Rural Migrants to Urban-Industrial Conditions in Sao Paulo, Brazil," Urbanization in Latin America, pp. 234-238.

<sup>2/</sup> W. L. Flinn, Rural to Urban Migration, A Colombia Case, University of Wisconsin, Land Tenure Center, July 1966.

than do the urban areas of the developed regions. A measure of the relative number of males to females can be calculated by the "net excess masculinity rate." In Latin America with a relatively high level of urbanization of 49%, females exceed males in the urban population. The masculinity rate is highest in Africa and South Asia where urbanization levels are about 18%.

Males per 100 Females in the Total, Urban, Rural Population  
of the World and Less Developed Regions, 1960

	<u>Total Population</u>	<u>Urban Population</u>	<u>Rural Population</u>	<u>Excess Urban Masculinity</u>
World Total	100	99	101	- 2
More developed regions	92	91	93	- 2
Less developed regions	104	111	103	+ 8
Of which:				
East Asia	106	114	104	+10
South Asia	105	114	103	+11
Latin America	100	93	106	-13
Africa	98	110	96	+14

Source: Growth of the World's Urban and Rural Population, 1920-2000,  
pp. 15 & 16.

A number of factors may account for this phenomena. In the least developed countries, males may be attracted in larger proportions to urban centers where some form of work opportunities can be found. Females in the least developed countries are less likely to find work in urban areas. Also it is more difficult to find adequate shelter for families. The attraction of urban amenities may be less in a society with poorly developed services.

In general, urban areas are growing more from migration than from natural increase. Since migrants to cities in the less developed countries tend to be of working age, the distribution of urban population by age is generally more concentrated in the working age category.

While urban male participation rates do not differ significantly among countries, there are cultural factors inhibiting the participation of females in economic activities in urban areas, particularly in Asia.<sup>1/</sup> The more developed a country, the higher its female participation rates, particularly in office and other service occupations. The sex composition of the labor force varies greatly with the level of urbanization. Proportionately many more women are working in urban areas in Latin America than in other less developed areas.

#### 6. Urban Employment Patterns

The distribution of non-agricultural employment (Annex Table 7) may be regarded as a rough measure of the distribution of urban employment. It may be useful to point out that the definition of non-agricultural employment is not the same for all countries. In most cases it includes the marginal service occupation category which absorbs so many recent migrants to the cities. Urban labor force figures and estimates of non-agricultural employment cannot be compared for the purposes of analysis (Annex Tables 7 and 10). First, because the figures include different groups of countries for different time periods and are based on different national definitions. Second, because non-agricultural employment includes employment in localities smaller than 20,000 while urban labor force, as here defined, only includes

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<sup>1/</sup> See "Urbanization in Asia and the Far East," Joint UN/UNESCO Seminar, ed. P. Hauser, Bangkok, 1956, p. 108.

localities of 20,000 and over. The urban labor force as defined by different nations approximates non-agricultural employment more closely, though still tends to be smaller for many nations where mining, manufacturing, transportation, etc. also take place in rural areas. For example, in India in 1951, 6% of the total rural labor force was employed in processing and manufacturing. In absolute terms, India's working force in processing and manufacturing was almost evenly divided between urban and rural areas. Rural areas contained predominantly cottage and handicraft industries while urban areas contained the bulk of factory employment. It is believed that the Indian pattern of employment is generally valid for most of Asia.<sup>1/</sup>

In Annex Table 7 non-agricultural employment is divided by main sectors for the main regions of Africa, Asia and Latin America. The less developed regions show considerable variations in the proportion of manufacturing and public utilities employment to total non-agricultural employment. Manufacturing and public utilities constitute from 19% to 25% of non-agricultural employment in Africa, from 23% to 27% in other East Asia, South-East Asia and South-West Asia, 37% in Middle South Asia (including India, Pakistan and Iran), and 31% to 35% in Continental South America. Latin America with relatively higher per capita income levels also has generally higher percentages employed in manufacturing and public utilities.<sup>2/</sup>

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<sup>1/</sup> See Hauser, ed., "Urbanization in Asia and the Far East," pp. 142-144.

<sup>2/</sup> More detailed analysis suggests that the industrial composition of the male labor force in Latin American cities is closer to that of the cities of the industrialized countries than to that of the cities of less developed Asia. See Urbanization in Latin America, p. 115.

Middle South Asia, including India and Pakistan, has a low proportion of non-agricultural employment and a relatively high proportion of people employed in manufacturing and public utilities. As manufacturing includes handicrafts and cottage industries, the higher Indian proportion in this category may simply reflect a higher proportion of these manual occupations in the non-agricultural labor force. South Africa which has a high proportion of non-agricultural employment shows a low proportion in manufacturing and public utilities. This is explained by the high proportion employed in mining.

Most of the variation in the distribution of non-agricultural employment takes place between manufacturing, public utilities and commerce and services. The latter category is high for all regions, varying between 45% and 62% of total non-agricultural employment. A good deal of employment in this category is of a marginal service nature. For this reason the category exhibits a high absorptive capacity in most less developed countries. As countries advance to the higher levels of development, the service category also absorbs a high proportion of the non-agricultural labor force but then in professional and other highly paid occupations. In the less developed countries the service occupations contain many underemployed people, which is one reason that official rates of unemployment are usually low in these countries.<sup>1/</sup>

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<sup>1/</sup> Annex Table 8 shows non-agricultural employment indices in selected countries for the last ten years.

C. A Comparison of the Developed and Less Developed Countries

1. Technology and Labor

The urban growth of the less developed nations differs fundamentally from that experienced by the industrializing nations of the world during the 19th century. The technology being introduced in the less developed nations now is far more advanced than that which transformed Europe and North America during the 18th and 19th centuries.

The technology of industrialization evolved gradually in the West. It was relatively labor intensive in the early stages and advanced gradually to its present high degree of capital intensiveness. Thus there was a long-run demand for labor in the industrializing cities of the West corresponding to the supply of labor freed from the agricultural sector, which was simultaneously increasing in efficiency. In contrast, the less developed countries are industrializing with a relatively advanced capital intensive technology under surplus labor conditions far more severe than those experienced by the Western countries during their phase of rapid urbanization.

2. Rate of Natural Increase

In addition, mortality rates in the developing countries of today have declined far more rapidly, because of modern environmental sanitation and medicine, than they did in the advanced countries of today when they were at comparable stages of urbanization. For example, infant mortality fell by about 60% in Sweden between 1880 and 1920 and by 130% in Ceylon between 1920 and 1960, while life expectancy rose by about 10 years in Sweden between 1880 and 1920 and by some 25 years in Ceylon from 1920 and 1954.

As a result urban areas of the developing countries of today are growing both from high rates of natural increase and migration. In contrast, the urban areas of the now highly developed urbanized countries grew primarily from migration as their rate of urban natural increase was low during their period of rapid urbanization.

### 3. Social and Economic Progress

Countries with similar urbanization trends and levels may be compared with respect to selected social and economic indicators. (See Annex III.) Such a comparison indicates that in the developing countries economic and social progress is not keeping up with the pace of urbanization. At similar levels of urbanization, the developed countries had progressed more economically and socially, with the exception of health conditions.

### 4. The Case of India

Let us consider the case of India. Between 1891 and 1951 India's urban population, in towns of 20,000 and over, rose from 5% to 12%, a level reached by most European countries by 1900. Germany, Britain, the low countries, and to some extent France, urbanized more rapidly than India during comparable periods of growth. Scandinavia, Switzerland and Russia were about the same as India.

Although comparable to Europe in urbanization, India has lagged far behind in industrialization and in income per capita. At the same level of urbanization (about 11%) slightly more than half of the population of European countries derived their livelihood from agriculture compared to two-thirds of India's population. About one-fourth of Europe's labor force was already engaged in manufacturing at this early stage of urbanization

compared to only about 10% in India in 1950. About a fourth of India's urban population was engaged in manufacturing in 1950 compared to over half in mining and manufacturing in Germany in 1882 at a comparable level of urbanization. India also suffering from high population densities in rural areas has experienced little change in agricultural productivity. A good deal of India's manufacturing and non-agricultural employment is of the cottage variety in rural areas. Industry in developing Europe benefited from the external economies of location in large urban centers and from internal economies of scale. This led to rapid capital formation in urban areas. In India the generally smaller scale and dispersion of manufacturing have limited capital formation, technological change and the growth of employment in rapidly growing centers. The increasing urban population accordingly must find employment in miscellaneous low productivity service occupations.<sup>1/</sup>

## II. IMPLICATIONS FOR THE FUTURE

### A. Urban and Rural Population Projected: 1960-2000

The increasing urbanization of the less developed world has profound implications for economic and social policy in the countries affected. Urbanization relates intimately to the location of modern sector activity, to the concentration of unemployed and underemployed labor and to the demand for social overhead facilities and social services. Thus development planning, the assessment of investment priorities, the formulation of investment programs and the location of and return on projects depend greatly on what demographic patterns are expected. In this section the main trends of regions will be assessed.

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<sup>1/</sup> Hoselitz, India's Urban Future, pp. 164-176.

The projections used in this section were derived from United Nations sources. In essence, total world population was projected and then urban and rural population based on tendencies observed in the 1920-1960 period were projected.<sup>1/</sup>

The projections are based on the limiting assumption that the urban population will never exceed 75% of the total population since the rural population would disappear in the projections of certain countries.<sup>2/</sup>

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1/ For a fuller explanation, see Growth of the World's Urban and Rural Population, 1920-2000, pp. 55-57. The "medium" variant of the UN total population projections was chosen. Future urban population was based on the weighted average results of projections based on four patterns of past growth. See p. 10 for a discussion of these patterns.

2/ This assumption may not be realistic for highly urbanized and developed countries like the U.S. A recent estimate indicates the urban population of the U.S. may reach 85% of the total by 2000. See Wall Street Journal, March 2, 1970, p. 12. See also UN Working Paper No. 15, pp. 50-64 for an earlier version of the projections with somewhat different assumptions. See ISDR No. 1, pp. 17-19 for a summary covering 1960-1980.

At present the UN estimates show that the world's population may be rising by 65 million annually of which 30 million are in urban areas. The urban population of the less developed areas may be rising by 20 million annually. The estimated breakdown of the annual urban and rural population increases in the less developed major areas is as follows:

	<u>Urban</u> (in millions)	<u>Rural &amp; Small Towns</u>
South Asia	7.5	20.0
East Asia	6.0	6.5
Africa	2.5	6.0
Latin America	4.5	3.5

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Source: Growth of the World's Urban and Rural Population, 1920-2000, pp. 56-57. It should be noted that Israel, Japan, Argentina, Uruguay and Chile all have passed the 50% urbanization level and most have relatively high per capita incomes even though they are part of the less developed major areas.

In brief, the longer term projections show that the urban population of the more developed countries may double by the year 2000 as it did from 1920-1960 to a total of some 900 million. The urban population of the less developed regions may quadruple by the year 2000 as it did from 1920-1960 to some 1,400 million. The rural and small town population of the more developed regions is expected to grow slightly to some 540 million by 2000. The rural and small town population of the less developed regions may almost double to some 3,200 million by 2000.

While the urban population of the developed world may rise at a decreasing rate, the momentum of urban population increase in the less developed areas is expected to be maintained.

As the following table shows, all major areas of the less developed world may feel the effects of massive increases in both urban and rural population, some to a greater degree than others.

Absolute Population Increases in the Less Developed Major Areas:  
Urban and Rural, 1920-2000

(In millions)

	<u>1920-40</u>	<u>1940-60</u>	<u>1960-80</u>	<u>1980-2000</u>
<u>Major Areas Urban</u>				
East Asia	34	73	120	158
South Asia	24	67	148	302
Latin America	12	44	94	179
Africa	7	23	53	128
<u>Major Areas Rural &amp; Small Towns</u>				
East Asia	47	87	127	88
South Asia	116	181	402	443
Latin America	28	38	72	81
Africa	42	58	123	191

The variations in the rate of increase of urban and rural population by area depend on population growth rates and the level of urbanization in each region. Africa may emerge through the rest of the century as the region with the highest rates of growth of both urban and rural population.

<u>Average Annual Rates of Growth</u>				
<u>Urban &amp; Rural in the Less Developed Major Areas 1920-2000</u>				
	<u>1920-40</u>	<u>1940-60</u>	<u>1960-80</u>	<u>1980-2000</u>
<u>Urban</u>				
East Asia	3.1	3.5	3.0	2.4
South Asia	3.2	4.3	4.1	3.9
Latin America	3.5	5.2	4.4	3.8
Africa	3.5	5.0	4.6	4.5
<u>Rural</u>				
East Asia	0.5	0.7	0.9	0.5
South Asia	1.2	1.4	2.2	1.7
Latin America	1.6	1.6	2.1	1.4
Africa	1.3	1.4	2.1	2.2

Source: Growth of the World's Urban and Rural Population, 1920-2000,  
Table 34, p. 64.

Europe's share of the world's big city population is expected to decline from 49% in 1920 to 16% by 1980. In the same period the less developed countries may increase their proportion of the world's big city population from 13% to 48%. The less developed regions may be called upon to accommodate almost 200 million people in big cities between 1960 and 1980.

The projections are on the whole probably cautious. Earlier UN projections of the urban population of the less developed regions show a low figure of 1.5 billion by the year 2000 and a high figure of 1.9 billion by 2000, based on high and low assumptions of total and urban population growth.<sup>1/</sup> Even the lower projection is slightly higher than the projections discussed here. The precision of the estimate is, of course, not the issue. What is important is the implication of the figures, even if roughly accurate, for the size and pattern of future resource allocation. Underlying this issue are questions concerning the organization and quality of life in cities of the less developed world which in many cases are doubling in size over 10 to 15 years. The issue is really the economic development implications of future urban growth.

B. Employment and Output

The urban labor force projections for Africa, Asia and Latin America from 1960-2000 in Annex Table 10 indicate the extent of the surplus labor problem in the less developed countries.

These projections are based on the lower UN urban population projections and on national census data on urban-age specific participation rates for the period 1950-66 for 3 countries in Africa, 10 in Asia and 13

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<sup>1/</sup> UN Working Paper No. 15, also Annex Table 9.

in Latin America.<sup>1/</sup> According to them the urban labor force may increase through the year 2000 by sixfold in Africa and by fivefold in Asia and Latin America. In Africa and Latin America urban population and labor force were projected to increase at approximately the same rate while in Asia, particularly in East Asia, the urban labor force was projected to increase faster than urban population.

In the period 1955-1964 the developing countries increased their output of modern sector manufactures by an annual rate of 7% but their direct demand for manpower in this sector by an annual rate of only 4%; employment in light manufacturing rose by 3% annually in this period and that in heavy industry by 6%.<sup>2/</sup> Urban industries are peculiarly well placed to benefit from increasing labor productivity. Apart from changes in the technique of production, firms in growing urban centers can usually count on achieving productivity increases through changes in labor force quality, better management, expanding markets, economies of scale and fuller use of capacity.<sup>3/</sup>

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<sup>1/</sup> Ettore Denti, "Sex-Age Patterns of Labor Force Participation by Urban and Rural Populations," International Labor Review, December 1968.

<sup>2/</sup> UNIDO, "Industrial Development Survey," International Symposium on Industrial Development, Athens, 1967, p. 307.

<sup>3/</sup> C. R. Frank, Jr., "Urban Unemployment and Economic Growth in Africa," Center Paper No. 120, Yale University, 1968, p. 257.

Assuming about one-fourth of the urban labor force in Asia and Africa will remain in manufacturing and public utilities and about one-third in Latin America as at present, the following number of jobs will have to be created in these sectors from 1960-2000.

	1960 Estimated Total Urban Labor Force (1)	(millions) 1960 Estimated Urban Labor Force in Manu- facturing & Public Utili- ties (2)	1960-2000 Pro- jected Increase in Jobs in Manu- facturing and Public Utili- ties (3)
Africa	14.4	3.3	18.6
Asia	45.9	14.6	70.5
Latin America	22.2	7.4	36.8

The prospects that industrial growth will absorb more than a fraction of the rapidly growing urban labor forces forecast for the less developed world is not promising. In order to achieve the employment levels shown above in manufacturing and public utilities by the year 2000, employment in these sectors would have to rise between five and six fold, the same as the projected increase in labor force. As we have seen, recent industrial growth in the less developed areas produces only about 1/2 percentage point gain in employment for each percentage point growth in industrial output. Thus, in order to achieve the relatively

modest goal assumed for the increase in industrial and public utilities employment, and allowing for a wide margin of uncertainty in the figures, a doubling in the rate of industrial investment and output with respect to the employment projected would appear to be necessary, given present technology and the recent trends in industrialization.

According to one suggestion, the highly paid modern sector workers in Africa are becoming an increasingly smaller percentage of the urban work force at the same time that the wage differential is widening.<sup>1/</sup> An analysis of three East African countries shows not only a consistent lag between industrial growth and employment for the late fifties and early sixties but a decline in manufacturing employment while output expanded.<sup>2/</sup>

However, the indirect demand for manpower due to greater industrialization grew undoubtedly far more than the 4% for direct demand. We need to know a good deal more about the indirect employment impact of industrial growth in developing countries. In particular we need to know how the growth of manufacturing industry leads to a rise in demand for transport and commercial services.

Further there may be important linkages between modern sector employment and so-called traditional service employment. There appears to be a

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<sup>1/</sup> Frank, op. cit.

<sup>2/</sup> J. Harris and M. Todaro, "Urban Unemployment in East Africa: An Economic Analysis of Policy Alternatives," East African Economic Review, December 1968, p. 25.

high income elasticity of demand on the part of those with modern sector incomes for the services of those in the low wage traditional sector. This is a subject where further research could well profoundly change our understanding of the economics of service sector employment in the less developed countries.

One study analyzes the growth of labor forces in relation to growth in real output for the recent past and through 1980. It concludes that surplus labor will rise by some 12% of the labor force by 1980 on the basis of present output-employment ratios adjusted. This implies an overall rate of surplus labor of over 20% when the estimated surplus labor force in 1965 is added. In Latin America given present trends in non-agricultural employment, overall rate of growth of output of 5%, and a growth of labor force of 2.8% per annum, productivity in agriculture and services could not rise by more than 1.3% per annum from 1965 to 1980 in order to avoid the emergence of a higher proportion of surplus labor to labor force.<sup>1/</sup>

In selected African countries the government sector accounts for close to half of total non-agricultural employment. Government employment cannot grow much more rapidly than current government expenditures. Growth of current government expenditure in turn relies on the expansion of total budgetary

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<sup>1/</sup> OECD, "The Employment Problem in the Less Developed Countries: A Review", OECD Second Working Conference on Research Into Employment Problems in Developing Countries, Working Document, December 2, 1969, pp. 98 - 100.

revenues and the distribution of such resources between current and investment needs. It is reasonable to assume that commerce, trade and miscellaneous services probably grow at roughly the same rate as total national income.<sup>1/</sup> The construction industry, as will be shown, absorbs less than 10% of non-agricultural employment and is highly unstable, subject to high rates of unemployment. A recent study shows that in Latin America well over half the increase in the labor force is still being absorbed in traditional low productivity activities.<sup>2/</sup>

The lesson of the recent past would seem to be that a large proportion of the less developed world's rising urban labor force will have to be absorbed in low productivity service occupations given the distribution of employment in present urban centers and allowing for reasonable growth rates in national product in the future.

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<sup>1/</sup> Frank, op. cit., p. 250.

<sup>2/</sup> G. Jones, "Underutilization of Manpower and Demographic Trends in Latin America," ILO Review, Nov. 1968, pp. 453, 454.

PART TWO: ISSUES AND POLICIES

I. CONTINUING URBANIZATION: MIGRATION TO THE CITIES

In the less developed countries, the urban labor force is rising more rapidly than urban employment opportunities despite fairly high rates of industrial output growth. Nevertheless, migrants continue to flood to the cities. Migration is essentially unpredictable and unlike population growth, is not greatly affected by birth and mortality rates. Economic incentives in particular, but also social factors play a large part in decisions to migrate. Under conditions of rapid population growth and urbanization, prediction is especially hazardous. Migration is a major factor leading to policies to control primate city growth in many countries and to corresponding policies to build up new regional centers. It also concerns the issue of the best allocation of national resources for urban and rural growth.

A. Why Cities Grow: Urban Pull and Rural Push

The motivation for people to migrate to cities is based on some combination of perceived welfare and economic incentives; in the preceding part some of the results of case studies on migration motivation and satisfaction was discussed. This motivation is by and large rational in that people who migrate believe they will be better off as a consequence of the decision. Assuming homogenous labor supply and perfect factor mobility amongst other assumptions the migration of labor could be ascribed to difference in the marginal productivity of labor in rural and urban areas.

Migration would thus cause workers to raise their marginal products and would cease once urban-rural wage differences had disappeared. The real world

is a good deal more complicated, as labor is not homogenous and factors are not perfectly mobile. Innovation and the process of economic development exert considerable influence on the forces producing economic incentives to migrants. In fact, people do not move only because of real wage difference. A number of factors are responsible which may be categorized as urban pull and rural push.

The movement to the cities is not without cost. The migrant and his family pay the psychic cost of the disutility of leaving a familiar environment. Money costs include the direct additional cost of making the move and the income foregone until the wage earner becomes reestablished. All these factors must be weighed against the advantages cited for the urban center. This suggests that major differences between expected or actual wages in urban and rural areas may not be the only important element in stimulating migration and that migration can be substantial even in the absence of large wage differentials.<sup>1/</sup>

Wage differentials are not always the same as real income differentials in view of the cost of migration and the high urban cost of living. Availability of public services would tend to increase real wages relative to money wages. Further wage rates for central city employed do not take into account the large percentages of people unemployed particularly the masses in slums on the fringes of the cities who may not be counted on the wage figures at all.<sup>2/</sup>

The impact of urban pull and rural push factors differs greatly among different regions in the less developed areas. Pressure of population on limited

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<sup>1/</sup> For a discussion of push-pull and cost-benefit factors associated with migration, see Bruce H. Herrick, Urban Migration and Economic Development in Chile, M.I.T., 1965, pp. 10-22.

<sup>2/</sup> Resources for the Future, Design for a Worldwide Study of Regional Development 1966, p. 50.

land resources is an important factor. Countries in Europe in the mid 19th century had from 3 to 5 times as much cultivable land per household as do Indian farm households today. The European farmer produced surpluses and entered the market economy. The Indian farmer, except for selected recent changes in productivity, has remained closer to subsistence.

Latin America represents an intermediate case between Europe and Asia, insofar as generalization about such a varied continent can have any validity. Pressure on the land in Latin America is not so great as in Asia. Substantial capital accumulation has taken place in urban industry and the modern sector is growing more rapidly. Nevertheless, culturally the poorer migrants of Latin America resemble those of India in their persistence of rural behavior patterns and social groupings, a phenomena which led Oscar Lewis to speak of a "Culture of Poverty."<sup>1/</sup>

In Africa one must distinguish between areas north and south of the Sahara. In the north cultivable land is limited. High rates of rural population growth and stagnant productivity levels are at the root of the high migration rates. In the south, population and agricultural resources are somewhat better balanced although rigid economic and social structures may be inhibiting a greater absorption of the labor force on the land.<sup>2/</sup> Rates of urbanization are amongst the highest in the world in the south. The socio-cultural settlement pattern in the cities resembles that in Asia.<sup>3/</sup>

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<sup>1/</sup> Cited in Bert F. Hoselitz, "The Role of Urbanization in Economic Development: Some International Comparisons", India's Urban Future, pp. 157-181.

<sup>2/</sup> Economic Commission for Africa, Localisation Du Peuplement, Migrations Internes et Urbanisation en Afrique, Cairo, 23 October 1962.

<sup>3/</sup> Dr. Prothero, "Characteristics of Rural/Urban Migration in Sub-Saharan Africa," UN, World Population Conference, Belgrade, 1965.

B. Can Cities Absorb the Migrants?

Policies designed to increase urban employment, if successful, will cause a corresponding reaction on the supply side by inducing those who might have withdrawn from the labor force to stay and by encouraging those who might not have come to the city to come. Successful industrial growth policies in addition to creating more employment opportunities may also increase urban unemployment.<sup>1/</sup> In short, within wide margins the supply of urban labor may be perfectly elastic. We do not know at what level of unemployment, of underemployment or of deterioration in the quality of urban life migrants are persuaded not to come. Certainly the widespread prevalence of "chain migration" implies the existence of an effective communication link between the urban and rural poor over wide areas.

In Latin America high levels of internal migration are consistent with urban unemployment rates of 10% to 15% particularly among the young, and even higher rates if underemployment equivalents are added. In India urban unemployment in 1956 was estimated to be 10% and generally underemployed 11%. Big city unemployment in India was reported to be four times the rate in urban areas of less than 15,000 people.<sup>2/</sup> In Chile an unemployment rate of 6-7% was found in Santiago and one of 8-10% in provincial cities. If low productivity employment

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<sup>1/</sup> See Frank, op. cit., and J. Harris and M. Todaro "Urban Unemployment in East Africa: An Economic Analysis of Policy Alternatives," East African Economic Review, December 1968, p. 25.

<sup>2/</sup> OECD, "The Employment Problems in Less Developed Countries: A Review". Also, "Unemployment and Underemployment in India, Indonesia, Pakistan and the Philippines," ILO Review, October 1962, pp. 4-12.

or underemployment is included a figure of 20% for "marginality" may be used.<sup>1/</sup>

Urban unemployment may not always be a matter of lack of job opportunities. In the case of those with some education there may be resistance to accepting jobs they regard as inferior. For example in the Ivory Coast rural population, with some education and high expectations, migrate to the cities where they face high unemployment rates in the unskilled job category. This movement has caused a rural labor force shortage which has in turn induced migration of even less skilled people from neighboring countries. In Abidjan there is the seeming paradox of surplus labor in unskilled job categories and labor shortages in more skilled job categories creating a demand for expatriate labor.<sup>2/</sup>

In general, the urban employment structure is characterized by widespread underemployment and marginal labor forces. This usually concerns workers at the lowest income levels. Virtually everyone has something to do and manages to earn something. In part this phenomenon results from overstaffing of public services and from public policies aimed at maximizing employment in simple construction and maintenance work.

However, an important part of the ability of these marginal labor forces and their dependents to survive relates to very flexible labor absorption capacity of the numerous service, trade and small industrial activities of the

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<sup>1/</sup> J. Friedmann, "Urban and Regional Development in Chile: A Case Study of Innovative Planning," Santiago, June 1, 1969. According to G. Jones, op. cit., p. 458, Chile in 1960 reportedly had an unemployment rate of 6.7% and an urban underemployment rate of 28%, Panama 11.2% and 20%, respectively, and Peru (1961) 2.7% and 25%.

<sup>2/</sup> See H. Mulder, "Urban Planning and Development in the Ivory Coast," IBRD Economic Report, February 1970 (Draft).

nonmodern sector of major urban centers which we do not fully understand.<sup>1/</sup> We do not know at what level the growing labor surpluses of cities can no longer be concealed in underemployment by the flexible absorptive mechanism that is the traditional economic and social sector of the major cities of the less developed world.

C. Bringing City Lights to the Country

In view of this situation, attention has been given to policies affecting the supply of labor in rural areas. An analysis of labor migration and unemployment in less developed countries concludes by suggesting that "the net benefits of bringing 'city lights' to the countryside might exceed whatever net benefit might be derived from luring more peasants to the city by increasing the attractiveness of urban living conditions." The object, of course, is not to reproduce urban amenities on the farm but rather to keep the urban-rural real income differential within tolerable limits and not depend on the "long run stabilizing effect of a lower probability of successfully finding modern sector employment."<sup>2/</sup> A suggested means of accomplishing this would be to encourage small-scale producers in the traditional sector as well as increasing agricultural real incomes by reducing taxes on agricultural output.<sup>3/</sup>

At the margin and given the choice of policies which would increase urban-rural wage differentials and encourage migration, it might well be sound policy to choose the rural option depending on what can be said about the marginal social product of increased employment in rural vs. urban areas. In this respect, increased urbanization involves higher social costs of infrastructure, services and often housing. Certainly nothing should be done which would deliberately worsen the urban problem

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<sup>1/</sup> For an analysis see ECLA, "Creation of Employment Opportunities Relative to Supply," Urbanization in Latin America, pp. 118-132.

<sup>2/</sup> M.P. Todaro, "A Model of Labor Migration and Urban Unemployment in Less Developed Countries," American Economic Review, March 1969, p. 147.

<sup>3/</sup> Frank, op. cit., pp. 270-271.

without a clear corresponding benefit. In short, the problem will be to achieve growth and employment objectives with a mutually consistent urban-rural development strategy. Such a strategy must recognize that the trend is for modernization and rising productivity in agriculture. This means that inevitably fewer people will be needed in the direct process of production on the farm. The rural economy is discussed later in the context of an urban-rural strategy for development.

D. Do Migrants Cause Instability?

The presence of a large and growing mass of underemployed, uprooted migrants living in miserable conditions on the fringes of a relatively efficient urban society, has often been regarded as a serious potential source of violent protest and revolution. Yet according to a number of surveys, slums such as the bustees of Calcutta, the *barriadas* of Lima and the *favellas* of Rio may be a greater source of stability than would be expected. Their numbers have been increasing dramatically. For example, in Lima the *barriada* population rose from 10% to 20% of the population between 1958 and 1964, and Rio's *favellas* increased from 8.5% of the population in 1950 to 16% in 1964.<sup>1/</sup> In Calcutta the bustees constitute one-third of the land area.

Joan Nelson and others point out that there is no evidence that migrants are particularly politically disruptive. Migrants, as we have mentioned usually come from nearby areas and follow a steplike procedure from small to large towns. The so-called tight structure of rural society has been partially eroded already in most areas through contact with modern influences so the transition to urban life is not that severe. Further, migrants are usually young and adjustable and receive help from an extended family circle. They also find their first jobs relatively quickly. Living conditions are probably not worse than those in rural areas and being politically inexperienced, it is not surprising that they

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<sup>1/</sup> Harley L. Browning, "The Demography of the City," The Urban Explosion in Latin America, p. 101.

are not sources of political action.<sup>1/</sup>

In Africa, Gutkind concludes "so long as the unemployed are dependent on their close and far kin and friends, and as long as they can, if they wish, return to rural areas to (try to) obtain a living from the land, they remain immune to the intensive social and economic pressures which might make them a more active political community."<sup>2/</sup>

Germani in a study of Buenos Aires confirms that employment expectations were usually fulfilled although housing and social disorganization were problems.<sup>3/</sup> Resentment, without violence, was shown towards recent arrivals in Buenos Aires on the part of established low income groups. In Bombay, resentment of newcomers of different cultural backgrounds reportedly is a serious cause of strikes and violence on the part of employed workers.

Another version of the instability argument claims that migrants become frustrated by conditions over time and are thus potential sources of instability. In Calcutta, demonstrations by the middle class are reportedly more violent than those by the predominantly working class. It seems that as long as people are in the marginal category without access to urban institutions and processes, they are unlikely to be sources of open discontent no matter how long they have been in an urban center. People at the lowest level of skills and income are concerned with survival and do not aspire for the impossible.

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<sup>1/</sup> Joan Nelson, "Migrants, Poverty and Urban Politics in Developing Nations," December 9, 1968, pp. 1-13, (Unpublished) and "Urban Growth and Politics in Developing Nations: Prospects for the 1970's," Pearson Conference, Doc. No. 31, Williamsburg, Va., February 1970.

<sup>2/</sup> Peter Gutkind, "The Poor in Urban Africa: A Prologue to Modernization, Conflict, and the Unfinished Revolution," No. 12, Center for Developing Area Studies, McGill University, Montreal, p. 890.

<sup>3/</sup> Germani, "Inquiry Into the Social Effects of Urbanization in a Working Class Sector of Greater Buenos Aires," Urbanization in Latin America, pp.228-230.

Many do make progress and others find other ways than political action to express frustration such as crime. Finally, the urban poor are particularly vulnerable to police control as they lack the necessary contacts and influence to avoid it.<sup>1/</sup>

Turner and Mangin argue persuasively that successful squatters who have acquired effective tenure of land tend to be mainly interested in consolidating their housing investment and in identifying themselves as respectable, property owners with a stake in society.<sup>2/</sup> Admittedly the conditions for promoting self-improving squatter settlements are not present everywhere, nor has the process been thoroughly studied in all regions. Nevertheless, numerous cases exist to provide a good deal of information to those concerned with the orderly integration of masses of migrants into urban life.

The fact that the large and growing marginal population of cities are less politically volatile than had been feared does not necessarily mean that the process of urbanization will be without strife and disruption. It simply means that policies to prevent the rural marginal populations from migrating should not be based on the potential instability argument.

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<sup>1/</sup> Nelson, "Migrants, Poverty and Urban Politics in Developing Nations," p. 11.

See also Gino Germani, "The City as an Integrating Mechanism," The Urban Explosion in Latin America, pp. 185-187.

<sup>2/</sup> J. Turner and W. Mangin, "Progressive Architecture," May 1968. Also J. Turner, "Uncontrolled Urban Settlement: Problems and Policies," Inter-Regional Seminar on Development Policies and Planning in Relation to Urbanization, United Nations, University of Pittsburgh, 24 October - 7 November, 1966.

High levels of urbanization in relation to development, or "hyper-urbanization," can be shown to be a constructive process for accelerating political development and transferring power from traditional elites to the emerging middle and working class groups. This may indeed involve severe disruption. In effect, the large city is the mechanism which best transforms societies from traditional to modern ways. In the process, a large unorganized urban proletariat may be excluded from effective participation in economic and political life until it can shed its marginal status.<sup>1/</sup> In short, the growing marginal population is not a critical problem requiring urgent solution, but one which can be dealt with by sound long-run programs of urban economic and social development.

E. Is Overurbanization the Issue?

A number of writers who would influence national migration policies resort to what may be termed the overurbanization argument. Typical of these is Barbara Ward's article entitled, "The Cities That Came Too Soon." She expresses the anguish of one who is appalled at the misery of life in the great cities of the developing world, and examines the symptoms of their growth without however suggesting a remedy. "Urban growth in the developing world today is not so much a measure of healthy, inevitable processes of modernization as a pathological acceleration of urban 'cell creation' which could put whole societies into a terminal crisis of social and economic disintegration."<sup>2/</sup>

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<sup>1/</sup> A case in point is Chile. See J. Friedmann and T. Lackington, "Hyper-urbanization and National Development in Chile: Some Hypotheses," Urban Affairs Quarterly, pp. 3-29.

<sup>2/</sup> Barbara Ward, "The Cities That Came Too Soon," The Economist, December 6, 1969

The use of the word "pathological" suggests deviation from the normal. Yet if Barbara Ward regards the city slums as unbearable, what would she say of their rural counterparts, which as we suggest may be little better in terms of living conditions.<sup>1/</sup> In fact, the argument against overurbanization must be seen in the context of overall population growth rates which exceed the growth of new resources through their process of economic development. The problems must be analyzed in national terms and not in terms of the urban and rural symptoms.

The idea that there is a norm and that less developed countries are overurbanized is essentially a conclusion drawn from the industrial history of the developed nations. There is, however, no theory or credible body of analysis which demonstrates that all countries must follow the same path of urbanization and industrialization. In fact, as Sovani has shown, even the developed countries did not all follow the same path. In 1895, Sweden had approximately 8% of its population in cities over 100,000, with almost 45% of its labor force in non-agricultural occupations. Switzerland had a far higher percentage of non-agricultural employment at that time with a lower level of urbanization.<sup>2/</sup>

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<sup>1/</sup> See Lowdon Wingo's comments in this respect on Philip Hauser's paper, "Urbanization Problems of High Density Living," World Population - The View Ahead, ed. R. Farmer, J. Long and C. Stolwitz, Joint Development Research Center, Indiana University 1968, p. 226.

<sup>2/</sup> N.V. Sovani, "The Analysis of Overurbanization," Economic Development and Cultural Change, Vol. XII, No. 2, January 1964, pp. 117-122.

Miss Ward further makes the statement that in the large tertiary sectors of major cities this "type of employment ... keeps the man from absolute starvation but contributes all but nothing either to the economy's development or to human acquisition of skills and confidence." Yet, the marginal product of migrants in urban areas must be higher than their marginal product in rural areas, as measured by wages received and satisfaction realized, as otherwise the migrants would return to their former homes. As we have seen, the lure of higher incomes is the factor most responsible for migration, and migrants who come to the cities are in the main satisfied. There is also the well established fact that urban per capita incomes are some multiple of average incomes in most countries particularly those of the less developed world. In the absence of more proof than has been presented, we must assume that the marginal productivity of labor in urban areas is higher than in rural areas.

Finally, the overurbanization argument is narrowly based on observations drawn only from one branch of the discipline of economics. It omits the idea that urban centers may play the role of dynamic centers of social and cultural change in the absence of large-scale industrialization. The less developed world may well adopt different patterns of urbanization. There is no reason to believe, for example, that the primate cities of Asia are not playing a dynamic role in bringing about cultural change and modernization.<sup>1/</sup>

In brief, what is called as overurbanization in one context could just as well be termed as overruralization in another.<sup>2/</sup> Further, experience with programs to steer urban migration is limited. Even if we wanted to, it is unlikely that we would be able to control the pace of urbanization to any great extent as we do not know what is involved in the way of managing such a social mechanism. Finally, there are substantial economic forces creating long-run urbanization trends with which we must come to terms in development policy.

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<sup>1/</sup> Ibid, pp. 120-121.

<sup>2/</sup> See The Urban Explosion in Latin America, p. 74.

## II. URBAN SCALE FACTORS IN NATIONAL GROWTH

### A. The Costs of Urbanization: Can they be Managed?

The process of urbanizing substantial portions of the population of the less developed countries will require corresponding investments in urban social overhead and service systems. These investments will be larger than those required if the same population were to remain in rural areas. Roads, transportation, sanitation and water are different in form and cost far more per capita in urban than in rural areas. In practice, rural areas also receive much less in education and health expenditures per capita. Furthermore, large cities usually have higher public outlays per capita than small ones. The trend, as we have shown, is for urban growth to concentrate in the big cities.

At the broadest level of aggregation (localities of 20,000 and over) the urban population of the less developed world may increase from 409 million in 1960 to close to 800 million by 1980 and to 1.4 billion by 2000. This implies that the investment in urban infrastructure as well as the use of land will probably have to double by 1980 and more than triple by 2000, depending on what is assumed with respect to the efficiency of capital, the standards of public services per capita and the densities of settlements.

For urban economic policy, problems arise in determining the size of the existing capital stock in urban public investment, the capital investment required for further urban growth, as well as the impacts of social capital on growth and productivity.

#### 1. The Case of Latin America

Some understanding can be acquired from what happened under conditions

of rapid urbanization in Latin America in the four decades after 1920.<sup>1/</sup> From 1920 to 1960 the population in Latin America rose from 90 to 213 million and the urban population (20,000 and over) from 15 to 55 million. The percentage urbanized rose from 17% to 26%; resulting in 19 million more people living in urban areas than would have occurred had the same percentage urbanized prevailed throughout this period. In the period 1925-1956 the fixed reproducible capital of Latin America per capita remained virtually stable at some \$600 in 1950 prices while GDP per capita rose from \$168 to \$285, a rise of some 60%. Rapid urbanization took place during this period with constant capital investment per capita and rising income per capita levels.

The gross product per unit of capital invested rose by 40% in this period.<sup>2/</sup> From 1940 to 1955 employment in manufacturing and construction rose by 6 million from 13% to 18% of total employment and the gross product per worker rose by about one-third. Government and other services employed an additional 7.5 million in this period with an estimated 10% rise in product per worker. The share of manufacturing and construction rose from 19% to 23% of gross product, while that of agriculture fell. Thus the shift of capital and labor resources to industry increased the overall productivity of both capital and labor.

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<sup>1/</sup> See Alexander Ganz, "Problems and Uses of National Wealth Estimates in Latin America," The Measurement of National Wealth, ed. R. Goldsmith and C. Saunders, Income and Wealth, Series VIII, Bower & Bower, London, 1959, pp. 217-273.

<sup>2/</sup> Based on data from Argentina, Brazil, Colombia and Mexico which contain 70% of the gross product and stock of capital of all of Latin America.

Certain stages and basic factors can be identified in this 40-year period which will enable us to gauge the impact of these broad developments on investment requirements for basic social capital.

In the 1920's Latin American economies were dominated by export sectors and imports were relatively free. There was little protection for domestic industry and much excess capacity. The situation changed in the 1930's when demand for domestic-manufactured products grew under autarkic conditions. This required expanded investments in road, power, health, education and sanitation in growing urban areas. During World War II the unavailability of foreign manufactured consumer goods, capital goods and food gave a strong stimulus to domestic manufacturing industry and agriculture. Production beyond capacity took place and machinery and equipment were used beyond their estimated normal useful life. After the War, huge reserves of foreign exchange supported a major expansion of domestic industry. Domestic demand grew as a result of rising per capita income and better income distribution. Investment in basic social capital, particularly in transport and energy, lagged because of the poor condition of government finances. This condition was related to the need to subsidize exports, to the high cost of poorly planned social security programs and to rising defense outlays. The shortage of basic social overhead facilities became a limiting factor to industrial expansion. Private foreign investment went into manufacturing for the domestic market rather than public utilities where public policies caused lower rates of return to prevail. The deficiency in social capital was aggravated by much misdirection of investment and an underestimation of the demand for such

investment. Further, the rapid growth of urban centers with expanding per capita incomes led to an increasing demand for urban amenities and services such as roads, hospitals, schools and recreation. Thus a substantial diversion of investment from more directly productive purposes took place.

Two countries illustrate the problem to different degrees. Colombia experienced an annual rate of growth in per capita gross product of 1.9% from 1929 to 1955, compared to about 0.5% for Argentina. Argentina started the period with a relatively high quality of urban amenities and service systems. Argentina's structure of social overheads required a large proportion of gross fixed investment to simply replace the existing stock of obsolete capital. Colombia, which developed later than Argentina, concentrated a greater proportion of its investment in sectors, such as iron and steel, with relatively high output to capital ratios. Further, it enjoyed the benefit of higher productivity through the adoption of the latest technology. Strategic errors in the allocation of resources also contributed to Argentina's relatively poorer economic performance. In the postwar period 30% of investment was allocated to government administrative, social and military services compared to half this percentage in 1944.<sup>1/</sup>

Allocations to directly productive investment declined correspondingly, particularly to transport, power and heavy industry. In contrast, Colombia's allocation of investment in manufacturing, mining, transport and electricity rose by threefold from 1925 to 1953 and that in agriculture, housing and government administrative and social services by only 70%.

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<sup>1/</sup> Ganz, op. cit., p. 250.

A comparison of capital invested per worker in the main sectors as a percentage of capital invested per worker in the whole economy for Argentina, Colombia and Venezuela shows that Colombia and Venezuela invested relatively more per worker in basic manufacturing, transport, communication, electricity, and enjoyed relatively higher returns per worker in directly productive sectors such as manufacturing and mining.<sup>1/</sup>

The difference in the capital stock structure of the three countries is compared to the average percentage allocation of resources in the following table.

Percentage Distribution of Capital Stock and Investment

	Argentina		Colombia		Venezuela	
	1955	(1950-54)	1953	(1945-53)	1958	(1956-58)
Agriculture	14.7	(9)	35.6	(25)	13.5	(9)
Manufacturing, minerals, petroleum & construction	15.3	(19)	16.5	(23)	23.4	(39)
Transport, communications and electricity	12.7	(16)	14.1	(19)	13.7	(19)
Housing, commerce, services and government	57.3	(55)	33.8	(33)	49.4	(36)
Total	100	(100)	100	(100)	100	(100)

Source: Banco Central de Venezuela, Memoria, 1959, p. 417, 421.

The figures show that Venezuela and Colombia spent only about a third of current investment in housing and services compared to over a half in Argentina. By devoting a higher proportion of capital invested to higher productivity uses,

<sup>1/</sup> Banco Central de Venezuela, Memoria, 1959, pp. 423, 424.

Colombia and Venezuela were able to achieve much higher rates of growth of per capita income. Such an effort required a tighter control of less productive investments. Venezuela and Colombia experienced rates of urbanization from two to two and a half times faster, respectively, than Argentina.

For the continent as a whole the current shortages of basic social capital for productive purposes will tend to raise the per capita requirements of future urbanization. To this must be added the fact that large cities are more costly to build and operate per capita if only because standards per capita are higher and that political pressures operate to satisfy the demand for urban amenities and services. The differences in allocation may be explained in part by the higher per capita income level in Argentina. This would normally be expected to lead to higher standards of urban services.

## 2. The Case of India

A rough computation for India gives some idea of the order of magnitude of resources required to cope with the investment needs of urbanization over the short run. The calculations were originally done by Britton Harris in the early 1960's and reflect price levels of that period. The urban growth figures have been adjusted upwards by one-third.<sup>1/</sup>

India's urban population (20,000 and over) is estimated to increase currently by some 60 million a decade. In terms of a five-year plan period, 30 million more urban dwellers will have to be accommodated. This implies some 12 million more households and about 20 million new jobs. On the basis of a reasonable average cost of housing, including both self-help and public, work places and urban services, a cost of some 28 billion rupees may be estimated.

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<sup>1/</sup> Britton Harris, "Urban Centralization and Planned Development," India's Urban Future, p. 263.

The 1969-74 five-year plan calls for total investments, public and private, of Rs. 241 billion of which some Rs. 31 billion is allocated to housing and urban development, water supply and sanitation.<sup>1/</sup>

By updating for estimated price changes of some 50% from 1963 to 1969, the percentage of investment devoted to urban investments, as defined by the five-year plan, would rise from 13% to 16% of total public and private sector outlays. About 85% of the Rs. 31 billion planned investment in urbanization is in the private housing sector, consisting to a large extent of self-built type housing.

Thus in the Indian context the cost of urbanization appears to be manageable at present standards of public services at least in the near term. For the private sector the large proportion of low standard housing and work places will probably continue. Given the fact that self-built construction involves substantial elements of new capital mobilization, we would not expect urbanization financed in this way to create severe competition with more directly productive investments. This tentative conclusion is almost the opposite of that reached by Harris with respect to the implications of urban investment needs in terms of the second plan which, however, involved a far lower level of total investment and when his calculations showed urban investments, as defined, constituted a third of total outlays.

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<sup>1/</sup> The 3,100 crores does not include such basic social capital as transport and communications nor such services as health, education and social welfare. Government of India, Fourth-Five Year Plan 1969-74, p. 48, (Draft).

In an estimate covering the period 1960-80, P. Pant concludes that a feasible investment program to accommodate the costs of urbanization can be projected and would require some 25% of total investment assuming an annual 5.3% growth rate of national income. This investment would cover existing quality housing, utilities, education, health and recreation and "bring about some measure of improvement in urban facilities." Pant argues for lower cost urbanization. His estimates are based on the addition of 110 million people to the urban population in towns over 5,000 in the period (1960-80), which is somewhat lower than our own.<sup>1/</sup>

### 3. Do Big Cities Cost More?

A study being done in the Economics of Urbanization Division on public current and private production costs per capita in 26 Pakistan towns shows wide variations.<sup>2/</sup> Public current costs per capita in West Pakistan range from 20 rupees in Peshawar to 41 rupees in Karachi. In East Pakistan costs ranged from 12 rupees for Dacca to 31 rupees for Chittagong, a rising industrial

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<sup>1/</sup> Pitambar Pant, "Urbanization and the Long-Range Strategy of Economic Development," India's Urban Future, pp. 186-190.

<sup>2/</sup> Samir K. Bhatia, "The Public Cost of Urbanization in Pakistan," IBRD, 1970, (Draft).

center. In general, the bigger towns incur higher per capita costs. Centers being promoted by the Government to achieve better regional balance may require exceptionally high current per capita expenditure. For example, Quetta in the far western part of the country has a per capita cost of 52 rupees mainly due to building of excess capacity in social capital investments in order to stimulate industrial growth. In this case the stimulation has not worked and industrial growth is lagging. Our study also shows that private production costs per worker in key industries are often lower in big towns with high public costs per capita. Karachi's cost of cement is far lower than in an internal city like Rawalpindi. Karachi's cost of vegetable oil is at least 10% lower than Hyderabad and Peshawar. The cost of jute processing is higher in Dacca than in Chittagong although Dacca's public cost per capita is far lower. These figures can begin to provide the framework for developing location criteria and policies for industry which will lead to a marginal least social cost location for new industrial plants and thereby contribute to a more efficient pattern of industrialization in terms of returns on national capital and the employment of urban labor force.

The pattern in Pakistan shows that the towns generating higher per capita incomes also require higher per capita outlays. In part this is due to the fact that the demand for better quality services is higher where higher incomes are earned and in part due to the complexity of public systems in large rather than small towns. In Karachi per capita public costs rose from 25 to 42 rupees between 1967 and 1968 almost entirely due to a Government decision to improve urban services following serious student-worker riots and strikes.

4. Concentration, Decentralization and New Towns

The cost figures as such do not tell us much about the relative merits of decentralization versus concentration. The evidence available suggests that the larger towns enjoy economies of scale for public investments, and generate external economies for the urban economy in sufficient amounts to yield greater net returns per unit of investment than do small urban centers. In India although per capita public costs per worker were higher in Bombay than in Orissa, this was more than compensated for by the higher per worker product in Bombay. In Japan an econometric study shows that GNP is higher under conditions of concentration than deconcentration. Further, the most densely populated urban areas produce lower social overhead costs per capita and higher incomes than less dense urban centers.<sup>1/</sup> New towns which have been attempted in India and Pakistan show, upon preliminary examination, fairly high per capita investment costs.<sup>2/</sup> Such costs can usually only be borne for showcase cities with substantial public administrative functions. A study of new towns in India found that the decentralization policy was based on the anti-city sentiment of decision-makers and that capital costs associated with these towns were excessive in relation to their financial means to cover current and capital costs.<sup>3/</sup>

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<sup>1/</sup> Koichi Mera, "On the Concentration of Urbanization and Economic Efficiency," IBRD, October 13, 1969, (Draft).

<sup>2/</sup> See Catherine Bauer Wurster, "Urban Living Conditions, Overhead Costs, and Development Patterns," India's Urban Future, pp. 290, 291. Research is needed on comparative urban overhead costs for various scales of urban size and for different standards of services. Until better cost information and investment location criteria are available, forecasting the cost of urbanization will remain a hazardous undertaking.

<sup>3/</sup> Ved Prakash, Financing New Towns in India, Cornell University, Doctoral Thesis, June 1966, pp. 1-335.

Alonso criticizes new towns as a solution for U.S. urban problems in that they would not permit the necessary complementary and specialization of functions required of modern cities and would not result in any discernible cost advantages.<sup>1/</sup>

5. Can Cities Keep Growing?

The issue relates to whether we can define an optimal sized city and whether it is possible to devise economic alternatives to continued central city growth. The next section will discuss this issue in connection with external benefits. Empirically it is difficult to demonstrate that cities do reach optimum size. Urban concentration must achieve a certain "critical mass" for external economies and internal economies of scale to raise productivity and foster more growth. There are probably increasing returns to urban scale over a considerable range as marginal productivity per capita probably rises faster than marginal costs. It will take careful study of individual situations to determine at what point the external diseconomies of city growth in the form of pollution, traffic congestion, and crime, for example, become sufficiently internalized by the private sector to cause new investments to leave. Even where this appears to be happening, as in Sao Paulo and New York, the center may simply acquire new functions while industrial activities seek new locations on the periphery. The new peripheral location would still enable an enterprise to enjoy most of the economic advantages of big city location.

An empirical study of this issue in the context of the regional-urban development of Northeast India concludes that "the case is strong for deferring

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<sup>1/</sup> William Alonso, "What are New Towns For?", University of California, Berkeley, August, 1969, (Draft).

the idea of finding an optimal city size in favor of determining merely the minimum efficient size for new developments." The study found that the unit costs of an increment of public infrastructure for a large industrial expansion are virtually the same for cities of population sizes 130,000 and 300,000. The study cautions against the relevance of the size finding for other countries where conditions are quite different.<sup>1/</sup>

The growth of cities should be promoted within a size range that is efficient in terms of unit infrastructure costs and that is able to achieve positive agglomeration economies in terms of the size of industrial structure. This will require a careful examination of the location of existing cities, the cost of equipping them with suitable infrastructure, the linkages between firms in the industry in question and the complementarities among cities of different sizes in the region.

The development issue cannot be put in terms of centralization versus decentralization or urban versus rural. In referring to the high incomes and high proportion of industry, transport, commerce and administrative jobs in urban centers in India, Britton Harris writes, "to a very considerable extent, the price which must be paid for urban development is a price paid for conducting these activities at all."<sup>2/</sup> The real issue is what kind of urban growth and where it will be located.

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<sup>1/</sup> R. Morse et al., "Costs of Urban Infrastructure for Industry as Related to City Size in Developing Countries: India Case Study," Stanford Research Institute, 1967, pp. 10-11, 18.

<sup>2/</sup> Harris, India's Urban Future, p. 266.

6. Can the Costs be Managed?

It appears that big concentrated cities are more efficient than smaller less concentrated cities in that the cost of social overhead per capita is lower and income per capita is higher in the bigger cities. Nevertheless, future urbanization is likely to require a larger share of the nation's capital supply because a larger proportion of the population will be living in cities. Most countries will find it necessary to devote more capital resources to providing at least minimum levels of settlement infrastructure and social services as standards cannot be allowed to decline continuously. The private returns of migrants should thus be weighed against the social cost in terms of investments which are diverted from other more productive social purposes (excluding income groups who pay for the services they demand).

While the evidence of the past may seem to be inconclusive with respect to the future cost of urbanization, it does suggest that urbanization can be managed, indeed, it must be if development itself is to proceed. The critical variables in this respect are the rate of growth, the rate of capital formation and the standards of urban overhead and service systems which are to be provided.<sup>1</sup>

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<sup>1</sup>/ Barbara Ward, "The Cities That Came Too Soon," The Economist, December 6, 1969, p. 57. This conclusion may represent a more balanced approach than that of Barbara Ward who noted that urban population projections for the period 1960-1980 may require "the equivalent of all the cities built in the developed world over centuries of urban growth. The gigantic scale of such a task, its virtual impossibility of fulfillment, are enough to suggest that urban growth..." is "...a pathological acceleration of urban cell creation."

B. The Economic Development Benefits of Urbanization

This discussion will focus on the process through which urban centers of various sizes and patterns contribute to the growth of output and employment in a national economy. The analysis will outline a conceptual framework for the urban area, the regions and growth poles. The primary purpose is to explore a number of important policy issues in urban-regional economics such as efficiency and equity in the allocation of resources and economic returns to city size.<sup>1/</sup>

1. The High Correlation Between Urbanization and Economic Growth

The high degree of correlation between urban growth and national growth has been commented on by a number of writers. Their empirical findings suggest some of the dynamic factors relating to urban growth and economic development and some of the relationships which may be irrelevant. Russell, for example, demonstrated the relation between urbanization and growth by regressing the percent of urbanization in 72 countries with per capita incomes using data of the mid 50's. This study produced an index of correlation coefficient of .69 at a high level of significance.<sup>2/</sup>

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<sup>1/</sup> Urban economics has only recently come to be recognized as a field of academic specialization. Formerly, it was considered a part of regional economics or regional science which itself was described as a "new field of specialization" in 1963. The theoretical roots of both fields may be found in location theory, multiplier theory, input-output analysis and mathematical programming.

J. R. Meyer, "Regional Economics: A Survey," Surveys of Economic Theory: Growth and Development, Vol. II, St. Martin's Press, N.Y., 1967, pp. 250-257 and I. Hoch, "Progress in Urban Economics," Resources for the Future, 1969.

<sup>2/</sup> Bruce M. Russell, "World Handbook of Political and Social Indicators," Yale University Press 1964, Part B, cited in Friedmann and Lackington, op.cit., p. 6.

The degree of concentration of per capita income can be related to the stage of economic growth. In examining historic income per capita differentials in Italy, Brazil, the U.S., Canada, Germany, Sweden and France, Williamson found that "increasing inequality is generated during the early development stage, while mature growth has produced regional convergence or a reduction in differentials."<sup>1/</sup> Alonso attributed the excessive concentration of activity in countries at the earliest stage of development to the fact that their industries are new and rely heavily on the externalities of the city.<sup>2/</sup>

In a study of city size distribution and economic development in 95 countries Berry noted two patterns of urban structure. One in which urban centers are of regular graduated size and another in which one or more primate centers dominate with a deficiency of intermediate centers.<sup>3/</sup> He concludes that there are no relationships between "city size distribution and either relative economic development or the degree of urbanization of countries, although there is a strong association between urbanization and economic development." The primate distribution is associated in small countries with political or economic dependence on an outside country, dual or multiple

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<sup>1/</sup> Williamson, "Regional Inequality and the Process of National Development: A Description of Patterns," Regional Analysis, ed. Needleman, 1968, Penguin, p. 155.

<sup>2/</sup> William Alonso, "Industrial Location and Regional Policy in Economic Development," Working Paper No. 24, Center for Planning and Development Research, University of California, Berkeley, 1968, p. 27.

<sup>3/</sup> Brian Berry, "City Size Distribution and Economic Development," Economic Development and Cultural Change, Vol. IX, No. 4, Part 1, July 1961, pp. 573-588.

colonial economies, centers of culture and administration and the capitals of empires. Primate centers may occur where economies of scale make it uneconomical to have more than one major city. Countries with more than one large city may have city regions like New Zealand or specialized complementary cities like Sweden and Japan. Where complex forces affect the urban structure a more normal distribution arises. "Countries with the lowest degrees of primacy include many with considerable industrialization and also those with long urban traditions and histories of urbanization." Belgium and the U.S. are in the former category and India and China in the latter.

Higgins notes the strong correlation between industrialization, urbanization and economic development. He ascribes differences in productivity and incomes to occupational differences between regions, even with a given country. He cites Schnore's rank correlation for 69 countries of urbanization with ten indices of economic development. The correlation coefficient for urbanization and employment in nonextractive industry is .77. It is high for the other indicators as well.<sup>1/</sup> Higgins, however, stresses the complexity and diversity of the development process and concludes that there is no proven causal relationship between the variables.

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<sup>1/</sup> Benjamin Higgins, "The City and Economic Development," The Urban Explosion in Latin America, pp. 126, 127.

2. How Urban Economies Work in the Nation

a. Export Base, Service Base and Growth

The city may be viewed analytically as a product of its export base;<sup>1/</sup> smaller metropolitan areas produce as much as half their goods for sale to areas outside their borders. In the short run the industrial composition of an urban economy's export sector is unlikely to undergo much structural change. Thus demand for export products is paramount in determining urban growth and employment. In the longer run however, the local service sector may be seen as the critical input for the export sector. Its efficiency is the key to the survival of export firms. A growing economy presents a far greater threat to a small single export industry town than to a larger more diversified urban center. Technological change often fosters inter-industry linkages, clustering and complementary labor demands, further enhancing the attractiveness of the larger manufacturing center.

As growth proceeds export specialization in small towns is replaced by the establishment of an export complex. With it the productive process widens to other products and deepens by completing forward and backward linkages in the production chain and leads to import substitution. At each stage the local economy acquires skills, services, social overheads and entrepreneurial talent. When the stage of the regional metropolis is reached, a "node" is created which both connects and controls former rival cities. The regional

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<sup>1/</sup> This analysis is largely based on the conceptual framework pioneered by Wilbur Thompson. See Wilbur Thompson, "A Preface to Urban Economics," Resources for the Future, 1965 \_\_\_\_\_, "Internal and External Factors in the Development of Urban Economics," Issues in Urban Economics, ed. H. Perloff and L. Wingo, Resources for the Future, 1968, pp. 43-80.

metropolis exports services as a major part of its activity. Whatever the cause of one city gaining dominance over others, such dominance is usually maintained, as the larger, dominating city generates external economies in a number of sectors particularly in services such as finance and administration.

The large city is a diversified productive machine made up of a blend of growing and declining industries. The linkages between firms in such a center make it difficult for any of them to break out of the system. The big cities represent enormous stocks of fixed capital in social and private overhead. Even if these cities' productive enterprises are obsolete, their current costs of public utilities and services are likely to be low. "No nation is so affluent that it can afford to throw away a major city." <sup>1/</sup> The great city is in itself an important market which attracts productive activities and being a transport hub becomes the focal point for activities throughout the nation.

b. Innovation, Incomes and Industry

The innovative function of the large city has important income effects. New, more sophisticated products require more skilled workers who can command higher wages. In turn the innovating large city spins off the traditional low wage industries. The smaller towns receiving such industries may well suffer from built-in growth limitations, as a result of low wage rates, limited skills and slow growth industries. The fiscal incomes of such lagging centers are insufficient to finance the better schools and training facilities needed to match the quality of the labor force in the large innovating centers.

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<sup>1/</sup> Thompson, "A Preface to Urban Economics," p. 23.

This theory makes the distribution and stability of income in an urban area a function of industry mix. For industries such as durables, clustering takes place reflecting external economies; in some consumer goods industries such as textile single industry towns can survive.<sup>1/</sup> The growing importance of the multiproduct, multiplant firm in an advanced country reinforces this trend, as the least cost location for such organizations is a large city.

In one sense the urban economy may be viewed as packages of industries in space. The nation's system of cities is a function of its system of industries. Large cities and industrial complexes result from economizing on the high cost of transportation of intermediate products in heavy industry. The external economies of large cities in services and overheads attract new industries. With its higher income levels and demand for labor the city attracts workers from outside. It also attracts the poor migrant whose marginal product may be low thus accounting for the paradox of poverty amongst plenty even in the affluent cities of the West.

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<sup>1/</sup> Not all analysts agree that we understand agglomeration fully. A path breaking study, after reviewing the literature, concludes: "not enough is known about agglomeration to indicate in what degree it represents a response to economic and noneconomic forces; whether there are alternative ways of achieving the economies that agglomeration may bring; or what costs or economic losses might result from measures diminishing the tendency of industries to agglomerate." See R. Morse et al., "Costs of Urban Infrastructure for Industry as Related to City Size in Developing Countries: India Case Study."

The innovating large city has no choice but to become bigger in size as city size and industrial growth are closely related. The large city has great advantages in transportation and utility systems, academic research complexes, skilled labor and training facilities. These economies of scale are internalized by private firms in the form of lower costs, while the social costs of congestion and pollution are borne by society as a whole. These external diseconomies are an increasing function of city size but are not usually reflected in factor market prices. When such diseconomies are fully reflected in the marginal cost of production in urban areas they may be a limitation on city size.

c. Management as a Limiting Factor

It would appear that the major scarce factor in large metropolitan centers is effective management. As land, labor and capital do not conceptually pose limits on the size of the city perhaps the real limitation or diseconomy of scale is managerial. This may be defined as the point where the unit cost of public services starts rising as the quality of services starts declining. If these marginal costs to local export firms are rising more rapidly than marginal returns, a fact limiting growth will have appeared. This probably depends in large part on how successful modern management techniques and the latest technology in such fields as transportation are. It is a central issue in public policy in the less developed world and concerns not only technical management efficiency, but also the effectiveness of the political process in coping with the changing times as well as the ability of major groups and classes to cooperate in an urban environment.

### 3. The Regional Economy: National Growth Versus Equal Growth

A city is not an isolated economic unit. It is a sub-system of a national economy. A nation may be said to consist of a system of cities in which each performs functions for its surrounding regions. Cities may also be regarded in a hierarchal framework with certain primate cities performing functions for the entire economy and other cities dependent on the primate city in varying degrees.

The regional development issue may be discussed most simply in terms of efficiency or national growth and equity or a more equal distribution of income. In many countries policies designed to limit the size of primate cities on economic grounds complement policies designed to promote development in backward regions. Alonso points out that such policies may often be detrimental to economic growth, that efficiency and equity policies may therefore be in conflict.<sup>1/</sup>

The ambiguity of a region with respect to scale is a problem. A region in one country may be as big as a country elsewhere; Chile's population is half that of the New York Metropolitan area. Growth pole theory stresses the key role of regional urban centers in equalizing income between regions under a strategy termed "concentrated decentralization" by Rodwin. Yet the inequalities in income within regions may be increased so that the average

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<sup>1/</sup> William Alonso, "Urban and Regional Imbalances in Economic Development," Economic Development and Cultural Change, Vol. 17, No. 1, October 1968, pp. 1-14. See Part II A 5 for a discussion of the empirical difficulty of defining an optimal sized city.

distribution of a nation's income may be little improved. "In the absence of empirically determined scales of relevant sizes of regions and growth poles, these concepts have limited relevance as a guide to policy and action.<sup>1/</sup>

Also questions whether there is any evidence that big cities necessarily experience rising marginal costs to scale. Even if marginal costs are rising, the net marginal product per capita may still be increasing, thus yielding increasing returns to urban scale.

On the other hand, regional equalization policies have not been empirically tested for consistency with maximizing national growth. Location theory holds that investment proportional to resources and population in the presence of unexploited regional resources will yield the fastest rate of national economic growth. Yet the conditions assumed by classical theory are not present in the less developed countries. Transport, for example, is not fully developed but usually converges on the port cities. Entrepreneurs and managers are reluctant to move to the bush. Investment in remote regions involves great uncertainty and there is good reason for businessmen to locate close to the government decision-making apparatus.

In the short run a policy of deciding on a project-by-project basis may yield one location strategy on efficiency grounds. In the longer run national growth plans may require a grouping of projects which will create a "critical" mass sufficient to start a process of self-sustaining growth through induced external economies, although the human and technical conditions for

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<sup>1/</sup> Ibid, p. 3.

achieving this mass are not well known. In the long run, policy must allow for fundamental transformations in population, transportation and virtually all the fixed parameters of incremental project analysis.

Studies show that primacy or concentration rises in the early stages of growth. As development proceeds, a trickling down effect takes place. Interior areas are opened and transport and education become available, "making externalities more nearly equal everywhere." Alonso mentions that "an invisible hand may be at work, and, given world enough and time, it may reconcile the efficiency and equity goals." He nevertheless concludes that dispersal theories have yet to be proved and that the ambiguous definitions of equity make difficult the measurement of tradeoffs with efficiency or income.<sup>1/</sup>

a. The Strategy of Concentrated Development

In an earlier work, Friedmann and Alonso consider regional development in a more pragmatic vein as a longer run policy issue. They reject the choice between social equity and growth in production as "the real options are not bracketed by extreme formulations in terms of either welfare or efficiency, present time or future." The choice of regions for development should be based on their potential development contribution.

Most transitional societies have as their basic goal the economic and social integration of their societies in space. A first criterion for policy concerns national integration stated as follows: "One of the fundamental purposes of economic development is the creation of a national economic

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<sup>1/</sup> Ibid, pp. 9,10.

space articulated by an interdependent system of cities, areal functional specialization and national markets." Second, with respect to efficiency, projects should not be located where private and social interests diverge. Third, regional investment allocation should be designed to maximize opportunities for future national growth, as regions cannot progress if the whole nation stagnates. Fourth, a reasonable balance in standards of living must be maintained, "at least sufficient to preserve political stability in support of the drive for national growth."<sup>1/</sup>

They suggest a fourfold classification which distinguishes metropolitan growth regions, development axes between such centers, frontier development regions and finally depressed regions with limited prospects. "Within the framework of a national policy for development, different problems are faced in each of these regional-urban types and different methods of development are called for."<sup>2/</sup>

In the end even Friedmann stresses the core region strategy for an industrializing society. Core regions are areas of concentrated interdependent activity which can decisively influence the economic development of a wider area. They can be activated through a "planned, coordinated, long range and massive investment effort."<sup>3/</sup> In short, it may for political or social reasons be necessary to divert resources to regions which have little development

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<sup>1/</sup> John Friedmann and William Alonso, "Introduction: Regional Development as a Policy Issue", Regional Development and Planning, M.I.T. Press, 1964, pp. 4-7.

<sup>2/</sup> Ibid, pp. 3, 4.

<sup>3/</sup> John Friedmann, "Regional Planning and Nation Building: An Agenda for International Research," Economic Development and Cultural Change, Vol. 16, No. 1, October 1967, p. 120.

potential. Growth, however, can only take place in selected regions where a number of economic conditions are fulfilled. Resources should be concentrated on such regions in the interests of achieving satisfactory national growth rates and thus having some resources left for distributional purposes. To a great extent the analysis and selection of critical growth regions in most countries will relate to the opportunities for industrial growth. Policies to promote such regions will have to recognize the essential industrial supply and market factors which lead to agglomeration in urban centers.

b. Growth Poles and the Spread of Innovations

Considerable literature exists on this subject which cannot be covered in this paper. A major problem in using growth pole concepts or theory as a guide to policy is raised by Lasuen in his research on the regional flow of innovations and the role of business organizations in creating growth poles. He views development as a process by which firms adapt successive sets of innovations on a successively larger scale. Both transport innovation and the increasing scale of innovating firms have operated to reduce the number of locations or centers where innovation can occur, leading to a relative decay in other places. The crucial question concerns the evolution of business organizations from the one product, one plant model to the multiproduct, multi-plant, multicity model.

In Europe the multiproduct one plant system led to widespread vertical integration of firms, but Europe lagged behind the management revolution in the U.S. which enabled firms to produce a variety of products for different markets. In Britain the success of industrial parks resulted from the diversified management of firms which could operate new factories anywhere. In contrast the Northern Italians still operate multiproduct one plant firms and are

unable to produce in the less developed south. In order to develop regions through the establishment of growth poles the locational limitations inherent in a firm only able to operate on a one product one plant basis must be recognized. Wide regional wage differentials or tax and infrastructure incentives cannot be exploited under these conditions. At best a selective policy encouraging firms organizationally capable of moving and stimulating the reorganization of others on a multinational basis is needed. Lasuen concludes that in less developed countries services such as banking and commerce rather than the typical manufacturing firms can best exploit final markets in underdeveloped regions.<sup>1/</sup>

#### 4. The Rural Economy

Little attention has been paid so far to regional imbalances and the rural economy. The tendency towards concentration in primate centers at certain stages of the development process may "inhibit the transformations necessary to succeeding stages of national development."<sup>2/</sup>

The dominating primate city not only draws in rural migrants, but also the higher quality human resources from smaller towns. Private investment institutions favor the big city, while public investment is also allocated to the big city because of its heavy concentration of political power. A self-perpetuating mechanism is set in motion in which capital, productive labor, managerial talent and entrepreneurship concentrate in one urban center. A

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<sup>1/</sup> J. R. Lasuen, "On Growth Poles," 28th Conference of the Southern Economic Association, Washington, D. C., November 8, 1968 (unpublished).

<sup>2/</sup> Lowdon Wingo, "Implications of Regional Development: Programs for the Patterns of Settlement," Design for a Worldwide Study of Regional Development, Resources for the Future, 1966, p. 31.

sort of "developmental dualism" is created which divides the country into a modern and a traditional sector. This is a barrier to the economic integration required for new development thrusts.<sup>1/</sup> Williamson analyzes historical cases of this kind of "perverse" development but concludes that the elements leading to divergence diminish in time allowing equilibrating effects to make themselves felt.<sup>2/</sup>

The rural areas of such countries may fail to show any productive response to the growing demand of the urban center for agricultural products. Thus the rural areas remain poor and export their surplus populations to the big city, as even the small towns offer little opportunity. Under these circumstances, regional policy might attempt to increase the interdependence of the rural and urban economies and thus gradually close the gap between them. The object would be to integrate rural areas with the nation's market economy, involving possibly substantial structural reforms such as with respect to land tenure.

By modernizing agriculture, however, the number of people supported by the land will be reduced and the growth of rural populations will have to be reduced. Migration to the city may simply increase and the resultant social costs may offset the productivity gains in agriculture.

a. A "Holding" Strategy

As we have seen rural push can be a powerful factor in inducing migration to the city. A short-run policy might call for an expansion of

1/ Ibid, p. 31.

2/ J. G. Williamson, "Regional Inequality and the Process of National Development: A Description of Patterns," Regional Analysis, pp. 101-106.

output permitting a greater proportion of population to be retained on the land. In essence, this would be a holding strategy designed to limit the outflow until urban areas could absorb more people. Policies designed to increase farm incomes and improve rural living conditions would be elements in such a strategy.<sup>1/</sup>

The holding strategy may prove to be feasible particularly in situations where expanding markets for agricultural products and technology permit a greater absorption of manpower in labor intensive production. The impact of urban settlements in rural areas as centers of commerce, distribution and rural based industry needs to be examined empirically. Such an approach may contribute to a better pattern of rural development. Such centers could provide the amenities and services demanded by higher income farmers, supply modern inputs and export rural output.

A strategy of this type would have to be carefully designed to accord with the minimum scale economies of urban centers. For this reason only a few such centers could be promoted in a given region and then only after a careful study. Such study would examine the impact of major transport investments in promoting such centers in rural areas. Transport investments can improve access of the primate center thereby eliminating the economic functions of rural centers. Study is needed of the responsiveness of the rural economy to urban demand changes, of farm incomes and employment patterns and of the institutional structure of agriculture in different countries.

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<sup>1/</sup> Wingo, "Implications of Regional Development: Programs for the Patterns of Settlement," pp. 34-35.

### III. THE METROPOLITAN POLICY ISSUE

#### A. Urban Public Goods and Services

The principal issues of urban-regional economic development policy are easier to bring into focus on a broad scale than at the level of urban project evaluation or systems of projects in urban areas. The subject will not be treated exhaustively, given the purpose and space limitations of this paper. It may, however, be useful to discuss some of the characteristics of investments in an urban context as well as the complexities in dealing with them and what this suggests for establishing criteria for investment policy in metropolitan regions.

In a larger sense market mechanisms may be said to determine the organization of functions in a city and the way in which behavioral processes are worked out. Accordingly, we would be well advised to understand these mechanisms and perhaps their imperfections in attempting to gauge the development impact of public investments.

Some of the evidence of diseconomies of scale of cities may result from the failure of the price system to discipline behavior. Urban space will be used more freely if the means of access to it, i.e. transportation or public utilities, are priced too low. To the extent users do not pay for such services, society must pay. The use of price as a control and equilibrating mechanism for the solution of all urban problems in the less developed world is not recommended. Its acceptability and applicability is probably greater in the presently more developed regions. Congestion may be more acceptable in less developed societies as it involves trading time, with low opportunity cost, for money with higher opportunity costs in alternative public

uses. Nevertheless, the use of price as a management tool for large urban areas should be overlooked, despite formidable problems in determining demand, costs and user charges.

1. The Relevance of Scale Economies

The size of the city to be governed is relevant in any discussion of the supply of public services. Scale economies and area-wide externalities exist for such integrated services as air pollution control, hospitals, public health services, power, water and sewerage, public transportation and planning. For any given size city, some services will be operating under conditions of overfull use of capacity and others will have excess capacity.<sup>1/</sup> However, for a substantial number of "horizontal" government supplied services such as libraries, schools and police protection long-run cost curves are flat and little in the way of scale economies can be achieved as unit size is restricted by the necessity to locate geographically close to service recipients. Thus, the scale economy argument has to be qualified.

2. Managing Urban Systems

It would seem that urban government consolidation would offer substantial advantages in terms of rational planning of the urban economy and the least cost supply of packages of urban public services. However, the possibility of better coordinated and systematic planning for growth must be weighed against the likelihood of increasingly complex communications between sub-units and

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<sup>1/</sup> Temporarily unbalanced capacities can be shown to represent optimal long-run planning among components of an urban system. R. Morse et al., "Costs of Urban Infrastructure for Industry as Related to City Size in the Developing Countries: India Case Study," p. 36.

remoteness from considerations of consumer choice of large government units.

Urban governments do not operate on profit motives. Even where possible, least cost combinations of inputs may not be chosen because of conflicting goals. Urban services are offered in a monopolistic market where marginal cost pricing is not usually considered.

Hirsch concludes that in the United States local governments with jurisdictions of 50,000 to 100,000 people can best provide most services, while district administrations can best provide those services with substantial scale economies, and income redistribution objectives can best be accomplished by state and federal authorities.<sup>1/</sup> Quite different solutions may be appropriate for countries with different economic structures and administrative and legal traditions.

### 3. Benefits and Costs

In considering the demand for public services there is no way that benefits or preferences can be assessed when the good concerned is given away. A case in point is that of so-called "merit" goods, of which education, low-cost housing and hospitals are examples. The individual receives more of the good than he would purchase. The supply of these goods is seen as a legitimate function of society. For goods supplied at zero price, demand always exceeds supply. Rationing takes place through congestion, administrative action and an active market in other assets which give one access to the public service.<sup>2/</sup>

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<sup>1/</sup> Werner S. Hirsch, "The Supply of Urban Public Services," Issues in Urban Economics, pp. 477-524.

<sup>2/</sup> Julius Margolis, "The Demand for Public Services," Issues in Urban Economics, pp. 527-565.

The essential point is that the supply of such goods is usually not related to any measure of benefits but rather to a definition of "need" advanced by the public supplier. In the case of collective goods, such as street lights, health inspection, streets and justice, users cannot be directly charged for benefits received. Similarly where external economies of consumption are present the beneficiaries cannot be made to pay. An example would be the dissuasion of a boy not to leave school in order to reduce potential delinquency.<sup>1/</sup>

Merit goods may be analytically distinguished from public goods. The latter include such publicly supplied services as urban transportation and water supply. Measuring costs and benefits produce familiar problems of which discount rate to use, uncertainty and the determination of optimal prices. Further, analysis takes place in the absence of markets and often in the presence of increasing returns, indivisibilities and extensive externalities. In brief, benefit-cost analysis usually attempts to relate the service supplied to some market behavior. This method assumes that public goods are not supplied according to community criteria as is often the case of merit goods.

In the case of transport, the savings in costs of supplying the service in question is the basis for evaluating the return of investments.<sup>2/</sup> In education the service is regarded as an intermediate good and the increased productivity of the individuals receiving education is put in the form of

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<sup>1/</sup> Robert Dorfman, ed. "Measuring Benefits of Government Investments," The Brookings Institution, 1963, p. 5.

<sup>2/</sup> See H.G. van der Tak and A. Ray, "The Economic Benefits of Road Transport Projects," IBRD, EC-160, November 13, 1969, (Draft).

higher income which is regarded as a measure of what an individual would be willing to pay.<sup>1/</sup>

The basic issue concerns the secondary effects of an investment. Aside from the difficult issues as to what interest rate to use in discounting back estimated net benefits of a project, there are all sorts of secondary benefits, allowances for consumer surplus and impacts on income distribution. In the end "the debate about benefit cost analysis centers on the question of whether the social value of benefits can be estimated reliably enough to justify the trouble and effort involved in a benefit-cost computation."<sup>2/</sup>

#### 4. The Scope of Urban Planning

The existing state of the art in project analysis sets limits to what can be done. For example, land value increases have been suggested as a way of measuring the impact of public investments. However, this involves analyzing such problems as the loss in value in competing sites.<sup>3/</sup> Recent study has shown that existing elaborate techniques in the U.S. for evaluating the impact of alternative transport systems and alternative land uses on urban development have failed to produce significant results. The study suggests that "alternative plans should not be attempted, given the state of existing methods. Rather

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<sup>1/</sup> Margolis, op. cit., pp. 556-562.

<sup>2/</sup> Dorfman, op. cit., p. 8. See also a forthcoming review paper by K. Mera, "The Framework for Urban Transport Studies," IBRD.

<sup>3/</sup> Margolis, op. cit., pp. 562-563.

a single 20-year regional projection should be developed as a target or framework for testing of alternative facility system plans."<sup>1/</sup>

Evaluation is needed of the interaction among urban systems in order to derive compatible policies. By means of a continuous planning process the basis would be provided for guiding current resource use decisions in accordance with plan objectives.

B. Distribution Policy for Urban Stability

The impact of the rising marginal populations on the quality of urban overhead and service levels deserves attention. Typically, the large city of the less developed world has seen the quality of its services decline as the influx of the dispossessed continues. In effect, this may mean a decline in the real standard of living for large groups already established in the city. This may be a source of growing discontent for those who are politically aware and organized.

The group which has graduated from marginal status is likely to have the highest expectations for the future. The growing deterioration in the quality of urban services will be most severely felt by those who have seen better and expect more. If, in fact, this group of lower middle income and working class people are the most volatile political element in the rapidly growing big cities, then investment policy should take account of this. This suggests that an investment policy that achieves an improved distribution of the

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<sup>1/</sup> D. Boyce and N. Day, Metropolitan Plan Evaluation Methodology, Institute for Environmental Studies, University of Pennsylvania, for the U.S. Bureau of Public Roads, March 1969, pp. 61-63.

benefits from public utility and transport investments, among others, would be better than one which looked only to the financial or economic rate of return as usually calculated. Specifically, this proposed strategy would give high priority to investments which could benefit the emerging lower middle income and working class most, on the grounds that this distribution of benefits would be most likely to ensure the orderly growth of the city. In view of the ever present financial resource constraints to urban development, this policy would have the further virtue of being financially self-sustaining as the investments in question could be paid for by the recipients of the benefits.

The marginal or lowest income groups will probably continue to be subsidized in the provision of basic urban overheads and services. It is a theme of this paper that the quality of urban services should be regarded as a variable in determining the allocation of resource for urban development.

In formulating a lending policy for urban areas, the introduction of more sophisticated distribution criteria would enable such institutions as the Bank to establish priorities for investments. For example, an expensive beltway whose benefit is calculated in terms of time savings for upper middle income automobile users would have to be considered in relation to improved mass transit systems and public utility facilities with wider distributional impacts.

#### C. Urban Housing Policy

The issue of housing is a central one in the problem of urbanization. Such agencies as AID and the Inter-American Development Bank have regarded the social distress of urbanization as sufficient justification for spending on low cost public housing and medium-class private housing. These programs

mainly benefitted higher income groups and failed to achieve their objectives.<sup>1/</sup> The economic arguments for these large-scale grant and investment guarantee programs are based on the presumed increases in productivity of those who have adequate housing versus those who do not. A housing industry on the U.S. model can be shown to have important employment-creating effects for the lowest unskilled income groups, while at the same time creating a demand for building materials and thereby causing an industrialized building materials industry to grow. While there is some validity to this point, the general case contains several weaknesses and the results of the programs undertaken have been far from satisfactory.

While the provision of a minimum standard house may contribute markedly to the productivity of a worker in a developed, fully employed economy, it is questionable whether productivity would be much affected amongst slum dwellers whose main concern is to find some kind of employment. Further, the provision of housing alone in the absence of an income generating capacity of the population housed will usually result in the creation of new slums as migration continues.

The need for housing as defined by various international agencies is virtually unlimited in terms of the standards specified. Even national

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<sup>1/</sup> For a critique of these programs on economic and social grounds, see Reuben Utria, "The Housing Problem in Latin America in Relation to Structural Development Factors." Economic Bulletin for Latin America, October, 1966, pp. 81-111. Also Charles Abrams, Man's Struggle for Shelter in an Urbanizing World, M.I.T. Press, Cambridge, Mass., 1964, pp. 100-103.

housing agencies in a number of countries have realized the impossibility of providing public low cost housing on a scale which would conform to need as defined.

For the low income slum dweller or squatter, the primary objective is the right or title to land. When they are given land or seize it, the low income groups build their own houses from intermittent savings. Lima's *barriadas* are excellent examples of what can be done in this respect, usually in opposition to law and the police power of the state. Self-built housing does not saddle the owner with large fixed debts. His family gets more housing at an earlier stage than is the case with comparable public housing.<sup>1/</sup> "If governments are to control urban settlement and development, policies and procedures must be based on the nature of local demand."<sup>2/</sup> Such housing can be built on a large scale consistent with the efficient growth of an urban area by relatively inexpensive public "sites and services" schemes. Individuals cannot cope with the health and sanitation measures of over-crowding and squatting. This requires the intervention of Government and where needed, sensible subsidy policies. Squatting can be avoided by anticipating population movements and planning for them. The key to housing finance at all levels is savings, and a house is a compelling motive to save.<sup>3/</sup>

At the higher income levels a good deal of success has been noted in a number of countries from creating savings and loan associations. Preliminary research indicates that the savings accumulated are not at the expense of the growth of time and demand deposits and may well represent a net addition to national savings. In selected instances for foreign seed capital loans have been used to set up central home loan type banks and subsidiary savings and loan institutions.

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<sup>1/</sup> Turner and Mangin, "Progressive Architecture."

<sup>2/</sup> Turner, "Uncontrolled Urban Settlements: Problems and Policies," p. 9.

<sup>3/</sup> Charles Abrams, *op. cit.*, pp. 223 and 236.

### PART THREE: POLICY IMPLICATIONS

#### I. GENERAL STRATEGY FOR URBAN-REGIONAL DEVELOPMENT

The cities of the less developed countries in most cases will double in population and probably in size in the foreseeable future. An opportunity exists to provide for this growth in a far more efficient manner than was done in the past, precisely because so much of urban growth is yet to come. The less developed countries can plan for urban growth patterns which allow for a more rational growth of cities. They can conserve resources through improved management and resource allocation procedures. They can greatly improve the mobilization of resources from local sources. The problem is one of economic and social development at the sub-national urban level as well as at the national level. Objectives must be specified, means identified, choices made and a mechanism devised for the efficient carrying out of decisions.

##### A. For the Nation

At the level of national policy making and resource allocation a new dimension in thinking about growth should be added. The cities are not just absorbers of resources which must be rationed if other national goals are to be financed; rather, they are the instruments of economic and social transformation of the nation. The choice must be made over a wide range between investment in commodity production and what may be termed settlement infrastructure and urban services. In this the quality of urban services should be considered a variable in determining investment allocations so that adequate resources will be available to achieve urban growth and employment objectives.

A related issue concerns the problem of regional imbalance which frequently leads to policies designed to limit the size of big cities. The difficulty is that such policies may lead to a more equitable distribution of goods by assisting the backward regions, but may limit overall growth. Of course, national policy must consider the longer run objectives of integrating the nation both socially and economically. In carrying out a national strategy, however, consideration should be given to selecting regions where concentrated activity and investments can have a decisive impact on the economic development of a wide area.

One preliminary conclusion is that urbanization solutions which require the establishment of numerous widely distributed "growth poles" with attendant industrial parks, infrastructure and other incentives should be avoided. The lessons of experience so far appear to be that the pursuance of distributional goals in the absence of efficiency criteria can lead to wasted investments and little growth in resources either for distribution or for new investment. Rather, a good guide to the selection of alternate viable centers is to determine which centers are already growing and have the potential for further growth. To a great extent the analysis and selection of critical growth regions will relate to the opportunities for industrial growth and, in some cases, to the development of untapped resources. Publicly provided infrastructure and fiscal policies can be a powerful force for the promotion of such centers. Further, given the state of knowledge, and in view of past experience, new town strategy, at least as carried out so far, does not appear to be promising as an urban solution in the less developed countries. The entire question of alternative growth poles and new towns requires further study in the course of our work in the field and at headquarters.

Given the economic factors favoring the continued expansion of existing large urban centers and desirability of concentrating growth in a few selected centers it follows that national policy will not be able to change the distribution of urban population decisively. Rather, national policy can aim at diverting part of the flow of migrants towards the few viable alternatives. National strategy should reconcile the goals of raising agricultural productivity with the impacts of such policies on migration to urban areas. In formulating national strategy, the criteria for a system of settlements should be to achieve the growth patterns most efficient in terms of the cost of overhead and services as well as the returns in the form of incomes and employment.

B. For the Metropolitan Region

The creation of coherent national strategies for urban-regional development will require careful reappraisal of the economy of the metropolitan region. In many cities of the world there are problems of fragmented administration, ineffective municipal or regional utility service systems and a general lack of coordination in planning and in the allocation of investments. Municipalities are often under-financed, do not adequately mobilize local resources, and have little conception of budgeting or of what constitutes an effective allocation of resources. What is needed is a development framework within which investment programs can be evaluated and carried out. The metropolitan development strategy should be aimed at optimizing output and employment in a given area and providing for a least cost overhead and service systems investment consistent with the society's distributional objectives.

The main limiting factor in the urban economy may well be management as the other factors such as land, labor and capital do not conceptually pose limits on city size and growth. As the large cities provide the bulk of modern sector jobs and incomes and a good part of a nation's traditional service employment, effectiveness of management may be a critical determinant in the ability of a society to achieve its development goals.

C. Resource Mobilization for Urban Development

For a good many countries effective regional and urban development programs cannot be carried out because of inadequate division of resources between national and local authorities. In some countries changes in the decision-making process may be required so that sub-national growth requirements are reflected at the national level. The system for decision making should be one which coordinates urban, regional and national development strategies and resource allocation. It is important that the provincial and metropolitan agencies requesting an allocation of resources be able to do so in terms of an economic justification which relates urban growth and investments to national objectives. Allocations justified by distributional, political or welfare criteria often fail to maximize growth.

An important problem facing most urban administrations is lack of sufficient funds for capital requirements and often lack of current revenues to maintain existing services. It can be shown that a substantial part of the difference between the performance levels of comparable cities in a given economy lies in the efficiency with which resources are mobilized locally through tax systems, rate structures, assessments and borrowing on local markets. In particular, the rate policies of public utility systems need to be reviewed in relation to the distribution of incomes in urban areas and their implication for financing public investments from internally generated sources.

#### D. Population Policy

The high rates of population growth in most less developed countries contributes greatly to the pressure on urban areas and to the demand for resources for current consumption instead of for growth. The Bank's policy towards encouraging family planning is thus relevant to the ability of developing countries to raise their average per capita incomes in the context of rapid urban growth. In general, birth control programs will not provide any relief for about two decades to the problem of surplus labor which has a tendency to increasingly gravitate towards the cities: the numbers entering the labor force for the next fifteen years are already born. Nevertheless, successful birth control programs can lead to important short-term savings in national resources required for urban settlement overheads, social services, housing and food. Even if we were able to sharply reduce population growth rates in developing nations, their urban areas would continue to grow rapidly.

As we have shown, this migration is based on powerful economic and social forces. As the lowest income areas of the world including most of Asia and Tropical Africa have yet to reach 25% level of urbanization, a vast number of potential migrants are available to come to the city.

#### II. POLICIES FOR BANK CONSIDERATION

The Bank should seek to be a constructive force in helping to channel future urban growth into patterns more consistent with national growth and distributional objectives. Bank policies may be considered at two levels, the metropolitan and the national. Their implementation will involve the Bank's country economic work, its project lending and its operational research. It will require coordination with others, particularly in

technical assistance. We will have to consider how best to adapt existing types of Bank lending to take account of new criteria related to urban-regional development as well as what new forms of lending may be needed to enable us to play a more effective role in an urbanizing world.

Section I of the Annex proposes an operational research program designed to assist the Bank in projects lending in urban areas as well as in formulating general policies for making the Bank as effective as possible in promoting healthy urban development in the less developed countries.

A successful Bank policy for urban-regional development will require coordination of the Bank's economic, financial, industrial, public utilities, transportation and agricultural work at the very least. The financing of investments in these sectors either directly or indirectly has an important impact on the efficiency of urban growth, on the distribution of benefits and on the employment of surplus labor.

The lines of approach suggested for Bank consideration in the field of urban-regional development can be subdivided as follows:

1. For the short run - improving the effectiveness of urban management, resource use and resource mobilization.
2. At the national level - integrating the Bank's macro-economic and sector approach to development performance with investment programs at the urban-regional level which promote a balanced growth of basic urban services.
3. At the metropolitan-regional level - metropolitan development strategies, management of urban systems, increasing the returns on the Bank's urban infrastructure investments.
4. New forms of Bank lending - sites and services, savings and loan mechanisms, land development.

A. Policy for the Short Run - How the Bank Can be Effective in Urban Development

It is often said by those familiar with both the complexities of urban-regional problems and the paucity of empirical studies of them that we do not know enough to do effective work in urban-regional economic development. The fact is, of course, that we know a good deal. We are also aware of what we do not know and how and where we must seek answers through operational research and field studies.

In the short run, we can analyze the performance of selected metropolitan-regional economies in three areas. First, we can assess the quality and the scope of the management of the urban complex by studying the various bodies responsible for managing a particular urban area. Matters of concern here are the ability to make and coordinate decisions in the relevant areas and the degree of effectiveness in allocating resources and in building and maintaining urban service systems. The role of public utility institutions needs to be analyzed. Within a metropolitan region the jurisdiction of public utility institutions is often partial or overlapping. As well, the interaction of utility investments with other major investments and services needs to be assessed.

This leads to a second area of concern, that of the mobilization of resources. Most urban administrations lack sufficient funds to provide the new services required. As well, they often lack sufficient current revenues to maintain existing services. Much could be done by improving local tax systems, rate structures, assessments, and by opening opportunities for

borrowing on local markets.<sup>1/</sup> Finally, we come to the issue of metropolitan planning and plan implementation. The urban area should be approached as a sub-national economy in which the use of resources will be related to the achievement of development objectives in a given metropolitan area. We might assist countries in formulating the criteria for studies leading to such plans and we might make the existence of such plans a condition for further investments in urban areas. This is partly a matter for Bank economic missions and their economists to deal with and may in some cases lead to recommendations for technical assistance. This will be discussed further under our third policy suggestion. Plans are, however, only a guide to what to do. They must be continuously revised in the light of experience and new facts and there must be a mechanism for implementing them if they are to have any practical meaning. This requires institutional mechanisms capable of advising management currently of the best strategy for achieving objectives. The appropriate form of coordinating investment policy will vary in different places and brings us back to our first point. The Bank may have an important role in bringing about such coordination.

As we are new at urban development and as staffs are small, it would appear prudent to deal only with a few urban areas, particularly those which show the greatest promise of meeting the criteria laid down. We have already begun to look at selected countries and metropolitan areas (Brazil, Colombia, India, Pakistan and Kenya) and this may be useful as a basis for deciding which one or two major cities are most promising as places to begin more operationally oriented work.

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<sup>1/</sup> For an example of how these three objectives have been analyzed in a metropolitan context, see R. Westebbe and K. Mera, "A Note on Calcutta's Urbanization Problems and Prospects," Economics of Urbanization Division, Economics Department, January 30, 1970.

## B. Policy at the National Level

In evaluating the performance of national economies and assessing their requirements for assistance the Bank usually looks at the national economy both as a whole and by particular sectors. This approach needs to be modified by taking into account metropolitan regional considerations which would relate the locational efficiency of investments and the spatial linkages between investment programs in different sectors. National planners and decision makers would thus also be concerned with carrying out national plans and achieving national goals at the metropolitan-regional level. They would have to be concerned with associated policies regarding internal migration and the creation of appropriate sub-national administrative and planning mechanisms to integrate sectoral programs at the regional level. The Bank might assist in this process of introducing urban-regional investment and locational criteria at the national level through the work of its economic missions. Already urban-regional consulting economists have been included in three economic missions, Venezuela, Argentina and Ivory Coast. An attempt has been made to draft preliminary guidelines for mission economic work and reports produced by the Bank staff in selected countries.

The work of introducing urban-regional analysis in our own economic reports should be continued and progressively expanded in key countries. Countries should be encouraged to do the necessary studies and acquire staff for national and sub-national agencies in the field of urban-regional development.

## C. Policies at the Metropolitan-Regional Level

Coherent national strategies for metropolitan-regional development are most desirable. Yet here knowledge is limited and it will take time to achieve results.

1. The Metropolitan Plan

At the outset we face in many cities the problem of fragmented municipal administrations, ineffective municipal or regional utility service systems and a general lack of coordination in planning or the allocation of investments. Municipalities are under-financed and have little conception of budgeting or of what constitutes an effective allocation of resources. The Bank's present programs in public utility and urban transport investments may provide part of the leverage for achieving improvements.

Bank policy should encourage the planning and evaluation of investments with a view to their areawide development impact. This would require the establishment of regional development plans for the metropolitan areas in question and the adoption of strategies and programs to carry them out. We would in effect request a development framework within which we could assess projects we are considering financing. As urban projects have inter-related impacts and traditional Bank benefit-cost analysis is based mainly on the returns which may be attributed to the project itself, we will have to improve our methodology and analytical techniques. The operational research program is partly designed to do this. In general, we should attempt to induce a major shift in our approach towards urban infrastructure investments away from just meeting deficiencies in the supply of certain services which appear as a result of the incremental growth of demand in urban areas towards anticipating and planning for investments on a coordinated basis over time.

If we recommend a UNDP financed development study and plan for a specific metropolitan area we should ensure that the terms of reference and criteria used evaluate urban-regional development in a national framework.

This will require that the study be fully coordinated with and backed by national plan authorities, who usually have decisive control of regional resource allocation and are responsible for a coherent national policy for urban-regional development. We should also do more to see that technical assistance in the form of study and foreign expertise leaves behind a group able to continue, adapt and improve on the initial strategy for growth set out in the plans.

It should be emphasized that what is being discussed here is not the traditional city master plan which usually takes little or no account of economic criteria and provides no basis for making choices between alternative uses of resources. As one senior Indian official put it, "The highest mortality rate in India is of town master plans." What is wanted is a metropolitan development strategy aimed at optimizing output and employment in a given area and providing for least cost overhead and service systems investments. The appropriate regions for such planning should encompass the areas which interact with the metropolitan urban center.

## 2. Urban Management

The appropriate management structure for an urban area cannot be precisely defined. Local traditions, politics and the inherited administrative structures will determine what is possible. Super metropolitan governments have drawbacks and many functions can most economically be carried out by smaller units of government.

The required system should coordinate major metropolitan investments, make them consistent with national development strategy, establish a rational system for distributing benefits and assessing public utility

rates and attain an acceptable level of local resource mobilization. It should also be coordinated with national government agencies concerned with urban-regional development and should be able to claim an appropriate share of national resources for local development.

### 3. The Bank and Urban Infrastructure Systems

Utilities are usually organized as integrated systems for supplying a single service such as water or electricity. This is necessary in order to provide a rational organizational structure, but in the future there should be more emphasis on coordination with the region of which they are a part. For the optimal use of space, utility investments need to be coordinated with area-wide investment programs which cover other areas as well. The impact of utility rate structures on the distribution of benefits throughout the area should be considered.

Standards should relate to what a country can afford and should not be based on arbitrary international criteria (as are suggested at times by some of our sister international organizations). Further, the distribution of benefits from urban utility systems should be examined for their relationship with the social requirements of particular metropolitan areas. Thus the distribution of benefits to lower income workers and others who have established themselves in the urban structure may be more urgently needed than a distribution to upper income groups or to the most recent group of relatively inarticulate migrants. While the need for basic water and sanitation facilities for the most recent migrants is recognized, the provision of somewhat better standards of services for those low income workers at the next stage of development (whose political power is disproportionately larger) may be more pressing.

The analytical framework for evaluating Bank projects in urban areas should be widened to include the interactions and tradeoffs with other related projects. For example, economizing on road investments may cause a dispersion of population and a ribbon type development of settlements. This could lead to higher costs of supplying water, sewerage and electricity.<sup>1/</sup> Further, Bank investments might, if connected with other infrastructure investments, be an important means of providing the basic structure which can determine the density and pattern of urban growth. The Bank will need to study what kind of Bank investments in urban areas will, singly or in combination, increase the productivity of resources the most, whether they be in transport, public health or education.

D. Possible New Forms of Bank Lending

1. Housing - Sites and Services

The issue of housing is a central one in the problem of urbanization. The basic problem is to facilitate the process of building shelter for the masses of migrants and low income people who are becoming a larger proportion of existing urban centers. At this level institution building is difficult as financial savings are not large. Yet the lesson of experience is that people who are offered the incentive of a housing site with perhaps minimum services will build their own dwelling from intermittent savings. Self-built housing does not saddle the owner with large fixed debts and provides more housing more quickly, in the cases studied, than does standard

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<sup>1/</sup> I am indebted to Mr. David Knox for pointing this relationship out in the case of Ceylon in his memorandum to me of March 16, 1970.

public housing. Public policy should find ways to mobilize this large savings potential by channelling squatter building into land uses consistent with metropolitan development strategy and without a large diversion of public funds.

The Bank's existing programs for water, sewer, roads and electricity in urban areas might be coordinated with site and service schemes for squatter building and may in some cases make such schemes feasible. By providing a rational settlement pattern for migrants such schemes can assist in avoiding much of the overcrowding associated with the rapidly growing squatter settlements in most of the less developed regions.

## 2. Land Development

In a number of countries consideration is being given to various institutional mechanisms for rational land development in growing urban centers. Such schemes may achieve more economic uses of land from a national point of view. As well, they may permit increases in land values resulting from development to benefit the public sector primarily, thus providing more resources for urban needs. They are intended to be self-liquidating over a period of time. One form of such an institutional mechanism is the improvement trust found for example in India, Pakistan and other former British overseas territories. The Bank already has been associated with such organizations in carrying out urban water and sewer systems. In addition to this, we may want to consider providing part of the necessary seed capital through direct loans to a revolving fund as well as making our infrastructure investments part of the scheme.

Our investments could in this way become the basis for assuring that physical planning would lead to the creation of viable communities including provision for the lowest income levels who are now squatters living on the fringes of society. Our purpose in this should be to combine economically and financially feasible projects with the social goal of integrating the poorest groups into modern urban society. We are investigating the prospects for promoting such schemes through our field research efforts.

3. Mobilizing Housing Savings Through Savings and Loan Mechanisms

At higher income levels a number of countries have had a good deal of success in creating associations for home building through a savings and loan mechanism. When tied to the possibility of acquiring a long-term loan for a house such savings may in large part be new. A variety of forms ranging from full public to mixed and private associations have been used. The element of public subsidy need only be sufficient to supplement what should be largely a savings effort on the part of the private sector. We are presently examining the desirability of doing research on the need for outside seed capital to promote such institutions in selected countries, particularly on whether more outside capital than that now provided by other external aid agencies is warranted. It seems that external aid for these purposes can be most effective when given to countries' central agencies which in turn sponsor the growth of local housing finance institutions.

ANNEX

I. DEVELOPING POLICIES FOR THE 70'S THROUGH AN OPERATIONAL RESEARCH PROGRAM

1. Case Studies in Urban Development

2. Review and Research Studies

a) National Economic Development and Urbanization

(1) A Review of Case Studies on Migration

(11) Research Paper: The Interrelations Between Urban and Rural Development in Developing Countries

b) Metropolitan Regional Development

(1) Review Paper: The Management of Resources for Urban Development

(11) Research Paper: Urban Land Markets in Developing Countries

c) Urban Transportation

(1) A Review of Mass Transit Technology and Cost Characteristics

(11) Research Paper: The Economics of Managing and Developing Integrated Urban Transport Systems

d) Public Utilities

(1) A Review of the Techniques for Analyzing Public Utility Investments in Urban Economies

(11) A Review of Technologies for Environmental Control

e) Housing

(1) A Review of the Economics of Housing in the Less Developed Countries

I. DEVELOPING POLICIES FOR THE 70'S THROUGH AN OPERATIONAL RESEARCH PROGRAM

The development of a full set of Bank Group policies and programs for urban development in the 1970's will require a systematic effort to advance the state of our knowledge and experience. We will want to simultaneously and over time go deeply into the problems of important selected countries, learn what we can of the best practice and thinking with respect to key areas of urban public policy, and finally improve our understanding and ability to operate in the field of urban-regional development by means of carefully designed operational research studies to be done by our own staff and by experts outside the Bank. In this policy oriented research effort we will have the benefit of the considerable urban-regional analytical talent of Resources For the Future which is willing to enter a collaborative arrangement with us to share part of the expense of doing these studies and to supervise them. A proposal has been drafted to this effect. We have also established links with the research activities of the Urban Institute and a number of research and academic institutions in various parts of the world. These contacts have put us in an advantageous position with respect to the current state of the art and enable us to draw on the best talent for doing studies of particular interest to us.

1. Case Studies in Urban Development

Current work involves urban-regional development studies of selected countries. Such studies are under way for India, Pakistan, Iran and Jamaica, and are proposed for Brazil, Colombia and Kenya. They are

intended to have general value for the Bank's emerging policies in the field of urbanization as well as to provide guidance for the work of the Bank in specific countries. Exploratory missions have already been to the first three countries in order to acquire data. Other missions are planned, partly in conjunction with Area economic missions, to carry out the rest of the program. In some cases we are supervising the work of consultant urban economists who accompany economic missions such as in Venezuela and the Ivory Coast. The scope of our country work is necessarily constrained by the availability of staff. In addition to the above, we have gained knowledge of conditions in other places by responding to Area and Projects Departments' requests for analytical assistance as in Chile, Niger, Sao Paulo and Singapore.

## 2. Review and Research Studies

The program of operational research concerns work to be done by the staff as well as studies to be commissioned outside. A number of relatively inexpensive review papers designed to be done in a few months' time, are proposed for topics about which we need to know the present state of the art for the purposes of current operational analysis and in order to provide a sound basis for defining further research efforts. The entire program may be considered in terms of a series of topics covering broadly the impact of urbanization or national development, and problems of urban metropolitan policy. A number of specific areas of high operational importance have been singled out such as urban transportation and public utilities. The following is a summary of the research program by topic.

### a. National Economic Development and Urbanization

The key issue for national development planning and strategy is the interaction of the urban and rural economies which are characterized

by large scale migration to the cities. A study is under way in the Division entitled, "Optimal Location of Economic Activity in Pakistan" based on an analysis of the public and private costs of locations in selected urban centers. A draft has been completed of a general paper entitled, "On the Concentration of Urbanization and Economic Efficiency."

A review paper on migration and a related full study on urban and rural development are proposed.

(i) A Review of Case Studies on Migration

Migration of population from rural areas to urban centers has been a significant factor for expansion of urban population in developing countries. Several hypotheses argue against migration such as that migrants decisions to migrate to urban areas are not motivated by economic reasons but rather by irrational expectations, that urban migrants are not so productive as they would have been in rural areas and that individual decisions to migrate do not lead to the socially optimal resource allocation.

The proposed survey is intended to summarize the findings of existing studies with respect to the motivation and expectations of migrants, the degree the expectation is fulfilled, the process of searching for first jobs, the time required to obtain jobs, their initial income relative to the income which they were getting before migration and the income non-migrants are getting in urban areas and the process and speed of assimilation into the urban life. Such summaries will not refute or confirm the hypothesis conclusively, but at least would provide a better basis for judgment with respect to them.

(ii) Research Paper: The Interrelations Between Urban and Rural Development in Developing Countries

Very little research has been focussed on the ways in which rural

and urban economies relate to each other in developing countries or on the impacts on national economic development which different kinds of rural-urban linkages imply. A good part of the economic dualism in these countries can be described in terms of the impact of the growth of the major metropolitan center on the rural hinterland of the nation. Under generally competitive conditions and within the market context which those conditions suggest, one would expect that urban growth and development would be accompanied by increasing productivity and prosperity in the agricultural region tributary to the urban market. One could also pose the hypothesis that the market institutions concerned with rural-urban economic relations tend to work perversely in developing countries, and in doing so, distort the allocation of capital between rural and urban development opportunities. Urban growth should be creating demands for capital investment in agriculture not only in terms of directly productive capital on the land, but also in terms of basic infrastructure essential to more productive agriculture -- farm-to-market roads, produce markets, irrigation and drainage works, and the like. This distortion of the allocation of capital should be of considerable interest to policy makers. When this problem is related to the rural-urban migration potential of agricultural development and its implications for the demand for urban infrastructure, the importance of the problem becomes even more pronounced.

This research proposed would explore and appraise the imperfections in the market mechanisms by which the economic impulses resulting from urban development are imperfectly transmitted to the tributary agricultural sector in developing countries and the extent to which substantial misallocations of capital result therefrom. It is hoped that the research would culminate

in a better understanding of the institutional, legal and other sources of market imperfections and thus provide a basis for recommending measures to reduce such imperfections. Furthermore, such research might well evaluate some of the policy opportunities that have been suggested to deal with such problems as rural-urban migration, the provision of rural public services, and the like. In brief, it is hoped that the research will produce some guidelines for national strategies of development which consider the urban and rural sectors as interrelated.

b. Metropolitan Regional Development

A review paper is proposed on the management of resources in urban areas. A research paper is proposed on land markets.

(i) Review Paper: The Management of Resources for Urban Development 1/

An important factor in the performance of urban economies concerns the effectiveness of the institutional structure and management in using and mobilizing resources. A paper is needed which would provide a survey of the best practice in selected countries with differing institutional structures and experience in allocating and managing resources for urban development. The paper would deal with the issue of resource allocation between national and subnational governmental levels, and would appraise the distribution of revenues in selected areas from the point of view of their contribution to achieving development objectives. At the level of the urban center the review would describe the existing patterns of mobilizing tax and other resources as well as the institutional and other constraints to and prospects for further resource mobilization. The review would

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1/ This should be carried out in close cooperation with the Domestic Finance of Developing Countries Division.

analyze selected local spending patterns in relation to development priorities. Specific consideration would be given to the techniques for financing urban development, such as betterment levies, self-assessment, changes in state structures, borrowing, etc. The paper would discuss the economics of various methods of mobilizing resources, i.e. the effects on incentives, the distribution of income, on investment.

(ii) Research Paper: Urban Land Markets in Developing Countries

It has been observed that the value of land in and around the major metropolitan centers of developing countries generally equals or exceeds that of parcels similarly situated in comparable metropolitan regions in the more developed nations, even in situations where urban land markets are severely constrained. This situation has a number of serious implications for development of the country as a whole, especially where the metropolitan region contains a major fraction of the nation's productive plant. Clearly land development schemes in major metropolitan areas are likely to be substantially shaped by land costs: new low income housing developments are frequently located at a considerable distance from job centers because land development agencies try to maximize the amount of land that can be bought by limited budgets. Land values have a substantial influence on the costs of land-intensive urban infrastructure; a major proportion of the costs of new freeways, schools and other public facilities in inner metropolitan areas is chargeable to land costs. On the other hand, the mechanics of the land market, reflecting as they may the benefits of public investment, suggest the possibility of betterment charges on land value increments as a source of finance for the development of public infrastructure in metropolitan regions. In short, the metropolitan land market has a substantial influence

on the costs of production, and hence, on the efficiency of the metropolitan economy. It would be useful to know how exogenous changes in the national economy are likely to affect the level and distribution of land costs, as well as how the distribution of land value is likely to be altered by policies and projects of the government. The research would attempt to identify and analyze the impact of imperfections and speculations on land markets. The conclusions would be expected to throw some light on the applicability of U.S. land market models for the developing countries.

c. Urban Transportation

From an operational viewpoint, investments in urban transportation are likely to be of primary operational interest for the near future. A draft review paper entitled, "The Framework for Urban Transport Studies," has been completed in the Division. A survey paper on mass transit technology and cost characteristics is proposed as well as a research paper on the economics of managing and developing integrated urban transport systems.

(i) A Review of Mass Transit Technology and Cost Characteristics

It is often argued that rail mass transit is more desirable than road mass transit in high density, large scale urban areas. In terms of line haul, rail transit tends to be faster than road transit, but rail transit tends to be more capital intensive and less adaptable to changing land use patterns. However, for fast growing urban centers, rail transit may economize by reducing the land area used for transportation because of high capacity and probably by reducing automobile ownership.

Some of the basic questions posed here can be answered by surveying the basic technological properties of rail mass transit (elevated, subway, opencut, monorail) and road mass transit (bus with or without exclusive lanes) and costs associated to each mode. Here, costs must be evaluated with the

domestic factor price proportions prevailing in developing countries rather than by merely converting currencies of developed countries to those of developing countries.

(ii) Research Paper: The Economics of Managing and Developing Integrated Urban Transport Systems

Urban transport involves the use of public policy and control measures in economizing in investments in roads, public road transport and mass transit. From the point of view of Bank policy formulation towards the urban development, it would be operationally highly useful to have an analysis of the economics of, first, improving the performance of existing transport systems in metropolitan centers through better policies and management and, second, different modes of producing transportation, the relationship between them and their impacts on the long-run development of urban areas including land values and use patterns. This longer run analysis would also deal with the whole range of public policies and planning including fare structures, subsidies, and other control measures. The study would be expected to consider the purposes of transport investment in an urban setting. It would examine the various categories of costs and benefits and in particular the distribution of benefits by classes of the population. Emphasis would be placed on maximizing rates of return through a coordinated approach to urban transport planning.

d. Public Utilities

A survey paper is proposed to improve our understanding of the present state of the art in analyzing public utility investments in an urban environment. Further research will be proposed as a result of ongoing collaboration between the Public Utilities Department and the Economics of Urbanization Division.

(i) A Review of the Techniques for Analyzing Public Utility Investments in Urban Economies 1/

A review is needed of the available analytical techniques for evaluating the costs and benefits of public utilities including water supply, sewerage, drainage, electricity, gas and telephone. The traditional techniques used by the Bank need to be broadened to include the developmental impacts in urban areas of public utility investments. In particular, methods of determining the costs and benefits of alternative utility investments and packages of utility investments would be examined in this paper. The cost and scale of public utility systems will be considered in relation to population density and the quality of service. In this respect, so-called "Standards" of service would be critically examined in terms of the opportunity cost of resources and the supply of related services. Finally, the "tree" character of utility systems would be analyzed as well as diurnal and seasonal peaking and spatial structure.

(ii) A Review of Technologies for Environmental Control

It has been amply demonstrated in developed countries that industrialization usually brings about environmental degradation through factory smoke and liquid and solid waste. Airpollution in major metropolitan areas in many developing countries has achieved levels of intensity comparable to or greater than those in most polluted of American cities. The issue of environmental quality is likely to become more pressing in many of these countries because of increasing density and size of urban centers.

Such environmental problems are due to externalities of production and consumption processes. They can be internalized to the producers of

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1/ This paper is to be done in collaboration with the Sector and Projects Studies Division.

externalities, but this has rarely been done because of additional economic costs involved for internalization. If costs are sufficiently low, the government should be encouraged to prohibit production of negative externalities or to dispose pollutants by itself. As a first step in answering this question, the proposed paper would survey available technologies and their costs for internalizing or disposing of wastes and pollutants. These basic technological data will become a basis for economic analysis of environmental control which may be planned in a later research study.

e. Housing

An initial review paper is proposed in the field. Discussions are presently being carried on with a number of experts concerning longer term research on savings mobilization and savings institutions with respect to housing in less developed countries.

(1) A Review of the Economics of Housing in the Less Developed Countries

This is a subject about which a good deal has been written, but which requires a systematic review of the sources in order to provide a basis for understanding the economics of the subject as well as its relation to national economic and social development. The importance of housing stems from the multiplying requests from less developed countries for Bank assistance in meeting the growing problem of slums and squatter housing in areas undergoing rapid urbanization and because of the large sums being expended for public housing in a number of countries. The proposed survey would deal with the impact of housing on employment and on the construction and building materials industries as well as the demand side from squatters to middle and upper income groups. The financing of housing would be considered also from the point of view of the efficiency of financial institutions in mobilizing underutilized resources as well as from one of efficiency of existing insti-

tutions. Finally, the resource mobilization aspect of self-built housing would be evaluated, together with the social implications of such housing in selected countries. The study paper would indicate the gaps in existing knowledge with respect to various economic impacts of housing and the institutional structures needed to manage housing.

II. A NOTE ON INTERNAL MIGRATION STATISTICS IN SELECTED COUNTRIES

Migration statistics should be interpreted with caution.<sup>1/</sup> The best procedure is to place reliance, wherever possible, on individual country statistics where appropriate adjustments have been made. Studies of intercensal natural increase and net migration for urban areas of 20,000 and over in Latin America indicate that migration accounted for from some 40% of urban growth in the case of Mexico to some 70% in the case of Venezuela.

Percentage Population Growth Due to Natural Increase and Immigration for Selected Latin American Countries

	<u>Intercensal Period</u>	<u>Percentage due to:</u>	
		<u>Natural Increase</u>	<u>Migration</u>
Venezuela	1941-50	29	71
Colombia	1938-51	32	68
Brazil	1940-50	51	49
Chile	1940-52	53	47
Mexico	1940-50	58	42

Source: Urbanization in Latin America, op. cit., p. 110.

<sup>1/</sup> It is difficult with the available data to measure with precision the effects of internal migration on urban growth. The figures on past urban growth patterns are at best estimates. They must be qualified for changes in urban boundaries and for changes in the number of settlements classified as urban as towns reach the minimum size necessary to be included in the urban category. In fact, the growth rate of urban centers of all different sizes is influenced by the graduation of smaller centers to larger ones.

Using a somewhat different method for the period 1950-60 in which the difference between rural and urban rates of natural increase is used to compute the net migrating balance, Lowdon Wingo found that migrants constituted as low as 27% of urban change in Argentina, 31% in Mexico and Chile, over 45% in Brazil, Colombia, Panama, Paraguay and over 50% in Peru and Haiti.<sup>1/</sup>

In India net migration from 1941 to 1951 to towns over 5,000 amounted to 20% of the 1941 population over 5,000. Individual cities such as Madras experienced migration rates of 2/3 their 1941 population.<sup>2/</sup>

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<sup>1/</sup> Lowdon Wingo, Jr. "Recent Patterns of Urbanization Among Latin American Countries," Urban Affairs Quarterly, Vol. II, No. 3, March 1967, pp. 81-109. The method used consists of assuming that urban and rural net natural increase rates are similar and that deviation of urban and rural growth rates from the national can be ascribed to net rural-urban migration. Wingo makes the point that internal migration is a complex process of human mobility which includes seasonal and temporary movement as well as permanent relocation. Further net migration may give no clue to gross migration which can be several times greater.

<sup>2/</sup> D. J. Bogue and K. C. Zachariah, "Urbanization and Migration in India," India's Urban Future, ed. by Roy Turner, University of California, Berkeley 1962, pp. 31 and 42.

III. A NOTE ON URBANIZATION AND ECONOMIC AND SOCIAL PROGRESS INDICATORS

Classification of countries according to when they reach 25% urbanization levels can be used to compare the developed countries with the developing countries at the same level of urbanization, i.e. Groups I and II, and to compare the developing countries at different levels of urbanization.<sup>1/</sup> The first group consisting of the developed countries of England and Wales, Australia, the Netherlands, the United States, Sweden and Finland attained a 25% urbanization level by 1920 and a 52% level of urbanization by 1960.

The next group consisting of the developing countries of Uruguay, Argentina and Chile reached a 25% urbanization level by 1920 and a 56% level by 1960. Compared to the first group in 1960 they had 1/3 the per capita income level, a 10% lower expectation of life, an infant mortality rate over 3 times higher, 10% lower caloric consumption, 1/4 the energy consumption, 17% lower school enrollment and over 1/3 more persons per room. This second group had virtually the same percentage of GDP derived from non-agricultural activities and 20% higher dependency ratio. Hence, at similar levels of urbanization the developing countries had not attained the same level of economic and social progress.

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<sup>1/</sup> United Nations, Department of Economic and Social Affairs, "Urbanization and Economic Social Change," International Social Development Review, No. 1, New York, 1968.

A third group consisting of Venezuela, Japan, Ryuku Is., the U.A.R., Mexico, Brazil, Peru, Iran, Malaya and Algeria amongst others reached a 25% urbanization level between 1925 and 1960. This group had an average urbanization level of 32% in 1960,  $\frac{2}{3}$  of that of the developed countries and an average per capita income level almost  $\frac{1}{4}$  times lower. The percentage of GDP derived from non-agricultural activities at 80% was about 10% less, life expectancy was some 20% less, literacy about  $\frac{1}{2}$ , caloric consumption about  $\frac{2}{3}$ , and persons per room and the dependency ratio about  $\frac{1}{3}$  higher.

The fourth group consisting of 30 of the least developed countries with an average level of urbanisation of 11% in 1960 has yet to attain the 25% level. Per capita income in 1960 was about  $\frac{1}{7}$  that of the developed countries, non-agricultural employment about  $\frac{2}{3}$ , caloric consumption a little over  $\frac{2}{3}$ , the inhabitant/physical ratio  $\frac{1}{12}$ , the cinema attendance rate  $\frac{1}{8}$ , the literacy level  $\frac{1}{4}$ , life expectancy  $\frac{2}{3}$  and the dependency ratio  $\frac{1}{3}$  higher. Hence, among the developing countries those at higher levels of urbanization have achieved a higher level of social and economic progress.

## Annex

Table 1: SUMMARY OF RATES OF URBAN AND RURAL GROWTH, 1920-1960 AND 1960-2000, AND URBAN POPULATION AS A PERCENTAGE OF TOTAL POPULATION, 1920-1960, AND 2000

Region	Rate of Total Growth		Rate of Rural Growth		Rate of Urban Growth		Rate of Big-City Growth		Urban Population as % of Total		
	1920-60	1960-2000	1920-60	1960-2000	1920-60	1960-2000	1920-60	1960-2000	1920	1960	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>World Total</b>	<b>61</b>	<b>89-118</b>	<b>40</b>	<b>51-62</b>	<b>185</b>	<b>201-281</b>	<b>230</b>	<b>216-310</b>	<b>14</b>	<b>25</b>	<b>40-44</b>
<b>1. More developed regions of high density</b>											
<b>Total of group</b>	<b>36</b>	<b>25-36</b>	<b>13</b>	<b>4</b>	<b>83</b>	<b>52-75</b>	<b>77</b>	<b>57-81</b>	<b>33</b>	<b>45</b>	<b>54-57</b>
Western Europe	34	25-33	15	0	61	50-66	52	50-66	41	49	59-62
Northern Europe	22	13-21	3	0	41	22-35	29	22-35	52	59	64-66
Southern Europe	42	24-33	15	5	125	53-76	283	78-111	25	39	48-52
Eastern Europe	22	32-42	10	12-14	60	76-100	22	114-151	24	32	42-45
Japan	68	31-49	19	1	230	67-105	206	59-92	24	46	59-64
<b>2. More developed regions of lower density</b>											
<b>Total of group</b>	<b>57</b>	<b>58-94</b>	<b>8</b>	<b>5</b>	<b>205</b>	<b>116-170</b>	<b>248</b>	<b>110-160</b>	<b>25</b>	<b>48</b>	<b>65-70</b>
Northern America	72	48-78	23	0	141	83-135	169	66-107	41	58	72-76
Soviet Union	39	65-89	-2	8	388	164-227	1482	237-328	10	36	58-63
Temperate South America	122	66-94	55	0	260	129-160	296	100-125	32	53	73-74
Australia and New Zealand	92	71-92	29	0	165	110-143	206	85-112	47	65	79-82
<b>3. Less developed regions of high density</b>											
<b>Total of group</b>	<b>60</b>	<b>98-130</b>	<b>45</b>	<b>65-81</b>	<b>321</b>	<b>303-432</b>	<b>918</b>	<b>339-512</b>	<b>5</b>	<b>14</b>	<b>29-32</b>
Mainland East Asia	37	60-106	25	44-71	252	155-323	750	137-307	5	14	22-28
Middle South Asia	74	118-138	60	79-88	321	377-467	644	540-743	5	13	29-31
South-East Asia	102	151-176	85	97-106	496	530-659	663 <sup>/a</sup>	595-741	4	13	31-35
Other East Asia	117	135-156	61	21	1155	405-479	533 <sup>/b</sup>	493-581	5	29	64-67
Caribbean	109	105-145	78	39	380	319-488	133 <sup>/a</sup>	543-836	10	24	48-57
<b>4. Less developed regions of lower density</b>											
<b>Total of group</b>	<b>108</b>	<b>159-198</b>	<b>81</b>	<b>69-78</b>	<b>440</b>	<b>525-658</b>	<b>720</b>	<b>695-929</b>	<b>8</b>	<b>20</b>	<b>47-52</b>
Tropical South America	147	167-222	96	20	553	516-702	768	521-708	11	30	68-74
Northern Africa	88	151-191	58	32	312	497-652	689	592-748	12	26	61-66
South-West Asia	106	157-185	85	43	229	543-667	240	1076-1471	14	23	57-61
Middle American Mainland	141	191-254	87	17	615	587-794	786	681-918	10	31	72-77
Tropical Africa	92	150-177	81	120-139	769	525-668	-	3327-4227	2	7	18-20
Southern Africa	126	159-187	80	13	375	463-554	333 <sup>/b</sup>	508-608	16	32	70-73
Other Oceania	58	107-147	53	100-134	-	300-500	-	-	0	3	7-9

<sup>/a</sup> For 1930-60.<sup>/b</sup> For 1940-60.

Source: Computations based on data from UN Population Division, "Urban and Rural Population Growth, 1920-1960 with Projections," Working Paper No. 15, September 1967.

**Annex Table 2: URBAN POPULATION (20,000 AND OVER) AS A PERCENTAGE OF TOTAL POPULATION, ESTIMATES 1920-1960**

Region	1920	1930	1940	1950	1960
<u>World Total</u>	<u>14</u>	<u>16</u>	<u>19</u>	<u>21</u>	<u>25</u>
<u>1. More developed regions of high density</u>					
<u>Total of group</u>	<u>33</u>	<u>36</u>	<u>39</u>	<u>40</u>	<u>45</u>
Western Europe	41	43	47	45	49
Northern Europe	52	56	58	58	59
Southern Europe	25	28	30	34	39
Eastern Europe	24	26	29	29	32
Japan	24	29	39	38	46
<u>2. More developed regions of lower density</u>					
<u>Total of group</u>	<u>25</u>	<u>28</u>	<u>34</u>	<u>40</u>	<u>48</u>
Northern America	41	46	46	51	58
Soviet Union	10	13	24	28	36
Temperate South America	32	35	38	46	53
Australia and New Zealand	47	48	52	57	65
<u>3. Less developed regions of high density</u>					
<u>Total of group</u>	<u>5</u>	<u>7</u>	<u>8</u>	<u>11</u>	<u>14</u>
Mainland East Asia	5	7	8	10	14
Middle South Asia	5	6	8	11	13
South East Asia	4	6	7	10	13
Other East Asia	5	8	14	21	29
Caribbean	10	13	16	20	24
<u>4. Less developed regions of lower density</u>					
<u>Total of group</u>	<u>8</u>	<u>8</u>	<u>10</u>	<u>14</u>	<u>20</u>
Tropical South America	11	13	16	21	30
Northern Africa	12	14	17	21	26
South-West Asia	14	12	13	16	23
Middle American Mainland	10	13	16	21	31
Tropical Africa	2	2	3	4	7
Southern Africa	16	18	22	28	32
Other Oceania	0	0	0	1	3

**Annex Table 3: SUMMARY OF CHANGES IN TOTAL, RURAL, URBAN AND BIG-CITY POPULATIONS IN WORLD REGIONS CLASSIFIED BY REGENCY OF URBANIZATION /a, 1920-1960**

Group of Regions	1920	1930	1940	1950	1960
<u>TOTAL POPULATION (MILLIONS)</u>					
<u>World Total</u>	1,860.0	2,068.6	2,295.1	2,515.5	2,993.2
Group I	380.7	424.4	456.4	504.3	569.8
Group II	421.5	484.9	544.5	577.0	696.4
Group III	1,057.8	1,159.3	1,294.2	1,434.2	1,727.0
<u>RURAL AND SMALL TOWN (MILLIONS)</u>					
<u>World Total</u>	1,593.6	1,730.4	1,863.6	1,982.5	2,232.9
Group I	231.8	243.8	255.0	268.2	272.7
Group II	359.2	399.3	412.8	421.8	459.9
Group III	1,002.6	1,087.3	1,195.8	1,292.5	1,500.3
<u>URBAN POPULATION (20,000 AND OVER) (MILLIONS)</u>					
<u>World Total</u>	266.4	338.2	431.5	533.0	760.3
Group I	148.9	180.6	201.4	236.1	297.1
Group II	62.3	85.6	131.7	155.2	236.5
Group III	55.2	72.0	98.4	141.7	226.7
<u>BIG-CITY POPULATION (500,000 AND OVER) (MILLIONS)</u>					
<u>World Total</u>	106.6	142.3	181.1	227.4	352.2
Group I	74.6	93.6	102.9	122.2	159.7
Group II	21.8	33.6	52.5	58.7	100.0
Group III	10.2	15.1	25.7	46.5	92.5
<u>URBAN POPULATION AS A PERCENTAGE OF TOTAL POPULATION</u>					
<u>World Total</u>	14	16	19	21	25
Group I	39	43	44	47	52
Group II	15	18	24	27	34
Group III	5	6	8	10	13
<u>BIG-CITY POPULATION AS A PERCENTAGE OF URBAN POPULATION</u>					
<u>World Total</u>	40	42	42	43	46
Group I	50	52	51	52	54
Group II	35	39	40	38	42
Group III	18	21	26	33	41
<u>BIG-CITY POPULATION AS A PERCENTAGE OF TOTAL POPULATION</u>					
<u>World Total</u>	6	7	8	9	12
Group I	20	22	23	24	28
Group II	5	7	10	10	14
Group III	1	1	2	3	5

(Footnote on next page)

Footnote

- /a Group I: regions at least 25 percent urbanized by 1920: Western Europe, Northern Europe, Southern Europe, North America, Temperate South America, and Australia and New Zealand.
- Group II: regions at least 25 percent urbanized by 1960 but not by 1920: Eastern Europe, Japan, Other East Asia, the Soviet Union, Tropical South America, the Middle American Mainland, Northern Africa, and Southern Africa.
- Group III: regions not yet 25 percent urbanized by 1960: Mainland East Asia, Middle South Asia, South-East Asia, South-West Asia, the Caribbean, Tropical Africa and other Oceania.

Source: UN Working Paper No. 15.

Annex Table 4: DECENNIAL INCREASES IN TOTAL POPULATION, ESTIMATES 1920-1960

(Percent)

Region	1920-30	1930-40	1940-50	1950-60
<u>World Total</u>	<u>11</u>	<u>11</u>	<u>10</u>	<u>19</u>
<u>1. More developed regions of high density</u>				
<u>Total of group</u>	<u>10</u>	<u>8</u>	<u>5</u>	<u>2</u>
Western Europe	7	4	8	10
Northern Europe	5	5	6	5
Southern Europe	12	11	6	8
Eastern Europe	11	8	-7	9
Japan	15	12	16	12
<u>2. More developed regions of lower density</u>				
<u>Total of group</u>	<u>16</u>	<u>9</u>	<u>3</u>	<u>20</u>
Northern America	16	8	15	20
Soviet Union	15	9	-8	19
Temperate South America	27	18	20	22
Australia and New Zealand	20	9	16	25
<u>3. Less developed regions of high density</u>				
<u>Total of group</u>	<u>9</u>	<u>11</u>	<u>10</u>	<u>20</u>
Mainland East Asia	5	6	6	16
Middle South Asia	11	14	14	23
South-East Asia	17	19	15	27
Other East Asia	19	17	27	22
Caribbean	20	20	20	22
<u>4. Less developed regions of lower density</u>				
<u>Total of group</u>	<u>15</u>	<u>19</u>	<u>19</u>	<u>28</u>
Tropical South America	19	23	26	34
Northern Africa	12	14	17	25
South-West Asia	9	19	21	31
Middle American Mainland	16	20	29	35
Tropical Africa	15	17	15	24
Southern Africa	24	20	19	26
Other Oceania	9	14	9	19

Source: UN Working Paper No. 15.

Annex Table 5: DECENNIAL INCREASES IN URBAN POPULATION, ESTIMATES 1920-1960

(Percent)

Region	1920-30	1930-40	1940-50	1950-60
<u>World Total</u>	<u>27</u>	<u>28</u>	<u>24</u>	<u>43</u>
<u>1. More developed regions of high density</u>				
<u>Total of group</u>	<u>19</u>	<u>18</u>	<u>13</u>	<u>21</u>
Western Europe	12	13	6	16
Northern Europe	13	8	7	8
Southern Europe	27	20	18	24
Eastern Europe	21	17	-8	22
Japan	42	49	14	38
<u>2. More developed regions of lower density</u>				
<u>Total of group</u>	<u>35</u>	<u>31</u>	<u>20</u>	<u>43</u>
Northern America	30	7	41	37
Soviet Union	50	96	6	56
Temperate South America	37	29	47	39
Australia and New Zealand	22	19	29	40
<u>3. Less developed regions of high density</u>				
<u>Total of group</u>	<u>34</u>	<u>39</u>	<u>45</u>	<u>57</u>
Mainland East Asia	30	25	30	65
Middle South Asia	31	46	52	48
South-East Asia	57	53	57	59
Other East Asia	86	110	90	67
Caribbean	55	41	51	46
<u>4. Less developed regions of lower density</u>				
<u>Total of group</u>	<u>29</u>	<u>44</u>	<u>60</u>	<u>82</u>
Tropical South America	35	51	70	88
Northern Africa	34	38	47	53
South-West Asia	-9	53	57	59
Middle American Mainland	53	44	70	97
Tropical Africa	60	49	77	112
Southern Africa	49	48	48	47
Other Oceania	-	-	-	350

Source: UN Working Paper No. 15.

**Annex Table 6: Number of big cities and multimillion cities in the world and major areas, 1920-1960**

Major area	1920	1930	1940	1950	1960
<i>Big cities (500,000 inhabitants and over)</i>					
World total . . . . .	83	102	126	158	234
More developed major areas . . . . .	62	73	85	97	126
Europe . . . . .	40	47	50	52	56
Northern America . . . . .	18	20	21	29	41
Soviet Union . . . . .	2	4	12	14	25
Oceania . . . . .	2	2	2	2	4
Less developed major areas . . . . .	21	29	41	61	108
East Asia . . . . .	11	13	16	22	50
South Asia . . . . .	4	7	14	22	29
Latin America . . . . .	5	7	8	11	19
Africa . . . . .	1	2	3	6	10
More developed regions . . . . .	69	81	94	105	139
Europe . . . . .	40	47	50	52	56
Other* . . . . .	29	34	44	53	83
Less developed regions . . . . .	14	21	32	53	95
<i>Multimillion cities (2,500,000 inhabitants and over)</i>					
World total . . . . .	7	11	15	20	26
More developed major areas . . . . .	6	8	10	12	12
Europe . . . . .	4	4	4	4	4
Northern America . . . . .	2	3	4	6	6
Soviet Union . . . . .	...	1	2	2	2
Oceania . . . . .	...	...	...	...	...
Less developed major areas . . . . .	1	3	5	8	14
East Asia . . . . .	1	2	3	3	6
South Asia . . . . .	...	...	1	2	3
Latin America . . . . .	...	1	1	3	4
Africa . . . . .	...	...	...	...	1
More developed regions . . . . .	7	11	13	15	15
Europe . . . . .	4	4	4	4	4
Other* . . . . .	3	7	9	11	11
Less developed regions . . . . .	...	...	2	5	11

\* Northern America, Soviet Union, Japan, Temperate South America, Australia and New Zealand.

Source: UN, Growth of the World's Urban and Rural Population, 1920-2000, Population Studies, No. 44, New York, 1969, p. 37.

**Annex Table 7: PERCENTAGE OF NON-AGRICULTURAL EMPLOYMENT TO TOTAL EMPLOYMENT  
AND % DISTRIBUTION OF NON-AGRICULTURAL EMPLOYMENT BY REGION**

<u>(% Distribution of Non-Agricultural Employment)</u>								
	Total Employ- ment <sup>/1</sup> (000's)	Non-Agri- cultural Employment/ <sup>2</sup> As % of Total	Manuf'g. & Public Utili- ties	Commer- & Services	Construction	Mining	Transport & Commer- ce	Urban As % of Total Population <sup>/4</sup> 1960
<u>AFRICA</u>								
North Africa	18974	32.8	24.8 <sup>/3</sup>	58.5	6.8	1.8	8.1	26
South Africa	5679	64.1	19.1	49.8	8.0	17.2	5.9	32
Tropical Africa	15062	20.2	21.9 <sup>/3</sup>	49.7	11.9	7.0	9.5	7
<u>ASIA</u>								
Other East Asia	12013	45.4	26.7	58.3	6.6	2.6	5.8	29
Middle South Asia	234565	27.3	36.6	50.7	4.8	1.5	6.4	13
South East Asia	61860	27.9	23.0	61.6	6.1	1.2	8.1	13
South West Asia	4678	56.5	26.7	50.4	12.8	1.2	8.9	23
<u>LATIN AMERICA</u>								
Tropical S. America	35489	48.5	35.2	44.8	7.7	3.2	9.1	30
Temperate S. America	10442	76.2	34.0	47.4	7.9	1.7	9.0	53
Middle Amer. Mainland	15092	43.6	30.9	51.8	8.2	2.3	6.8	31
Caribbean	6259	46.7	27.6	54.6	9.2	1.1	7.5	24

<sup>/1</sup> This total only includes those countries on the attached list at the specified date.

<sup>/2</sup> Excludes activities not adequately described in a country census or survey. Unemployed persons have been included for some countries and not for others.

<sup>/3</sup> Excludes public utilities for Sudan, Congo (Kinshasa) and Niger.

<sup>/4</sup> Source: UN, "Growth of World's Urban and Rural Population, 1920-2000," p. 24.

Annex Table 7: (Continued)

COMPOSITION OF REGIONS AND DATE OF CENSUS, SURVEY OR OFFICIAL ESTIMATES

AFRICA

N. Africa: Algeria (4-4-66)\*, Libya (31-7-64)\*, Morocco (30-6-62)\*, Sudan (17-1-56)<sup>a</sup>, Tunisia (1-2-56)<sup>c</sup>, and U.A.R. (20-9-60)\*.

S. Africa: Botswana (1964)\*, Namibia (6-9-60)\*, and South Africa (6-9-60)\*.

Tropical Africa: Cape Verde Islands (15-12-60)\*, Congo<sup>1</sup>/ (Kinshasa) (1955-57)<sup>a</sup>, Ivory Coast (1-1-64)<sup>b</sup>, Gabon (31-12-63)<sup>b</sup>, Ghana (20-3-60)<sup>c</sup>, Liberia (2-4-62)\*, Malawi<sup>2</sup>/ (26-9-61)<sup>c</sup>, Mauritius (30-6-62)\*, Mozambique (21-9-50)\*, Niger (1960)<sup>a</sup>, Reunion (9-10-61)\*, Sierra Leone (1-4-63)\*, Southern Rhodesia<sup>2</sup>/ (26-9-61)\*, Tanzania<sup>2</sup>/ (20-2-57)\*, Uganda<sup>2</sup>/ (18-3-59)\*, Zambia<sup>2</sup>/ (26-9-61)<sup>c</sup>.

ASIA

Other East Asia: Taiwan (16-9-56)\*, Korea (1967)<sup>c</sup>, Ryukyu (1966)<sup>a</sup>

Middle South Asia: Ceylon (8-7-63)<sup>c</sup>, India (1-3-61)\*, Iran (1-11-66)\*, Nepal (22-6-61)\*, Pakistan (1-64)<sup>b</sup>.

South East Asia: Brunei (10-8-60)\*, Cambodia (17-4-62)\*, Indonesia (31-10-61)<sup>c</sup>, East Malaysia (1960)\*, West Malaysia (1962)<sup>a</sup>, Philippines (5-65)<sup>a</sup>, Singapore (17-6-57)\*, Thailand (25-4-60)\*.

South West Asia: Bahrain (13-2-65)\*, Cyprus (2-12-60)\*, Iraq (12-10-57)\*, Israel (1967)<sup>a</sup>, Jordan (18-11-61)\*, Kuwait (25-4-65)\*, Aden (1958)<sup>b</sup>, Syria (11-66)<sup>b</sup>.

LATIN AMERICA

Tropical South America: Bolivia (5-9-50)\*, Brazil (1-9-60)<sup>c</sup>, Colombia (15-7-64)\*, Ecuador (25-11-62)\*, Guyana (20-3-65)<sup>a</sup>, Peru (2-7-61)\*, Surinam (31-3-64)\*, Venezuela (26-2-61)\*.

Temperate South America: Argentina (30-9-60)\*, Chile (29-11-60)\*, Paraguay (14-10-62)\*, Uruguay (16-10-63)<sup>c</sup>.

Middle American Mainland: British Honduras (7-4-60)<sup>b</sup>, Costa Rica (1-4-63)\*, Guatemala (18-4-64)<sup>c</sup>, Honduras (17-4-61)\*, Mexico (8-6-60)\*, Nicaragua (25-4-63)\*, Panama (11-12-60)\*, El Salvador (2-5-61)\*.

Caribbean: Netherlands Antilles (31-12-60)\*, Bahamas (15-11-63)\*, Barbados (7-4-60)<sup>a</sup>, Cuba (28-1-53)\*, Dominica (7-4-60)\*, Dominican Republic (7-8-60)<sup>c</sup>, Grenada (7-4-60)\*, Haiti (7-8-50)\*, Jamaica (7-4-60)\*, Martinique (9-10-61)\*,

**Annex Table 8 : NON-AGRICULTURAL EMPLOYMENT INDICES IN SELECTED COUNTRIES**

(1963 = 100)

**AFRICA**

**Tropical Africa**

Year	Zambia <sup>c</sup>	Cameroons <sup>c</sup>	Gabon <sup>b</sup>	Ghana <sup>c</sup>	Kenya <sup>c</sup>
1958	115.7	109.9	82.3	75.8	109.6
1959	109.4	104.1	92.4	80.7	110.1
1960	107.9	100.0	93.4	84.0	111.7
1961	104.7	103.0	92.0	92.1	107.7
1962	101.5	79.7	96.5	96.8	106.6
1963	100.0 <sup>e</sup>	100.0	100.0	100.0	100.0
1964	105.8	101.6	100.0 <sup>e</sup>	102.6	100.0 <sup>e</sup>
1965	119.5	108.8	100.1	103.6	100.8
1966	n.a.	112.6	105.3	95.3	95.5 <sup>f</sup>
1967	n.a.	n.a.	n.a.	n.a.	n.a.
1968	n.a.	n.a.	n.a.	n.a.	n.a.
Rate of growth*	(-3.0) <u>1</u>	(-6.3) <u>2</u> (8.1) <u>3</u>	(2.4)	(3.6)	(-1.8)

Year	Malawi <sup>c</sup>	Nigeria <sup>c</sup>	Sierra Leone <sup>c</sup>	S. Rhodesia <sup>c</sup>	Tanzania <sup>c</sup>	Uganda <sup>c</sup>
1958	114.8	106.7	81.3	110.4	109.4	112.4
1959	113.3	105.2	83.3	110.6	105.0	111.2
1960	109.8	113.3	84.6	111.6	106.6	111.6
1961	107.3	95.0	89.4	108.4	113.8	109.8
1962	99.9	120.1	94.1	105.0	110.5	105.0
1963	100.0 <sup>e</sup>	100.0	100.0	100.0 <sup>e</sup>	100.0	100.0
1964	92.0	129.7	104.2	99.0	104.3	100.8
1965	n.a.	125.6	113.4	n.a.	106.9	111.1
1966	n.a.	n.a.	113.8	n.a.	114.3	111.4
1967	n.a.	n.a.	110.1	n.a.	n.a.	117.8
1968	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Rate of growth*	(-1.7)	(2.1)	(3.7)	(-2.1)	(0.9)	(-1.7) <u>4</u> (4.4) <u>5</u>

(Continued on next page)

Annex Table 8 : (Continued)

AFRICA

South Africa<sup>c</sup>

<u>Year</u>	<u>Total Population</u>	<u>White Population</u>
1958	95.0	95.5
1959	95.6	95.4
1960	96.1	95.3
1961	96.9	95.8
1962	97.6	97.1
1963	100.0	100.0
1964	108.1	99.5
1965	115.5	104.5
1966	120.8	110.2
1967	123.4	112.1
1968	n.a.	n.a.
Rate of growth*	(2.8)	(1.6)

ASIA

Other East Asia

<u>Year</u>	<u>Korea<sup>a</sup></u>	<u>China<sup>a</sup> (Taiwan)</u>	<u>Ryukyu Is.<sup>a</sup></u>
1958	n.a.	n.a.	72.9
1959	n.a.	n.a.	79.2
1960	n.a.	n.a.	86.7
1961	n.a.	n.a.	92.5
1962	n.a.	n.a.	95.8
1963	100.0	95.7 <sup>b</sup>	100.0
1964	107.0	100.0	101.3
1965	120.5	104.7	105.4
1966	124.8	112.0	111.7
1967	136.6	123.5	118.3
1968	149.0	n.a.	n.a.
Rate of growth*	(6.3)	(6.4)	(4.3)

(Continued on next page)

Annex Table 8: (Continued)

ASIA

South-West Asia

<u>Year</u>	<u>Turkey<sup>b</sup></u>	<u>Syria<sup>a</sup></u>	<u>Israel<sup>b</sup></u>	<u>Cyprus<sup>c</sup></u>
1958	86.3	n.a.	83.6	97.0
1959	86.7	n.a.	87.8	95.6
1960	87.0	n.a.	91.2	96.2 <sup>e</sup>
1961	96.3	85.2	85.0 <sup>e</sup>	96.7
1962	95.2	84.3	92.8	98.4
1963	100.0	100.0	100.0	100.0
1964	107.7	94.9	107.0	96.6
1965	128.2	94.7	110.8	99.3
1966	141.9	95.7	110.8	102.7
1967	153.0	n.a.	107.6 <sup>e</sup>	n.a.
1968	n.a.	n.a.	114.9	n.a.
Rate of growth*	(5.9)	(1.9)	(4.4) /6	(0.6)

South-East Asia

<u>Year</u>	<u>Philippines<sup>c</sup></u>	<u>Singapore<sup>c</sup></u>
1958	87.4	107.3
1959	90.2	103.1
1960	92.5	93.0
1961	94.8	94.5
1962	97.3	95.1
1963	100.0	100.0
1964	102.5	104.6
1965	105.9	110.8
1966	105.1	121.8
1967	105.7	122.0
1968	n.a.	n.a.
Rate of growth*	(2.0)	(3.7) /7

(Continued on next page)

Annex Table 8<sup>a</sup> (Continued)

LATIN AMERICA

Tropical South America

<u>Year</u>	<u>Peru<sup>d</sup></u>
1958	n.a.
1959	n.a.
1960	n.a.
1961	92.5
1962	96.1
1963	100.0
1964	104.1
1965	108.4
1966	n.a.
1967	n.a.
1968	n.a.
Rate of growth*	(4.1)

Middle American Mainland

<u>Year</u>	<u>El Salvador<sup>o</sup></u>	<u>Br. Honduras<sup>o</sup></u>
1958	n.a.	63.3
1959	n.a.	68.2
1960	n.a.	73.0
1961	95.7	97.8
1962	99.3	100.0
1963	100.0	100.0 <sup>e</sup>
1964	109.6	n.a.
1965	128.8	82.5
1966	126.6	90.1
1967	144.0	94.1
1968	n.a.	n.a.
Rate of growth*	(7.3)	(13.6) /8

Caribbean

<u>Year</u>	<u>Puerto Rico<sup>a</sup></u>
1958	85.2
1959	87.3
1960	89.0 <sup>e</sup>
1961	91.3
1962	94.2
1963	100.0
1964	108.3
1965	114.5
1966	120.5
1967	124.1
1968	130.7
Rate of growth*	(4.7)

(Continued on next page)

Annex Table 8: (Continued)

Note: Generally, the employment indices refer to the number of employees. In some cases, other status groups are also included. In addition, for certain series "services" are not fully represented. In a few cases some sectors or occupations have been excluded. In some cases only persons over a minimum age are included. Some of the time series are based on one month of the year.

- a labor force sample surveys
- b compulsory social insurance statistics
- c establishments statistics
- d official estimates
- e new or revised series
- f excludes rural areas

\* Rates of growth calculated by fitting a logarithmic time trend.

- 1 1958-1962
- 2 1958-1962
- 3 1962-1966
- 4 1958-1963
- 5 1963-1967
- 6 1961-1966
- 7 1960-1967
- 8 1958-1962

Source: International Labour Office, 1968 Year Book of Labour Statistics, Table pp. 306-308.

**Annex Table 9: PROJECTIONS OF URBAN POPULATION, 1960-2000, ASSUMED TO INCREASE AT TWICE THE RATES OF TOTAL POPULATION <sup>/a</sup> (MILLIONS)**

Region	1960 Estimate	Lower Assumptions				Higher Assumptions			
		1970	1980	1990	2000	1970	1980	1990	2000
<b>World Total</b>	<b>760.3</b>	<b>1,027.1</b>	<b>1,384.6</b>	<b>1,814.8</b>	<b>2,292.3</b>	<b>1,061.4</b>	<b>1,524.2</b>	<b>2,147.4</b>	<b>2,897.2</b>
<b>1. More developed regions of high density</b>									
<b>Total of group</b>	<b>230.8</b>	<b>263.4</b>	<b>295.4</b>	<b>324.6</b>	<b>350.4</b>	<b>268.5</b>	<b>312.0</b>	<b>356.5</b>	<b>402.8</b>
Western Europe	65.4	74.4	82.4	90.2	98.0	75.6	86.0	96.7	108.6
Northern Europe	45.0	48.3	50.6	52.4	54.7	49.0	52.6	56.2	60.8
Southern Europe	45.9	52.5	58.4	64.4	70.3	53.5	61.7	70.7	80.9
Eastern Europe <sup>/b</sup>	31.6	37.3	43.5	49.9	55.6	38.0	45.7	54.3	63.3
Japan	42.9	50.9	60.5	67.7	71.8	52.4	66.0	77.6	88.1
<b>2. More developed regions of lower density</b>									
<b>Total of group</b>	<b>218.8</b>	<b>274.9</b>	<b>337.0</b>	<b>408.5</b>	<b>472.8</b>	<b>287.0</b>	<b>370.8</b>	<b>475.3</b>	<b>590.8</b>
Northern America	115.3	138.8	164.8	190.8	210.9	143.4	178.2	222.5	270.6
Soviet Union	78.0	102.3	130.8	168.6	205.6	109.3	148.7	198.5	255.3
Temperate South America	17.3	23.4	28.6	34.0	39.6	23.8	30.7	37.7	45.0
Australia and New Zealand	8.2	10.4	12.8	15.1	17.2	10.5	13.2	16.6	19.9
<b>3. Less developed regions of high density</b>									
<b>Total of group</b>	<b>213.0</b>	<b>317.3</b>	<b>462.1</b>	<b>642.9</b>	<b>858.8</b>	<b>333.0</b>	<b>529.5</b>	<b>801.7</b>	<b>1,133.3</b>
Mainland East Asia	90.4	118.2	152.6	190.6	230.6	132.2	199.3	287.9	382.4
Middle South Asia	76.6	122.9	188.9	269.3	365.7	123.9	201.8	307.8	434.7
South-East Asia	27.4	45.3	72.8	115.4	172.6	45.8	75.9	127.4	208.1
Other East Asia	13.8	23.4	36.6	52.2	69.8	23.5	40.3	59.6	79.9
Caribbean	4.8	7.5	11.2	15.4	20.1	7.6	12.2	19.0	28.2
<b>4. Less developed regions of lower density</b>									
<b>Total of group</b>	<b>97.7</b>	<b>171.5</b>	<b>290.1</b>	<b>438.8</b>	<b>610.3</b>	<b>172.9</b>	<b>311.9</b>	<b>513.9</b>	<b>770.3</b>
Tropical South America	33.3	61.8	105.7	154.9	205.0	62.2	114.5	184.6	267.0
Northern Africa	16.9	28.8	48.2	73.5	100.9	29.2	52.6	87.6	127.1
South-West Asia	13.5	22.6	38.2	60.4	86.8	22.9	40.3	68.4	103.6
Middle American Mainland	14.3	27.0	48.4	72.7	98.2	27.2	52.4	86.7	127.9
Tropical Africa	13.9	21.6	33.5	53.2	86.9	21.7	35.6	60.5	106.8
Southern Africa	5.7	9.5	15.9	23.8	32.1	9.5	16.2	25.7	37.3
Other Oceania	0.1	0.2	0.2	0.3	0.4	0.2	0.3	0.4	0.6

<sup>/a</sup> Until one-half of the population is urban, thereafter rural population is assumed to remain constant (absolutely), while urban population absorbs all the increase in population.

<sup>/b</sup> Includes Berlin.

Source: UN Population Division, "Urban and Rural Population Growth, 1920-1960, with Projections," Working Paper No. 15, September 1967, pp 134-135.

**Annex Table 10: PROJECTIONS OF URBAN LABOR FORCE <sup>1</sup>, 1960-2000**  
(millions)

	1960 Estimate	Lower Assumptions				Higher Assumptions			
		1970	1980	1990	2000	1970	1980	1990	2000
<b><u>MALE</u></b>									
Africa	10.0	16.3	26.6	41.0	59.8	16.5	28.4	47.3	73.8
Asia	38.2	62.4	98.0	144.7	202.2	62.9	104.3	163.9	240.5
Latin America	15.9	27.3	44.2	63.1	82.7	27.5	47.8	74.7	106.6
<b><u>FEMALE</u></b>									
Africa	4.4	7.0	11.4	17.6	26.2	7.2	12.0	20.0	32.0
Asia	7.7	12.6	19.8	29.2	44.9	12.7	21.1	33.1	48.6
Latin America	6.3	10.8	17.5	24.9	32.7	10.9	18.9	29.5	42.2
<b><u>TOTAL</u></b>									
Africa	14.4	23.3	38.0	58.6	86.0	23.7	40.4	67.3	105.8
Asia	45.9	75.0	117.8	173.9	247.1	75.6	125.4	197.0	289.1
Latin America	22.2	38.1	61.7	88.0	115.4	38.4	66.7	104.2	148.8

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Annex Table 10: (Continued)

URBAN BASIC ACTIVITY RATES

MALE

Africa	50.0
Asia	50.7
Latin America	49.1

FEMALE

Africa	13.2
Asia	13.8
Latin America	16.8

URBAN SEX RATIO (males per 1,000 females)

Africa	1,088
Asia	1,147
Latin America	928

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/1 "Urban" refers to localities of 20,000 population or more, "labor force" to persons 15 years and older.

Sources: Urban population projections: UN Population Division, Urban and Rural Population Growth, 1920-1960, with Projections, Working Paper No. 15, September 1967, pp. 134-135. Age-sex specific labor force participation rates: Ettore Denti, "Sex-Age Patterns of Labor Force Participation by Urban and Rural Populations," International Labor Review, December 1968. Sex-age structure of urban populations at