

National Urbanization Policies in Developing Countries

World Bank Staff Working Paper No. 347

July 1979

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NATIONAL URBANIZATION POLICIES IN DEVELOPING COUNTRIES

A Background Study for the World Development Report, 1979

The need for active national urbanization policies is greater now for developing countries than it has been in the past because population growth rates are faster, economic growth rates are higher, and the role of government is more dominant than they were historically for the presently advanced economies. Appropriate national urbanization policies have three dimensions: the correction of unintended and unwanted spatial effects of national economic policies; the more efficient internal management of cities; and decentralization policies to increase national economic efficiency and socio-economic integration through the elimination of barriers to resource mobility, trade and the diffusion of innovations. Decentralization policies are not a substitute for a more efficient and more equitable use of resources within cities, particularly in the large urban centers. The purpose of this paper is to show why progress in formulating national urbanization policies requires coordination between these three policy dimensions while uncoordinated policies have too often worked at cross-purpose.

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SUMMARY AND CONCLUSIONS

National urbanization policies are important for developing countries because the location of new economic activities and population movements affect the efficiency of national economies and the stability of political systems. This paper reviews the determinants of urbanization and spatial concentration as a country grows and develops. It discusses dominant policy issues for various countries grouped into six broad categories: very small countries (in terms of area or population), countries with limited domestic markets, large low-income countries, middle-income countries, advanced market economies and centrally-planned economies.

The core argument of this paper is that all countries are better off with a national urbanization strategy that is the outcome of a careful national debate about economic, political, social and cultural goals.

Decentralization is not always the issue. Quite a few countries do not need to work actively at decentralizing economic activities from the main urban region either because it is a premature decision considering their level of development or because they do not seem to be suffering from excessive urban concentration. On the other hand, in most countries, the spatial effects of current national policies and practices of government are never considered in spite of their great influence on urbanization patterns. Whether these policies systematically accentuate the tendency toward urban concentration should be a matter of public concern.

The need for active national settlements strategies is greater for developing countries than it has been historically for presently advanced

economies for three major reasons. First, they are experiencing a high rate of population growth: a country growing at the rate of 2.7 percent per year (the current median for middle-income countries) will need to accommodate 1.7 times its present population in 20 years. Second, their economic growth rates are also higher: an economy growing at 6 percent per year (the median GDP rate for middle-income countries for 1970-76) will be 3.2 times larger in 20 years. The combined effect of rapid population and economic growth is that the urban population of developing countries is often growing at more than 5 percent a year. The third important reason for formulating deliberate national urbanization policies is that the role of government in developing countries is more dominant than in most advanced economies, either directly through public enterprises or indirectly through the regulation of a wide range of economic activities. Governments must carefully evaluate how their actions affect the rapidly changing distribution of population.

The main determinants of urbanization and population concentration in urban areas are: the rate of development and the structure of the agricultural sector (which is heavily influenced by the size distribution of land holdings); the rate of growth and sectoral pattern of industrialization and the location decisions affecting the distribution of manufacturing and therefore services activities among cities; and the condition of the transportation and communication networks. Population redistribution and migration (hence, urbanization patterns) are the result of the creation of new employment opportunities.

Rapidly changing patterns of settlements create four major types of imbalances: imbalances between the rural and the urban sectors,

imbalances between the level of development of different regions, imbalances between cities of different sizes and, finally, imbalances between social groups within cities, particularly in large ones. Correspondingly, there are four major objectives to national urbanization policies: (a) the full development of the national resources of the country, (b) the maintenance of national cohesion among various regions, particularly where very large disparities in per capita output exist between regions, (c) the prevention or correction of excessive concentration of economic activities within the capital regions; and (d) the achievement of a more efficient and more equitable management of growth within cities.

There are three major dimensions to the formulation of appropriate national urbanization policies: the elimination of unintended and unwanted spatial effects of national economic policies; the more efficient internal management of cities; and the increase of national economic efficiency and socio-economic integration through the elimination of interregional barriers to resources mobility, trade and the diffusion of information and innovations.

Unintended spatial biases of national policies are commonly generated through trade policies protecting the manufacturing sector; credit allocation, public investment and subsidy or pricing policies giving preferential treatment to economic activities which are concentrated in a few cities and regions; and the management practices of the government and its regulation of economic activities. Of major significance is the place accorded to rural development and the farm sector in the national growth strategy. National urbanization policies must make sure that national economic and social policies do not accentuate sharply and unnecessarily the concentration of population and economic activities in large urban centers.

Appropriate management of all cities is very important to the success of a decentralization policy. In the case of very large cities, policies to limit or stop completely population growth are not a substitute for direct policies addressed to the correction of congestion and pollution problems, nor to the problems of inadequate provision of services for large segments of the existing population. If other cities are not efficiently and effectively managed, their chances of attracting industries and deflecting rural-urban as well as city-to-city migrants away from the capital region are very limited.

In order to limit population concentration in very large urban centers, decentralization policies must encourage the growth of the farm sector as well as the growth of intermediate urban centers. They must be based on favorable policies toward the farm sector because its stagnation would simply imply a slow growth of provincial rural centers, stagnation of small towns and faster concentration into large cities. The more equal the distribution of income and assets in rural areas the greater will be the benefits of these policies. Decentralization policies must also encourage the growth of intermediate-size urban centers with a good growth potential because economic goods and services, financial flows and innovations circulate throughout the country via the system of cities. These policies can strengthen secondary urban centers through various actions: transportation policies, industrial estates policies and more importantly perhaps the systematic development of organizational and informational networks between these cities and the capital region (banking networks, industrial associations networks, professional association networks, modifications of adminis-

trative structures, etc.). Growth centers strategies are more a way of thinking about such policies than a precise methodology. They place the accent on moving from a position of strength and on concentrating various forms of investment into the cities of the system which already show promise for growth.

There are three major reasons behind the frequent failure of national urbanization policies in developing countries. First and foremost is the lack of high-level political commitment to a better distribution of economic activities throughout the country. Second, urbanization policies fail because they concentrate exclusively on the problems of urban decentralization and ignore the fact that national economic policies (such as trade, industrial and infrastructure, policies) provide much stronger implicit incentives in favor of location in the dominant urban region. An additional shortcoming of these policies is that they seem to be perceived as a cheap way of avoiding addressing the problems of internal efficiency in that dominant urban region. The third typical cause of failure of settlements policies is the stop-go application of policy instruments according to short-term political or economic circumstances. Since location decisions by business firms are rather infrequent and represent a long-term commitment on the part of individual firms, stop-go policies are almost entirely discounted, and migrant workers will continue to go where the jobs are. We are just entering the period when national urbanization policies in some developing countries are stable enough and different enough that their experience are worth comparing.

- 1 -

At low levels of urbanization and economic development, the concentration of population and economic activities in a limited number of urban centers of small or medium size is inevitable if the national economy is to benefit from the positive externalities generated by urban concentration. At that stage, the appropriate objective of a national urbanization strategy is to make sure that economic and social policies do not accentuate sharply and unnecessarily the concentration of political power and economic activities in these few cities. Socio-economic policies can create strong biases in favor of the largest cities well above the degree of concentration which will take place thanks to urban externalities, while growth of the national hinterland is suppressed. Sound rural policies are most important when they matter the most: at low levels of urbanization, when the farm sector provides a large share of the national output. Excessive urban concentration due to past policies biased against the farm sector is difficult to correct until advanced stages of development.

In the middle-income countries with a high population growth and dynamic economies, it is not realistic to expect that appropriate national urbanization policies will stop completely the growth of selected large cities in a short period of time (such as ten years). Many of these large cities are already more dependent on natural population growth than on migration for their expansion. An important threshold will already be crossed when net migration is reduced to zero. At present, the only countries experiencing net out-migration from the core regions are advanced economies characterized by very low national population growth rates (well under 1.5

percent), high levels of urbanization (well over 60 percent) and a high degree of inter-city mobility of businesses because there are many good potential locations in the country.

INTRODUCTION

1.1 The lack of interest in spatial matters found in most developing countries in the 1960s has now been replaced by a much greater concern for the patterns of human settlements generated by the relentless growth of the national population and its tendency to concentrate in larger and larger cities. Given the much lower level of income and education of many of these large concentrations of urban population, there is a definite sense of concern that some capital cities are entering into the unknown and reaching population levels new to urban policy making. This concern is certainly not relieved by the recent wave of dissatisfaction with large cities so frequently voiced in western countries: too much congestion, too much pollution, deteriorating amenities and a sense of declining social cohesion. What is emerging is the realization that the spatial distribution of socio-economic activities cannot be dissociated and treated independently from the broader issues of national economic, social and political development.

1.2 Because of the popular concern with the scope for urban decentralization and problems of rural-urban balance and regional inequalities, decision-makers appear to be more willing to integrate spatial consideration into their national policy schemes. However, if the degree of political urgency is substantial, the selection of objectives, their validity as well as the degree of coordination of various policy instruments, remains a new field of operation for national planners. The seemingly well-focused query "Can we decentralize our population away from the capital region?" calls into question our knowledge of the sources of urban growth and of the value of various policies designed to affect patterns of population settlements.

1.3 The questions raised in this paper are: What are appropriate objectives for a national urbanization strategy aimed at shifting patterns of urban growth? Can a national urbanization strategy operate separately from other social and economic policies? Are there trade-offs between a greater dispersion of economic activities among various regions and the rate of growth of the national economy? What kind of actions could or should be considered by a country in order to moderate or even limit the growth of the capital region? To what extent is it possible to channel economic activities through selected urban settlements? To what extent does the growth of new urban centers in developing countries differ from the experience with new towns in advanced economies? What are the relationships between a city and its hinterland and how do the rural and the urban sectors interact? Thus the formulation of a national urbanization strategy is not limited to solving the problems of population and economic concentration in the capital region. This is a frequent point of departure of national spatial planning efforts in developing countries, when in fact a national urbanization strategy does not always require the existence of a strong concentration of population at the political and economic center of a country.

1.4 An explanation is in order here to justify the extensive use of the expressions "national urbanization strategy" or "national urbanization policies" in this paper. Many other terms have been used in various countries and by various professions (urban planners, political scientists, sociologists, geographers or economists) such as: "population distribution policy," "national urban growth strategy," "regional policy," "community development policy." ^{1/} Some of these expressions are limiting because they

1. Bureaucracies and large-scale organizations being what they are, related policy assignments end up in rather inappropriate places, on the basis of such labels.

seem to imply the exclusion of other considerations which should be legitimate concerns of national planners. Also, the use of the word "urban" in a developing country context often leads to opposing the term "rural" to the term "urban". It is easy to move from there to the unwarranted and counterproductive assumption that an "urban" policy must be "anti-rural" or at least damaging to rural interests; it would be a very unfortunate point of departure for policy formulation because rural and urban areas can interact very positively. Seeing rural-urban policies as a zero-sum game is a rather myopic perception, particularly in middle-income countries. In practice, when formulating its strategy, a country will typically choose the expression most apt to receive wide acceptance and to mobilize public opinion, given its particular circumstances.

1.5 The need for a national urbanization strategy is much stronger for the developing countries than it has ever been in the presently advanced economies for several essential reasons:

- (1) The rate of urbanization of developing countries is much faster than what has been experienced historically by the developed countries. By the year 2000, less than 22 years from now, the entire world population will be more than 50 percent urbanized. In the year 1900, only the most industrialized country, Great Britain, had reached that level; even the United States had not reached that level until 1920.
- (2) This very rapid rate of urbanization applies to populations that are still growing extremely rapidly at rates that are

often two or three times the rates experienced by the advanced economies. Between 1970 and 2000, the world urban population is expected to grow from 1.3 to 3.3 billion. ^{1/} That is to say that the urban population alone at that time will be equal to the total world population of 35 years earlier (in 1965).

- (3) The rate of growth of developing economies is also very high by historical standards, being very frequently of the order of four to five percent for GNP. For instance, over the period 1970-76, the medium GNP growth rate of the middle income countries was 6.0 percent, or almost double that of the advanced economies for the same period, which was 3.2 percent. This is a very high growth rate compared to those of the 19th century. Even though population growth erodes the gains made on a per capita basis, from a spatial viewpoint it is very important to decide where this increment of output will be located.
- (4) In practically all developing countries the role of the state is a dominant one so that a "laissez faire", "do nothing" approach to the location of population and economic activities similar to that experienced by most advanced economies at comparable levels of urbanization is in fact impossible. The government has an inevitable impact through (a) its policies, (b) the location of infrastructure investment and (c) the public enterprises that it controls. Because government is an important and sometimes even a dominant partner in the growth process, it must clarify its objectives and strategies. This

1. As used in this paper, the word "billion" means thousand million.

does not mean that the state is relieved from all the economic constraints experienced by the private sector, but rather, that a well thought-out strategy is a requirement for more rapid progress.

- (5) In many developing countries national spatial development is also marked by a higher degree of economic dualism and inequality among regions and urban areas. The rapid rate of growth of the urban population can lead to the concentration of large groups of low-income households in limited locations. This in turn complicates the task of development. Effective settlement strategies may alleviate this problem.

1.6 In other words, the spatial distribution of population and economic activities has very important implications for the efficiency of the economies as well as the distribution of income and welfare and eventually social stability in all countries. The urgency of the need for better strategies is accentuated in middle-income countries by the joint effect of their rapidly growing output and population. By the end of the two decades remaining in this century, if the output of a country grows at 5 percent a year, it means that space will have to be provided for an economy 2.7 times greater in value terms than at present. If its population grows at 3 percent a year, space will have to be provided for 1.8 times more people than at present.

1.7 The first section of the paper presents a worldwide perspective on urbanization and shows how rates of urbanization in developing countries are consistently higher than the historical European and North American rates. It also shows the wide variations in the level of urbanization among

the countries of the world and compares rates of changes among countries, the extent of urban concentration and the frequency of very large cities. On the basis of this very aggregate information, it is possible to see that there are common features in the evolution of settlements patterns in groups of countries, and that the middle-income countries are the countries that can benefit the most from active policies towards the distribution of population and economic activities, because they are experiencing the most rapid changes and have the resources necessary to make a difference. The contrast between the various countries regrouped in a rather imperfect typology helps to clarify the priorities appropriate for national settlements policies under various states of development.

1.8 The second part of the paper discusses the determinants of resource mobility within a country and the urbanization process. Much emphasis is placed on the decision-making process in reaching the decision to move in the case of business firms, individuals and households. A better understanding of the decision to move is central to the formulation of sensible and effective policies aiming at re-channelling resources between regions and cities. It is on the basis of such understanding of actual mobility patterns in developing countries that effective adaptation of the instruments and methods used in advanced economies will be possible. In the process, it also becomes clearer why economic development sets in motion a complex of forces that lead to the movement of both capital and labor towards favored locations and the concentration of social and economic activities in cities, particularly large ones. Rural-urban interactions are examined to indicate why and how rural development policies are an integral part of properly conceived national urbanization strategies.

1.9 If the concentration of economic activities and large scale urbanization are responses to the economic incentives generated by development, why is there a spatial development problem? The third section of the paper discusses the main reasons pushing policymakers to develop national urbanization policies: the excessive concentration of population within the capital region, the need to maintain the cohesion of the country by preventing or reducing divergencies in the level of development and welfare of various regions and the need to develop more fully the national resources located in peripheral regions. The relative influence of the implicit spatial effects generated by national economic policies is contrasted with the policies explicitly addressed to the correction of spatial problems. The choice of appropriate policies to deal with excessive population concentration in large cities, or lagging regions or the undeveloped areas is reviewed. The types of instruments available for carrying out policies is discussed with much emphasis being placed on their context: structure of industry, national policies, structure of government, local government policies. Much stress is placed on the implicit spatial biases of national economic policies and the limitations that they place on national settlements policies.

1.10 The final section of the paper discusses the choice of appropriate policies under various circumstances. It defines some basic principles based on past policy experiences. It also presents the policy measures that can be used at various scales of policy making. Finally, it reviews the dominant issues in countries at various stages of urban development.

II. WORLD URBANIZATION: ELEMENTS OF A TYPOLOGY FOR NATIONAL URBANIZATION STRATEGIES

A. World Urbanization

2.1 The facts about global trends in world population are becoming more and more widely known. The world population is estimated to have been approximately 800 million in 1750, and to have increased to about 1.3 billion by 1850; by 1950, it had grown to about 2.5 billion. Between 1950 and 1970, the world population grew by another 1.1 billion, to reach somewhat over 3.6 billion in 1970. Between 1970 and the end of the century, it is expected that the world population will increase by about 80 percent, to reach a total of about 6.5 billion. ^{1/} These striking figures are projections and, as such, are subject to error, but even though they may overestimate the world population for the year 2000, they imply extraordinary changes in the social and economic structure of most countries. The accompanying changes in the demographic structure are just as far reaching as the projected total size of the world population: the majority of the world population is very young and potentially very mobile (see WDR indicators for the population under 15 years of age).

2.2 The demographic changes of greatest interest to this paper are those associated with the rapid pace of rural-urban population redistribution and the equally important shifts in the proportion of the urban population living in very large cities. Anyone familiar with demographic data knows that the definition of the urban population of a country is to some degree arbitrary and that definitions change from country to country as well as

1. See International Union for the Scientific Study of Population (IUSSP), Committee on Urbanization and Population Redistribution, Patterns of Urbanization, 1977.

over time within the same country. Some countries define as urban all human settlements above 2,500 people, others such as Japan, Korea or the Republic of China for many purposes define cities as population concentrations above 50,000. 1/ This creates problems of comparability between countries. It is also very important to keep in mind that any population projection is merely an extrapolation of what would happen if certain assumptions concerning levels of mortality and fertility were realized. The element of uncertainty is increased in the case of rural-urban projections because rural-urban migration is susceptible to rapid and sometimes erratic changes which can always be explained after the fact but not necessarily anticipated. The projections discussed below must be considered as indicators of things to come; the patterns are unmistakable even if the risk of error is substantial in the case of a single city.

1. Worldwide Trends

2.3 Demographic research has shown that, before 1850, no country of the world was predominantly urban. As late as 1900, only Great Britain had crossed that threshold. By 1920, about 14 percent of the world population was urbanized, but by year 2000, it is expected that over 50 percent of the world population will be urbanized. The urbanization world trend is approximately as follows:

1. For more details on definitions of urban population, refer to Manual VIII, Methods for Projections of Urban and Rural Populations, United Nations, Population Studies, No. 55, 1977.

World Wide Level of Urbanization

1920: 14.3	1960: 33.0
1930: 16.3	1970: 37.2
1940: 18.3	1980: 41.5
1950: 25.4	1990: 46.1
	2000: 51.1

Source: Various U.N. documents.

2.4 In the more detailed description that follows, both the past record and the current U.N. projections to the year 2000 are presented. It must be reemphasized that the projections reported are speculative. We must restate the warning: "Changes in current and projected patterns of national increase and migration, errors in existing data, and in some places the lack of data, as well as changes in urban definitions all contribute a degree of uncertainty to the precision of existing data. While each of these sources of error can contribute independently to the total in the estimates, their effects on projections can be even more serious as the initial impacts become compounded through time in the projection process." 1/

2.5 The relative growth rates of rural and urban population are presented in Table 2.1. This table shows the average annual rate of change in the world's urban and rural population as well as the comparable average rates of changes of more and less developed countries separately. The urban growth rates of developing countries have been and are projected to continue to be twice as high as the urban growth rate of more developed countries. They are projected to be three times as high by the last decade of the century.

1. Goldstein, IUSSP, Patterns, p. 47.

TABLE 2.1: Average Annual Rates of Increase in Rural, Urban and Total World Population

	Total Population			Urban Population			Rural Population		
	World Total	More Developed Regions	Less Developed Regions	World Total	More Developed Regions	Less Developed Regions	World Total	More Developed Regions	Less Developed Regions
1955	1.75	1.30	1.99	3.40	2.49	4.88	1.07	-0.06	1.40
1960	1.89	1.28	2.18	3.47	2.40	5.01	1.14	-0.18	1.50
1965	1.96	1.22	2.31	3.02	2.18	4.09	1.42	-0.20	1.81
1970	1.92	0.88	2.39	2.93	1.96	4.07	1.36	-0.93	1.86
1975	1.93	0.88	2.36	3.05	1.76	4.38	1.25	-0.84	1.65
1980	1.97	0.87	2.39	3.05	1.69	4.29	1.25	-0.94	1.62
1985	1.98	0.85	2.37	3.02	1.61	4.15	1.22	-1.05	1.55
1990	1.91	0.76	2.29	2.91	1.45	3.95	1.12	-1.21	1.42
1995	1.86	0.67	2.22	2.81	1.29	3.76	1.02	-1.36	1.30
2000	1.76	0.62	2.08	2.69	1.18	3.53	0.88	-1.47	1.11

Source: U.N. Population Division, Urban-Rural Projections from 1950 to 2000. October 9, 1974

2.6 By the end of the century, the world urban population is expected to be greater than 3.3 billion. If this projection is anywhere near correct, it implies that, while the total world population will have increased by about 80 percent over the period 1970-2000, the urban population will have increased by about 145 percent. 1/ If we refer to the entire second half of the century (1950-2000), the world's population is expected to grow by about 160 percent and the urban population by an enormous 375 percent. The world population will require about 35 years to double once, while the urban population will take about 45 years to double twice. By contrast, the rural population is not expected to even double during the same 50-year period; it is expected to increase by about 80 percent.

2.7 Whatever the degree of error carried by the current projections and the various possible definitions of urbanization, the following world-wide implications of the figures can be drawn:

- (a) Urban areas will play an increasing role in absorbing large shares of the world population.
- (b) There will be a marked increase in the level of urbanization. An increasingly large number of countries will have become more urban than rural.
- (c) Even though the world's population will not become more urban than rural until the end of the century, there are already more countries that are predominantly urban rather than rural in 1978.

1. The main cause for caution is that the People's Republic of China represents about one-fourth of the world population, but nobody knows accurately the size of the total Chinese population, the size of cities nor their growth rates.

(d) The distribution of urban population among regions of the world has changed drastically for cities over 100,000. At the beginning of the century, the largest share of the world's population was found in Europe. Since 1950, Europe has had only the third largest share, after Asia and America. Asia will dominate the world picture, with about 45 percent of the world urban population by the year 2000.

2.8 The sources of urban growth must be considered very carefully. The statistics on urban population can change because of the natural growth of the population already living in cities, the net rate of in-migration or the redrawing of city boundaries with the annexation of nearby towns. At present, the components of urban change have been calculated only on the basis of 1960 data by the United Nations because of serious problems in doing accurate growth accounting for a widely different set of countries. The comparison of the aggregate results show that natural increase has been playing a greater role in the growth of urban areas in developing countries than in advanced economies, in spite of the fact that the role of net-migration was also higher in the developing countries. This was due in 1960 to the fact that the birth rates observed in urban areas in developing countries were only 15 percent below those of rural areas; in both cases, these rates were several orders of magnitude larger than in advanced economies. More recent demographic analysis suggest that population growth rates are declining in developing countries. Efforts to control fertility will have a direct positive impact on the rate of urban growth and on the potential for population deconcentration.

1.9 However, the net transfer of population from rural to urban places in less developed areas is still low; only 5.9 persons in 1,000 of the rural population moved to urban places in 1960. At present, "the very large and so rapidly growing rural population provides a tremendous reservoir for potential migrants to cities." 1/ The extraordinary growth of urban areas should not distract from two facts: (i) there are many countries that have large rural populations, even though (iii) a very large proportion of their urban population (about 40 percent) still live in towns under 100,000. We have the coexistence of very rapidly growing large cities with a large population living in rural villages and small towns. Because very large cities dominate the urban system, there is a great difference between the average size of settlements and the typical size of settlements: even with very large urban places, the average place is still very much rural. The implications for rural development are quite important.

2.10 With respect to the population of large cities (defined as cities over a million inhabitants) the prospects for developed and developing countries are quite different. In developed countries the size of the urban population is expected to be about 2.7 times larger in 1985 than it was in 1950. In developing countries the urban population in cities over one million will increase 10 times during the same period.

2. Level of Urbanization

2.11 The level of urbanization of a country, i.e. the percentage of population living in urban areas, is the first major indicator that one would want to consider in cross-country comparisons of national urbanization policies. There are several reasons for paying attention to the level of urbanization. First, at low levels of urbanization, economic and settlements

1. Goldstein, IUSSP, Patterns, p.

policies should be dominated by a concern for the rural sector; there is a close association between the level of urbanization and the level of economic development as measured by the per capita GNP (see Figure 2.1); at low levels of urbanization, rural-urban migration is the main source of growth of the urban sector; at high levels, the main source of growth is the natural growth of the urban population. There are significant differences among countries, but it is not entirely misleading to examine regional breakdowns because geographic contiguity is often associated with comparable levels of urbanization. The countries are regrouped here according to the regions used by the United Nations. Heterogeneous levels of urbanization are indicated when they occur within a given region. For convenience, the complete listing of the countries found in each region and subregion is presented in Figure 2.2; names and countries correspond to the year 1975.

(a) Levels of Urbanization in Africa

2.12 Africa is the least urbanized region of the world. In terms of absolute size, the cities of Africa also have the smallest urban population in the world. By the year 2000, the entire region will still remain the least urbanized of the world (about 40 percent). There are such great differences among the subregions that, in fact, this regional average is misleading. The Northern and Southern Regions (12) and (13) were already close or past the 50 percent mark in 1978, when the other regions were not past the 25 percent mark and will barely pass that level by the year 2000. A note of caution should be sounded for the Middle Africa Region (II) which is projected to cross the 50 percent level by the year 2000: the demographic base of this area is one of the weakest anywhere. Between subregions there are sharp differences in the

FIGURE 2.1: Level of Urbanization and GNP/CAP
 ESTIMATED EQUATION: PERCENT URBAN = 20.845 + 9.558 LN GNP PER CAPITA

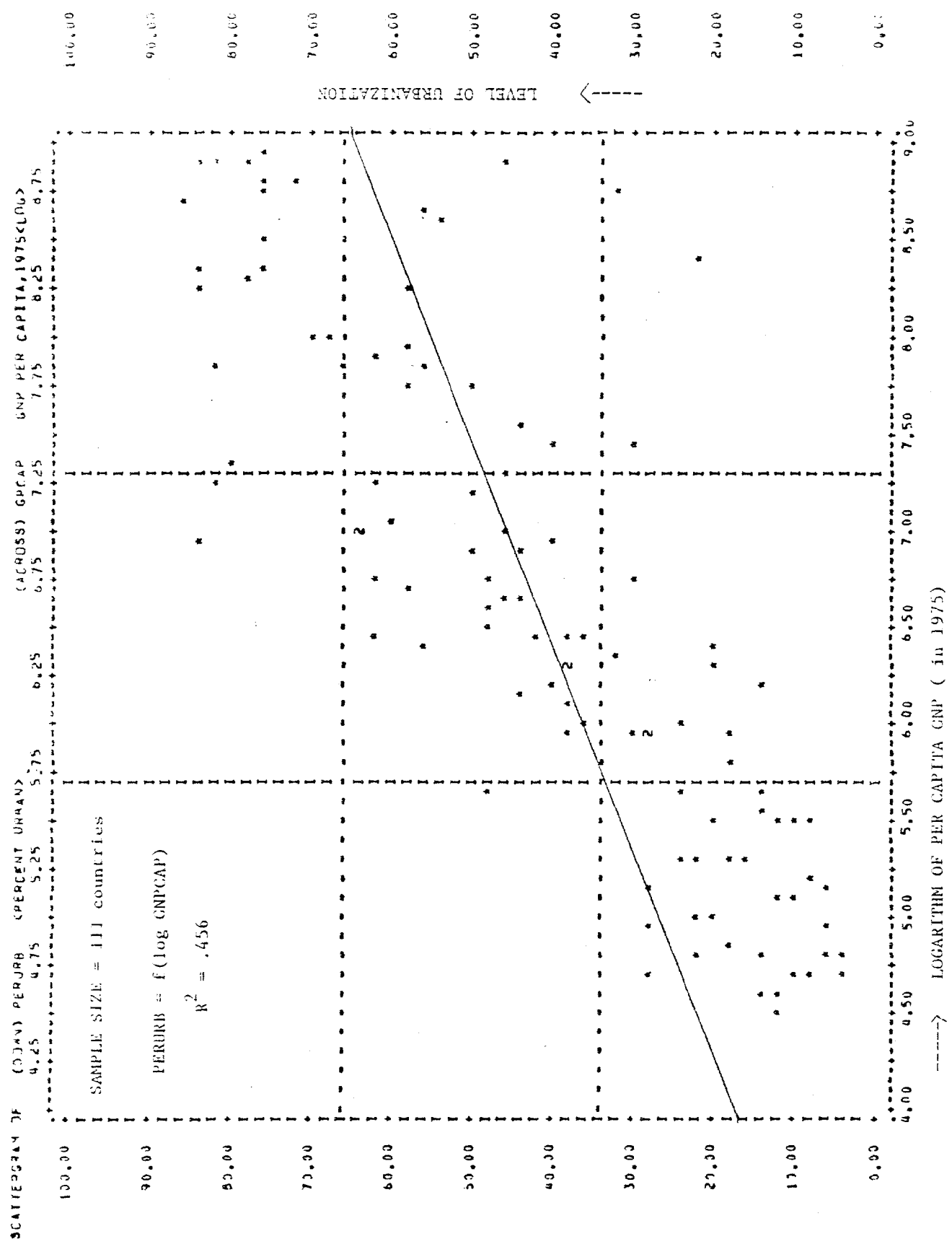


Figure 2.2

Country Groupings Used for Demographic Analysis
by the U.N. Population Division

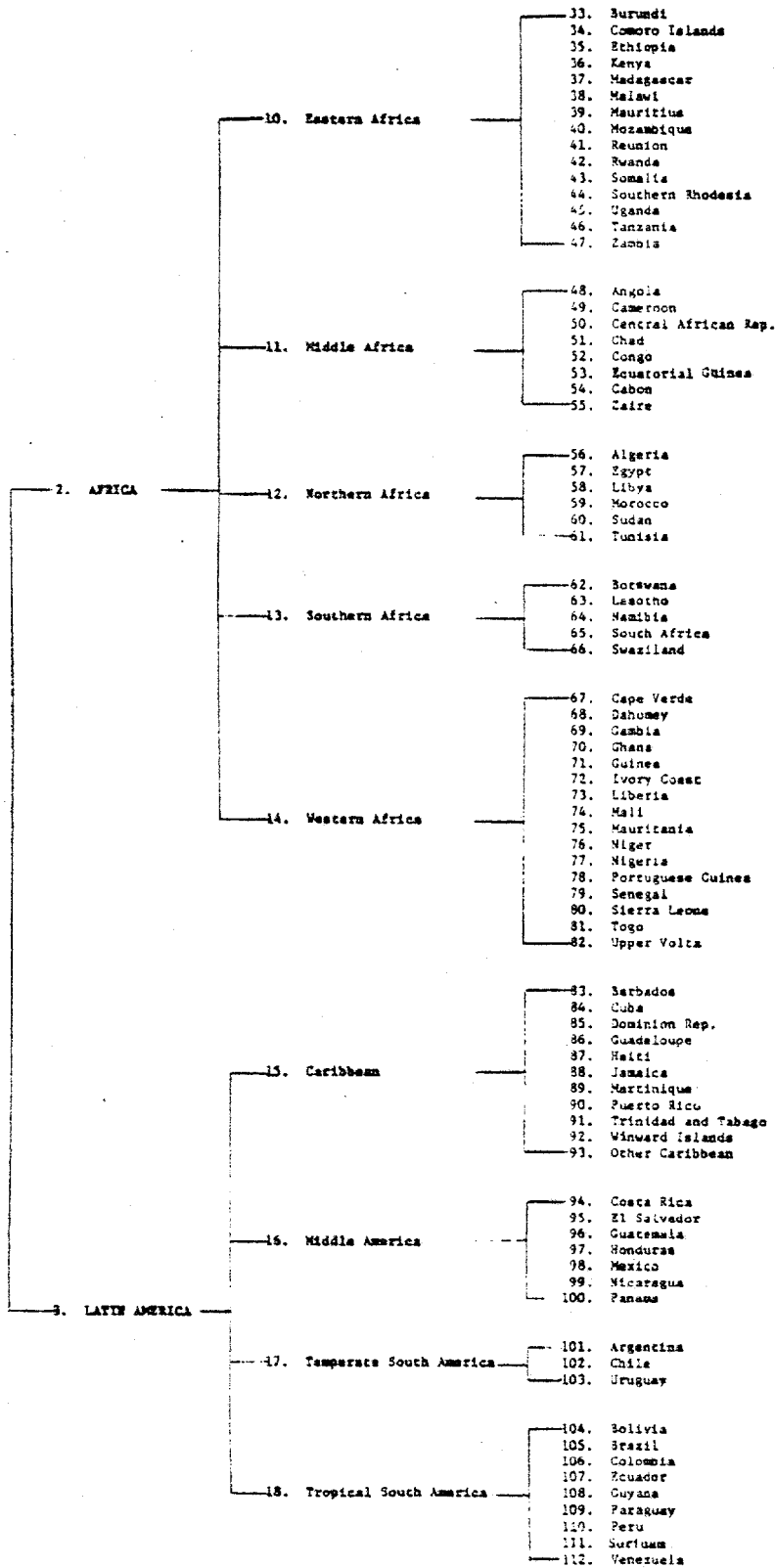
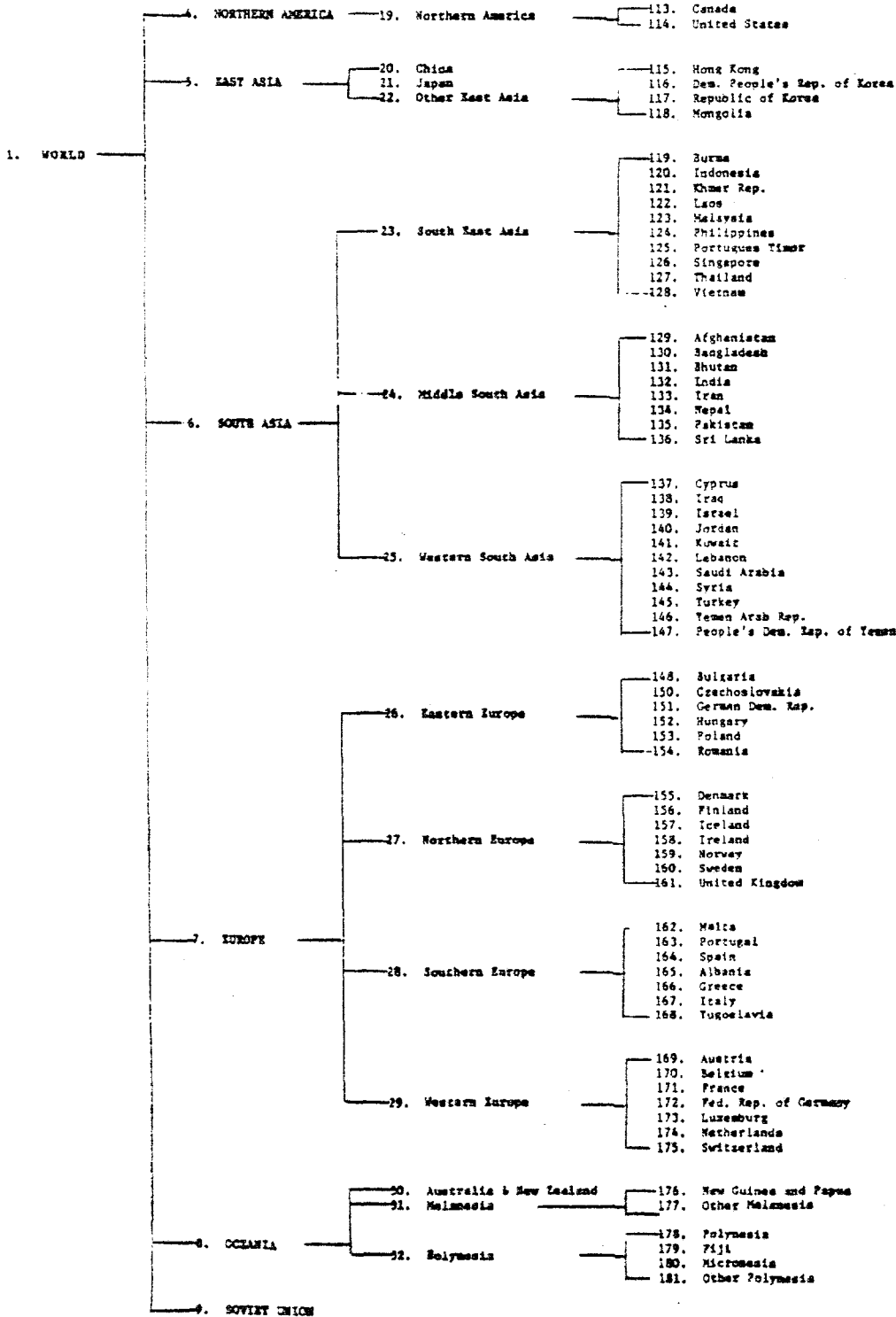


Figure 2.2 (cont'd)

Country Groupings Used for Demographic Analysis
by the U.N. Population Division



contribution of natural growth to total urban population increase. The contribution of national population increase is the highest in the Northern region. It is also in Northern Africa that one finds most of the very large cities of the continent, and this region should be separated in a finer breakdown.

(b) Levels of Urbanization in Latin America

2.13 During the last 25 years, only the Soviet Union has been urbanizing at a higher pace than Latin America. Urban growth rates in Latin America have been about four times larger than rural growth rates. By the year 2000, the continent as a whole will be over 75 percent urbanized, will have reached the level of North America in 1975 and will be at a level of urbanization comparable with that of Europe. Urbanization is expected to advance at very different paces in the four sub-regions. Tropical South America will change very rapidly and reach the levels of temperate South America, leaving the other two regions behind. As will be discussed further later, the very large cities play an extremely important role in Latin America. Population concentration in the largest cities is a particularly significant feature of Latin American urbanization.

(c) Levels of Urbanization in Asia

2.14 The Asian region is probably the most heterogenous of all regions. Because of the dominant impact of India, Indonesia and China, it combines a very low level of urbanization with the largest absolute urban population in the world, which is already double the size of the North American urban population, itself the most urbanized region of the world. During the last 25 years, East Asia has begun differentiating itself from the rest of the region because of the combined effect of rapid economic growth with falling

population growth rates. In South Asia, India defines a unique type of urbanization combining a very low and stable level of urbanization over long periods of time, with a numerically very large urban sector. Projections suggest that the pace of urbanization in India might accelerate during the last quarter of this century. For purposes of policy analysis, the countries of the South Asia region fall into markedly different groups. (The Western South Asia Group as defined by the U.N. in particular has more in common with Northern Africa than with the rest of South Asia.)

(d) Levels of Urbanization in Europe

2.15 Europe has the second highest level of urbanization in the world after North America and Oceania (mostly Australia and New Zealand). The pace of urbanization has been moderate and will slow down further as the rural population of the region has declined rapidly over the last 25 years. Sub-regional differences are projected to narrow very significantly during the rest of the century, especially the difference between Northern and Southern Europe. This is a region of the world where the growth of very large cities will be in pace with overall urban growth, at best, instead of being more than double the overall urban rate elsewhere.

(e) Levels of Urbanization in the Soviet Union

2.16 The case of the Soviet Union is treated separately in the U.N. statistics because it belongs both to Asia and Europe. It is very interesting because it has combined the highest rate of urbanization of the nine U.N. regions of the world with a very slow growth of the largest cities. During the third quarter of the century, the USSR has experienced a higher rate of rural-urban transfer than any other region. However, at the same time, the proportion of the total urban population found in the largest cities over one

million remained very small and less than 15 percent until 1970. This proportion is projected to increase until the year 2000, but the large-city share will continue to remain small by world standards. We shall return to the relationship between a centrally planned economic system and this type of urbanization.

(f) Levels of Urbanization in Oceania

2.17 The overall pattern of growth in this region is completely dominated by the experience of Australia and New Zealand. It has a very high level of urbanization, exceeded only by North America, but it represents the smallest total urban population of the world. It is a region where the very large cities are particularly important to the urban system. Over 50 percent of the urban population of this region is concentrated in cities of a million or more.

(g) Urbanization Level for 33 Countries or Regions

2.18 It is frequently convenient to compare the historical patterns of urbanization of one country to those of another country. For instance, it is interesting to compare changes in the level of urbanization in Latin America with the historical pattern in Europe or North America. To facilitate such comparisons, 33 graphs of individual countries or groups of countries have been prepared (see Annex 2.1). From their examination, it is clear that the rates of urbanization experienced by developing countries are systematically higher than those experienced in the past by Western countries (the curves are steeper). While the trends are very clear, it will be noticed that the level of urbanization does not rise monotonously; it can fall temporarily because of major social disruptions. In some countries like Japan, Germany, and the United States, the level of urbanization either fell or remained level during the Great Depression and World War II. The diagrams for the People's Republic

of China and for India are of particular interest, given their large share of the world population. In India the rate of urbanization is accelerating after a long flat trend; in China the rate of urbanization is significantly faster than in India and comparable to the long-term U.S. trend.

3. Tempo of Urbanization

2.19 The speed at which a country is urbanizing reflects the pressures experienced by the urban sector and conditions the policy environment. The U.N. calculates the tempo of urbanization for each country as the difference between the rate of growth of the urban population and that of the rural population. Under the practical but oversimplifying assumption that this tempo is stable, it is possible to project the level of urbanization. In any case, the observed difference between the rate of urban and that of rural population growth is a good indicator of the speed at which urbanization is taking place. ^{1/} Over the period 1950-1970, for which actual data is available, the value of the urban-rural growth differential (URGD) ranges from -0.41 for the U.K. to 10.35 for Papua and New Guinea. In Table 2.2, the data are presented for the countries with population over 15 million in 1950. Among the fastest urbanizing countries were Ethiopia, Brazil, Korea, and Turkey. The figure for China is conjectural. (The complete results are presented in Annex Table 2.2).

2.20 There are four ways a country can have a very high value for the Urban-Rural Growth Differential: (i) a country at a very low level of urbanization can have a very high rate of urban growth because the absolute base is so small (the case of Papua and New Guinea); (ii) a country may have

1. A better indicator might be the percentage of urban population growth due to rural-urban migration, but even for a single country, it is more difficult to compute precisely.

Table 2.2: TEMPO OF URBANIZATION BETWEEN 1950 AND 1970 FOR ALL COUNTRIES WITH A POPULATION GREATER THAN 15 MILLION IN 1950

	<u>T. Population</u> 1950 (Millions)	<u>T. Population</u> 1970 (Millions)	<u>URGD</u> 1950-1970
<u>AFRICA</u>			
Egypt	20.5	33.3	2.66
Ethiopia	17.7	24.8	5.50
Nigeria	34.3	46.1	2.60
<u>SOUTH AMERICA</u>			
Argentina	17.1	23.7	3.18
Brazil	52.0	95.2	3.89
Mexico	26.3	50.5	3.37
<u>NORTH AMERICA</u>			
U.S.A.	152.3	204.9	2.37
<u>ASIA</u>			
Bangladesh	40.0	68.2	1.79
Burma	18.3	27.7	3.03
China	540.3	771.8	3.79
India	359.2	548.4	1.11
Indonesia	76.0	120.0	2.32
Iran	16.6	28.4	2.59
Japan	82.9	104.3	3.61
Korea (N + S)	30.1	44.6	5.27
Korea N.	9.7	13.9	4.33
Korea S.	20.3	30.7	5.71
Pakistan	36.6	62.0	2.68
Philippines	20.3	38.4	1.38
Thailand	19.6	36.2	1.99
Turkey	20.8	35.6	4.11
Vietnam	24.6	33.2	2.65
<u>EUROPE</u>			
Fed. Rep. of Germany	47.8	60.7	2.13
France	41.7	50.7	3.72
German Dem. Rep.	18.4	17.0	.07
Italy	46.8	53.6	2.04
Poland	24.8	32.5	3.01
Romania	16.3	20.2	3.47
Spain	27.9	33.8	2.89
United Kingdom	50.6	55.5	-0.41
Yugoslavia	16.3	20.4	3.27
<u>SOVIET UNION</u>			
	180.0	242.0	3.48

Source: United Nations, Urban Rural Projections from 1950 to 2000, October 9, 1974, (Medium Term with Medium Variant).

a high rate urban growth due to international migration combined with a declining rural population (the case of Singapore and Hong Kong); (iii) a country can have a high rate of urbanization combined with a rapidly declining rural population and a total population growth rate which is falling (the case of Korea); (iv) a country may have a high total population growth rate and high rate of farm out-migration with rural population still growing (the case of Algeria). Among developing countries, the first and fourth type of high urbanization rates are the most common. The first type is characteristic of many African countries with low levels of urbanization. The fourth type of urbanization shows the potent effect of rapid population growth when combined with rapid economic growth.

2.21 An important aspect of urbanization in developing countries is that very few countries so far have been experiencing an absolute decline in the rural population. The decline of the farm population is a clear sign that the economy has become predominantly urban in character and that the urban labor markets have become the main determinant of employment. The sources of growth of specific cities are less and less rural-to-urban migration, but rather the movement of population from city to city. This indicator alone signals the need for specific national settlements policies focusing on inter-urban mobility. The developing countries which are in such a situation are still few. They are: Singapore, Hong Kong, Venezuela, South Korea, Bulgaria, Chile, Uruguay, Jamaica, Argentina, and Greece.

2.22 The role of international migration in the rate of urbanization has been generally limited on a world-wide basis. It has operated in two ways. First, some countries have experienced higher rate of urbanization

because of international migration; they are small and among the fastest urbanizing countries such as: Singapore, Kuwait, Hong Kong, Venezuela, Ivory Coast, and Saudi Arabia. A few countries have benefitted from international migration that has lowered the growth of their rural population, such as Portugal (sending migrants to EEC countries). In advanced countries some substantial rates of urbanization were still observed because of the very rapid rate of decline of the rural population over the period 1950-1970; this is particularly clear in the case of Sweden, France and Japan.

4. Components of Urban Growth

2.23 The relative importance of the two major components of urban growth -- natural urban population growth and rural-urban migration -- is of major significance to policy makers. In preparing policies designed to affect the mobility of labor and firms throughout the urban system, it makes a great deal of difference whether the major source of urban growth is net-in-migration or natural urban growth. Unfortunately, to be accurate, an analysis of the components of urban growth requires the use of separate information on fertility and mortality in cities, information on the age structure of the population and information on urban annexation through the redrawing of city boundaries. The last comprehensive analytical effort has been carried out for 1960 by the U.N., and a new analysis is currently in progress for 1970. The distinction between rural-urban migration and natural urban growth is important because rural-urban migration and urban-to-urban (city-to-city) migration decisions are taken quite differently.

2.24 In the absence of a more precise demographic analysis, orders of magnitude for the percentage of urban growth due to net rural-urban migration

have been estimated for the period 1970-1975. This percentage has been obtained by taking the difference between the urban growth rate and the national growth rate and dividing it by the urban growth rate. ^{1/} The results show that the rate of rural-urban migration in urban growth is generally quite significant (see Table 2.3). It is particularly high at low levels of urbanization and at very high levels of urbanization, but for very different reasons. In advanced economies, rural-urban migration is proportionately large because both urban and total population growth are very low. This is particularly conspicuous in the case of East Germany where the proportion is 160 percent, because cities continue to grow very slowly when the national population has been declining. The situation is rather similar for advanced centrally planned economies. It is also worth noting that, in Latin American countries, natural urban population growth is the dominant force behind urban growth. This is also the case in Southeast Asia and South Asia, but for very different reasons: in these countries, the non-farm sectors are not dynamic enough to stimulate rapid migration, and they are still at a low urbanization level. Kuwait is exceptional because it is growing through international immigration. To complete the sample of 25 countries presented in Table 2.3, the full results are presented for 125 countries in Annex Table 2.3. In that table the share of migration to that of urban growth ranges from 160 percent for East Germany to -11.7 percent for Hong Kong.

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1. It is only a first approximation to the contribution of net migration to urbanization because it assumes that (1) there are no fertility nor mortality differentials between the rural and the urban sector, (2) that the redrawing of city boundaries and annexation of rural areas is insignificant, and (3) that the minimum threshold size for reclassification of areas from rural to urban has no effect on the results.

Table 2.3: SHARE OF NET MIGRATION IN URBAN GROWTH, 1970-1975

	Urban Growth	Share of Migration	Population Growth
Papua-New Guinea	10.1	74.3	2.6
Yemen Arab Republic	8.0	76.3	1.9
Kuwait	8.2	24.4	6.2
Tanzania	7.5	64.0	2.7
Nigeria	7.0	64.3	2.5
Colombia	4.9	43.1	2.8
Mexico	4.6	23.4	3.5
Brazil	4.5	35.5	2.9
Venezuela	3.9	20.5	3.1
Argentina	2.0	35.0	1.3
Thailand	5.3	45.3	2.9
Philippines	4.8	41.7	2.8
Indonesia	4.7	48.9	2.4
Sri-Lanka	4.3	60.5	2.1
India	3.8	44.7	1.7
Bulgaria	2.8	82.1	0.5
U.S.S.R.	2.4	62.1	0.9
Poland	2.2	59.1	0.9
Hungary	1.5	73.3	0.5
Germany, D.R.	0.5	160.0	-0.3
France	1.8	55.5	0.8
Sweden	1.2	66.7	0.4
Belgium	1.0	70.0	0.3
Germany, F.R.	0.8	75.0	0.2
United Kingdom	0.5	60.0	0.2

5. Extent of Population Concentration in Large Cities

2.25 The concern for the problems of urbanization is focused increasingly on the problems of urban concentration in large (over one million) or very large cities (two million or more). This trend is very much in evidence in the demographic analyses produced by the United Nations. 1/ The basic trend given in terms of shares of each size-class at 25-year intervals is as follows:

<u>Cities</u>	<u>1950</u>	<u>1975</u>	<u>2000</u>
5 million or more	12.1	19.9	29.8
2 to 5	18.6 45.1	16.4 51.4	18.6 62.7
1 to 2	14.4	15.1	14.3
0.5 to 1	17.6	15.6	12.6
0.2 to 0.5	21.7	20.2	15.3
0.1 to 0.2	<u>15.6</u>	<u>12.8</u>	<u>9.4</u>
Total Urban Population	393 million	983 million	2,167 million

The trend toward larger and larger cities which are increasing their share of the total urban population is quite clear from this aggregate data; more detailed information is given in Table 2.4. Very tentatively, the U.N. projects an increase from 21 to 59 in the number of very large cities over 5 million, with two-thirds of them in developing countries. These numbers are tentative in part because two or several adjacent cities can effectively form one continuous urbanized region of very great magnitude. 2/

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1. Trends and Prospects in the Populations of Urban Agglomerations, 1950-2000, As Assessed in 1973-1975, Population Division, Department of Economic and Social Affairs, U.N., November 1975.
 2. For a discussion of this coalescence of urban areas, see Jean Gottmann; "Megapolitan Systems Around the World," Ekistics, Vol. 243, February 1976.

Table 2.4.

SIZE-DISTRIBUTION OF CITIES IN DEVELOPED AND DEVELOPING COUNTRIES, 1950-2000

A.1 NUMBER OF CITIES							
AREA/SIZE GROUP (000)	1950	1960	1970	1975	1980	1990	2000
WORLD TOTAL							
5000 +	6	12	20	21	25	40	59
2000-4999	24	31	39	55	71	101	133
1000-1999	41	67	98	105	128	181	222
500-999	101	126	179	220	249	303	395
200-499	281	385	554	659	730	877	1059
100-199	453	654	841	907	998	1192	1460
MORE DEVELOPED REGIONS							
5000 +	5	10	11	11	11	15	16
2000-4999	15	16	20	24	31	41	50
1000-1999	28	38	54	56	67	77	84
500-999	41	82	99	110	118	131	152
200-499	173	221	288	327	353	387	404
100-199	275	350	437	453	483	532	563
LESS DEVELOPED REGIONS							
5000 +	1	2	9	10	15	25	43
2000-4999	9	15	19	31	40	60	83
1000-1999	13	29	44	49	61	104	132
500-999	40	54	80	110	131	172	244
200-499	168	164	266	332	577	490	655
100-199	178	304	404	454	515	660	897
A.2 POPULATION IN CITIES (IN THOUSANDS)							
AREA/SIZE GROUP (000)	1950	1960	1970	1975	1980	1990	2000
WORLD TOTAL							
5000 +	47364	95951	167219	195761	251519	414403	646485
2000-4999	73026	92219	114011	151705	206072	297200	403079
1000-1999	56314	94591	137429	148378	173533	243965	309962
500-999	69062	95949	124336	153346	171701	208403	273641
200-499	84568	117838	162667	198049	222250	274458	330575
100-199	61713	90845	112258	125503	138130	167311	203788
MORE DEVELOPED REGIONS							
5000 +	41533	83019	103145	112169	121354	159426	182552
2000-4999	48306	63744	57559	70485	90619	115869	147637
1000-1999	39434	54272	75016	79590	91504	103835	114603
500-999	41530	58339	68715	78752	81033	89456	103784
200-499	53286	68339	86965	99018	106354	120903	128268
100-199	37535	48950	61698	63147	66168	73294	79487
LESS DEVELOPED REGIONS							
5000 +	5781	12932	64074	83592	130165	254917	463933
2000-4999	24720	48475	56352	91221	115453	181331	255442
1000-1999	16880	40319	62413	68788	82029	140130	195359
500-999	27432	39110	55621	75094	90618	118947	169857
200-499	31232	49499	81702	99022	115896	153655	202307
100-199	24178	41895	57160	62356	71962	94017	124301

Source: Trends and Prospects in the Population of Urban Agglomeration 1950-2000, Population Division, Department of Economic and Social Affairs, U.N. ESA/P/WP50, November 1975.

6. Large Cities and Primacy

2.26 The concentration of the urban population in a few cities (primacy) and the existence of very large cities in a country (say two to three million people), are not entirely distinguishable. However, it is important to keep in mind that a country can experience primacy without having any very large city and that, on the other hand, countries can have very large cities without exhibiting such primacy. While problems of primacy cannot be overlooked in the formulation of national urbanization policies, the problems associated with very large cities are generally more important. It is a matter of national context to decide on the appropriate degree of emphasis.

2.27 The extent of primacy for 125 countries in 1975 is presented in Table 2.5. The measure used is the ratio of the population of the largest city over the total urban population of the country. It is useful because it is easy to compute and is not restricted by sample sizes or minimum city-size cut-off points. Except for the two city-states of Hong Kong and Singapore, it can be seen that most of the countries with a high primacy value are countries in their early stages of development.

2.28 There are other ways to estimate the level of primacy and to investigate the size-distribution of cities in a country. The most traditional primacy measure consists in taking the ratio of the largest city in the country to the next three largest cities. This index is of particular value in showing the presence or absence of large alternative urban centers balancing the influence of the largest city. Estimates based on the U.N. demographic yearbook of 1976 are presented in Annex Table 2.2. A more systematic method

TABLE 2.5: Degree of Urban Concentration Ranked by the PrimacyIndex Covering the Entire Urban Sector

Hong Kong	100	Argentina	45	Sudan	33	Indonesia	21
Singapore	100	Korea (South)	45	Afghanistan	32	Japan	21
Mozambique	88	Peru	45	Syria	32	Sri Lanka	21
Burundi	75	Rhodesia	45	Bangladesh	31	Sweden	20
Lebanon	72	Uganda	44	Finland	31	Switzerland	20
Jamaica	66	Nicaragua	43	Papua N.G.	31	China, Rep. of	19
Senegal	65	Benin	42	Zaire	31	Germany F.R.	19
Uruguay	62	Jordan	42	Ghana	30	Turkey	19
Lao P.D.R.	61	Dominican Rep.	41	Iran	30	Nigeria	18
Ivory Coast	60	El Salvador	40	Mexico	30	Romania	18
Malawi	60	Guinea	40	Niger	30	Canada	17
Paraguay	59	Israel	40	Yemen A.R.	30	Korea DPR	17
Togo	58	*Chad	39	Zambia	29	Belgium	16
Haiti	56	Cuba	39	Morocco	28	Italy	16
Angola	55	Egypt	39	New Zealand	28	Malaysia	16
Libya	55	Guatemala	39	Philippines	28	Poland	16
Chile	54	Hungary	39	Vietnam	28	Brazil	15
Greece	54	Saudi Arabia	38	Venezuela	27	Spain	15
Costa Rica	53	Honduras	36	Alabama	26	Algeria	14
Ireland	51	Norway	36	Australia	25	S. Africa	13
Porgual	51	Burma	35	Pakistan	24	Czechoslovakia	11
Somalia	51	Denmark	35	U.K.	24	Yugoslavia	11
Tanzania	51	Tunisia	35	Upper Volta	24	Netherlands	10
Iraq	50	Bolivia	34	France	23	U.S.	10
Sierra Leone	50	Ecuador	34	Mali	23	Germany D.R.	9
Kenya	48	Madagascar	34	Bulgaria	21	China P.R.	6
Austria	47	*Cambodia	33	Cameroon	21	India	6
Rwanda	47	Ethiopia	33	Colombia	21	U.S.S.R.	5
Thailand	47	Nepal	33				

* Data not reliable

Source: Based on U.N. Demographic Yearbook 1976 and country sources.

consists of fitting curves to the size-distribution of cities to investigate the degree of development of the urban system. 1/

B. Factors Affecting National Spatial Development

2.29 The level of urbanization and its rate of change, rural-urban migration and the differentiated growth of cities according to size are important data for the formulation of national settlements policies. They constitute major indicators of what is happening, but they reveal more than they explain changing patterns of population distribution. It is useful to review the various factors which affect the spatial development of a country before separating 182 countries and areas listed in Figure 2.2 into groups that are relevant for the discussion of national urbanization policies. In evaluating the ability of a country to carry out specific policies, physical and demographic constraints are important. In addition, the economic resources available and the national economic priorities determine the range of national urbanization policies that can be useful. Ultimately, the political and institutional context decides how policies will be carried out.

2.30 Physical constraints. The total area of a country is an important dimension of national urbanization policies: large countries require higher infrastructure expenditure per capita to achieve spatial, political and economic integration. The net population density based on arable land is associated with a somewhat higher degree of urban concentration. The distribution of water resources also constrains urbanization and patterns

1. See: Rosen and Resnick, The Size-Distribution of Cities, The Pareto Law and Primate Size, February 1978, Princeton, mimeo.

of urban settlements. Finally, island states experience important problems of population distribution and of spatial integration (Caribbean States, Philippines, Indonesia, Pacific Islands). At the lower end of the geographical scale, very small countries are like city-states for which international migration can become quite important.

2.31 Demographic characteristics. As mentioned earlier, the level of urbanization, the rate of change in the level of urbanization, rural-urban migration and the percentage of urban growth contributed by migration, the differentiated rate of growth by city size and the size distribution of cities are important indicators for the formulation of national urbanization policies. On the other hand, the total population growth and urban and rural specific growth rates are major determining factors for the growth rate of cities and the problems they encounter.

2.32 Economic capacity to implement national settlements policies. The level of GNP per capita is an essential factor for the formulation of policies: countries enjoying a relatively high GNP per capita for their level of urbanization are in a particularly good position to undertake national urbanization policies (for instance, mineral rich countries). The rate of growth of the economy is another important factor because, without growth, little can be decentralized.^{1/} A skewed distribution of income and assets in rural and urban areas will be a major brake on decentralization as it contributes to premature mobility of low-income households. Inequality will also be reflected in the ratio of maximum to minimum regional income.

2.33 The structure of trade is also a significant factor. Exploring the relationship between the structure of the economy and the level of urbanization

1. As shown by the United Kingdom, without overall growth some firms and /or sectors are still growing and can decentralize.

with the help of the Chenery-Syrquin equations, Mills and Song found that: "...the reason for Korea's greater than predicted urbanization does not appear to be that the predominately urban production sectors are larger than predicted (...). The answer to the question why Korea is somewhat more urbanized than predicted appears to be in the international sector (...). Korean exports were much greater than predicted in 1974 and have grown relative to their predicted share throughout the period covered (...). Thus, the reason that Korea is more urbanized than predicted appears to be that Korea's international sector, and especially its manufactured exports, are much larger than predicted by the Chenery-Syrquin model." ^{1/} An additional factor not mentioned is the very high population density of Korea.

2.34 The ability to undertake significant national urbanization policies is strongly affected by the quality of human resources in the country. Both the literacy rate and the percentage of population with more than a high-school level of education are constraints on what can be undertaken.

2.35 Political and institutional capacity to implement national settlements policies. Political and institutional constraints are the most important elements of national settlements policy making. The ability to select an appropriate strategy, to have it accepted and widely known throughout the country and the strength to sustain it over time are decisive factors. There is nothing more harmful to national urbanization strategies than shifting objectives and erratic implementation, because they often lead to major irreversible decisions. This affects the growth of the urban system as well as the internal structure of cities. Indicators of the institutional ability to carry out policies are: the degree of ethnic fragmentation, the structure

1. Mills and Song, Korea's Urbanization and Urban Problems 1945-1975, Harvard University Press, Cambridge, 1979.

the share of central government expenditures in total public expenditures and the relative balance between public and private sector investment. The frequency of turnovers in administration is a simple indicator to use, but the quality of communications between government planners and the business sector is much more difficult to assess effectively.

2.36 There are great differences between the urbanization patterns of centrally-planned economies and market economies which are related to the nature of their growth strategies in agriculture and industry. The context in which both households and businesses chose to locate in certain cities in preference to other differs substantially between these two types of economies.

C. A Typology of Countries for the Formulation of National Urbanization Strategies

2.37 The three major elements of a national urbanization strategy are: the implicit spatial policies created through the choices made when formulating national economic policies, the appropriate policies needed to deal with the problems of the very large cities (particularly congestion and pollution) and the policies needed to reduce sharp regional disparities and increase the degree of socio-economic integration of the nation. Given the wide diversity of national conditions among countries, a typology can be useful in showing the relative emphasis to be given to each of the three discussions of what constitutes a complete national urbanization strategy. Much confusion can be avoided in the comparison of country experiences, and significant returns appear attainable, by matching national urbanization strategies and country conditions more systematically.

2.38 The typology actually proposed covers all the countries of the world because there is much value in contrasting sharply differentiated national spatial situations, and one would also want to know where any given country belongs in terms of dominant spatial problems. Then, given a general notion of the nature of the national spatial development process in a country compared to all the others, the really interesting work of studying the unique traits that differentiate a country from all others can begin. Some of the characteristics of a country can be fitted into statistical curves. However, an individual country can pursue an individual policy in a totally unforeseen manner, a fact which should not be ignored.

2.39 The countries of the world can be grouped into six major groups as long as one considers the major tendencies of each group and remains flexible with respect to the boundaries between these groups. First, one should distinguish between market and mixed economies on one hand and centrally-planned economies on the other, because these two different institutional contexts are of major significance for national urbanization strategies and the three types of national urbanization policies (implicit national policies, intra-urban policies for large cities and interregional policies). Then countries can be distinguished on the basis of their level of development (GNP per capita), their total population, the size of their domestic markets, their population density and their total area and the presence of very large cities. The six major groups are: (1) very small countries, (2) countries with limited domestic markets, (3) large low-income countries, (4) middle-size, middle-income countries with large cities, (5) advanced industrialized countries, and finally, (6) centrally-planned economies. These six basic categories are presented in Table 2.6. To clarify the country content of each category, additional distinctions within each category have been made when useful. The number of countries falling into each category, as well as the averages for the area, the population,

Table 2.6: COUNTRY TYPOLOGY FOR NATIONAL SETTLEMENTS POLICY

Country Types Market and Mixed Economies	1 Number of Countries	2 % of World Population	3 Land Area (000 km ²)	4 Total GNP (\$US Millions)	5 GNP per Capita (\$US)	6 Total Population (Millions)	7 Population of the Largest City (thousands)	Policies of Major Significance		
								I National Implicit Policies	II Problems of Large Cities	III Large Regional Disparities
1. <u>Small Countries</u>										
a. City states	2	0.2	1.0	7,853	2,405	3.4	3,130		x	
b. Others 1/	39	0.7	---	---	---	---	---			
2. <u>Limited Domestic Markets</u>	37	5.3	381.7	1,800	354	5.8	389	x		x
3. <u>Large, low income</u>										
a. S. Asia	5	23.1	1363.4	30,034	158	187.6	4,500	x	x	x
b. Africa	7	5.3	1360.9	8,148	230	30.6	2,025	x	x	x
4. <u>Middle Income</u>										
a. Asia	5	3.7	255.8	17,315	678	30.3	3,496	x	x	
b. Middle East and Mediterranean	15	5.2	720.7	26,688	2,142	13.9	1,840	x		x
c. Latin America 2/	3	1.0	1234.0	18,251	1,330	13.0	4,282	x	x	
d. Latin America 3/	6	5.7	2350.8	42,901	1,145	38.6	5,484	x	x	x
5. <u>Advanced Economies</u>	19	16.9	1665.8	219,999	5,890	36.0	4,680	x		x
6. <u>Centrally Planned Economies</u>										
a. China	1	21.3	9597.0	354,978	410	865.8	10,888			
b. Other low income	6	2.2	169.0	4,370	490	14.6	1,063			
c. USSR	1	6.3	22,402.0	708,492	2,760	256.7	7,734			
d. Other middle income	4	1.5	174.5	27,912	1,930	15.6	1,435			
e. Higher income	3	1.6	183.0	75,403	3,640	22.0	1,737			

1/ IBI/IBRD members only. Descriptive data not calculated.

2/ Latin American countries with population growth rates under 2% per year.

3/ Latin American countries with population growth rates over 2% per year.

Note. Individual country data are presented in Annex Table 2.6, only group average are presented in Columns (3) to (7)

the size of GNP, and per capita figures are presented. In addition, the degree of emphasis to be given to each of the three categories of national urbanization policies is suggested in the table.

1. Small Countries with Market or Mixed Economies

2.40 This category includes two sub-groups: either countries that are very small with populations under two million or countries which have very small land areas and are city states. These countries do not need to have a fully developed, three-dimensional national urbanization strategy. Some have a land area which is so small that appropriate policies for the distribution of their population is mostly a matter of city or metropolitan planning. Among the countries with more than 2 million people, Singapore with 595 square kilometers and Hong Kong with a little more than 1,000 have a land area which is much less than many of the major metropolitan regions of the world. For instance, the area covered by the Regional Plan Association of New York is 3,371 square kilometers and many Latin American cities are also bigger. ^{1/} Most of the other countries in this category consist of populations so dispersed that problems of excessive concentration do not arise; in fact, insufficient levels of urbanization and economically inefficient city sizes may be the problem. While there are over 30 countries in this category, it represents less than one percent of the total world population.

2. Countries with Limited Domestic Markets

2.41 These countries are relatively small in terms of land area and population and total size of GNP. Because of the limited size of their economy, the potential development of manufacturing industries is heavily dependent on external markets and on the possibility for regional economic integration. Population concentration in the capital city is difficult to

1. See Gregory K. Ingram and Alan Carroll, The Spatial Structure of Latin American Cities, IBRD paper presented at the annual American Economic Association Meeting, August 1978, Table 2.

avoid as this is the only location where business firms can benefit from significant economies of scale. One could distinguish three major groups in this category. First, the Central American States which have a sparse population along the coastal zone. Because of climatic conditions, most of the urban development has taken place inland on the higher altitude plateaus. Second, the Caribbean states, being island economies, see their urban growth constrained and concentrated near a few commercial harbours. Third, the large number of small African states which are still at a low level of development, with a still unstable pattern of urbanization which is heavily dependent on the transportation network that can be developed between the capital city and a limited number of small centers. Many of these countries are experiencing a high degree of urban concentration even though their cities are not large at all by international standards. There are 37 countries in this category and they represent 5.3 percent of the world's population.

3. Large, Low-Income Countries

2.42 In this category of countries one can distinguish two continental sub-groups because of very marked differences in the institutional, cultural and economic context. First, one can consider the large, low-income countries of South Asia that indeed are extremely large in terms of total population and where one also finds a significant number of very large cities. Then one can consider the large, low income countries of Africa, which are significantly smaller in size than their South-Asia counterparts, but at the same time are quite different in scale from the other countries of the continent. Together these two groups include 12 countries and 28.4 percent of the world population.

(a) Large, Low-Income Countries of Asia

2.43 In this group of countries we find the low-income countries of India, Bangladesh, Pakistan, Burma and, with some significant differences,

Indonesia. However, the case for their uniqueness is developed here mostly on the basis of the Indian data. The characteristics of these countries from the viewpoint of urban policies are unique and none (or at least few) of the urban strategies that could be considered in the middle-income countries would make sense in this part of Asia.

2.44 The characteristics of urbanization in these Asian countries, as seen through the case of India, sets them apart from other urbanizing countries in the following manner:

- (1) During the third quarter of this century, the rate of population growth in India has been accelerating. It is confronted with an enormous growth of population in both urban and rural areas.
- (2) The level of urbanization has been going up very slowly from about 10 percent at the beginning of the century to only 21 percent in 1975. The rural sector has continued to grow significantly. It increased by 63 percent during 1950-75 when the urban sector increased by 121 percent.
- (3) While the share of the urban sector has remained relatively stagnant, its absolute size has become very large. In 1975, the urban sector of India represented about 9 percent of the world population, and projections indicate that in the year 2000, it could be as much as 11 percent, for a total of 355 million.
- (4) During the third quarter of the century, rural to rural migration has been far more important than rural to urban migration. The contribution of rural-urban migration has been particularly small in India.

(5) Within the urban sector, a reshuffling of the urban population has occurred through urban-to-urban migration. The percentage of urban population in cities over 100,000 has increased at an accelerated rate, while the share of population in the small towns under 20,000 has been falling steadily, as shown in the following table:

INDIA

Distribution of Urban Population
by Size-Class of Towns (percent)

<u>Census Year</u>	<u>100,000 and over</u>	<u>50,000 to 90,000</u>	<u>20,000 to 49,000</u>	<u>10,000 to 19,000</u>	<u>5,000 to 9,999</u>	<u>Under 5,000</u>
1901	22.9	11.8	16.5	22.1	20.4	6.3
1911	24.2	10.9	17.7	20.5	19.8	6.9
1921	25.3	12.5	16.9	18.9	19.0	7.4
1931	27.4	12.0	18.8	19.0	17.3	5.6
1941	35.4	11.8	17.7	16.3	15.4	3.4
1951	41.8	11.1	16.7	14.0	13.2	3.2
1961	48.4	11.9	18.5	13.0	7.2	1.0
1971	52.4	12.2	17.4	12.0	5.2	0.8

Source: A. Bose: Urbanization in India, 1977 in IUSSP Working Paper 3.

- (6) The stagnation of the urban sector is also underlined by the nature of migration, which is predominantly rural-to-rural over short distances within the same district.
- (7) Because of the importance of the rural sector, we have emphasized the shifts in the size-distribution of cities with the fairly low cut-off point of 100,000 for the largest size. However, there is a very large city problem in India as well when we break the urban sector above 100,000 into its components:

Urban Population Distribution for Cities over 100,000: India 1950-2000

Size Class S(1,000)	1950	1960	1970	1 9 7 5		2 0 0 0	
	(percent)	percent	percent	(percent)	(total) population	(percent)	(total) population
5,000+	0.0	4.5	6.4	5.9	15.0	8.0	73.3
2,000+	9.2	9.7	9.7	10.7	27.5	11.2	103.0
1,000+	14.1	14.0	13.4	13.0	33.4	15.3	140.4
500+	17.7	16.4	16.7	17.8	45.7	18.5	169.4
200+	25.9	24.5	24.5	24.2	62.4	22.1	202.8
100+	33.0	30.8	29.3	28.5	73.3	24.9	209.0
Total Urban Population	79.9	122.5	198.8	257.6	257.6	918.1	918.1

With the same reservations as those which could be made to projections for large-scale countries such as China, the notion of increasing concentration in the largest cities is also valid for India.

(b) Large, Low-Income Countries of Africa

2.45 In this category we find Nigeria, Zaire, Sudan, Ethiopia, Kenya and Tanzania, to which could be added Egypt in North Africa. In these countries problems of regional imbalances among regions and large population concentration in the capital region are very significant; at the same time the present level of urbanization is still low (the group average is under 20 percent). They all experience high population growth rates, and the growth rates of the largest cities are among the highest in the world even though they already constitute large urban agglomerations. This group includes seven countries which represent 5.3 percent of the world population.

4. Middle-Income Countries

2.46 Countries in this group are those most capable of developing very active and comprehensive national urbanization strategies. Their level of urbanization is often relatively high, and their income level indicates that the volume of resources devoted to urbanization is large and deserves much greater planning. They are all characterized by the presence of very large cities, and the quality of their internal policies is a major dimension of national urbanization strategies.

The following geographical subgroupings can be considered:

- (a) Middle-income countries of Asia,
- (b) Middle-income countries of the Middle East and Mediterranean countries,
- (c) Latin American countries with moderate or low urban population growth rates,
- (d) Latin American countries with high urban population growth rates.

2.47 In terms of national settlements dynamics, middle-income countries are most differentiated, and the following factors are important for the formulation of national urbanization strategies:

- (1) Degree of closure of the domestic economy: low closure means a low degree of interaction and interdependence among the regional components of the economy. It is indicated by the presence of a high degree interregional inequality while the entire country has already reached a fairly high level of development.
- (2) Regional structure of industry: by value of output, by level of employment, by size-distribution of firms, by form of organization--a high percentage of manufacturing volume accounted for by the 25 largest firms of the country indicates the frequency

of multiplant, multisectoral organizations which are more responsive to national urbanization policies; the percentage of manufacturing controlled by the government implies more scope for spatial policies; finally the distribution of manufacturing output by city is crucial to urban decentralization policies.

- (3) Degree of centralization of economic power: National programs of investment in infrastructure are a major aspect of national urbanization strategy. In addition, labor and business mobility are affected indirectly and directly by the ability of local government to provide urban services efficiently. The extent of control of local expenditures by the central government has a strong impact on local efficiency.
- (4) The growth rate of the rural population -- whether it is still growing at a high rate, levelling off or already declining -- has a strong impact on the growth of various cities. In the case of middle-income countries it is particularly important to determine what dominates migration patterns: rural-to-rural, rural-to-urban or urban-to-urban movement.
- (5) Middle-income countries are releasing these human resources constraints through education, but wide differences remain among them in literacy rates and proportion of highly educated population.

(a) Middle-Income, Middle-Size Countries of Asia

2.48 There are five middle-income, middle-size countries in Asia: Thailand, the Philippines, Korea, the Republic of China and Malaysia. These countries are spread apart in terms of population growth rate and level of

urbanization. They belong to one of the most dynamic regions of the world and have been shifting their economic strategies toward manufacturing exports, an approach that will speed up the pace of their urbanization. Each one of these countries has been actively reviewing the formulation of national urbanization strategies; among them is Korea, which has taken a more comprehensive approach to national spatial development and is steadily working at creating new instruments to achieve decentralization away from Seoul.

2.49 The needs for a deconcentration of economic activities as a part of a national urbanization strategy vary greatly among these five countries. They rank as follows according to the concentration index (Table 2.5).

	<u>Urban Concentration</u>	<u>Level of Urbanization</u>
Thailand	47	17
Korea	45	47
Philippines	28	36
Republic of China	19	64
Malaysia	16	30

They rank quite differently according to their level of urbanization, and there is no direct relationship between level of urbanization and urban concentration. Differences can be traced to rural policies, economic growth strategies and the quality of national infrastructure investment policies. The difference between Korea and the Republic of China, which are two countries otherwise very similar in trade policies, social structure and degree of inequality, is due mainly to the fact that Korea has a poorly endowed, high-cost agriculture and has switched directly to manufacturing for its

development strategy, while rural development has been contributing very effectively to national growth in the case of Taiwan. 1/

(b) Middle Eastern and Mediterranean Countries

2.50 If one considers urbanization in the Middle Eastern area, the dominant threads are geographic contiguity and the role of Islam. 2/ Found in this group are: Morocco, Algeria, Tunisia, Libya, the countries of the Arabian peninsula, Israel, Lebanon, Syria, Iraq, Turkey and Iran. Sudan, which could have been considered within this group, is distinctly different, with a much smaller degree of urbanization. The picture that emerges is that of a common historical background and diverging futures.

2.51 The traditional cities of the Middle East shared common features in their ideology, structure of society, and government, and physical form. It was above all religion that gave the Middle Eastern city its distinctive features, dominating personal and family relations, the physical lay-out of the city, the mode of government and the political structure of public life. The long urban traditions of these countries were profoundly affected over the last century by new economic interactions with Western Europe; their self-sufficient economies were opened to colonial interactions with the industrializing European powers and drawn into a new environment of politico-economic relationships.

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1. For more on growth patterns in the Philippines, Taiwan, Malaysia and Thailand, see Paauw and Fei, The Transition in Open Dualistic Economies; on Korea see, KDI Modernization Study.
 2. V. Costello, Urbanization in the Middle East, 1977. Michael Bonine, "Urban Studies in the Middle East," Middle-East Studies Association Bulletin, Vol. X, No. 3, October 1976. Janet Abu-Lughod, "Problems and Policy Implications of Middle Eastern Urbanization," Studies on Development Problems in Selected Countries in the Middle East, 1973, United Nations.

2.52 The divergence among the countries of the region is already extremely pronounced. At one end of the spectrum we have Israel, which is an already highly urbanized country with a high level of income, whose urbanization policies are dominated by the origins of the state and greatly complicated by disputes with the Arab border states. (It is one very clear example of how state policy, institutional structure and ideology interact to yield specific urbanization patterns). At the other end of the spectrum we have Saudi Arabia, Libya and the two Yemens, which still have a low level of urbanization deeply influenced by geography. But the comparisons end there: Saudi Arabia and Libya are among the richest and the two Yemen's among the poorest states of the world. Ideologies concerning the role of the state separate them even more deeply.

2.53 In the middle we have a group of relatively more similar countries which are close to a 50 percent level of urbanization, with intermediate levels of income. Given an emphasis on infrastructure and the emergence of a large scale public sector, major urban functions have tended to gravitate toward a few metropolitan regions. In many of these countries policy choices to solve urban problems of housing shortages, overcrowding, and lack of urban public services have often focused on strategies to reduce the volume of rural-to-urban migration. However, these policies of deflecting migration away from the largest centers to smaller urban areas do not seem to be taking proper account of the forces which are generating movements to the capital regions. In some of these countries rural inequalities have been a major factor inducing migration to the cities (Turkey). In others, the acceleration of growth generated by oil or other energy sources has led to the concentration of resources into highly localized urban areas in the urban regions (Libya,

Algeria). In all countries, the water problem is a major factor constraining the pattern of urban growth. Also, in all countries rural development programs have been slow in raising rural income and in increasing purchasing power in the hinterland.

2.54 To the group of Middle Eastern countries, one can add Israel as well as the three Mediterranean countries of Spain, Portugal and Greece. These four countries are at a higher level of urbanization than others in the group, and their national population growth rates are low to moderate. They have fairly large cities that are growing at a rate of around two to three percent, and their per capita income is high. The policies of these countries are influenced by Western European experiences.

(c) Latin American Countries with Large, Rapidly Growing Cities

2.55 What characterizes spatial development in Latin American countries is the contrast between: (a) significant levels of overall development in terms of per capita income, sophistication of the manufacturing sector and productivity of their economy, and (b) conspicuous structural and institutional barriers to the widespread diffusion of economic and social progress. They suffer from significant rural-urban disparities, pronounced differences between large and small cities as well as large interregional disparities. Among the countries which have large domestic markets, one can distinguish two groups: (a) the middle-income countries with large cities and a rapidly growing urban sector and (b) those that have already reached a high level of urbanization and have an urban sector that is no longer expanding rapidly.

2.56 In the group with large cities and a rapidly expanding urban sector, we have Mexico, Venezuela, Brazil, Colombia, Peru and Ecuador. Each one of these countries shows an urgent need for more appropriate policies and more

deliberate attention to every dimension of national urbanization strategies. Their national economic policies have strong built-in biases in terms of trade protection, credit policies and treatment of the rural sector. The internal management of cities, particularly of the largest ones, is a major issue; there also exist strong disparities among regions, caused by insufficient socio-economic integration of the various regions.

(d) Highly Urbanized, Slowly Growing Latin American Countries

2.57 Three other Latin American countries differ markedly from most other developing countries because they have reached a very high level of urbanization, and their annual population growth rate is about one-third of the growth rate of other Latin American countries. Chile, Argentina, and Uruguay are countries which have run out of many options for the adjustment of national settlements patterns. Most of their policy efforts must go into better internal policies and better treatment of various provinces by improving the growth of medium size cities. In these countries rural-to-urban migration is much less important than the city-to-city mobility of already urbanized migrants. This implies very different types of national settlements strategies, emphasizing the system of cities.

5. Advanced Market Economies

2.58 These countries have reached a stage of urbanization never experienced before. The size of their farm population has dropped to such a low level that rural-urban migration has become insignificant. The level of urbanization has reached its saturation point, but mobility of resources within the urban system is still very important. Depending on the political history of the country, on its degree of centralization of government and on its size, two different systems might be observed: a monocentric, hierarchical

system marked by the dominance of the capital region, or a polycentric system with several important urban centers of more or less the same size playing functionally differentiated roles. Recent analyses of these systems indicate a deconcentration away from the core urban region. ^{1/} The type of urban movement taking place in countries where rural-urban migration has exhausted its course could be referred to as mature urbanization to contrast it with the more familiar patterns of expanding urbanization, where rural-urban migration plays a major role in shaping the urban settlement patterns jointly with urban-urban migration.

2.59 There are major differences between the regional problems of advanced economies and the diversified range of problems experienced by developing countries even when the comparison is limited to the problems of middle-income countries. The advanced economies are highly integrated and most serious constraints on the choice of location by private firms have been removed: they are characterized by a well-established civil service, a highly educated labor force, a slowly growing or stationary population, well-educated, with a medium age above that of developing countries, and a very small degree of dispersion of regional per capita incomes. Most policy discussions are still attempting to make sense out of this new context.

6. National Settlements in Centrally-Planned Economies

2.60 The urban development process of centrally-planned economies does not fit well in any of the four major categories outlined so far. Their rate of urbanization is particularly rapid, but at the same time, the urban structure is much better balanced than in market economies. Because of the centralized nature of decisions, there is a strong emphasis on matching current needs against the realization of long-term, predetermined goals. These

1/ Daniel R. Vining and Thomas Kontuly, "Population Dispersal from Major Metropolitan Regions: An International Comparison," International Regional Science Review, Vol. 3, NO. 1, pp. 49-73.

countries appear to be controlling and eliminating extreme fluctuations in the speed of their urbanization. The more even distribution of urban centers and the extensive use of non-market decision making have created new ways of affecting factor mobility and urban growth. The dominant contrast with market economies is that centrally-planned economies have deliberately used their national economic policies to affect urbanization, while market economies too often have ignored these implicit policy instruments.

2.61 Centrally-planned economy countries represent almost 33 percent of the world's population. Like market economies, they could be subdivided into more homogenous sub-groups: (a) China, (b) other low income centrally-planned economies (such as Vietnam, The Lao People's Democratic Republic and Cambodia), (c) the Soviet Union, (d) high income, centrally-planned economies (such as Czechoslovakia, the German Democratic Republic, and Poland), and (e) middle-income countries (such as Hungary, Bulgaria, and Romania). ^{1/} The two major competing models of national urbanization strategies are the Soviet Union and the People's Republic of China. The general characteristics of the strategies followed by these two countries are described in Appendix 4. However, a brief outline of these strategies can help clarify major differences between centrally-planned economies and market economies.

2.62 The most important aspect of the Soviet urbanization strategy has been the systematic attempt to economize on the cost of urbanization and to block rural-urban migration through a two-pronged strategy. Very labor-intensive technologies were encouraged for agriculture, while very

1. See Roy E. H. Mellor, Eastern Europe: A Geography of the Comecon Countries, New York: Columbia University Press, 1975.

capital-intensive technologies were encouraged for industry. This situation encouraged much higher productivity gains in manufacturing than in agriculture. At the same time, the demand for higher urban services which would have been associated with higher levels of productivity of industrial labor was suppressed by the absence of a direct link between productivity and wages. Since savings are collected and allocated by the central plan, there has been a tendency to limit the supply of needed urban services. These factors explain why the Soviet Union appears to be controlling the growth of its very large cities better than most other countries. An additional reason has been the emphasis on "new" industrial cities, which has concentrated the supply of new services and skilled labor in intermediate urban centers. Thus the Soviet model combines high rates of urbanization with a very low degree of urban concentration.

2.63 Because the People's Republic of China represents more than one-fifth of the world's population, its urban policies are of major significance by themselves and as possible models for newly developing countries. Our detailed knowledge of urban development in China is still limited. Since 1957, migration to the cities has been drastically reduced through direct controls and the emphasis on rural development. Strict policies have been applied to stop the growth of the three major urban regions: the Shanghai region, the Peking-Tientsin region and the industrial zones of Manchuria (Harbin, Mukden). However, the drop in the growth rate of the urban sector has been associated with a similar drop in the rate of industrialization. It remains to be seen whether the abandonment of autarchic development policies and the move toward more international trade will be sustained. A move to a more rapid

rate of industrialization will significantly increase the rate of urbanization. It must be noted that the level of urbanization in China so far has been rising faster than in India, even though China is reported to have reduced its population growth rate below one percent a year. Like the Soviet Union, China appears to be controlling the growth of the largest cities well. Both the Soviet Union and China, being very large countries, have very serious problems of regional inequality.

III. DETERMINANTS OF THE GROWTH OF URBAN SYSTEMS
IN DEVELOPING COUNTRIES

A. Introduction

3.1 The size of a population, the percentage living in cities, and the rates of growth of both rural and urban population in relation to their level of economic development are all important indicators of the type of economic and urban environment one should expect to find in a country. They raise general expectations about the nature of the cities, the movements of population and the type of transportation systems used or even the type of housing system, but they provide only a grossly simplified picture of the way a country is developing. Aggregate urban indicators may be enough within the framework of traditional economic theory, which omits all references to space and treats any economic activity as if it took place at a single point. At early planning stages, it may be also possible to assume that development analysis can consist of watching numbers increasing at different rates along two columns, one labelled "urban sector" the other "rural sector". On the other hand, when the time has arrived to implement policy decisions the question "where?" becomes crucial, and it will make an essential difference whether the country is small, like Fiji, or large, like Brazil; desertic, like Yemen, or regularly drenched by equatorial rains, like Liberia; flood prone, like Bangladesh, or short of water, like Mauritania; with wide open plains, like Argentina, or valleys divided by mountain ranges, like Colombia; landlocked, like Zambia, or endowed with a hospitable sea coast, like the Philippines; within a region of major seismic activities like Iran, or relatively unaffected by earthquakes. Given a country's existing urban structure, it matters even more where future investment should be encouraged.

3.2 In addition to the very specific constraints imposed upon a country by its physical geography, economic development itself will set in motion a complex of forces that tend to lead to the movement of both labor and capital toward the same regions and the concentration of social and economic activities in cities, particularly the large ones. Neither new investment resources nor new additions to the labor force are being spread evenly across a country, nor should they be expected to be so.

3.3 The pattern of industrial investment and the concentration of population at selective locations have given rise to a debate on a basic national settlements strategy issue: in the formulation of policies, should the emphasis be on moving capital investment to the regions where the current populations are located? Or rather, should one let population immigration become the principal means of adjustment and expect labor to move where capital investment can be located most easily? A priori, one would prefer to help existing communities to grow and let them avoid the disruption of losing their more talented and younger members, who migrate to distant regions. The earlier analysis has already shown that such a goal is not easily met and that rural-urban migration is a major component of urban growth in developing countries.

3.4 The constraints on policies to decentralize and regionalize employment are created by the structure of the national and regional urban system and the way growth impulses are transmitted from city to city through the mobility of labor, financial flows, the flows of producer and consumer goods and the diffusion of innovations. The transportation system shapes the national patterns of population settlements for very long periods of time, but over the medium term (say five to ten years) the births, deaths and moves of business firms play the central role in the selective growth of cities.

At the lower end of the urban scale, small towns and rural centers interact strongly with the rural sector and depend on the structure and dynamism of the farm sector for their growth. The policy implications of these elements of dynamics of urban growth in developing countries are examined in this chapter.

B. Urban Systems, City Size and the Transmission of Economic Growth

1. Evolving Systems of Cities and the Concept of Optimal Size

3.5 In spite of the extreme complexity of urban settlements, a few major factors must be fully used in the formulation of national urbanization policies as well as in the formulation of particular plans of action for given cities or urban regions. The first and most important fact, especially for the planning of new economic activities, is that all the cities of a country form an urban system connected by flows of goods, people and information. This system is constantly evolving and reflects well the stage of economic development and economic integration of a country. ^{1/} It is a regular occurrence in the development of a country -- and practically a truism -- that the poorest provinces have the smallest number of cities compared to their population, and that in addition, most of their urban population is concentrated in the main city. On the other hand, the richest provinces or states share a much more structured system of cities, quite a few of which will be greater than the capital of the poorest province. This situation could be illustrated through a comparison of the 22 states of Brazil

1. As noted earlier, the term integration refers to the sectoral and geographical mobility of factors of production. It can be extended to the political sphere and related to social mobility.

in 1970, where the richest state, Sao Paulo, had 65 cities averaging 186,000 people, and the poorest state, Maranhao, had 5 cities averaging 60,000. The concentration of population in a few urban centers at the early stages of urbanization and industrialization is due to economies of scale and the effect of the risk and uncertainty which favor a few locations.

3.6 An important conclusion to be derived from the analysis of the growth and structure of urban systems is that the notion of an optimal size for a city is a meaningless planning concept. There are a variety of reasons why it is empirically impossible to identify an optimal size for a city stemming from the uncertainty attached to the costs and benefits of urban size. What needs emphasis is that, when analyzing the sources of growth of cities, the size of a city cannot be independent from its place in the hierarchy of cities which make up the urban system.

3.7 Some simple illustrations of the pitfalls of looking for some sort of optimal city size without paying careful attention to the country context are: Mexicans feel that Mexico City is much too large with its population of 11.9 million (1976); Koreans feel that Seoul is too large with a population of 7.8 million (1978); Malaysians feel that Kuala-Lumpur is too large with its population of 452,000 (1970) (even though Singapore was much larger in 1975 with 2.25 million); and it would not be surprising to hear also that Papuans feel that the population of Port Moresby, in Papua, New Guinea, with 113,000 (1976) is also too large. Part of the problem lies in the distribution of political power and, as previously noted, the difficulty of knowing when a city has reached an optimal size, even when it is the capital city and the linchpin of the entire urban hierarchy.

3.8 Clearly, the size of a capital city (or the leading urban center) is related to the size of the national population and the structure of the economy. It is also undeniable that some of the major cities of middle-income countries such as Seoul, Mexico City and Sao Paulo - as in the case of Tokyo two decades earlier -- are now reaching population sizes not attained previously by Western cities until reaching a much higher average income level. But the main point to remember is that even these population concentrations are directly related to the structure of the country and the operation of the economy. Any modification of the populations of these cities will change the rest of the urban system. These very large population concentrations lead to very severe problems of traffic congestion and environmental pollution whose solutions are seriously constrained by the average income level. Proper internal metropolitan policies toward these two problems constitute one of the three major dimensions of national settlements strategies. 1/

2. Expanding versus Mature Urbanization: A Fundamental Difference between Developing and Advanced Economies

3.9 The various types of urbanization which have been discussed earlier in the worldwide review share many characteristics and define a kind of urbanization which could be called expanding urbanization. On the other hand, the advanced economies are now entering into a new phase of urbanization never experienced before which could be called mature urbanization. Some of the most important differences between these two types of urbanization have

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1. As a point of reference, the greater Tokyo Region (Tokyo City plus the three prefectures of Saitama, Kanagawa and Chiba) had 24.1 million residents in 1970, within a 50 km radius. The average number of daily trips per resident was 2.5 in 1968. See Traffic in Tokyo, Tokyo Metropolitan Government, 1975.

been presented in Table 3.1. During the phase of expanding urbanization, industrialization plays a major role, and one can conceptually distinguish three successive phases for both urbanization and industrialization: initial concentration, decentralization towards selected locations and finally, a more thorough diffusion of growth throughout the nation.

3.10 Mature urbanization is characterized by a reshuffling of urban populations among urban regions, possibly accompanied by further suburbanization of population within the large metropolitan regions. It is important to realize that at that stage, city-to-city migration is the dominant factor affecting the system of cities. The determinants of city-to-city migration are quite different from those of rural-to-urban migration: because migrants are fully urbanized, they are much more sensitive to differences in amenities between cities. Under conditions of mature urbanization, the core urban regions are losing jobs and residents to more attractive locations. Both in Britain and in France decentralization schemes away from Paris and London are being reviewed and curtailed. In the United States mature urbanization is leading to regional conflicts between the Northeast and the Sunbelt, because the gain of one region is the loss of another in this new urban environment. Another common trait of the mature urban countries is that native population losses in the large urban centers are largely made up by foreign immigrants in Paris, London, Stockholm, the Ruhr Valley, New York and other large cities.

3.11 The contrast between expanding urbanization and mature urbanization can serve as a reminder that there is little reason for middle-income countries to borrow from the settlement strategies currently being followed in advanced economies, because they are based on different mobility patterns

TABLE 3.1: CONTRAST BETWEEN EXPANDING AND MATURE URBANIZATION

	(a) <u>Expanding Urbanization</u>	(b) <u>Mature Urbanization</u>
(1) National Population	Expanding well above the net reproduction rate. Its average age is young.	Current population growth rates often below the net reproduction rate. The average age of the population is above 30 and a substantial proportion is above 60.
(2) Rural-Urban Migration	Major force behind the growth of the major cities. Significant factor in the growth of practically all cities of the national urban system. Urban amenities are not a major determinant of migration.	Has practically stopped. The growth of cities is entirely dependent on urban to urban migration. Because migrants are already completed urbanized, they are particularly sensitive to urban amenities. The only factor preventing urban growth from becoming strictly a zero-sum game among cities is international migration.
(3) Degree of Economic and Social Integration	There remain conspicuous constraints to economic and social mobility between sectors as well as geographically.	Most of the constraints on the locational mobility of industry and services have been removed. Amenity intensive regions have an edge.
(4) Level of Income and Complexity of the Economy	Still not comparable with advanced economies. A major national objective is to reach comparability with advanced countries.	The leading sectors of the economy are high human capital-intensive and information-intensive. The majority of the population is employed in the service sector, which has reached high levels of productivity.
(5) Capital Region and Largest Cities	Still growing at a substantial rate.	Are no longer growing. In fact there is evidence that the processes of deconcentration in the major urban region of the country have already started. A factor masking this new trend is the important role played by international migration in replacing the larger net-out-migration of native urbanites from the capital region.

for labor and businesses. On the other hand, many of the urban tools and techniques used in advanced countries deserve careful analysis and can generally be adjusted by a middle-income country for its own national settlement policies.

3. Size, Location and Functions of Cities: Growth Potential and Classification of Cities

3.12 The size of a city cannot be evaluated independently of its location and its function, and it would be convenient to provide a classification of cities which would be used for the formulation of urban policies and valid for most of the middle-income countries. There is indeed a remarkable record of efforts to classify the cities of various countries as well as very substantial theoretical developments to analyze and explain the structure and growth of system of cities. Conceptual models such as central-place theory (Christaller, Losch and more modern statements), growth center theory (Perroux and others), Hierarchical diffusion models (B. L. Berry and other geographers), industrial linkage models (Pred and others), as well as very recent theoretical economic models (Vernon Henderson, 1978), have considerably improved our understanding of the economic, social and political forces affecting urban systems. However, at this stage, few if any of these analyses have yielded strong, clear-cut policy results easily transferable from country to country. They can greatly improve the formulation of national settlements strategies, making them more realistic and thus more effective, but they have yet to yield the convenient recipes, rules-of-thumb and quantitative operational guidelines judged necessary by decision-makers.

3.13 The immediate empirical outcome of the various theories attempting to provide more and more precise explanations of the structure and growth

of urban systems has been the classification of the cities of a country according to their functions and their ranking in order of importance. City classification analysis has a long and sophisticated history, particularly among urban geographers. 1/ The objective is to reduce the extreme diversity of city characteristics to a limited number of major dimensions to improve our grasp of the urban system. Typical studies will analyze more than 90 urban characteristics of cities for up to 1,100 urban areas. These classifications have provided better ways of looking at cities, but they cannot provide unique results uniformly applicable to all policy issues because the analytical needs of an economist differ from those of a sociologist, a political scientist or a physical geographer even though urban policy making eventually requires the formulation of an inter-disciplinary view point. These classifications make settlements policy discussions easier because the position of a city in the urban hierarchy and its physical location within the country cannot be understood without knowing its dominant functions. National settlements plans will often include detailed descriptions of the important functions by cities and/or regions

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1. The first functional classification scheme is reported to have been done for U.S. cities in 1937 by William Ogburn, Social Characteristics of Cities, International League of Cities; there may well exist earlier studies in other countries. The most frequently quoted pioneering effort is the paper by Chauncy D. Harris, "A Functional Classification of Cities in the United States" Geographical Review, 30 January 1943; it emphasized economic functions and relied on census data. Since then, numerous studies have been performed for a variety of countries, frequently in association with the University of Chicago. For references to Canada, Britain, Yugoslavia, Chile, India, Nigeria and Ghana, see Bryan L. Berry, City Classification Handbook, N.Y., John Wiley, 1972, especially Chapter I. An adequate library search would identify additional case studies. (Romania, China, Netherlands, Japan, Korea, etc.)

of the country. 1/ A good illustration of functional classification is the 1961 analysis of British towns by Moser and Scott, which is considered a classic among practitioners (see Table 3.2). It identifies 14 major types of cities in addition to London, which share common characteristics in terms of social and economic factors. It is readily seen how such a scheme can be adjusted to the reality of any other country, focusing on the economic base and the growth potential of each type of city and on the region where they are located.

4. Transmission of Growth and Development among Cities

3.14 Classification of cities according to the structure of their economic base provide useful clarifications of the growth potential, given the economic orientation of the region where they are located and national economic strategies. However, they do not provide any insight into the ways through which people, financial funds, producer and consumer goods, technical and social information move from city to city. Recent work by Pred (1977) on the transmission of economic impulses across cities through business networks provides new insights into the structure of urban systems in the case of developed countries. 2/ It raises serious doubts about the assumptions made by regional planners in formulating policies for regional development.

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1. See for instance, Mexico's Plan Nacional de Desarrollo Urbano, 1977/1978 Comision Nacional de Desarrollo Urbano, or Korea's 15-year Perspective Plan 1979-1991, Chapter 10.
 2. Alan Pred, City Systems in Advanced Economies, New York, John Wiley and Sons, 1977.

TABLE 3.2 Illustration of a Classification of Cities: The Case
of British Towns (1961)

- A. National capital with multiple functions: London
- B. Mainly resorts, administrative and commercial towns
 - 1. mainly seaside resorts
 - 2. mainly spas, professional and administrative centers
 - 3. mainly commercial centers with some industry
- C. Mainly industrial towns
 - 4. including most of the traditional railway centers
 - 5. including many of the large ports as well as two Black country towns.
 - 6. mainly textile centers in Yorkshire and Lancashire
 - 7. including the industrial towns of the North-East seaboard and mining towns of Wales.
 - 8. including the more recent metal manufacturing towns.
- D. Suburbs and suburban type towns.
 - 9. mainly "exclusive" residential suburbs
 - 10. mainly older mixed residential suburbs
 - 11. mainly newer mixed residential suburbs
 - 12. including light industry suburbs, national defense centers and towns within the sphere of large conurbations
 - 13. mainly older working class and industrial suburbs
 - 14. mainly newer industrial suburbs.

Source: G. A. Moser and Wolf Scott, British Towns: A Statistical Study of their Social and Economic Differences, London 1961.

3.15 The first questionable assumption has been used as the foundation for "growth center" policies. It asserts that significant investment and increases in the level of economic activities in a given city selected as a growth center will generate multiplier effects which will remain concentrated within the target city and its hinterland, defined as its geographical zone of influence. The theory of growth poles in its principles is very familiar; thanks to highly localized backward and forward linkages in the structure of production and to increasing levels of household expenditures by households, a concentration of investment in well selected cities will have powerful secondary effects which will lead to a substantial expansion of the local economy and the region. Thus it is assumed that multiplier effects are transmitted from cities of a selected size to smaller centers and their surrounding rural areas. This is assumed to be especially true for lagging regions which need to be brought back to levels of performance closer to the national average.

3.16 Another conceptual framework which has strongly influenced many policies toward cities is central-place theory. It has been used by geographers in particular to explain the size, function and sometimes location of cities. The regional concept, presented by Christaller, was developed with reference to wholesale and retail services and their distribution among cities of different sizes. The smallest size-class of rural towns provides the basic high frequency services needed by the rural hinterland; a fewer number of larger towns will provide more specialized services requiring a larger market both to the smaller towns and this hinterland. Larger city sizes were associated with higher-order services and a greater variety of

economic activities. This model was found in general harmony with the fact that the size distribution of cities exhibits remarkable statistical regularities from country to country and is very stable over time.

3.17 These useful findings related to services have been extrapolated into two unwarranted assumptions. The first one claims that what is frequently correct for wholesale and retail services is also true of other types of economic activities, and of the manufacturing sector in particular. The second unwarranted assumption is that economic growth will be trickling down from major urban centers to the smallest towns throughout the hierarchy of city sizes. More specifically the deliberate introduction of new economic activities in the largest center of a region is expected to generate further activities through the ranks of the smaller cities. Thus the assumptions are made that the transmission of economic growth occurs from larger cities to smaller cities in a predictable way and that upward or lateral interactions are not of great significance to the formulation of policies.

3.18 The critique of these theories within the context of the urban system of advanced economies developed by Pred is very useful in itself. For our purpose, it has the added benefit of suggesting where and how the urban systems of developing economies tend to differ. Pred is very critical of the propulsive industry version of growth transmission which has been the foundation of applied growth pole theory. In his words: "To argue that growth transmission is mostly or fully restricted to the hinterland of a growth center is to maintain that regional or subregional city-systems have a very high degree of closure, i.e. a low degree of interaction and interdependence with urban units situated elsewhere in the national system." ^{1/}

1. Pred, City Systems, p. 95.

3.19 The problem with many regional planning activities in developing countries is that they are based on weak or unwarranted assumptions concerning the geographic contiguity of the market area of a firm to the city where it is located and the nature of input-output relationships in the local economy. They consider neither the nature of industrial organization in the regional economy nor how employment is created when, in fact, it matters a great deal whether a firm is a single establishment, family-controlled, family-managed unit or a multi-plant corporate organization. The problem with such assumptions is that they ignore the extremely intricate interdependence of the component units of the urban systems of advanced economies. They also ignore the "likelihood that a propulsive industrial unit will belong to a multilocational organization with a variety of extraregional, intraorganizational and interorganizational linkages." 1/

3.20 The typical technique for appraising the nature of input-output relationships has been the construction of input-output tables or their derivatives. Both the simplified models used in developing countries and the few very large-scale studies done in advanced economies (Philadelphia, Stockholm, Seattle) for single regions show the large degree of openness of these local economies; many of the most important goods and services linkages or growth transmission channels occur with non-local units. 2/ Multi-regional input-output models have rarely been built even for advanced economies. The Japanese model built for a set of nine regions 3/ shows that

1. Pred, City Systems, p. 96

2. See also the recent review of the Calcutta economy by W. C. Wallich, Urban Growth in Calcutta, July 1978, IBRD, mimeo.

3. Takeo Ihara, Impact Analysis of Interregional Economies: A Tentative Scheme for Development Planning, East-West Center, Hawaii, Pacific Regional Science Conference, 1969.

the leakages from the poorer regions to the center are particularly important. Other Japanese studies based on regional accounts also show the transfer of earnings from the hinterland to the core region (Tokyo mostly) rather than their local reinvestment within the regional economy. Using simpler methodologies to estimate multipliers, it was found for the new industrial city of Ulsan in Korea that the short-run local multiplier was remarkably small. In general, it can be said that the extra-regional interdependence of small and less diversified cities will tend to be large for cities selected as growth centers.

3.21 As Pred points out very effectively, what most distinguishes the urban systems of advanced economies from those of developing countries is the important role played by large organizations in advanced economies. The economies of all developed countries are dominated by large private-sector corporations and government organizations that are "multilocal in character, i.e., comprised of a number of spatially separated and functionally differentiated units. A plentitude of revenue, asset and employment data show that the relative and absolute economic might of multi-local organizations has burgeoned since the Second World War ... for example, in 1974, 150 business enterprises answered for 88 percent of Sweden's total export, and partly as a result of foreign operations, the country's 200 largest domestically headquartered business organizations had aggregate revenues that exceeded the gross national product." 1/

3.22 In the case of developing countries, we do not have good documentation of either intra-organizational job-control, decision-making relationships or sometimes even input-output relationships. We can, however, expect that complexity in the structure of production and its spatial organization will

1. Alan Pred, The Interurban Transmission of Growth in Advanced Economies, International Institute for Applied Systems Analysis, Laxenburg, Austria, Research Report 76-4, 1976, 5.

increase the per capita income level, the share of manufacturing in total output and the size of the banking and financial sector. In the actual formulation of policies affecting location, a major constraint on the range of possible action will be the structure of industry: its sectoral breakdown and the size distribution of firms within each sector. We have emphasized the attraction of the largest cities for most manufacturing activities. The ease with which a firm will be expanding away from (or even leaving) these cities will be determined by the importance to the firm or to the plants of close location to a variety of urban services and close spatial linkages with other enterprises. Large corporations will be more capable of developing routine operations and providing the necessary support for a branch operation in a new location. A country's ability to promote large and efficient organizations is a major indicator of its ability to decentralize. In addition, the public sector will play a major role in the country where there is a significant manufacturing force because public sector firms can rely on government to reduce risks.

5. Implications for National Urbanization Policies

3.23 For the formulation of national urbanization policies, a list of basic propositions can be drawn to guide studies in a given country:

- (a) The sources of economic growth of a city cannot be inferred from the size of its population; it is dependent on its economic functions and its distance from other urban centers.

In particular, natural resources oriented cities (those cities depending on mining, fisheries, tourism, or agriculture) will exhibit growth patterns and potentials quite different from cities of comparable population performing mostly transportation wholesale or retail functions.

- (b) The largest cities of developing countries have an employment structure very similar to that of the major cities in advanced economies. Only a detailed analysis of the structure of their internal labor markets can yield information on specific planning needs and the extent to which dualism prevails. In general, there tends to be a positive relationship between diversification, city size, and level of income given the income elasticity of demand for most urban goods and services. 1/
- (c) The analysis of Japanese cities done by the Economic Planning Agency (Shinohara 1970 and Kawashima 1971) supports a general presumption that there tends to be an inverted U-curve relating the importance of manufacturing to city size. Past a certain level which must vary from country to country, the services sector becomes more important. The findings of these Japanese analyses are generally in concordance with the more recent study of the patterns of employment and industrial structure in the U.S. done by Bergsman, Greenston and Healy. 2/ In particular, they note that whatever the degree of disaggregation, "the secondary-tertiary distinction remains strong, i.e.,

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1. For some empirical evidence for a developing country, see Spatial Development in Mexico, IBRD, 1976. For a theoretical interpretation, see B. Renaud, "Employment Structure and the Stability of Urban Growth During the Urbanization Process", Urban Studies, 13, 1976. Also Bergsman, et al., "The Agglomeration Process in Urban Growth," Urban Studies, October 1972.
 2. Joel Bergsman, Peter Greenston and Robert Healy, "A Classification of Economic Activities Based on Location Patterns" Journal of Urban Economics, Vol 2, January 1975, and "The Agglomeration Process in Urban Growth," Urban Studies, October 1972.

manufacturing activities are not closely associated with services, trade, etc. ...". They add also that "the weakness of positive associations between manufacturing and services is noteworthy. The few exceptions that suggest actual linkages are port-related activities and analogous manufacturing, and pipeline services and oil production and refining". 1/

- (d) Comparable analyses for developing countries are not available yet, but one main difference that can be easily hypothesized is that because of the role played by the income elasticity of demand for various services, cities of similar population will have a less diversified structure in developing countries. One would also expect "high-order" services to be concentrated in the largest cities of developing countries, an hypothesis no longer valid in very advanced economies such as the U.S.
- (e) Classification of cities according to their economic structure and their sources of growth is very different from their classification according to the needs of their urban residents. In a developing country the total population and the average income level tend to be a good predictor of the nature of the demand for urban services serving the residents: the historical background and the growth rate of the population are obvious intervening factors. Few, if any, classifications based on the structure of local urban services (housing, urban transport, water supply and other utilities, etc.) have ever been attempted.

1. Bergsman, Greenston and Acoly, "A Classification," pp. 24-25.

While there is little or no correlation between the population size of a city and the sources of its growth, there is a much higher correlation between population and urban services needs and solutions. This fact is reflected in the system of local administrations of every country; the urban transport sector is particularly closely associated with the size and income level of a city. 1/ The provision of urban services to residents is discussed by Linn. 2/

3.24 In addition to size and economic function, the distance between one city and other cities appears to play a significant role in the growth potential of the local economy. This hypothesis has been most clearly stated by Von Boverter, and preliminary tests have been made. In Von Boverter's formulation: "... A given town has better growth prospects if it is either close by a vigorous bigger city or far away from all competing centers and there is some intermediate distance at which the town is worse off." 3/ This perception is based on the consideration of two dominant factors affecting the growth potential of a given urban center: agglomeration economics and the existence of an economically strong hinterland. The worst distance will be short in the case of a small city. The further away from the worst location with respect to a competing center a city is, the bigger the potential for further growth; in that case a rich hinterland will help because the city would have to be rather big to become fully viable and develop significant agglomeration economies of its own. Such a useful insight

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1. See, for instance, J. Michael Thomson, Great Cities of the World and Their Traffic, 1977, London.
 2. Johannes Linn, Policies for Efficient and Equitable Growth of Cities in Developing Countries, background paper for the World Development Report, 1979.
 3. Edwin Von Boverter, "Optimal Spatial Structure and Regional Development", Kyklos, Vol 23, 1970, pp. 903-24.

is, however, difficult to use for actual planning because there are important intervening factors such as population density, transportation costs and products as well as factor mobility.

C. Role of Transportation in Shaping Patterns of Settlements

1. Limited Transportation Networks Encourage Urban Concentration

3.25 Throughout history, cities have always tended to locate at favorable locations providing significant savings in transportation costs: they are found along major rivers flowing through rich agricultural plains, they have grown around seaports, along navigable lakes and at the crossroads of major trade routes. The main effect of modern transportation technologies (large-gauge canals, railroads, modern shipping systems, highway and expressway networks), has been to enormously increase the comparative advantage of the locations served by these transportation systems over other existing locations not served.

3.26 Because the growth of cities is now very much dependent on the pace of industrialization, the cities that are growing most rapidly are those that are most favorable to the location of economic activities, and the quality of their transportation links will become an important factor. But it must be noted that economic forces are not the exclusive source of growth possible for current urbanization. Just as was the case in the past, there are still cities that are growing as religious centers (such as Mecca), military bases or political centers.

3.27 If the structure of the transportation network serving a country affects the pattern of urbanization, it also reacts to it. More new transportation investment will take place between cities that are growing rapidly.

In the case of developing countries, the heritage of a colonial past is often a transportation network which funnels the movement of goods and services into a major harbor and often does not provide adequate lateral transportation between other inland regional centers. In particular, instead of having a road transport network that covers the entire country rather evenly, one often finds an all-weather road network that is tree-shaped and drains all activities into the main export city connecting the country to Western markets.

3.28 The impact of a limited transportation network can be very strong because the freedom to choose a variety of locations does not exist, and communications must follow very specific routes. In Western Europe, in North America or in Japan, where most of the transportation constraints have been released, one can be confident that in practically all cases the actual road distance between two significant cities will not differ much from the air distance, the difference being less than 20 or 25 percent. In many developing countries it is frequently impossible to travel directly between two relatively close cities, and the only feasible route is through a fairly distant major city: urban growth patterns are deeply affected. In Korea, for instance, the "one day travel zone" policy for transportation, followed over the last 15 years to make sure that no place in the country would be over one day's travel time away from any other location, came at the same time as industrialization and is only helping deconcentration now. In contrast, it cannot be denied that the existence of an adequate transportation system in Taiwan prior to in-migration from the Mainland and rapid industrial growth, has been a significant factor leading to the very balanced distribution of population in Taiwan by international standards.

3.29 Given the typical transportation networks of developing countries, economic forces will tend to accentuate the concentration of economic activities at the transportation terminals. On a continental scale, the history of how various transportation modes can shape the location and growth of cities is particularly evident in Latin America. ^{1/} The major transportation systems have often made relations between two countries easier than between the capital city and its national hinterland, and past transportation patterns continue to have an effect on the current concentration of population along the coast as the strong comparative advantage they have initially provided continues to feed further economic growth.

2. Economic Concentration along Transportation Corridors between Major Urban Centers

3.30 A factor of major significance to national spatial development policies is that existing transportation corridors between major cities have a tendency to grow stronger over time. If we consider a metropolitan center in isolation, it can be seen that the development of railroad networks or all-weather transportation networks will favor new and large-scale factories which have comparatively low marginal costs of production because of the size of the market that they are already serving. Lowered transportation costs will further expand the market area that they can serve profitably and will frequently lead to the elimination of existing smaller-scale producers who

1. For discussions of other national transport networks, see Brian J. L. Berry, Essays on Commodity Flows and the Spatial Structure of the Indian Economy, Paper No. 111, Department of Geography, University of Chicago, 1966, or Peter Haggett, Locational Analysis in Human Geography, New York, St. Martin's Press, 1966.

used to serve smaller cities in relatively more eccentric locations. ^{1/} Economies of scale in production and in transportation related to the rapidly increasing output of industry tend to expand the market area that can be served from a given manufacturing center and will favor large-city interdependence accompanied by greater labor market specialization, and the attainment of minimum market-size for specialized products (particularly services) non-traded outside major urban centers.

3.31 The simplified chain of events leading to more rapid urban growth along the transportation link connecting two major urban centers has been described by Pottier (1963), Janelle (1969) and Pred (1977) as follows:

1. The appearance of railroad transportation lines or major highway links (such as the Seoul-Busan expressway in Korea) joining leading urban industrial centers encourages inter-urban (inter-regional) trade between the two cities concerned. Because ton/mile costs on railroads are typically a function of the total traffic per unit length of track, freight rate economies accrue to the cities at each end, particularly when they are rapidly expanding cities with a growing traffic in food, supplies, goods in transit, incoming industrial inputs and outgoing manufactured products. The availability of lower freight rates in relatively few cities along

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1. The advantages of larger-scale firms, based in the richest consumer market where new transportation systems lower distribution costs, are well known. The opening of a better road will suddenly eliminate the natural protection enjoyed by small firms in smaller cities where traditional crafts will quickly disappear. A most typical case is Colombia, with its former system (before the improvement of the highway network) of provincial urban centers tucked in each valley and serving a limited market.

the dominant trunk line helps to attract new manufacturing establishments and stimulates the expansion of existing capacity on site, reducing the competitive position of less attractive cities distant from the main transportation axis.

2. The growth of traffic between the two cities yields production economies and lowers per unit freight costs. It improves as well the diffusion of labor market information for the migrant labor force in favor of these dominant cities.
3. The growth of traffic offers the opportunity to reduce shipping rates or to improve services (frequency of service, quality of the rolling stock used, terminal facilities, etc.). This further stimulates inter-urban trade.
4. Larger volume trade will permit major investment in new facilities: for railroads: double-tracks, electrified lines, faster locomotives, greatly increased number of train schedules; for road transport: large-scale container facilities, truck service stations. Such services will come first to the major urban centers at each end of the transportation axis.
5. With rapid growth, increasing congestion and rising costs of non-traded services in the major centers will induce the location of new industries away from the two major urban centers. The best location will be in a smaller city along the main transportation axis, at a secondary transportation node where the firm will have easy access to the two major markets and quality transportation services.

3. Relations between a City and Its Hinterland: Transportation and the Opening of Trade in Rural Areas

3.32 One could contrast the effect of increasing transport efficiency between two major centers with the dynamic impact of rural roads. Transportation between two major centers leads to more rapid growth of economic activities along the trunk line than elsewhere in the country as well as concentration of economic activities in the two major urban centers. Transportation in rural areas opens up new areas to profitable agricultural development and often has a combined effect of increasing agricultural productivity and output as well as stimulating migration. From the viewpoint of transportation analysis, much of the difference between the two types of transportation investment decisions is related to the traffic that is expected to materialize with the reduction in transportation costs: to the projected growth of traffic must be added the induced growth stimulated by lowered costs, (which transportation economists distinguish as "normal" traffic and "generated" traffic). Simplifying, one could say that, in the case of a major transportation corridor, investment follows the demand for transport, while in rural areas, transportation investment is expected to greatly stimulate economic growth and lead to much higher levels of future traffic. 1/

3.33 The projected change in the use of a rural road is critically dependent on the answer to several basic questions:

- (1) Who benefits from the transport cost savings created by the new road? Is the impact evenly spread among producers, traders, and consumers?

1. Carnemark, Biderman, and Bovet. op. cit.

(2) What will be the response of producers to higher farm prices, lower input costs and higher quality of service, particularly greater frequency and improved reliability? Will savings be enough to induce a measurable input increase? Will lower transport cost permit the introduction of significantly new inputs?

(3) Will the transportation improvement lead to entirely different market structures for farm inputs which will favor the local imports of new goods not previously available? Will migration be accelerated?

3.34 There is no way to theoretically predict the distributional impact of a new transportation investment. The pattern of interaction between small urban centers and their hinterland cannot be predicted a priori. For instance, in Iran, Colombia and Brazil, it was found that the benefits of a better rural-urban integration through transportation were mostly absorbed by urban-based intermediaries who captured a large proportion of transportation cost savings without meaningful improvement of the incentives to the producers. ^{1/} In two cases, the benefits were absorbed by market middlemen who collect and transport the product; in Brazil the lion's share was absorbed by the transportation companies. The structure of farm production has an effect on rural-urban interaction. Land tenure and the agricultural credit system may concentrate benefits to land-owning farmers or absentee landowners and by-pass tenants. On the other hand, the study of a rural road project in Madagascar (Andapa Basin) evaluated the contribution of the road and improved

1. Curt Carnemark, Jaime Biderman and David Bovet, The Economic Analysis of Rural Road Projects, World Bank Staff Working Paper, no. 241, 1976, p. 12.

access to markets and other services and found the project beneficial to producers. After accounting for the effects of price controls both on the price of crops (vanilla, coffee and rice) and on transportation tariffs, it found that roads has significantly improved the potential of the region. This finding is consistent with the fact that the crops considered, particularly rice, were transportation intensive.

3.35 In general, one cannot expect that new rural-urban transportation links will lead to major producer responses. New transportation investment very often has an effect which is limited to the release of constraints placed on the expansion of existing economic activities. The direct effect of investment on local output depends on the degree to which local commodities are "transport intensive." In such a case, the derived demand for transport will be more elastic. In all cases rural roads should benefit rural centers and small towns.

4. Policy Implications

3.36 Given the existing network of cities and the associated transportation system, a national urbanization policy needs to build upon the existing strengths of the system and to emphasize locations in intermediate cities of a substantial size (which will vary according to each country) located in the major urban corridors. Even within such corridors, there will frequently remain a great deal of room for major locational choices. There is a very low probability that decentralization can be realized by providing major central government support to growth in the relatively isolated capital city of a low-income province, particularly when that province has not yet reached a significant level of manufacturing and related economic activities. Prematurely forcing the relocation of major manufacturing activities in such locations

can prove costly to the national economy and fatal or near fatal to the firm (Asia Motors locating in Gwangju, South Cholla, Korea in 1968). The general timing of investment in such stagnant or slowly growing regions cannot be identified without reference to the pace of growth of other regions and the overall long-term outlook for the national economy.

3.37 It can be safely said that, in most developing countries, the development of economic activities along the major transportation corridors should be encouraged, not discouraged. The possibility for the spread of manufacturing activities will be also related to the opening of new transportation links connected to the main corridors. However, as shall be discussed further on, the creation of new transportation links connected to self-contained "new towns" is very likely to be the most expensive and least effective way of attempting a decentralization policy.

3.38 It would be greatly misleading to argue that the growth of cities is entirely determined by historical and current patterns of inter-city transport investment. The relatively undeveloped transportation system of developing countries plays a major role in the rapid growth of larger cities, because it provides them with a major economic advantage over other locations. But saying that does not mean that industry does or should select a location in order to minimize transportation cost. The expansion of the transportation system over time will relax constraints on alternative locations. In addition, other constraints on the location of economic activities progressively further away from major centers also need to be released because the growth of modern developing cities is determined by the growth of employment and labor mobility.

D. Role of Industrialization in the Concentration of Population

1. Why Single Out Manufacturing Activities

3.39 In the formulation of national spatial development policies, a sound understanding of the factors affecting business mobility is more important than the understanding of the determinants of migration because, fundamentally, migrants have to go where the jobs are. In particular, a realistic understanding of the location of manufacturing activities is central to the understanding of the growth of cities and the organization of economic activities in space.

3.40 There are three major reasons for singling out the location of manufacturing employment as a major element in designing and implementing spatial, social and land-use policies at the national and the regional level, even though manufacturing employment seldom constitutes the largest source of employment in the capital region of a country. (See Table 3.3 reporting the employment structure in eight cases). First, the service sector plays a very important role in the cities of developing and advanced economies alike; most consumer-oriented services are closely tied to the location of the population of those cities. These population-serving activities are not greatly amenable to locational control at the national and regional scale in contrast to internal metropolitan planning. In addition, these activities do not generate much income outside the city which they are serving. A second reason is that manufacturing firms are greatly more mobile than firms in the services sector. Studies of the service industries in advanced economies have shown that even when relatively mobile, service firms are less important than

Table 3.3 OCCUPATIONAL STRUCTURE OF SELECTED CAPITAL CITIES
(in percentages)

Sector	<u>1/</u> Seoul (1970)	<u>2/</u> Kuala Lumpur (1970)	<u>3/</u> Manila (1970)	<u>4/</u> Abidjan (1970)	<u>5/</u> Tunis (1972)	US Small MLM <u>6/</u> (1960)	US Large MLM <u>7/</u> (1960)	<u>8/</u> Bogota (1972)
Agriculture and Mining	2.3	7.0	3.5	4.6	1.8	7.1	1.0	1.0
Manufacturing	22.7	20.5	22.1	22.5	18.9	25.1	30.2	28.5
Construction	7.1	6.0	6.5	10.4	5.9	6.0	4.8	9.5
Transport	4.3	6.6	9.7	10.1	6.0	3.9	4.6	12.1
Commerce	28.9	17.6	13.8	18.6	17.5	28.4	32.6	23.5
Public Utilities	1.3	1.4	0.8	1.0	1.4	1.4	1.3	-
Services	33.0	35.5	37.3	42.8	39.2	28.8	24.8	30.3
Others	-	5.3	6.2	-	9.3	3.1	5.3	2.2

1/ Seoul Statistical Yearbook 1971

2/ Urbanization and Employment in Kuala Lumpur, WEP-ILO paper February 1975.

3/ Manila, Urban Sector Report, Vol. 1 page 21, 1975.

4/ Urbanization and Employment in Abidjan, WEP-ILO paper 1974.

5/ Tunis, Public Finance Report, 1975.

6/ & 7/ Stanback, T.M., and Knight, R.V., The Metropolitan Economy, (New York: Columbia University Press, 1970).

8/ Bogota Urban Development Study, IBRD-UNDE, September 1973.

manufacturing in terms of volume of movements (number of firms and jobs involved), in terms of distance involved in the move, and in terms of the range of new locations selected. ^{1/} The third and most important reason for concentrating on the location of manufacturing employment is that it is most likely to have a greater multiplier impact upon the expansion of the local and the regional economy than a similar employment expansion in the service sector.

2. Birth, Death and Relocation of Firms

3.41 Quite a few countries have announced policies to encourage the dispersion of manufacturing activities away from the capital region. In fact, incentives towards decentralization of manufacturing activities are often the cornerstone of explicit national settlements strategies. These are designed on the basis of weak empirical knowledge: it is remarkable how little is known in developing countries about the sources of changes in the composition of the manufacturing sector in major cities.

3.42 At present one can derive only broad impressions of the likely level of manufacturing mobility from looking at annual investment data at the national level and comparing them with the available data on manufacturing employment by city. In a stagnant economy, where the volume of manufacturing investment is low, one would not expect many opportunities for spontaneous decentralization because most firms are operating below capacity. For any period of time, much of the investment in manufacturing will be for the replacement of equipment or the expansion on site of existing facilities.

1. Interested readers can refer to Office Location: An International Bibliography, Council of Planning Librarians, 1977, and the earlier bibliographies provided by the Location of Offices Bureau, an office of the U.K. Government which has been a major factor behind office location analyses in Great Britain, 1972 and 1975.

3.43 Detailed information on the movement of industry affecting large cities, particularly in developing countries, is very scarce, and whatever information we have does not tell us much about the distances involved in moves crossing the metropolitan boundaries. The typical accounting procedure involved in tracing industrial movements requires the decomposition of the net changes in the number of firms and the size of employment into birth of new firms, death, expansion in situ, decline in situ and actual moves across city boundaries. The preliminary findings of the Bogota industrial directory files tell us that the level of relocation within the capital region is very substantial and has affected over 5 percent of the firms annually over the period 1970-1975. However, tentative results from the survey indicate that only a small fraction of the new births (8.8 percent of the firms, 5.7 percent of jobs) have come from interregional moves. The rate of deaths has been smaller, and we have no information on decentralization decisions. The comparative results for Bogota, Cali and five U.S. cities show that both the manufacturing structure and mobility patterns do not differ dramatically between Colombia and the U.S., (see Tables 3.4 and 3.5, borrowed from K.S. Lee, 1978). 1/

3.44 Preliminary impressions from the ongoing study of Bogota suggest a continuous and significant amount of internal relocation of manufacturing activities within the metropolitan region and a much smaller amount of inter-city movements, particularly out of the region. This weak outward relocation flow is confirmed by the analysis of changes in industrial employment by city size (see J. Linn, 1978).

1. Kyu Sik Lee, Intra-urban Location of Manufacturing Employment in Colombia, paper presented at the American Economic Association Meetings, August 1978. Revised October 1978.

Table 3.4 Manufacturing Firm Size and Employment Distribution:
Comparison of Bogota and Cali with U.S. Cities

A. <u>Firm Size Distribution</u> ^{1/}												
<u>Size</u>	<u>Bogota</u>		<u>Cali</u>		<u>Washington, DC</u>		<u>Boston</u>		<u>Chicago</u>		<u>Los Angeles</u>	
(persons)	%	cumm.	%	cumm.	%	cumm.	%	cumm.	%	cumm.	%	cumm.
less than 20 ^{2/}	57.55	57.55	55.25	55.25	59.11	59.11	50.39	50.39	46.89	46.89	53.03	53.03
20 - 49	24.17	81.72	22.45	77.70	24.53	83.64	25.08	75.47	24.06	70.95	24.48	77.51
50 - 99	10.11	91.83	11.95	89.65	8.88	92.52	12.93	88.40	11.60	82.55	11.18	88.69
100 - 499	7.43	99.26	9.33	98.98	6.54	99.06	10.05	98.45	14.61	97.16	9.84	98.53
500 or more	0.75	100.00	1.02	100.00	0.93	100.00	1.56	100.00	2.84	100.00	1.46	100.00

B. <u>Employment Distribution</u> ^{1/}												
<u>Size</u>	<u>Bogota</u>		<u>Cali</u>		<u>Washington, DC</u>		<u>Boston</u>		<u>Chicago</u>		<u>Los Angeles</u>	
(persons)	%	cumm.	%	cumm.	%	cumm.	%	cumm.	%	cumm.	%	cumm.
less than 20 ^{2/}	14.35	14.25	10.78	10.78	12.17	12.17	7.57	7.57	4.95	4.95	8.07	8.07
20 - 49	18.26	32.51	12.71	23.49	17.47	29.64	12.28	19.85	8.37	13.32	13.48	21.55
50 - 99	17.31	49.82	15.79	39.28	13.63	43.27	13.92	33.77	9.00	22.32	12.40	33.95
100 - 499	35.74	85.56	35.32	75.60	31.20	74.47	31.15	64.92	33.42	55.74	30.79	64.74
500 or more	14.45	100.00	24.39	100.00	25.54	100.00	35.08	100.00	44.26	100.00	35.25	100.00

C. <u>Average Firm Size (persons)</u>						
<u>Size</u>	<u>Bogota</u>	<u>Cali</u>	<u>Washington, DC</u>	<u>Boston</u>	<u>Chicago</u>	<u>Los Angeles</u>
less than 20	9.95	10.07	9.07	9.78	9.60	9.53
20 - 49	30.35	29.21	31.35	31.86	31.57	34.48
50 - 99	64.80	68.12	67.61	70.05	70.46	69.47
100 - 499	193.34	200.81	210.00	201.78	207.66	195.87
500 or more	771.63	1233.00	1,203.50	1,465.40	1,416.58	1,509.07
Total	40.18		44.04	65.07	90.60	62.62

(1,000 persons)						
	<u>Bogota</u>	<u>Cali</u>	<u>Washington, DC</u>	<u>Boston</u>	<u>Chicago</u>	<u>Los Angeles</u>
Population ^{2/}	3,453	1,057	2,862	2,754	6,978	7,041
Total employment ^{3/} (A)	1,157	351	1,110	1,098	2,503	2,596
Mfg employment ^{3/} (B)	291	106	67	262	782	719
Mfg empl. share (%)	(25.16)	(30.20)	(6.04)	(23.87)	(31.20)	(27.70)

1/ 1970 for Bogota and Cali; and 1973 for U.S. cities. All U.S. figures are for central city.

2/ For Bogota and Cali, this category covers 3-19; and for U.S. cities, 4-19.

3/ 1977 estimate for the Special District of Bogota and Cali; 1970 U.S. census SMSA figures for U.S. cities.

Sources: Figures for U.S. cities are from Gregory K. Ingram, "Reductions in Auto Use from Carpools and Improved Transit," Harvard University, October, 1976; they are derived from County Business Patterns, 1973, and data on journey to work (Table 2) of the 1970 U.S. Census.

Source: Borrowed from Kyu-Sik Lee, Intra-Urban Location of Manufacturing Employment in Colombia, 1978, IBRD.

Table 3:5 Birth, Death and Relocation Rates in Bogota, Cali
and U. S. Cities

	<u>Births</u>				<u>Deaths</u>				<u>Movers</u>			
	<u>Establish- ments</u>		<u>Employment</u>		<u>Establish- ments</u>		<u>Employment</u>		<u>Establish- ments</u>		<u>Employment</u>	
	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>	<u>% of Annual base rate</u>
Cleveland ^{1/}	9.97	3.22	2.59	0.86	14.07	4.49	7.75	2.52	13.83	4.41	5.77	1.89
Minneapolis- St. Paul	12.29	3.94	6.17	2.02	18.00	5.67	11.25	3.62	15.93	5.05	8.28	2.69
Boston ^{1/}	6.10	1.99	1.30	0.43	13.40	4.28	8.00	2.60	9.80	3.17	4.70	1.54
Phoenix ^{1/}	24.40	7.55	12.10	3.88	20.20	6.32	5.30	1.74	8.90	2.88	4.70	1.54
New York ^{2/}	10.21	4.98	3.95	1.96	7.56	3.71	3.55	1.76	11.45	5.57	1.24	0.62
Bogota ^{3/}	52.38	8.79	31.96	5.70	27.01	4.90	12.61	2.40	28.37 ^{4/}	5.12		
Cali ^{3/}	43.13	7.44	24.48	4.48	26.88	4.88	11.27	2.16	23.33 ^{4/}	4.28		

^{1/} From R. Struyk and F. James, Intrametropolitan Employment Location, Lexington Books, 1975; covered 1965-68 period (1965 was the base year).

^{2/} From R. Leone, Location of Manufacturing Activity in the New York Metropolitan Area, 1971; covered 1967-69 period (1967 was the base year).

^{3/} The period covered was 1970-1975; 1970 was used as the base year. The base year figures can be seen in Lee (1978).

^{4/} These figures include relocation within the same seccion, which defines subareas in a barrio (see footnote 10 on the next page). For those establishments which moved to at least another seccion changing DANE's six-digit zone code, the annual relocation rate was 3.56% for Bogota.

Source: Borrowed from Kyu-Sik Lee, Intra-Urban Location of Manufacturing Employment in Colombia, 1978, IBRD

3. Relocation Decisions Are Infrequent, the Search Process Limited

3.45 The existing industrial location theory is rather ill-adapted to policy formulation in the context of developing countries because it assumes rationality, complete information, a set of static conditions and disregards the broader context of regional, national and international economics by taking them completely as given. In reality, the location decision context is one of very incomplete information where the entrepreneur, whether he be the manager of a large scale textile plant or the operator of a food store, must consider a very wide variety of factors which are imperfectly known, or totally unknown, then decide whether his business can be expected to adjust to them, survive and prosper. The greatly uneven access to information and its unreliability are major forces explaining the spatial concentration of economic activities at the early stages of development.

3.46 In formulating industrial dispersal, it is very important to keep in mind that the choice of a new location for a manufacturing investment presents very unique problems to the manager of the organization, whether it is a public or a private corporation. Except in the case of extremely rapidly growing economies, it is a decision which businesses face very rarely. Even for a business of a significant size, an individual manager is not very likely to go through this experience more than a couple of times in his entire career. In developed and developing countries alike, for the majority of firms there are very few precedents, no solid rule of thumb, and no record of past experience on which to rely. The range of factors to be analyzed is extremely wide, and even for the same type of manufacturing activities, those factors that are really binding can vary significantly from case to case. And a bad decision will be difficult to reverse.

3.47 Because the location decision is a limited search process, it plays a major role in explaining the observed distribution of maximum activities in advanced economies and developing countries alike. To understand why rapid industrialization in the early stages of development favors concentration of economic activities into the largest cities, it is necessary to take a closer look at the steps involved in deciding on a business location. All research on industrial mobility indicates that the relocation decision could have been improved with more planning and forethought and that the quality of the search process is closely related to the importance of the business and the size of the operation involved. 1/

3.48 The reason why business managers are always short of experience in making a location decision is that it is a discrete and unique step. In small firms it is a very infrequent decision: in large firms, where more moves might be made, there is seldom a justification for the existence of a specialized team within the organization even in advanced economies. For these reasons, specialized expertise on location search is hardly expected in developing countries. First, managers must decide whether they really need to move, or whether there are better alternatives to moving. Depending on size, they must decide on a complete transfer or a branch plant; they must decide on the timing and the scale of the new operation; they must decide on the search procedures. They must decide on the area where they want to locate and consider: transport and communications; ties with other company operations; labor conditions (availability, quality, unions, training requirements);

1. For one of the most recent and most thorough reviews of the problems confronting a manager, see Peter Townroe, Planning Industrial Location, Leonard Hill Books, London, 1976.

supplies of materials and components; access to services; central and local government services; amenities. Once this stage has been reached, a choice of site must be made involving: intra-urban location, physical characteristics, tenure, availability of buildings, access to services, prices. Then follows the transition into a new plant with its own series of problems, and finally, the period after the move when operations are starting, but full production efficiency and viability has yet to be reached.

3.49 The multitude of problems which must somehow be solved if a business operation is to operate profitably and successfully makes the largest cities almost irresistibly attractive to a businessman whose location decision is a consciously made one, and who has actually considered alternative cities. They also explain why the largest cities are also the most likely places for the births of activities that are new to the country.

3.50 The lack of economic integration, i.e., the lack of geographic and sectoral mobility of factors of production is by itself a factor in location. The less developed the economy, the greater the likelihood of location at the only large urban center and the polarization of economic activity. One of the lasting findings of classical location theory is the distinction made between market-oriented economic activities and raw materials- and resource-oriented activities, with the general rule that the best location for an activity pulled between the major market and its major source of supply is seldom, if ever, the intermediate location: either the market or the supply source must be preferred. Thus, except for mining and transport-intensive activities, the major cities would also be preferred on the basis that they have the greatest concentration of income, since the average per capita

income of the capital is typically 40 to 60 percent higher than the national figure, and a high proportion of the national population is concentrated within a 35 kilometer radius.

4. Location of Branch Plants in Provincial Cities: Strengths and Limitations

3.51 A central argument in favor of the dispersion of manufacturing activities has been the two-stage nature of the location of a new industry in a region. In the short-run, it is said that the new manufacturing facility will contribute to raising local incomes and to reducing the level of unemployment. In the long run, these same firms are expected to generate secondary development with "new plants forming short backward linkages with other local firms and introducing new concepts and ideas to indigenous entrepreneurs and thereby stimulating diversification and growth". 1/ Underlying this argument is the expectation that any region which lags behind, either in technological knowledge or rate of adoption of new techniques, can expect, in the long run, to grow more slowly than other regions.

3.52 Most of the studies of the spatial diffusion of innovation through the decentralization of manufacturing firms deal with the experience of more advanced economies (U.K., Sweden, U.S., France). They have found that most of the plants which have been located in regional areas have been branch plants. These branch plants were the results of intra-firm growth which could not be accommodated by existing facilities in the metropolitan center. 2/ They have

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1. A. T. Thwaites, "Technological Change, Mobile Plants and Regional Development," Regional Studies, Vol. 12, No. 4, 1978, 445-462.
 2. See David Keeble, Industrial Location and Planning in the United Kingdom, London, Methuen, 1976, and Peter M. Townroe, "Branch Plants and Regional Development", Town Planning Review, Vol. 46, No. 1, 1975, 47-62.

increased local employment and contributed to the diversification of the local industrial structure. However, they have not contributed to the diffusion of innovations within the region. Typically, branch plants mass produce relatively standard goods, and large firms are "unlikely to decentralize anything to branch plants that require day-to-day supervision from head office, and this results in routine production at sites distance from the corporate or research center." 1/

3.53 Some diffusion of innovations could take place between the new facility and indigenous units through linkages created by purchases and sales. But, in general, the record shows that the growth of a wide variety of short distance, local linkages seldom takes place. Branch plants controlled from headquarters appear slow in changing their patterns of suppliers: because they place low volumes of orders to local suppliers, their presence does not lead to higher levels of technological sophistication and performance of purely indigenous firms. Unless specific policies are used to improve links with other firms of the regions, it is not at all certain that the new firms will diffuse their own knowledge locally or learn from their local environment and modify their own production methods.

3.54 A method frequently advocated to attract new manufacturing plants to provincial cities is the organization of industrial estates. These estates can be an excellent urban planning technique at the city level for the rapid provision of land and services, particularly in countries with scarce industrial land. However, they are neither a necessary nor a sufficient condition for the attraction of industry to a provincial location. They can be a heavy burden to a local government if they are too large or premature. Most

1. Thwaites, "Technological Changes," Regional Studies, Vol. 12, 125-127, 1978.

successful industrial estates are either export-processing zones or free-trade zones located in the capital region or in major harbors. Their success has been quite directly related to the country's overall strategy for industrial development and the policy climate. In Korea, where one can find one of the most successful programs of manufacturing for export, 80 percent of manufacturing employment was provided outside the industrial estates.

3.55 In the case of domestic-oriented industrial estates, success can be quite elusive. There has been a significant contrast between the inland industrial estates of Korea, which were expected to serve the domestic markets, and the other export-oriented estates (which were not all free trade zones). These inland estates have progressed at a much slower pace, remained underutilized for long periods of time and have experienced difficulties in integrating backward with firms in the local economy or national firms. It is only recently that the prospect for such industrial estates has improved with the sustained rapid growth of the Korean manufacturing sector, the overall scarcity of industrial land in the country and the newly found strength of the domestic market (the Korean per capita GNP was 300 U.S. dollars: when the local industrial estate program was initiated in 1968; by 1978, it had risen to 1,200 U.S. dollars).

3.56 More important than industrial estates in stimulating the growth of regional centers are government policies which will raise the quality of the human capital in the regions through educational programs, technical schools, national technical and industrial research organizations with branches in every significant center. Co-financing between government and private industry of technical high schools and universities is an important means of

diffusion of innovations at the regional level. The capacity to organize and the ability to circulate information rapidly are crucial to the vitality of a region. The growth of regional information networks must be actively encouraged.

5. Policy Implications of the Location Decision Context in Developing Countries

3.57 We can sum up all the various reasons why there are so few obviously good locations in developing countries, and in the process, draw up the list of some of the major factors which deserve special attention if decentralization and population deconcentration must be achieved more rapidly.

(a) The transportation system of the country is insufficiently developed and serves only a few major locations effectively.

In addition, the quality of the network is such that the time cost of shipping even over relatively short distances can be a serious burden.

(b) Reliable information about provincial locations is often difficult or impossible to obtain. "There is frequently the possibility that something that has been taken for granted will not be available and that the firm will be put to the expense and waste of energy of going into these activities to supply it itself". This is what Alonso called "diseconomies of internalization".

(c) A certain minimum size and level of income is required for the operation of important facilities such as airports, transportation terminals and other major forms of infrastructure. But more importantly, a minimum size is necessary

for the profitable operation of specialized business services, shippers and jobbers, financial offices, legal offices, trade associations and trade information letters, repair services, specialized printing facilities, consulting services, equipment leasing, laboratories, and professional schools. These services, much more than the availability of cheap labor, define the attractiveness and the healthiness of a city for a business firm (see Figure 3.1, where the great differences in levels of services among Korean cities are shown for 1963-1970. Moreover, this indicator does not reflect the quality of the services).

- (d) A large urban market reduces the need for a firm to hoard labor and resources in order to meet unexpected problems such as spoilage, unexpected orders, etc. In particular, the existence of a large pool of skilled labor greatly facilitates the operation of a firm. A low rate of unemployment in a large city provides a greater reserve of labor than would a higher rate of unemployment in a smaller center, so that, when a new firm locates in a developing country's smaller center, a large proportion of its skilled manpower will have to be brought from the larger cities until on-the-job learning progresses sufficiently.
- (e) The advantages of a large pool of skilled labor are also present in the case of suppliers of other inputs, repairs and services. The probabilistic advantages of urban size are

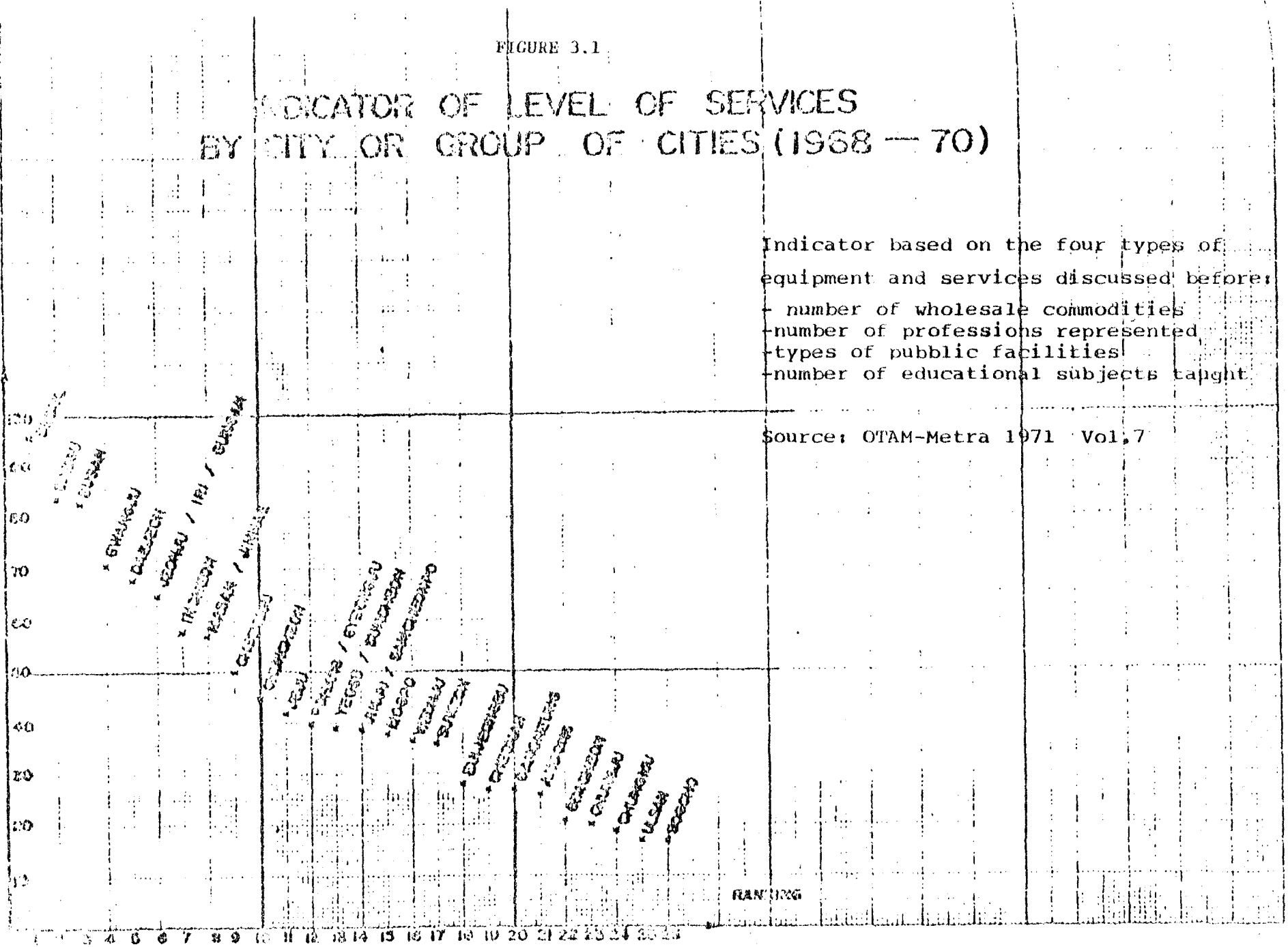
FIGURE 3.1

INDICATOR OF LEVEL OF SERVICES BY CITY OR GROUP OF CITIES (1968 - 70)

Indicator based on the four types of equipment and services discussed before:

- number of wholesale commodities
- number of professions represented
- types of public facilities
- number of educational subjects taught

Source: OTAM-Metra 1971 Vol. 7



well known: uncertainty, when spread over larger numbers, is more predictable and therefore less risky. This explains the strong correlation between the number of functions and the size of a city.

- (f) The large scale of cities offers pecuniary externalities to the firms: large scale of operations for suppliers allow smaller costs and more convenient services, which in turn, improve the operations of other firms. This also explains why certain cities tend to become particularly dynamic in selected industrial fields (the most complete analysis of this agglomeration process was done by J. Bergsman, and others, for the U.S., starting with 186 activities and 203 urban areas (SMSA) in 1971). ^{1/}
- (g) Face-to-face contacts and social forces are extremely strong forces pushing toward spatial concentration in developing countries for the operation of a business of any size compared with advanced economies. There are several obvious reasons. First, communication systems are poorly developed, telephone and other systems are deficient and physical distance between persons is a much greater barrier. Second, the availability of technical information through trade magazines, technical catalogues, government publications and a specialized press is limited. Third, business practices are much less standardized: terms of contracts, deliveries, product specifications and a variety of practices do not follow set patterns and are far more dependent on direct verbal communication and personal supervision. Fourth, the structure of business organization

1. J. Bergsman, and others, "A Classification of Economic Activities Based on Location Patterns," Journal of Urban Economics, Vol. 2, No. 1, January, 1975.

is much less organized or standardized: sustained, frequent personal relations are a more significant part of the conduct of business. Fifth, business managers in developing countries are much less likely to consider their staff as a perfectly standardized and substitutable unit of labor, expected to produce certain results according to some set schedule. Personal and human commitments are an essential dimension of the conduct of business. Professional advancement is strongly influenced by personal networks and patronage by more senior staff. This will lead to a concentration of entrepreneurial talents in the capital region and a profound reluctance to relocate into a provincial location.

- (h) In addition to the characteristics of business operations, the attraction of the capital city is extremely strong in every developing country, where intellectual, business, cultural, religious and political elites interact and are more overlapping than in large industrialized countries. Location in a small provincial town is considered as an exile and a threat to the future success of one's children. Such an attitude on the part of staff and managers alike is an additional restrictive influence on the location search process. 1/

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1. In countries which are in a transitional phase of spatial development such as Korea, a striking percentage of managers work in provincial locations, staying at bachelor's quarters during the week and returning to Seoul to see their family at regular intervals, so as to maximize the educational opportunities of their children and their future professional chances. Such arrangements (1) are feasible because of the greatly improved transportation system, (2) may also be a way of improving the availability of engineering and managerial talent currently in great demand.

3.58 The constraints on the choice of location which have been described for the manufacturing sector apply equally well to small-scale firms and self-employed workers. The main differences lies in the fact that small businesses and services are serving either larger firms or the consumption needs of the city population and, therefore, constitute dependent economic activities. 1/ The locational difficulties for this second group of activities are not related to the choice of city, since they are more or less bound to the present region, but rather the choice of neighborhood and actual site in the city where they should be operating. This is why the structure of a normally operating city will tend to be differentiated spontaneously, irrespective of zoning practices, into clusters of similar and complementary activities with all these neighborhoods of specialized urban trades so familiar to the urban planner: retail trade, wholesale trade and automobile parts sectors. The distribution of employment in the capital region of a middle-income country forms a highly structured pattern which changes over time in a manner very comparable to Western European or North American cities. 2/

E. Migration and the Job Search Process

1. Migration is Dependent upon Employment Opportunities

3.59 For the formulation of national spatial development policies, planners and analysts tend to consider migration and labor-migration to be

1. It is worth stressing again that reliance on family members will often limit the potential growth of a business, because continuing expansion will strain the managerial skills of the family and require opening the firm to outsiders.
2. For a precise description for Bogota, Colombia, see Kyu Sik Lee, Intra-Urban Location of Manufacturing in Colombia, IBRD paper, October 1978; and for general analysis, see Byung Nak Song, The Distribution and Movement of Jobs and Industry - The Seoul Metropolitan Region, KDI Working Paper 7411.

a more important problem than economic flows of business and capital resources; paradoxically, the opposite is true. Too much has been made of the attraction of city lights for young rural migrants and the notion that improving housing will accelerate migration, or worse, that the removal of squatter and low quality housing and limited urban amenities will deter migration. All studies of migration are unanimous in agreeing that long term migration is perfectly rational: migrants will go where the jobs and the opportunities are and where they will improve their living conditions. As long as the time, distance, cost and information barriers are high, rural migrants might settle down in small-and medium-size cities. But as soon as the lowering of the transportation barriers takes away the protection previously afforded to the more traditional small-scale, high-cost businesses of small cities and makes the capital region more accessible, the flow of migrants to the capital region will promptly swell (for instance, in the case of Colombia). If it happens that the economy is also booming, massive migration to the capital city will take place at an alarming rate, as was the case in Korea over the period 1965-1970 (when Seoul grew at 9.3 percent per year) or in Sao Paulo during the same period. 1/

3.60 If it is the creation of employment which triggers mobility and induces migration, there is also a secondary employment effect created by the growth of the population coming from migration 2/ (which raises further the demand for city non-traded goods and services). The dominant force in

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1. The close relationship between the growth of urban activities and rural-urban migration in Korea is analyzed quantitatively in Renaud, Economic Fluctuations and Speed of Urbanization: A Case Study of Korea, 1955-1975, World Bank Staff Working Paper No. 270, November, 1977.
 2. This kind of chicken-and-egg relationship has been discussed by Muth. It can be measured with the appropriate data (see work by Greenwood, Journal of Economic Literature; or for Korea, Nancy Hwang and B. Renaud, mimeo, 1975).

triggering migration is the growth of the manufacturing sector. In a stagnating urban economy, no rural-urban migration will take place on any significant scale, as is seen in the case of Calcutta, where long years of stagnation have stopped rural-urban migration and population growth is due entirely to natural population growth.

3.61 In addition to the migration employment multiplier, because additional job opportunities are created by the needs of the new employed migrants, there is a migration "demographic multiplier" because migrants are generally young, typically under 30 and move to the cities during their most fertile years. The fact that the level of fertility in cities is lower than in the rural areas and that migrants tend to reduce their family size once they are in the cities are not enough to compensate for their age-distribution, which is heavily concentrated in the child-bearing period. The effect of the demographic multiplier is longer-lasting than those of the employment multiplier. Its magnitude is related to patterns of family formation and is rather country specific; it is related to the sex distribution of migration and depends on whether migration is predominantly an individual or a household move.

2. Unrealistic Population Projections and Policies to Stop the Growth of the Capital Region

3.62 One of the most remarkable and most disconcerting features of policy makers in developing countries, when it comes to the planning of the capital region, is their frequent unwillingness to accept reasonable demographic projections for the preparation of their plans. They will insist on unrealistically low figures with rather problematic consequences for the contents of their decisions. Then, public confidence in the validity of the associated urban policies is greatly reduced when 10-year population projections are overtaken after two or three years. Very low figures may be convenient to

justify the suppression of investment in the urban sector, but they also delay the formulation of the realistic urban policies which would improve the internal efficiency of the capital region. They also postpone the time when decentralization policies will at last succeed in stemming migration into the capital region.

3.63 The effects of the demographic multiplier guarantee that the population of the largest cities will continue to grow naturally by large absolute numbers for quite a while. In addition, it is very important to recognize that the largest cities in each country, because of their sheer size, are absorbing a very high proportion of the total net migration flows into the urban sector. Bringing the growth rate of the largest cities down to their natural population growth rate - that is to say, bringing net in-migration down to zero - will have a strong impact on other cities and will require very serious planning. Smaller cities could not absorb the large number of migrants who are presently moving to the capital city without enduring growth rates three to four times higher than at the present time. It is a matter of simple arithmetic to see that the greater the concentration of population living in the capital city, the greater the flow of migrants to be redirected to smaller cities will be; the number of migrants will be very large compared to the current population of these cities.

3.64 This problem of redirecting migration across cities can be easily understood by taking a look at the case of Colombian cities in the years 1951, 1964 and 1973, presented in Table 3.6. First, it can be seen that the attraction of large cities can vary over time: during the first period, 42 percent of the net migration flows converged to the largest cities; the proportion increased sharply to 78 percent during the second period, accentuating

TABLE 3.6

MIGRATION AND CITY SIZE IN COLOMBIA 1951-1973

Size Distribution of Cities in 1973		1951	Population Increase 51-64			1964	Population Increase 64-73			1973	Intercensal Growth Rates	
			natural	* migration			natural	* migration			51-64	64-73
Size (in 1,000)	Number of Cities											
1,500 and over	1	665	342	+	666	1,673	457	+	589	2,719	3.19 + 3.91	2.69 + 2.71
500 - 1,499	3	940	483	+	689	2,112	577	+	403	3,092	3.19 + 3.04	2.69 + 1.55
150 - 499	7	598	307	+	337	1,242	340	+	17	1,599	3.19 + 2.43	2.69 + 2.81
90 - 149	6	232	119	+	145	496	135	+	41	672	3.19 + 2.65	2.69 + 0.48
30 - 89	13	302	155	+	196	653	179	+	41	873	3.19 + 2.74	2.69 + 0.54
small places	-	1,732	890	+	295	2,917	798	+	177	3,892	3.19 + 0.82	2.69 + 0.52
Total Urban		4,469	2,296	+	2,328	9,093	2,486		1,268	12,847	3.19 + 2.27	2.69 + 1.15
Total population		11,548	5,936			17,484				22,264	3.19	2.69

*Natural population growth estimates are approximations based on the intercensal growth rates of the total population

Source: Based on data from Johannes Linn, Urbanization Trends, Polarization Reversal, and Spatial Policy in Colombia, 1978, Table 4

population concentration further. Second, in both cases it can be seen that migration was more important than natural growth as a source of population increase in Bogota. Redirecting all net migration away from Bogota during the second period to bring its growth back to the national rate of 2.69 percent would have sharply increased the growth of the smaller cities to rates above 6 percent. Similar exercises can be performed for any country, as can be easily seen from the demographic materials presented in Chapter I. In any given country, stabilizing the population of the capital city will remain a difficult task as long as the level of urbanization is not very high (below 50 percent) and the population growth rate acceptably low (well under 1.5 percent). Until that stage is reached, the objective of national urbanization policies is to gradually increase the migration share of the smaller cities by improving their economic growth.

3.65 Redirecting migration away from the capital region implies the need for substantial changes in city-to-city as well as rural-urban migration flows. At higher levels of urbanization it is city-to-city migration that matters the most. Urbanized migrants are significantly more sensitive than rural-urban migrants to the internal management of cities and the comparative merits of various places. This fact alone would justify the importance of a better internal management of cities as an essential part of national urbanization policies in addition to the encouragement of industry expansion outside the capital region.

F. Rural-Urban Interactions and Growth Linkages

1. Appropriate Policies toward the Rural Sector Are Essential to a National Settlements Strategy

3.66 There are strong two-way interactions between urban and rural development. Concerning urban-to-rural influences, it is a uniform finding

in every country that the most dynamic and productive agriculture is found near the most dynamic cities. Quite frequently, cities have developed originally because of the natural endowment of the area, but more importantly, dynamic interactions continue to develop between the urban markets and farm producers. Because of their proximity to a large market, farmers can develop more intensive cash crops, they have easier access to suppliers, and they are more easily in contact with government extension services as well as private farm suppliers, who constitute an important source of technical information. As the city market grows, more and more of the subsistence farmers are transformed into part-time commercial farmers. In addition, the city provides rural people in the area opportunities for part-time work. The dynamic growth of provincial cities tends to reduce the rural-urban economic gap that is widening when economic growth is concentrated in the distant large metropolitan centers. 1/

3.67 On the other hand, a dynamic rural sector contributes to more rapid regional integration in all countries by raising farm income, purchasing power and the regional level of demand for both household goods and farm inputs. The development of rural-urban linkages assumes central importance in national urbanization strategies for countries at low levels of urbanization where a substantial share of the national output comes from the farm sector, such as in African countries south of the Sahara and in the large Asian countries.

1. See Jin-Hwan Park, "The Growth of Taegu and its Effect on Regional Agricultural Development" in A City in Transition: Urbanization in Korea, M. G. Lee and H. R. Barringer, eds., Seoul: Hollym Corporation, 1971; and also Bruce F. Johnston and Peter Kilby, Agricultural Strategies; Rural-Urban Interactions and the Expansion of Income Opportunities, OECD, 1975.

Indeed, in the South Asian countries the development of the rural sector should become by necessity a major element of a comprehensive national settlements strategy.

3.68 Rural towns and small-scale cities are heavily dependent on the economic health of the farm sector and their expansion is wholly dependent on the basic strategy used for the expansion of the agricultural sector. When a country becomes more industrialized, a rural growth strategy will not be the complete answer to problems of disparities in income levels between the rural sector and small towns on the one hand and the larger cities on the other. If studies of economies of scale and city size have not shown the existence of diseconomies of scale for very large cities, they have shown the definite existence of diseconomies for smaller size cities.

3.69 Because the level of capital intensity required in the production of consumer goods is low, it is widely expected that the demand structure associated with increasing rural income will be favorable to more decentralized and more labor-intensive patterns of industrialization. The results of studies in Malaysia qualify this view. On the one hand, the work done by Cohen, English and Brookfield shows the high correlation between the three types of agriculture practiced in the region they studied and the pattern of growth of small towns. ^{1/} On the other hand, the Social Accounting Matrices (SAM) developed for the Muda project clearly show that the demand leakages out of the region can be substantial given the Malay/non-Malay dichotomy of the settler population. ^{2/} Thus, in addition to the constraints

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1. Cohen, English and Brookfield, Functional Diversity at the Base of the Urban System in Peninsular Malaysia, Urban and Regional Report No. 77-6, ECDRB, World Bank, also in Journal of Tropical Geography (forthcoming).
 2. See DRC papers by Hazel, Bell, and others.

placed by economies of scale, Malaysian regional development is affected by imperfect social integration.

3.70 In general, a strategy of rural development will have good effects on regional development and on the growth of regional cities. But it would be wrong to expect small economic leakages in the form of savings and demand for goods out of the region. The magnitude of the leakages depends on local economic organization and cannot be predicted a priori. Because of these economic leakages, rural development can yield increases in absolute income in the region but will not necessarily narrow the income gap with the rest of the economy, which benefits from the boost provided by the leakages.

2. Size Distribution of Rural Land Holdings and Settlement Patterns

3.71 A skewed distribution of land ownership will have a negative impact on the dynamics of settlements in both conspicuous and subtle ways. The rural sector in some countries is characterized by a bimodal distribution of land holdings: a few large landowners control the greatest proportion of the agricultural land, while a large number of small farmers have to make a living with the remainder. Such a situation is particularly conspicuous in Latin America, but not unique to that area. In 1960, in Peru, 3.3 percent of the landowners controlled 87.3 percent of the land; in Colombia, 9.1 percent controlled 85.8 percent. 1/ Not incidentally, urban expansion in such countries is characterized by an increasing concentration of the urban population in the largest cities.

3.72 A highly skewed distribution of land creates three classes of people: landless people, who will easily migrate to cities for lack of rural ties,

1. FAO, Report on the 1960 World Census of Agriculture, Rome, 1971. See also Land Reform, Sector Policy Paper, World Bank, May 1975, and Agricultural Land Settlement - A World Bank Issues Paper, World Bank, January 1978.

small land holders living at a subsistence level and large-scale commercial farmers relying on hired labor. From the viewpoint of urban development, the stagnation of farm income leads to low level of demand for both producer and consumer goods by the majority of the population. Rural towns and small cities are based on small-scale, high-costs factor and product markets and serve a generally stagnant local economy. It becomes very difficult for any one of them to grow large enough in terms of total income to provide adequate economies of scale: because of very low income levels, they would have to reach a much greater population size to reach an adequate economic scale. Depressed farm earnings and scarce employment opportunities in intermediate urban centers encourage migration to the large urban centers.

3.73 Very unequal land ownership can have many indirect effects which make the situation a self-perpetuating one. For instance, it has been shown that in Argentina the decision processes underlying the generation of agricultural innovations by the public sector, as well as the adoption of new technologies by farmers, are profoundly affected by the skewed distribution of land ownership and the very different structure of production between small-scale farms and large-scale agricultural operations. It was found that small-scale farmers did not have domestic access to the yield-increasing technologies that would be the most effective in raising their income. The socio-economic structure, together with market forces, yielded new technologies that were consistent with the production methods of large-scale agricultural operations and not those of small farmers. Conversely, one should expect that rural development policies which succeed in providing an adequate technology to the large majority of small and medium farmers by raising their

income levels will have a positive effect on national settlements patterns, particularly at low levels of development when agriculture is a dominant economic sector.

3.74 Intersectoral priorities can have a lasting impact on the structure of the urban sector and the distribution of population among cities of various sizes; and the size distribution of farms is an intervening factor. For instance, Korea and Taiwan are two countries that have many socio-economic traits in common. However, Korea has a much higher proportion of the urban population concentrated in the capital city than Taiwan. An important reason for this is that Korean agriculture is naturally poorly endowed. Also, the Korean growth strategy of the 1960s by-passed the agricultural sector and went directly for the expansion of the manufacturing sector. The combination of limited farm opportunities and the creation of manufacturing and other jobs in the Seoul region led to massive migration movements to Seoul. By the late 1960s, the government worked on improving terms-of-trade for the farm sector, including in particular the Grain Management Fund to support farm prices, an effort to limit the gap between rich industrial regions and poor agricultural regions. Because the land redistribution of 1949 has made land holdings very equal in Korea, the policy was successful in improving the situation considerably. Now that the terms-of-trade and rural development 1/ policies are reaching diminishing returns, new policies are being devised to provide non-farm employment opportunities in regional urban centers in order to minimize inter-sectoral and inter-regional disparities.

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1. Because of the great uniformity of farm conditions, government extension policies for agricultural innovations have benefitted a very large percentage of farmers in Korea. The New Community Movement also has proven to be extremely effective.

3.75 Both the structure of the farm sector and the national policies concerning it are of great significance to the long-term evolution of national settlements. In countries marked by a highly skewed land distribution there are limits to what improved farm terms-of-trade policies can do: small-scale farmers often operate at the margin of subsistence and cannot be reached easily through the market. Most of the benefits of favorable terms-of-trade will accrue to the large landowners, and the financial benefits will leak back directly to the largest cities. Because of the limited market power of the small farmers, programs appropriate to their needs will be difficult to initiate.

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IV. CURRENT STATUS OF NATIONAL URBANIZATION POLICIES

A. Introduction

4.1 From our improved understanding of location decisions by business firms and individuals and of the transmission of economic impulses from regions to regions, it is clear that the formulation of national urbanization policies goes much beyond the problems of concentration in the capital regions of middle income countries. It is time to return to the questions raised in the introduction and to possible policy responses. What are appropriate objectives for a national urbanization strategy aimed at shifting patterns of urban growth? Can a national urbanization strategy operate distinctly from other social and economic policies? Are there trade-offs between a greater dispersion of economic activities among various regions and the rate of growth of the national economy? What kinds of actions could or should be considered by a country in order to moderate or even limit the growth of the capital region? To what extent is it possible to channel economic activities through selected urban settlements? What kind of policies could be considered to improve rural-urban interactions?

1. Weak State of National Settlements Policies in Developing Countries

4.2 In the case of developing countries, it is not a bad point of departure to begin with an evaluation of their urbanization strategies recently given by Brian J.L. Berry:

"What characterizes most of the planning efforts in the Third World is the absence of a will to plan effectively, and more often than not, political smoke-screening. Most urbanization policy is unconscious, partial, uncoordinated and negative. It is unconscious in the sense that those

who effect it are largely unaware of its proportions and features. It is partial in that few of the points at which governments might act to manage urbanization and affect its course and direction are in fact utilized. It is uncoordinated in that national planning tends to be economic and urban planning tends to be physical, and the disjunction often produces competing policies. It is negative in that the ideological prospective of the planners leads them to try to divert, retard or stop urban growth, and in particular to inhibit the expansion of metropolitan and primate cities."

(B.J.L. Berry, "Comparative Urbanization Strategies" in H. Swain and R. MacKinnon, eds., Managing Urban Systems, Laxenburg, Austria: IIASA, 1976, pp. 66-79.)

Fortunately for all concerned, things are not quite that simple or that bad in all countries. In his frustration Berry points to major problems that are very real. Of these four weaknesses, the lack of commitment and the lack of understanding are particularly damaging; competence for dealing with other problems can be improved over time through the process of learning by doing.

4.3 At present, many of the policy objectives selected by policy makers are addressed to the symptoms and not the causes of resources misallocation and severe regional disparities. The social and political objectives behind many announced spatial strategies are in clear conflict with the forces set in motion by national economic policies. The unintended spatial biases of these national policies are yet to be more systematically considered and more perceptive approaches developed by national economic planners. On the other hand, it is the burden of national physical planners to understand better the economic limitations of the explicit spatial strategies that they are advocating.

4.4 Better national urbanization strategies depend on improvements in the methods of planners. On the one hand, we have the national economic planners who are only concerned with the global or sectoral effects of their decision and ignore their spatial consequences. On the other hand, we have national physical planners, often located in the ministries of public works or construction; they are heavily "design" oriented and, at times, appear more concerned with the maximization of their budget than with the overall economic impact of their grand designs. National economic planners must be made more aware that most of their decisions are not spatially neutral, and physical planners must acknowledge the limits placed on their plans by the state of the national economy, if national spatial policies are to improve the national environment.

2. The Three Major Components of a National Urbanization Strategy

4.5 The core argument of this study is that all countries are better off with a spatial strategy that is the outcome of a careful national debate about economic, political, social and cultural goals. However, quite a few countries do not need to work actively at decentralizing economic activities from the main urban region either because it is a premature decision considering their level of development or because they do not seem to be suffering from excessive concentration by world standards. At present in most countries, the net effect of the current policies and practices of government is never considered and this generally accentuates the tendency toward concentration. In addition, discrimination against the rural sector makes everything worse.

4.6 The proper formulation of a national urbanization strategy requires the systematic discussion of three major policy areas affecting patterns of

population distribution and national settlements. The country must examine in turn: (1) implicit spatial policies and spatially biased national policies, (2) the problems of the very large cities and the appropriate policies to deal with the externality effects of congestion and pollution, (3) the problems of regional inequality and the direct (explicit) policy instruments for the redistribution of economic activities. Of these three clusters of spatial policy instruments, the best known is the third, though the first two often have greater impact.

4.7 Every nation should take a different approach, based on its social and political climate and its institutional structure. We have discussed in Chapter II, Section B, the various factors that influence a country's ability to implement a national settlements strategy, and it seems possible to rank the middle-income countries according to their likely ability to succeed. In discussing policy options, a variety of considerations makes it possible to avoid being somewhat taxonomic (and consequently, boring). One needs to consider the purpose and goals of the policies, the instruments used, the economic sectors affected, the spatial pattern that could be encouraged, the level of details in decision-making at which the policy will operate, etc.

3. The Goals of a National Urbanization Strategy

4.8 The national urbanization strategy of a developing country always has multiple objectives, even though one or two may be emphasized in order to mobilize public opinion and crystallize the orders of priority of decision makers both in the public and the private sectors. A multiplicity of objectives calls into use a comparable multiplicity of instruments, and the problem becomes one of identifying the combination of policies most appropriate for a

given country at a given level of development. Another problem is to decide on the timing of policy decisions and the proper scheduling of spatial development programs.

4.9 It is possible to organize a list of objectives of national settlements strategies by noting that most planning efforts are initiated on the basis of the need for deconcentration of economic activities, when in fact, the real problem lies with the intensity of dualism among various regions and locations in the countries. It is necessary to be more specific in defining the objectives which could be selected to improve the situation, such as:

- (1) The integration of peripheral regions to increase the size of the national domestic markets (increasing the intensity of regional demand). Raising regional incomes to improve the demand for domestic products is very much dependent on rural development, agricultural policies and the development of the transportation and communications networks. This has often been the objective of very large countries such as Brazil and Mexico, especially at the time when they had adopted import-substitution industrialization strategies and it was considered essential to increase domestic demand for new industrial products in order to reach greater economies of scale. A possible useful effort would be to judge whether a country has already run the course of easy import substitution.

- (2) The integration of peripheral regions and the opening up of new resources to raise the national output. This objective applies to the mineral rich countries such as Brazil, Mexico, Iran, etc., as well as the countries which still have an important resource frontier to exploit such as Malaysia, or again, Brazil. Water basin development projects have often been developed under this heading but they could just as well be classified under the first objective.
- (3) The reduction of interregional disparities. In a well integrated society the concern for inequalities among individuals or households should be more important than the concern for inequality between various places. However, the reduction of regional disparities is a legitimate concern in developing countries where regional differences are dramatic. In Latin American, for example, the output per capita of one region might be as much as 10 times the output per capita of another region, while in fully integrated, advanced economies the differences tend to be on the order of 2 to 1.
- (4) The more rapid development of border regions for reasons of national security. This objective has been an important motivation for the Latin American region where disputes have been frequent in the past concerning the exact location of national boundaries in undeveloped regions. Similar incidents have occurred more recently

between China and India; there, each country, in anticipation of further incidents, has developed the local road networks to consolidate its hold on disputed territory. A complete inventory of international disputes of this type would place the Middle East high on the list.

- (5) Improving national political integration and social cohesion within the nation. It would be a conspicuous mistake to assume that national urbanization strategies have purely economic objectives such as increasing output or redistributing economic opportunities. In heterogenous societies marked by important cultural, political and linguistic differences a dominant element of a national urbanization strategy will be to maintain the cohesion of the state and to prevent regional minorities from, in some fashion, "leaving the national coalition of social groups." Special regional institutions such as regional development corporations are often used to give visibility to an expression of central government concern for the region: they are meant to be a vehicle for the transfer of resources and represent one mode of expression of local political aspirations.

- (6) Another frequent objective of national urbanization strategies is to "improve" the national system of cities because the system has a dominant role in the transmission of economic impulses and the diffusion of innovations. Raising the level of economic activity in growing medium-size cities will help them reach sufficient economies of scale and improve the inter-regional diffusion of growth. It is often expected that a more developed system of cities will help in equalizing access to the most important services such as education, public health and other social services.

Such broadly defined strategic objectives are still much too global to yield to analytical investigations. They must be further developed into specific programs and their related projects. For instance, the formulation of a coherent and appropriate national urbanization strategies will have a considerable impact on planned programs of transportation investment, the choice of networks, the choice of sectoral priorities (inter-urban network vs. rural roads), as well as the timing of investment. Additional elements which shape the national environment in major ways are water-basin development projects, the location of large-scale industrial projects, the structure of energy networks for the distribution of electrical power, etc. Similarly, sectoral economic policies for agriculture, manufacturing, banking, education, etc., will uncover significant unintended spatial effects of these policies.

4.10 Two important observations must be made with respect to the multiple nature of the goals involved in a national urbanization strategy. First, the selection of such goals and the implementation of programs for a single region in isolation from the rest of the nation is a major source of problems in terms of effectiveness. Very worthy objectives such as the maximization of growth per capita income over the planning horizon, the improvement of internal income distribution by reducing disparities between important minorities and the rest of the population, and the minimization of unemployment can often be found in conflict with national plans. In addition to possible conflict between the maximizing of income and the maximization of employment, plans for single regions may seriously underestimate the scarcity of resources at the national level to carry out the plan (human resources and capital resources). Also, a regional strategy will often underestimate the mobility of resources between regions. ^{1/}

B. The Unintended Spatial Effects of National Economic Policies: Implicit Spatial Policies

4.11 There are several important reasons why a good understanding of the unintended spatial effects of national economic policies (implicit spatial policies) is essential to developing countries. First, these policies have a definite impact on where people live and where they work and are present in all countries, including those that have no substantial announced

1. See, for instance, Higgins' re-evaluation of his previous experience with the separate regional plan for Pahang Tenggara in Malaysia, in Kuklinsky, ed., Regional Development and Planning, 1975.

spatial policies. Second, in those countries which have begun to tackle their spatial problems more seriously, there is a presumption that the effects of the implicit incentives on business location decisions are much stronger than the official incentives in favor of regional locations. Third, if national economic policies can be adjusted so that their spatial biases in favor of the most advanced regions can be moderated, the need for specialized teams of spatial planners might be reduced and large-scale spatial planning effort postponed by a few years until more abundant planning skills are available; besides, excessive population concentration in one region might be avoided altogether. The difficulty at present is that, though we have a good perception of the directions of most of these implicit effects, few effects, if any, have been measured quantitatively. No attempt has yet been made to compare the total monetary value of these implicit incentives with the corresponding resources involved in the national spatial budgets. The accounting problems are indeed very serious.

4.12 The list of policy decisions and programs which are implemented without giving consideration to their spatial effects and which have potentially strong consequences for the distribution of population could be quite long. Moreover, a fine level of detail in evaluating the spatial effects of, say, a tariff would be necessary prior to making adjustments to neutralize its spatial effect. It is enough here to list the main areas of concern. They can be taken in the order of importance of national economic policy without prejudging the quantitative importance of each policy area to spatial development. They are: trade protection and industrial incentives by sector, foreign exchange policies, policy decisions affecting the rural

sector, the government regulation of economic activities (particularly of the energy sector), transportation investment policies and decision rules, the concentration of decision making in the capital region and the institutional structure. Policies concerning public enterprises may be considered an area of implicit spatial policy if a better spatial distribution of economic activity and employment is not one of their multiple objectives. Government procurement policies can have a strong spatial impact. 1/

1. Trade Protection and Industrial Incentives

4.13 The protective effects of a foreign exchange policy will often discriminate against the sectors located in the peripheral regions of a country because the national economic structure is very differentiated between the capital (or core) region and the hinterland provinces. Two quantitative studies of these effects have been done for Brazil. 2/ They found significant regional disparities in the effects of economic policies and that

"these regional disparities in the impact of protection are the result of differences in the structure of the regional economies. Protection tended most consistently to drive down the output of agriculture and non-tradeables

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1. In an extensive analysis done for the United States in 1970, a great deal of attention was given to procurement policies of the federal government. This factor is also an increasingly important one for some middle-income countries. It was found that, among 42 spatial programs, only a few had a significant impact on the distribution of population; on the other hand, activities like defense and Research and Development had a strong impact. See Federal Activities Affecting the Location of Economic Development, E.D.A., U.S. Department of Commerce, November 1970, 2 volumes.
 2. R.N. Barret, "The Brazilian Foreign Exchange Auction System: Regional and Sectoral Protective Effects," Unpublished Ph.D. Dissertation, University of Wisconsin, 1972, and O.E. Reboucas, "Interregional Effects of Economic Policies: Multi-Sector General Equilibrium Estimates for Brazil," Unpublished Ph.D. Dissertation, Harvard University, 1974.

and to stimulate the output of manufacturing industry. Since the latter generated a much smaller proportion of income in the North-East than the Center-South, even if the relative output changes in each sector had been the same in both regions, income would have risen more (or fallen less) in the latter." 1/

4.14 Further analytical work indicates that tariffs and industrial incentives would have a differentiating effect on the location of economic activities, even if there were no other forces constraining the location of industrial activities to a few favored locations, as is actually the case. 2/ The preliminary conclusion of this work is that strong protection accorded to industry will accentuate the concentration of population and economic activities in a few locations and plant the seeds for further cumulative imbalances. All these analyses explain why countries which rely intensively on the growth of the manufacturing industry and on international trade to develop their economy while de-emphasizing the agricultural sector are the most likely to experience a strong surge of economic activities in a few major urban regions.

4.15 What remains to be done is to estimate quantitatively the spatial distributive effects of trade and industrial policies to have a more accurate measure of their intensity. In a report done on industrial incentive and effective protection in Nigeria, it is shown quite clearly that the Lagos region, where much of the Nigerian industry is concentrated, receives about 90 percent of the indirect subsidies provided by national trade policies.

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1. Reboucas, "Interregional Effects," p. 6.
 2. For a systematic theoretical assessment of the spatial effects of trade and industrial incentives, see Frances Ruane, "Trade and Industrial Incentives and the Spatial Concentration of Economics Activities: Causal Relationships or Spurious Correlations?", report to DEDRB, winter 1978-1979, a work in progress on the quantitative measurements of these distributive effects.

There is clearly an on-going process of cumulative causation at work, leading to the concentration of more and more activities in the Lagos area. Its correction will require a very detailed and systematic look at the internal working of these policies and at how different locational patterns can be encouraged. 1/

2. Sectoral Priorities and Bias against the Agricultural Sector

4.16 In addition to the direct spatial biases of trade and industrial policies within industries themselves, another important problem lies in policies that are deliberately biased in favor of the industrial sector at the expense of the rural sector. This problem is becoming better understood, and the strength and limitations of important substitution strategies are relatively well established. Their impact on urbanization patterns must be more systematically weighted in the formulation of national policies. We have described earlier the situation as follows:

The implicit anti-agricultural bias in most import substitution policies has had a significant impact on urbanization patterns. Protection, by producing the distortions in prices in favor of manufacturing, stimulates these activities. This policy often leads to an import-dependent industrial structure. Because of protection, the real contribution of manufacturing activities, especially large-scale ones, has often been small. After correction for the effect of protection, there have been cases where the contribution of value added of a particular industry was actually negative. A dramatic example is that of Pakistan in 1963-64 where the average annual subsidy to large-scale manufacturing and the corresponding implicit tax on agriculture represented 6.6 percent of total domestic expenditures. The conventional contribution of industry was measured as 7.0 percent; its actual contribution after allowing for protection was estimated to be a dismal 0.4 percent of domestic value added. The implications for growth in the economy and consequent labor absorption from the next round of investment need hardly be labored. If the import substitution sector is producing little value

1. See Trent Bertrand, and others, "Industrial Policy in Nigeria," IBRD, 1978.

added, the growth effect of the funds invested in it are effectively sterilized and when apparent savings (i.e., part of the financial gains to owners of protected industry) are reinvested in similar industries, they merely perpetuate the cycle. 1/

These kinds of policies toward the rural sector tend to generate problems of inefficiency in the large urban centers and depressed rural areas in the hinterland. A better treatment of the rural sector will also have dynamic effects which will be much more supportive of the growth of the manufacturing sector and of the economy in general, as can be seen in the Ivory Coast in Africa.

3. Government Regulation of Economic Activities

4.17 Government regulation of economic activities can also have a profound impact on the economic dynamism of various regions and the distribution of population. The effects are felt in two ways: first, they are felt when the regulatory process is in progress, and firms have to argue their case with government; second, they are felt once decisions have been reached and profitability is affected. In many developing countries the regulation of transport tariffs and the pricing of energy resources is frequently biased in favor of the capital regions where residents have to pay less than the full cost of having goods and services delivered to them. The price of electricity in Mexico City is exactly the same as it is at the source some 1,000 kilometers away. 2/ Reviewing the rationality and spatial effectiveness of

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1. See Beier, Churchill, Cohen and Renaud, The Task Ahead for the Cities of Developing Countries, World Bank Staff Working Paper No. 209, 1975.
 2. In addition to improper pricing policies, the spatial impact of distribution networks is often in need of serious reconsideration. This issue lies more in the domain of explicit spatial policies and the provision of infrastructure services.

tariffs and price regulations can only be done on a sector-by-sector basis for each country. For transportation, one can only note that, in general, freight tariff classifications and special commodity rates should reflect rather systematically the relative prices per ton of various commodities (in addition to other considerations such as bulk, perishability, scheduling of shipment, etc.). In general, finished goods pay much higher freight rates than intermediate goods or raw materials because production processes normally eliminate wastes and add value. Locational problems arise when a discriminatory tariff is pushed to such a level that processing is always cheaper in the capital region, depriving other regions of opportunities for local growth and local employment.

4.18 A minimum wage law can have a differentiated spatial impact which could be reinforced when coupled with a system of transfer payments to support the unemployed. Such a law provides incentives which will stimulate the growth of the largest city. This is due to the fact that, in all countries, the cost of living in the large cities is higher than in smaller cities because of the effect of congestion costs on non-traded urban goods. Imposition of a minimum wage law which enforces a uniform wage rate for all cities will impose a higher real wage on industries located in smaller cities than on those located in large cities. If the demand for labor is elastic, there will be lay-offs in the smaller cities, and workers will have an incentive to migrate to the large city, where the minimum wage rate is not yet effectively influencing industry. Migration risks will be reduced by unemployment welfare payments, in the case that such a program exists. The magnitude of the spatial bias can be appraised with adequate wage surveys and comparisons with the wages of workers not protected by the law.

4. Structure of Intergovernmental Fiscal Relations

4.19 In any country, large or small, the concentration of fiscal resources and decision making stimulates the concentration of economic activities in the capital region. Fiscal centralization is a problem for a better spatial distribution of economic activities for three major reasons. First, central decision makers insist on following stereotyped procedures in the name of efficiency and are sometimes ignorant of important local needs. Second, arguing with them is a costly process which progressively leads to the suppression of local initiative. Third, if central government officials have any bias, it is in favor of the capital region, which they know better and where they live. It is a common trait of central government officials that they always start with the premise that local government officials are not very competent and should not be trusted, a self-fulfilling prophecy. Also the centralization of bureaucratic routines in the capital region imposes severe transaction time and money costs on individuals and businesses located in other cities.

4.20 Finally, the structure of intergovernmental fiscal relations is an important aspect of the management of a national settlements policy. In developing countries, local governments are often quite weak in their relations with the central government. One of the major reasons is that the elasticity of central government revenues with respect to GNP increases is much higher than for local government. This is due to the fact that the central government has access to more buoyant tax bases. The urban development of the regions and population decentralization will be easier if local governments

share these taxes in a predictable manner. 1/ Appropriate sources of revenues for local governments allow them to plan more effectively for the provisions of services for both the business sector and the resident population. This improvement in services will release constraints on business location.

5. An Illustration: Calcutta

4.21 The cumulative impact of national economic policies on the growth of the city can be very deep. It is particularly conspicuous in the case of a city like Calcutta. In a recent review of the problems affecting this major Indian city, the difficulties created for Calcutta by the policies of the central government of India are summarized as follows:

"Because the public sector in India is so pervasive, and because Calcutta's economic base makes it especially sensitive to the industrial policy of the central government as well as to the general state of the Indian economy as a whole, public sector policies and operations have had no small impact on this city. Both represent exogenous factors affecting existing industry in Calcutta as well as potential entrants. Among the more important of such policies and operations are plan investment levels, raw materials allocations, import licensing and industrial licensing, the grants-in-aid for central sector schemes and centrally sponsored schemes, tax devolutions relative to the revenues obtained from the state, etc."

C. Wallich, Urban Growth in Calcutta,
July 1978

1. See Roger Smith and Chong-In Kim, "Local Finances in Non-Metropolitan Cities of Korea," IBRD 1978, and Woo-Sik Kee, "Fiscal Decentralization and Economic Development," Public Finance Quarterly, Vol. 5, No. 1, 1977.

C. Problems of Very Large Urban Concentrations
and Appropriate Policies

1. Primacy vs. the Problems of the Very Large Cities

4.22 Many of the policies formulated toward the largest cities in developing countries are regarded with great skepticism by local residents and outsiders alike, because there is generally an obvious mismatch between the problems associated with large concentrations of population in one urban area and the policies proposed by the government to reduce the severity of these problems. Most of these policies are simply based on the idea of keeping newcomers out of the capital regions, without asking why people keep coming, and generally ignore the fact that a significant proportion of growth is due to the natural growth of the current city population. There is often an inability to go to the source of the actual internal problems (for lack of political will rather than for a lack of administrative skills), a problem which can be remedied over the medium term in middle-income countries. A clarification of what proper urban policies could do to improve the internal efficiency of cities would greatly facilitate the formulation of national settlements policies.

4.23 An important distinction must be made between the concentration of a large percentage of the total urban population in the largest city (primacy) and the existence of a very large urban center in a country. These two conditions are not necessarily found in the same country. They should be distinguished on the basis of what we have learned about economic efficiency and city size. Economic efficiency for a city is the net result of the benefits of urban agglomeration (agglomeration economies), which lowers

the average cost of production for many activities and the losses created by congestion and environmental degradation. As far as agglomeration economies are concerned, most studies show that, at the lower end of the scale, economies of scale increase rapidly as a city expands, but beyond a certain size, the additional gains diminish rapidly. No study so far has been able to identify important diseconomies of scale (an upturn in the curve) with very large urban sizes. ^{1/} This pattern has often been described as the "Lazy-J" curve in studies of economies of scale.

4.24 At low levels of income and of urbanization, a country may be experiencing a high level of primacy, but the capital city may still be barely large enough in terms of population and income level to provide an economically efficient environment. It would be a poor policy to attempt to stop the growth of the only efficient city of the country. This does not mean that one should not look carefully for implicit economic policies which are subsidizing its growth at the expense of the rural sector. An examination of primacy level for 109 countries shows that primacy declines with per

1. Actual population figures for the economically efficient threshold should be used with caution because the average city income should be taken into account. A study done in India in 1968 identified a threshold size of 125,000, beyond which economies of scale were less pronounced. See, Cost of Urban Infrastructure for Industry as Related to City Size in Developing Countries, India Case Study. Joint Study: Stanford Research Institute; School of Planning and Architecture, New Delhi; Small Industry Extension Training Institute, Hyderabad, October 1968.

capita GNP and that there is a great deal of instability in the primacy index at low income levels (see Figure 4.1). 1/

4.25 At higher levels of income, the degree of primacy is less pronounced, and the real problem is that of the rapid growth of already very large cities (say, above two million residents) when the average per capita income of the country is still low.

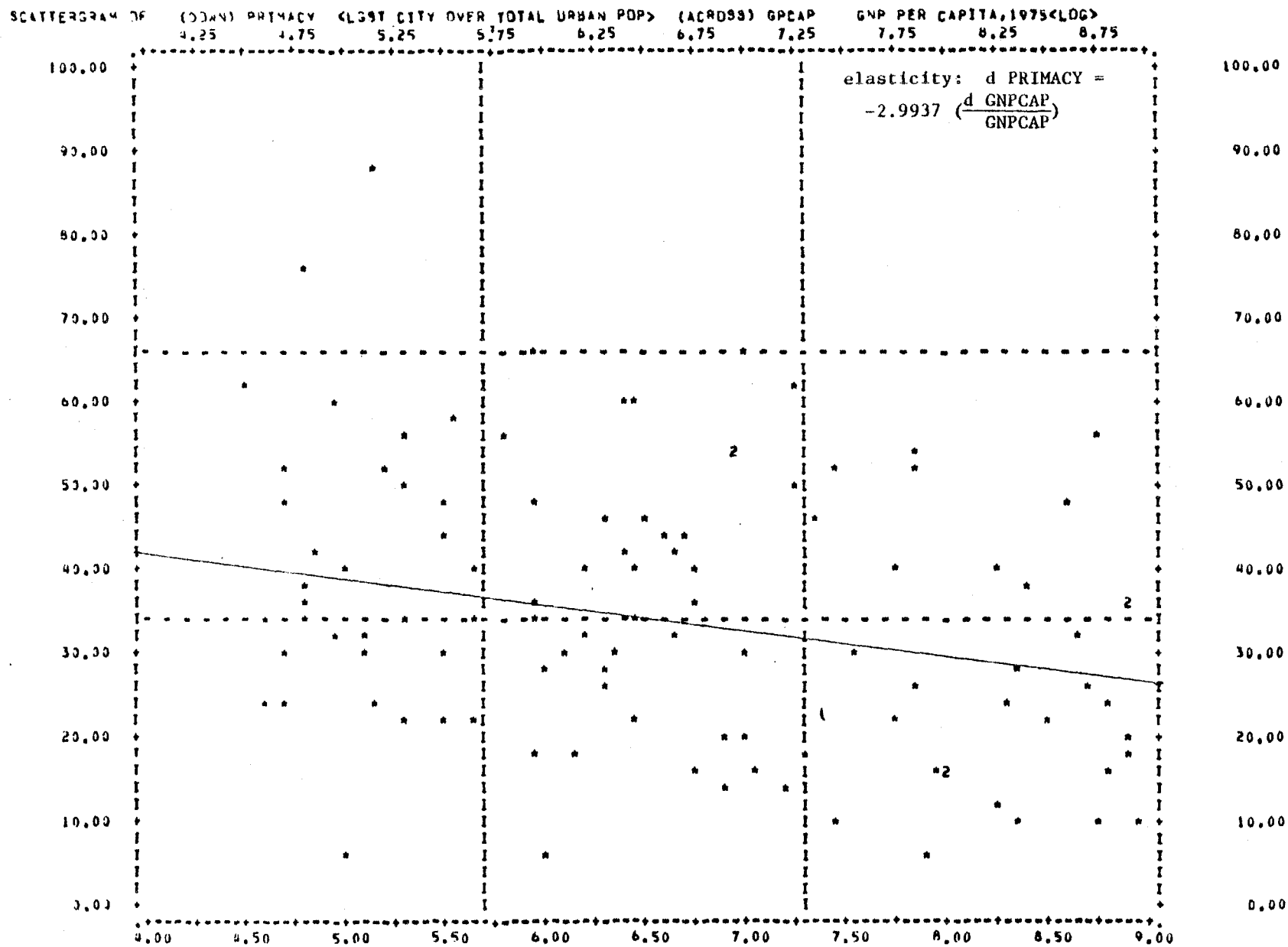
2. Economic Efficiency and Large Cities

4.26 In discussions of large cities, the main argument focuses on whether market failure is extremely intense and whether additional migration imposes a greater cost on the resident population than it contributes to increasing output so that there is a net loss to society. The existing empirical work deals mostly with the U.S. cities, and its results are simply not transferable to the context of developing countries. The starting point is how urbanization affects national economic efficiency. 2/ The three major questions asked are: "What are the relations between city size and labor supply

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1. The estimated equation for the relationship between primacy and the level of per capita GNP suggest that a 1 percent decrease in primacy is associated with a 3 percent increase in GNP per capita. This result is a strong one because primacy is estimated on the basis of metropolitan regions whenever applicable for the 109 cases.
 2. For a non-technical summary of the work done at the University of Chicago, see George Tolley and John Gardner, "Toward a Population Distribution Policy for America" in Regional Economic Policy, Federal Reserve Bank of Minneapolis, 1973. The full results of the Chicago Workshop are presented in Tolley, Graves and Gardner, Urban Growth in a Market Economy (New York: Academic Press, February 1979). The most important theoretical work which extends significantly the earlier Chicago research is by J. Vernon Henderson, Economic Theory and the Cities (New York: Academic Press, 1978).

FIGURE 4.1: RELATIONSHIP BETWEEN PRIMACY AND PER CAPITA GNP

ESTIMATED EQUATION: $PRIMACY = 53.806 - 2.9937 \ln GNP \text{ PER CAPITA}$



and demand? How do externalities affect city size? What would be the benefits of alternative city sizes? Negative externalities are due to the fact that transportation congestion imposes a cost on workers who should be compensated in well functioning labor markets. Similarly, a larger population concentration generates greater pollution. In determining whether a migrant should go to a smaller or a larger city, the difficulty is to estimate quantitatively the net social cost of adding one more worker to a very large city, by taking the difference between marginal external costs in that city and those he would impose in the alternative location where he could go.

4.27 Empirical analysis requires the introduction of economies of scale in production, the effect of local public finance externalities (in larger cities there is a larger proportion of wealthy people, tax rates relative to income will be less than in smaller cities), and the effect of minimum wage laws (which drive workers to larger cities and also raise unemployment costs). In the case of the United States, the research done at the University of Chicago has been summarized as follows:

"The effects of the externalities on city size are substantial, while the national income costs of the city size effects are extremely small. The basic reason for the substantial city population effect is the high elasticity of demand for labor in the city. The production function for many goods is about the same all over the country, so that a small change in wage costs will induce larger changes in industry location decisions. The basic reason for the smallness of national income costs of migration to the largest cities is that, for laborers reallocated, the difference in their marginal products as between locations is a relatively small percentage of their total marginal product. The specific numbers used and details of the analytical assumptions could vary a great deal and still not alter the basic message." 1/

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1. Tolley and Gardner, "Toward a Population Distribution Policy For America", 1973

4.28 In other words, the central finding of the Chicago Workshop is that, in the United States, the failure to make new migrants pay for the traffic congestion costs and the environmental costs that they impose on present residents does not imply a very large efficiency loss for the national economy; on the other hand this failure makes a difference for the city which experiences a very substantial population gain. The main value of this finding for large developing cities is to show that policies dealing with the internal operations of large cities are important to national settlements patterns. The results of other U.S. studies either failed to identify an upper limit to the efficiency of large cities (Segal, 1976) or found a discontinuity in the range of efficient city sizes, some intermediate-size cities failing to meet the test (Yeser and Goldfarb, 1978). 1/

4.29 No one should be particularly surprised at the difficulty of reaching decisive results on the relationship between city size and economic efficiency as broadly defined in these studies. The difficulty increases further when other important factors are included in the analysis as they should be: the size of a city is not unrelated to the composition of its output; it is necessary to consider a given city as part of the total system of cities; the physical location of a city next to another large city has an impact on its growth potential. In addition, the problems of market failure affecting the location decisions of business firms are of a much greater magnitude in

1. Yeser and Goldfarb, "An Indirect Test of Efficient City Size," Journal of Urban Economics, Vol. 5, 1978. David Segal, "Are there Returns to Scale in City Size?", Review of Economics and Statistics, Vol. 53, 1976, 339-350.

developing countries. The most thorough, but purely theoretical, analysis of the problems of an efficient allocation of resources in a system of cities concludes:

"In general there is a problem of population allocation among cities. Given an economy with multiple types of cities and a few cities of each type, if there are external economies of scale in production or pure public goods in consumption, federal government intervention will be needed to ensure an efficient allocation of resources among regions. 1/

This new theoretical effort, which has not yet been put to an empirical test, at least encourages the view that there is a problem with the largest size. It remains a different matter to take a dogmatic view to claim that 3 million or 6 million or even 10 million people within a metropolitan region are too many. 2/

4.30 An important reason for distinguishing between the problems of city size in developing countries and advanced economies is the fact that middle-income countries in particular are living through the most rapid phase of their urbanization. There is a sharp contrast between the "expanding urbanization" of developing economies and the "mature urbanization" of advanced economies as detailed earlier (see para 3.9). Among the many contrasting characteristics of "expanding" and "mature urbanization," much emphasis can be given to the fact that rural-urban migration has seen its course, and

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1. J.V. Henderson, *Economic Theory and the Cities*, 1978, Chapter IV.
 2. It must be noted that Henderson clearly addresses the issue of large, multi-centered metropolitan regions. For him a suburban center becomes a distinct urban area when it becomes a major employer, drawing commuters from the area adjacent to it and all points beyond it (away from the central business district).

urban-urban migration is the main factor shaping urban growth in advanced economies. Given a relatively static labor force, the relatively efficiency of various city sizes may become directly apparent through the revealed preferences of urban residents.

4.31 A recent international comparison of 18 countries indicates that mature urbanization renders the largest cities less attractive to economic activities and supports the labor market analysis by Tolley and Gardner (high elasticity of demand for labor in large cities). Vining and Kontuly have found that, of the 18 countries they studied, 11 were

"showing either a reversal in the direction of net population flow from their sparsely populated, peripheral regions to their densely populated core regions or a drastic reduction in the level of this net flow. In seven of them this reversal or reduction became evident only in the 1970's. Six countries have yet to show an alternation in the movement of persons into their most densely populated regions. Some possibly unreliable British data likewise fail to reveal a slackening in the 'drift South' of the British population." 1/

The Vining-Kontuly study does not deal with the largest urban areas per se but more broadly defined core regions and underlines the changing characteristics of urban systems when they are driven by urban-urban mobility patterns. Another remarkable finding is that the decline of the core region is prevented by foreign immigrants particularly in France, Sweden and Norway.

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1. See Daniel R. Vining and Thomas Kontuly, "Population Dispersal from Major Metropolitan Regions: An International Comparison," International Regional Science Review, Vol. 3, No. 1, pp. 49-73. The first seven countries where dispersal began in the 1960s were Japan, Sweden, Norway, Italy, Denmark, New Zealand and Belgium. The next four countries are France, West Germany, East Germany and the Netherlands. The six countries where a slow-down has not yet started are Hungary, Spain, Finland, Poland, South Korea and Taiwan.

4.32 There are very few developing countries where the rural population has even begun to decline, and in all of them, rural-urban migration continues to drive the population of all cities toward larger and larger size. Given the labor market structure and the constraints on business location, the likelihood of a reversal in population concentration in the immediate future is not very great. This is why policies designed to improve the internal efficiency of the largest cities must be vigorously pursued and not side-stepped in the name of decentralization policies. The Tokyo metropolitan region was the first city to enter a range of population sizes so far unknown to Western countries. It is already clear that some metropolitan regions of the middle-income countries will be going even further, such as Mexico City and Sao Paulo. It will take some time before a correction of implicit biases found in national policies and more effective spatial policies begin to make a difference at the margin, given the large reservoir of low-income, rural-urban migrants in Mexico or Brazil.

3. New Towns and New Capitals in Developing Countries

4.33 Influenced by Western countries, many middle-income countries have been attempting to develop "growth centers strategies" and considered programs of "new towns." These are two very distinct elements of urbanization policy which should be treated separately. New towns are often associated by urban theorists with the idea of optimal city size. In the realm of actual policy-making, planning for new towns should be strongly discouraged in most developing countries.

4.34 "New towns" refer to entirely new, planned urban communities clearly detached from the commuting zone of existing cities. They are expected to provide employment to their resident population and to attract business firms and industries which will form the economic base of the city. New towns programs should be clearly distinguished from the development of large-scale neighborhoods at the fringe of larger urban areas. The new suburbs of Singapore or Korea are frequently called new towns to emphasize a sense of progress and modernity and also because they require large-scale planning. They can be quite large and have over 12,000 housing units. However, these new neighborhoods are well within commuting distance to the major sources of jobs of the existing city. The design standards of these new communities vary according to location and can be geared to prevalent income levels in the city. The use of the public facilities they provide is immediate and there is no investment threshold to cross in providing services as internal neighborhood utility and road networks are connected to the existing city system. The population of the new neighborhood can relocate in other parts of the city as circumstances permit, and new residents will easily replace them.

4.35 On the other hand, new towns are a very poor way to attempt a better "balance" among various cities in order to alleviate congestion in old urban centers. They have problems, whether they are intended to be industrial new towns, residential new towns or new capital cities. While being particularly fascinating to urban designers and architects, new towns frequently represent a fundamental misunderstanding of urbanization and play on the desires of

the upper income groups to cut themselves off from urban pollution and congestion by creating fully planned, well designed "garden cities." The construction of new towns raises questions of urbanization rationale, costs, methods of financing, economies of scale, localization, and of manpower and planning capabilities. They present problems in properly identifying the sources of growth of an urban community: too often, new towns are planned as single-purpose towns and are dependent over long periods of time (over 10 years) on faltering political support. They also present important problems of internal spatial organization and design.

4.36 One of the two initial reasons for avoiding new towns programs in developing countries is that new towns have never lived up to the claims that they were a particularly good way of absorbing urban population increments. Even on the largest scale, they will never absorb more than a very small percentage of the total annual increment of the national urban population. Brasilia, which is one of the most dramatic cases of a new city, had a population in 1970 (after more than 10 years of investment and settlement) that was of the same order of magnitude as the annual increment of the population of Sao Paulo.

4.37 The second critical reason for avoiding new towns in middle-income countries is that they constitute the most expensive ways of financing urban development. The universal experience with new towns is that they are capital-intensive experiments where the cost of living tends to be significantly higher than in existing cities. They have the additional undeniable feature of developing countries: in the shadow of the planned, highly serviced new towns, will grow a separate town. In the well designed new town, one will find

mostly high-income groups financially capable of living in the city, i.e., those for whom it has really been designed. Outside of the planned jurisdiction of the new town, one finds a shadow town, unplanned, poorly serviced, with a very low-income population. This is where construction workers and other unskilled laborers live after having been attracted during the construction period. At the end of the construction boom, many workers have remained and commute to the official new town in order to find some sort of employment. This has occurred in the cases of Brasilia, Islamabad, Chandigarh and other lesser cities.

4.38 New towns in developing countries are not consistent with the general country context of pronounced scarcity of resources. At a time when many existing cities lack adequate water supply, drainage, sewerage, public transport and low-income housing, new towns compete with old cities for central government funds. High standards, high costs, low economic returns and high maintenance costs make new towns inaccessible to most of the population and are inconsistent with prevailing urban income levels.

4.39 In a sound urban development environment, public land development costs can be financed through municipal taxes, public utility costs can be financed through user charges and housing and residential land development can be financed through user charges and housing and residential land development can be financed through rental fees. The problem is that the capital and operating costs of new towns rise rapidly to levels that would require that the typical household would spend over 50 percent of its income (often after substantial subsidies) on housing and utilities. In the provision of housing, for instance, there is a strong inducement to shift design standards upwards in order to serve the needs of the very rich, who are the only ones capable of paying cash. If maintenance and operating costs are to remain within the

ability of a normal cross-section of urban households, utility costs and housing costs should compare well within their income levels.

4.40 New capital cities represent a very special kind of new towns. They are the outcome of a fundamentally political decision and cannot be directly compared with other new towns. They represent many objectives. They are expected to be a symbol for the entire nation (Ankara, Islamabad, Canberra, Brasilia). They are expected to become examples for the urban renewal of many existing cities and future new cities. However, their planners are not free from the search for an adequate economic structure which will diversify the employment base. A source of long-term problems for the city is when the socio-economic structure is not adequately studied and inadequate attention is given to future growth. The planned socio-economic composition of the population of the capital city and its employment base are substantially more important to eventual success than the issue of city design and physical layout. Rarely, if ever, do planners ask themselves whether the resources commandeered by the new capital city could not be more efficiently used for other urban purposes and serve a greater proportion of the national population than the civil servants who will live there.

D. Regional Inequalities, Dualism and Spatial Policies
as Traditionally Understood

1. Regional Inequalities and Lack of Socio-Economic Integration

4.41 In practically all countries, spatial settlements policies have as objectives the economic, political and social integration of all regions in accordance with national values. Integration is indeed the ultimate objective if it is taken to mean the easy mobility of resources and people between regions and economic sectors as well. It is an objective that is constantly in evolution and is translated into programs such as the development of depressed or undeveloped areas (the Korean Western region), new settlements based on agricultural development (Malaysia, Latin America, Indonesia), new settlements based on newly discovered mineral resources (Mexico: East Coast), the restructuring of major metropolitan regions (Sao Paulo in Brazil, Seoul in Korea), the strengthening of other developed regions, intensified policies of river basin development (Mexico), or the development of border areas for economic and strategic reasons (Mexico, Brazil, Paraguay). It could even include the devolution of power and decentralization of decision-making, even though this is one of the most difficult steps to carry out in any country.

4.42 There is a significant difference between the background of the policies developed in advanced economies and those of most middle-income countries. In advanced economies spatial policies have been strongly stimulated by the concern for greater equality. In developing countries there are much greater opportunities for convergence between the desire to reduce disparities among regions and the need to improve the overall efficiency of

the national economy. In many middle-income countries there are very pronounced differences between regions. Dualism is no longer a matter of gradation between types of activities pursued with different levels of technology and scale; it is a discontinuous dualism, where the differences between regions are extremely pronounced and resources mobility very restricted.

4.43 The existence of great economic and social differences between regions sharply differentiates the problems of a large number of developing countries from those of advanced economies. Even when using blunt, macro-economic indicators such as estimates of the Gross Regional Product, the contrast is very clear. ^{1/} In most of the advanced economies, the ratios between the poorest and the richest region are on the order of 2 to 1, in many middle-income countries this ratio can go up to 10 to 1, as can be seen in Table 4.1, where data for 17 countries are reported. To account for the differences in the size of the population living in each region, the population-weighted index originally proposed by Williamson is also presented. Also in that case, most middle-income countries, particularly in Latin America, have indicators of inequality twice as large as those of advanced economies. It is the observation of this contrast between the richer, more

1. There are at least two important reasons why GRP estimates are blunt indicators of regional disparities. First, they do not provide a very precise picture of economic conditions in each region. More specific and more micro-economic performance indicators are needed for planning. Second, there are serious quality problems and comparisons between countries or over time which are only approximate.

advanced regions and the poorer regions that has lead to contrasting the "core" region of a country and its "periphery" and the notion of "polarized development." 1/

4.44 There is little doubt that these pronounced spatial inequalities are associated with the biases of national economic policies discussed earlier. The problems of generating growth with equity are also strongly felt in the formulation of national urbanization policies. We do not know enough yet about the dynamics of regional inequalities in the case of developing countries; or rather, we know that different countries have different experiences, but we do not have reliable methodologies to explain divergent paths.

4.45 Not much more comparative work has been done on regional inequalities beyond the work of Jeffrey Williamson and his cross-country comparisons, which were based on a sample with a large proportion of western countries. 2/ And since the quality of statistical information is highly correlated with the wealth of a country, the degree of comparability among countries is an open question. From a cross-section of 24 countries, he concluded that inter-regional inequality appears greater at intermediate levels than at low or high

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1. John Friedmann has attempted to articulate this notion of polarized development as it cuts across all important aspects of human activities in an intuitively very stimulating, but quantitatively untested (untestable?), "theory of polarized development" in Urbanization, Planning and National Development, Beverly Hills, Sage, 1973. However, in policy making it is hard to hold dogmatically the view that only what is quantifiable is important.
 2. Jeffrey G. Williamson, "Regional Inequality and the Process of National Development: A Description of the Patterns." Economic Development and Cultural Change. Vol. 13 (July 1965), part 2. See also Gilbert, D.E. and Goodman D.E., "Regional Income Disparities and Economic Development: A Critique," in Gilbert A.G. (ed.). Development Planning and Spatial Structure, London: John Wiley, 1976, p. 113-142.

Table 4.1: REGIONAL DISPARITIES BASED ON GROSS REGIONAL PRODUCTS

	National Per Capita NP (1976 US\$)		Williamson Factor	GRP/Capita Richest Region (1976 US\$) <u>1/</u>	GRP/Capita Poorest Region (1976 US\$) <u>1/</u>	Richest Poorest	
	1976	Year of <u>1/</u> Year Estimate					
Netherlands	6200	3375	1970	0.1403	4032	2578	1.56
Belgium	6780	3645	1970	0.1604	4380	2616	1.67
Italy	3050	2488	1970	0.2718	3384	1538	2.20
German Federal Rep.	7380	4371	1970	0.1352	7022	2683	2.62
Japan	4910	3274	1972	0.3007	5555	1900	2.92
France	6550	3989	1970	0.2430	5918	2833	2.09
United Kingdom	4020	3197	1970	0.1088	3667	2566	1.43
India	150	149	1964-5	0.1845	217	97	2.24
Republic of Korea	670	373	1970	0.3078	582	270	2.16
Thailand	380	502	1975	0.6775	1358	215	6.34
Iran *	1936	774	1972	0.9226	3132	313	10.07
Colombia	630	838	1975	0.3073	1342	199	6.75
Mexico	1090	521	1970	0.5343	1067	198	5.39
Brazil	1140	440	1969	1.6201	1102	109	10.14
Venezuela *	2570	1729	1971	0.5333	3175	502	6.32
Malaysia	860	438	1970	0.3599	730	202	3.62
Yugoslavia	1680	740	1968	0.3570	1354	237	5.72
Argentina *	1550	1561	1970	0.3132	3706	397	9.33

* Includes oil.

1/ The GRP/Capita figures refer to the year for which the disparities are estimated. However, in order to facilitate comparisons with more recent conditions in 1976, all figures have been translated into 1976 U.S. dollars.

Source: Various national documents, IBRD files.

Williamson Factor: An index consisting of a coefficient of variation adjusted for the relative population of each region.

levels of development. Williamson advanced the idea of an inverted U curve between interregional inequality and development and raised in the spatial context the question of whether regional inequalities are an inevitable part of development. But inequalities of the magnitude observed in certain Latin American countries or in the Middle East are not an undesirable side effect of growth, they are a major problem.

2. Trade-off between Regional Income Equality and National Growth

4.46 Some of the most systematic work on the existence of a trade-off between interregional income equalization and economic efficiency has been done in Japan. It was initiated by the Economic Planning Agency, which wanted to find what kinds of losses in terms of national growth would result from the use of regional policy instruments such as transportation, infrastructure investment and industrial decentralization. ^{1/} The model was based on a relatively short sample period (1955-1962) and on nine regions regrouping 46 prefectures. It yielded a significant trade-off between the national growth rate and more regional income equality. It projected that, if national income increased by 175 percent in 8 years, the coefficient of variation of the regional per capita incomes would increase at 3 percent a year. It also projected that, if industrial investment is decentralized, the coefficient of variation would decline, but at a significant loss to the national growth rate. On the other hand, improvements in transportation between developed and less-developed regions will lead to greater growth with a rather neutral effect on regional disparities.

1. Japan Economic Planning Agency, A Study on Japan's Nationwide Regional Econometric Model, Economic Research Institute, EPA, 1967. This study is in Japanese, but other related papers have been published in English by the Japan Section of the Regional Science Association. The most significant empirical study in the field is by Koichi Mera, Income Distribution and Regional Development, University of Tokyo Press, 1975, in English.

4.47 As usual, the familiar warning applies that "it does require maturity to realize that models are to be used but not to be believed." 1/ These Japanese studies have uncovered some important relationships for regional policies, but those are findings at the margin for Japan over a short period of time, in the absence of major structural change. In the absence of similar studies in distinctly different countries, such as in Latin America, it is not possible to draw strong inferences from this Japanese work; it only tells us more precisely where to look for interesting regional policy instruments.

4.48 Using the same data base, Koichi Mera explored the relationship between productive efficiency in different regions of Japan and the spatial density of economic activities (urbanization). Because the Japanese data are extremely detailed and include estimates of the stock of social overhead capital, it was possible to estimate regional production functions based on three factors of production: labor, private capital and social overhead capital which were later disaggregated further. 2/ From the estimated production functions, Mera derived estimates of the marginal productivity of various forms of capital investment for the national economy:

"On this basis the following tentative conclusions can be derived: the production elasticity of social capital in the primary sector is 22 percent, that in the secondary sector about 20 percent without social capital in transportation and communication and more than 50 percent with it, and that in the tertiary sector in the range of 12 to 18 percent. The

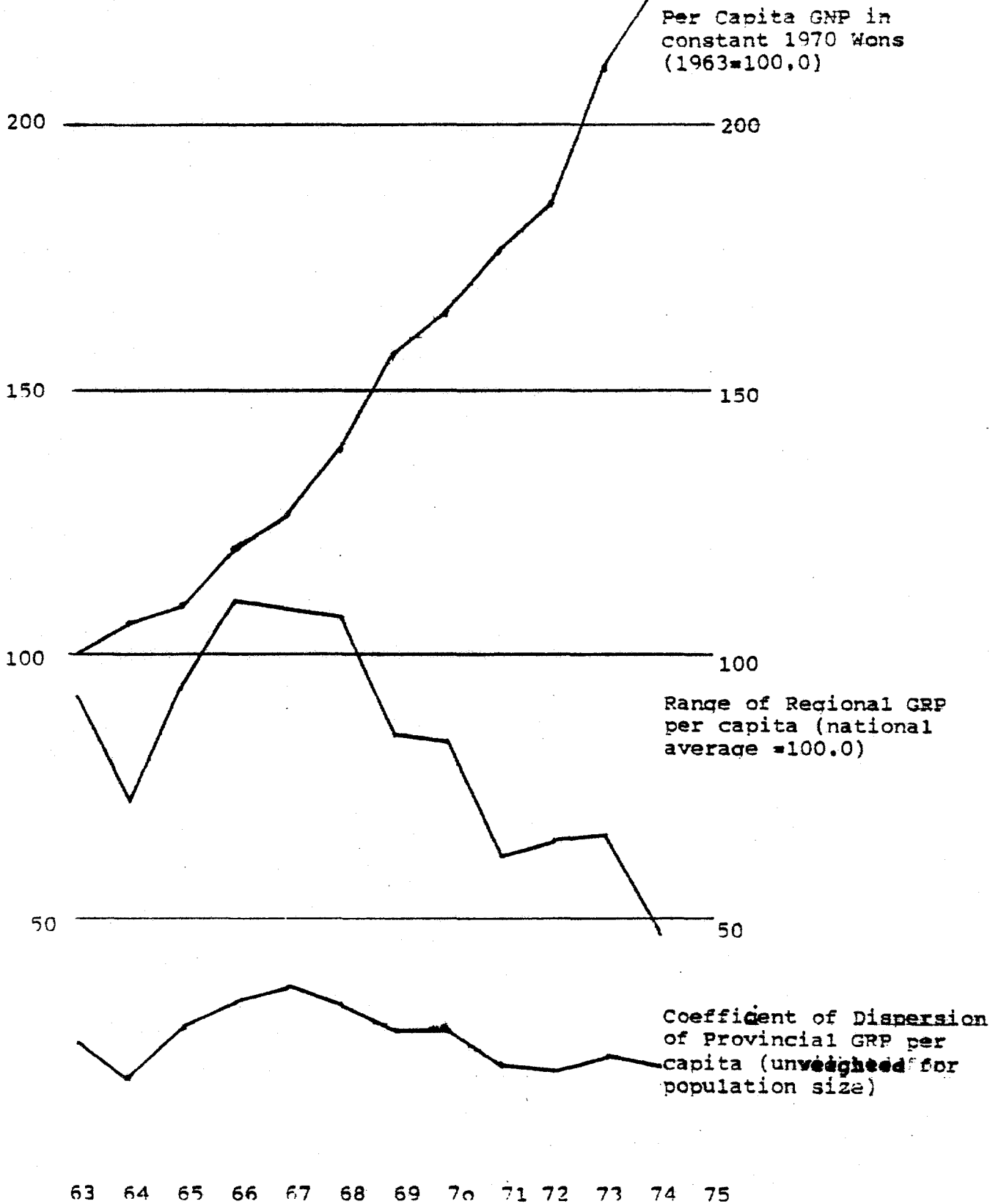
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1. Henri Theil, Principles of Econometrics, New York: John Wiley and Sons, 1971, preface.
 2. See Koichi Mera, Income Distribution, or "Regional Production Functions and Social Overhead Capital: An Analysis of the Japanese Case." Regional and Urban Economics, Vol. 3, May 1973. For instance, the social capital stock data included primary sector capital (soil and water conservation, flood control, irrigation, etc.), coastal improvements, industrial water supply, vocational training, power and gas, transportation and communication, health, education and welfare facilities, including public housing.

above estimates are tentative in the sense that they are sensitive to the specification of the estimating equation." (Mera, 1975, p. 130.)

These findings for Japan are quite interesting because they represent the first systematic attempt to look into the impact of the composition of public investment programs on the productivity of the national economy. In particular, the high productivity of transportation and communication investment is indicative of the bottlenecks in the Japanese economy at a time when the country also experienced an explosive growth in the number of motor vehicles, with private cars increasing at rates of between 20 and 30 percent a year.

4.49 The trade-off between more national growth and greater regional equality may have been overemphasized by the studies based on the Japan data for the 13-year period 1954-1967. In the countries of East Asia which are fairly well integrated economically, it appears that deliberate policies, particularly those dealing with the rural sector and farm income, can be effective in moderating or reducing regional disparities. In Figure 4.1 the range of regional GRP per capita (the difference between the richest and the poorest province, measured in terms of the national average) and the dispersion of regional GRP per capita (measured by the coefficient of variation) are plotted against the national per capita income (based on 1963 = 100). It can be seen that in spite of the tremendously rapid growth of the economy when per capita GNP increased 2.4 times, regional disparities, after a sudden increase, fell markedly and steadily to a new low. This trend is also confirmed by the coefficient of dispersion. A similar trend can also

FIGURE 4.2 : NATIONAL GROWTH AND REGIONAL INCOME DISPARITIES IN KOREA 1962-1974.



be found in the case of Japan. 1/ Such results do not give strong support to the dilemma between growth and regional equity anticipated by the Japanese EPA. At present both the Korean and the Japanese government find it vexing that regional disparities still remain, but the nature of their problem is quite different from those of most developing countries: instead of having large disparities because of the lack of market integration, they are finding that more and more the problems of regional inequality and interpersonal inequality are increasingly due to the fact that some social groups are not easily reached through the market (and are not economically or geographically very mobile). These are welfare problems in the commonly understood sense of developed countries.

4.50 When there is a great lack of integration between regions of the same country, there will be very marked variations in the cost of living at various places. This is particularly clear in a recent analysis of levels of poverty in various parts of Peru. 2/ The cost of living in the region of Lima was found to be about 60 percent higher than in the poorest region (la Selva). In such a case regional differences based on unadjusted per capita income figures will overemphasize the income gaps between regions. Under such circumstances the advanced countries' dilemma of what to do with their

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1. For a comparison of Japan and Korea, see Koichi Mera, "Population Concentration and Regional Income Disparities: A Comparative Analysis of Japan and Korea" in Niles M. Hansen, ed., Human Settlement Systems, Ballinger, 1978, and also K. Mera, Population Distribution Policies in Korea, Report to IBRD. June 1976.
 2. See Vinod Thomas, "The Measurement of Poverty in Peru." IBRD Staff Working Paper No. 2.

depressed regions and the running debate on "place prosperity" versus "people prosperity" take an intensely different color.

4.51 In developing countries the best ground for national concern with interregional inequalities derives from their significance as indicators of poor integration and resources misallocation. Some cases may call for resource reallocation to more dynamic regions where labor productivity and earnings may be higher or where location for industry may be better. In other cases analysis may show that what is needed is not so much a reallocation of labor and industry as a need for complementary investment in human capital, through more education or more investment in social and economic infrastructure which cannot be provided profitably by the private sector. In many cases regional inequalities may be moderated through reorganization of the structure of inputs and product markets or the elimination of institutional arrangements that discourage investment in the lower-income region.

4.52 Large regional disparities are a sign that there is a serious problem of socio-economic integration, but past a certain level (say, when the range of GRP per capita falls somewhat below three to one) more precise and more detailed micro-economic indicators are necessary. The reason is that perfect socio-economic integration will not make a region with a poor comparative advantage rich: satisfactory integration does not imply a high rate of expansion in every peripheral area. For instance, the historical record for the United States shows that regional disparities in that country have never been as extreme as what is being observed in many developing countries, because the degree of socio-economic mobility was generally satisfactory. It also shows that regional disparities have not vanished completely. The range

of per capita personal income (not GRP) over 110 years, standardized over the national average (US = 100), was as follows: 1/

	<u>1860</u>	<u>1880</u>	<u>1900</u>	<u>1920</u>	<u>1940</u>	<u>1960</u>	<u>1970</u>
Highest	143	141	139	136	132	117	114
Lowest	65	43	45	53	49	66	74
Ratio	2.20	3.28	3.09	2.57	2.69	1.77	1.54

3. Regional Inequalities and Interpersonal Inequalities

4.53 The formulation of explicit regional policies should be supported by systematic efforts to correct the implicit biases of national economic policies, including their distributive effects. Too often, regional policies are used by policymakers as the (politically) cheapest way to appear to confront problems of interpersonal inequalities. If income redistribution is really the objective, explicit regional policies can be helpful, but they come a very poor second behind other forms of income redistribution (land reforms, reforms of the fiscal system, pricing policies, education policies, etc.). Moreover, the exact content of regional programs and projects must be carefully examined, because in many countries, the poorest regions are also those with the most skewed income distribution. It would be very unfortunate if the benefits of regional policies accrued mostly to the highest income groups. It is necessary to evaluate all sector programs for their

1. See R.A. Easterlin, "Regional Income Trends, 1840-1950" in American Economic History, ed. S.E. Harris, New York, 1961, and U.S. Department of Commerce, Statistical Abstract of the United States.

local income benefits, particularly those directly addressed to the private sector. For instance, other income raising methods than the tax relief program used under the 34/18 program for Brazil's Northeast may have been more efficient and more equitable. 1/

4. Regional Investment, Local Multiplier Effects and Leakages through the Urban System

4.54 The assumption that rapid investment in a region will have large trickling-down effects locally is indeed just that. It must be carefully checked against local and national conditions. There are no simple guidelines as to the size of the regional multiplier and the extent of leakage effects to be expected from a given project. A well designed project will contribute to raising local income but may not reduce interregional income differentials much because many of the financial flows will leak back to the large urban centers through the urban network. This can be illustrated by the case of an agricultural project in Malaysia and the industrial dispersion policy of Japan.

1. See David Goodman, "Industrial Development in the Brazilian Northeast: An Interim Assessment of the Tax Credit Scheme of Article 34/18." In R.J.A. Roett (ed.), Brazil in the Sixties, Nashville, Vanderbilt University Press, 1972.

Case A: An Agricultural Example: the Muda Region Project in Malaysia

4.55 The Muda River Valley project in Malaysia is a well studied example of a large, highly visible public sector project, located in a backward region, as a major element of a regional policy designed by the central government. The Muda irrigation project covers a command area of about 100,000 hectares cultivated by about 51,000 farm families. Most of the region is devoted to the monoculture of rice. The introduction of irrigation permitted double-cropping, and the scheme brought substantial rise in the total output of paddy as well as in local farm incomes. Presently, the Muda region (representing only 6 percent of Malaysia's population) meets about 40 percent of Malaysia's annual rice requirements. ^{1/} The problem is that, before the project, the region was a poor one with a per capita GDP of about 60 percent of the national average in 1965, and that, after successful completion of the project, it is still at about the same relative level. Thus, "although the Muda Scheme had done much to raise incomes by 1972, it had not solved the region's poverty problem." (C. Bell, 1978, p. 19.)

4.56 The construction of a social accounting matrix for the scheme has clarified this puzzling situation. The social structure was divided into five groups: (1) landless paddy workers, (2) labor-abundant paddy farms, (3) land-abundant paddy farms, (4) other agricultural households, and (5) non-farm households. It was found that almost all landless paddy workers

1. See Clive Bell, "Some Aspects of Regional and Cost-Benefit Analysis Within a Social Accounts Framework: With Special Reference to the Muda Region of Malaysia." Social Accounting Methods in Development Planning Conference, Cambridge, U.K., 1978.

and a great proportion of labor-abundant paddy farms, or about 15 percent of the population, still fell below the Malaysian-defined poverty line.

4.57 The social accounting matrix framework showed that the interindustry linkages within the region were very limited. The downstream effects of the projects were mostly felt through final demand. The leakages were substantial, and household final expenditures accounted for just over 50 percent of total imports. For these imports, which were mostly durables, the ratio of non-competitive to competitive imports for household consumption exceeded seven to one. Clearly, the local urban centers could not provide the appropriate goods. Only 45 percent of regional private savings found their way into regional investment. More strikingly, "the annual outflow of regional private savings in 1972 was almost 20 percent of the total investment in the Muda Scheme by the Malaysian Government and the World Bank." ^{1/} The capital outflow attributable to households and regionally based firms was almost 10.5 percent of regional value-added. Estimates of government flows show a net tax burden for the region even though the area is poorer than average.

4.58 How did that happen? In addition to the apparently inappropriate federal fiscal policies, it appears that about one-half of the total increase in household incomes accrued to non-farm households. The scope for private on-farm investment was limited for farm households, and the problem may have been compounded by the fact that non-Malays are not permitted to own farm land and have concentrated in trade and services, transferring their net savings outside the region for higher rates of return.

1. Bell, "Some Aspects," p. 25.

4.59 The Muda case shows how important it is to determine the extent to which different classes of households (and different types of firms) have different propensities to invest in the region itself because of imperfections in the capital markets and different barriers to entry for different social categories according to economic activities.

Case B: An Industrial Example: Japan in 1960

4.60 The case of Japan is of particular interest because it is a country that traditionally has had a low degree of income inequality on a national basis and because it has grown extremely rapidly since World War II, placing much emphasis on the growth of the manufacturing sector. By the middle of the 1960s, the Japanese felt that the rapid growth of the period 1955-1961 had led to serious imbalances in the rates of growth of various prefectures.

4.61 The Japanese defined their regional problem by regional income differentials; widening productivity differentials; the excessive concentration of population in big cities; a distorted accumulation of productive capacity in particular districts; and in important coastal areas, a shortage of industrial water leading to a lowering of the underground water table and the sinking of the ground, as in Tokyo Bay. The rapid rate of industrialization led to a spread of smog in big cities, aggravated traffic conditions and a rapid rise in consumer prices. 1/

1. See M. Shinohara, "Structural Changes in Japan's Economic Development," Economic Research Studies No. 11, Hitotsubashi University, Tokyo, Kinokuniya Bookstore, 1970.

4.62 A first investigation of regional income differentials led to the conclusion that, in contrast to interindustry, intra-industry scale differentials, the regional differential in terms of per capita income and productivity is relatively unlikely to disappear. Although it was popularly agreed that regional differentials in per capita income and productivity had widened during the process of rapid growth, this could not be substantiated statistically. Dividing the prefectures into two subgroups, the industrialized prefectures and the nonindustrialized prefectures, the regional differential had widened between the two groups, but within each group, differentials had been significantly reduced. The two conflicting tendencies led to a fairly stable situation overall. Subdividing further the manufacturing sector into heavy industries and light industries, it was found again that within-group differentials tended to decrease over time and that the major source of possible increases in regional income differential would be due to the rate of growth of heavy industry. In studying regional variations in terms of value-added per worker, it was predictably found that heavy industry and a concentration of large size firms contribute to higher levels of regional differentials.

4.63 The element of the study which is of particular significance in discussing the potential of industrial dispersion for regional income equalization was the contrast found between levels of value-added per capita in various regions and their corresponding level of per capita income. There is a significant difference between productivity and per capita income rankings. It was found that the ratio of income to gross value-added in new

heavy-industry prefectures was particularly low. Some of the gross value-added created, inside a prefecture, flows to the head office of corporations or other industries outside the prefecture. Investment in large capital-intensive projects will lead to the emergence of complementary industries consisting of part-makers, specialized suppliers, etc., but it may not always be possible to satisfy the requirements for specialized services within the same prefecture. The choice of location of complementary industries will be particularly important to the reduction of regional inequalities. In the case of Japan, it was found that, when heavy industries located fairly close to major industrial centers such as Tokyo or Osaka, the income/gross value-added ratio was much lower: many of the benefits of large-scale projects were leaking outside the prefecture back to Tokyo.

4.64 Another important finding is that, when the regional differential in terms of income per employed workers was decomposed into two parts (an industrial composition effect and a residual characterizing the region), there remained extremely large productivity differentials in a ratio of 2.8 to 1 between Tokyo prefecture and the poorest prefecture of Kagoshima. In addition to a size-effect for firms related to location, these productivity differentials underline the correlation between productivity and city size.

4.65 In both the rural and the industrial examples, the channels followed for the transmission of economic impulses have been shown to have an essential impact on the narrowing of regional income differentials, and the local multiplier effects were limited by the absence of complementary economic activities in the region. In the case of the Muda project, the transmission of economic impulse via the interindustrial structure was less important than

the effects generated by household consumption of large amounts of non-competitive imports. Further transfer of resources to other regions were also made by businesses, and the fiscal structure in Malaysia simply made the situation worse. In the case of Japan, it appears that inter-industry effects and transfers of funds by large firms were important factors in limiting regional income equalization. It is quite possible that, over the long-run, the necessary complementary activities will locate close to the original large-scale project, but this adjustment is not automatic and it will require direct, detailed, region-specific attention to the attraction of additional activities.

V. APPROPRIATE NATIONAL URBANIZATION STRATEGIES

A. Basic Considerations in Defining National Urbanization Strategies

5.1 The first and most crucial steps for the formulation of a national urbanization strategy to be effective is political commitment at the highest level and appropriate adjustments of the government structure and modes of operation. To the extent that government decision makers are interested in the spatial outcome of their decisions, there are good chances that the process of learning by doing will lead to increasingly appropriate strategies and policies. A commitment to better policies toward urbanization is likely to lead to greater convergence and interaction between the implicit effects of national policies, explicit spatial policies and policies addressed to the problems of the largest cities.

5.2 At present, two of the three major elements of a national urbanization strategy are not found within the scope of the usual national spatial policy making framework. First, problems of congestion, pollution, internal city inefficiency and biased distribution of services among residents should be addressed directly. The joint consideration of national spatial and intra-urban policies would greatly improve the focus of both policies. Attempts to rely on direct control of the population of the capital region are a particularly poor way of dealing with its internal inefficiencies: where are all those people supposed to go? Second, the problems of implicit spatial biases present in national economic and sectoral policies should be reviewed and addressed directly. Efforts should be made to keep national economic policies and regulations more neutral; policies biased against the rural sector

are a good place to start. The improvement of national policies at the margin depends on the national context. To the extent that behind every government policy bias there is a pressure group growing stronger because of it, commitment to better settlements policies at the highest level is an important requirement for progress.

5.3 Direct national spatial policies, which are the third and most familiar area of a national urbanization strategy, have two roles to play. First, the provision of transportation and communication infrastructure is crucial to releasing the growth potential of every region of the country. Second, by improving the comparative advantage of other areas, direct spatial policies contribute to a redirection of migration and resource flows away from the primate city. Great attention must be paid to the transportation corridors and urban locations that are likely to channel this growth. It is very unlikely that all peripheral regions will be equally attractive at any given time, and the timing and scheduling of government programs must be carefully investigated in the light of anticipated national and sectoral economic growth patterns.

5.4 In the formulation of national urbanization strategies, a few basic lessons learned from past experience should be kept in mind:

- The spreading of resources over all regions and cities is not likely to be effective; pressures to do so are most easily resisted in strong, centralized governments.

- The problems of lagging or depressed regions must be addressed on the basis of their specific growth potential (agriculture, natural resources, tourism and recreation). Note that in many countries, the cities of these regions do not possess the necessary scale for agglomeration economies; as the poorest regions also have the least developed urban system, the timing of investment becomes important.
- The scale of national spatial strategies is not uniform. Very large countries like Brazil and India should emphasize state-level policies once the unintended spatial effects of national policies have been well understood and hopefully improved. In Central America and the Caribbean the problems are almost those of a large metropolitan region and its immediate hinterland.
- In most cases, new towns are wasteful and inefficient ways of approaching the problems of rapid urban growth; satellite towns within the commuting zone of large cities or company towns are a different matter.
- A spatial strategy that can emphasize intermediate size cities (scaled according to each country), and major transportation corridors will be building from a position of strength.

- Planning for an individual area cannot be done effectively in isolation. It must be part of a national strategy and based on the comparative advantage of the region as well as a realistic appraisal of national resource constraints.

5.6 Stop-go policy making in the case of national urbanization policies is particularly destructive. In the absence of a stable, long-term, coherent national growth policy and of an equally stable spatial policy, the observed patterns of industrial location and individual migration will lead to the concentration of economic activities in the largest metropolitan regions. Both the sensible industrialist and the young household will minimize the probability of bankruptcy or the probability of unemployment by locating in the largest and richest market: the capital region. The combined effect of an active growth strategy and a consistent national urbanization strategy can convince a business firm that opportunities outside the capital region are meaningful, given very infrequent business location decisions. In market or mixed economies government instability will render decentralization policies totally ineffective and jeopardize other elements of the national settlements strategies as well.

B. Policy Measures for National Urbanization Strategies

5.7 The large number of policy measures available for the implementation of national urbanization strategies can be ordered in various ways. First, they could be classified according to their significance for each of the three dimensions of a national urbanization strategy. Policies could also be classified according to the economic sectors which they are affecting:

directly productive sectors, such as manufacturing or agriculture; economic overhead sectors, such as transportation, energy, telecommunication or industrial water supply; or, investment in human resources, such as education or public health. Another dimension of national urbanization policy measures is their economic character; taxation policies, subsidies, direct public investment, regulation of economic activities and licensing. From the viewpoint of policy formulation, it is best to consider the scale of operation of policy measures, the opportunities which exist at various levels of decision making and the level at which specific policies are most effectively administered.

5.8 The level of operation of national urbanization policy measures, their nature and their effects are summarized in Table 5.1. Beginning with international policies, the growth strategy of a country is very important: whether it is export-led or autarchic will influence the nature and location of leading sectors. Trade regulations and tariffs, because they favor certain sectors over others, also afford preferential treatment to the cities and regions where these sectors are predominantly located. International transportation policies and participation in shipping conferences can favor certain coastal zones and specific harbors over others. In some countries, particularly in Africa and the Middle East, international migration can have an important impact on both countries of origin and of destination, as immigrants tend to locate in large cities.

5.9 At the national level many policies can be considered. Among them, population policies have been listed as a reminder of their dominant implicit role for national settlements development; in practice, they are a datum for

Table 5.1: POLICY MEASURES FOR NATIONAL URBANIZATION STRATEGIES

Scale of Operation of Policy Measures	Nature of Policy Measures	Effects of Policy Measures
<u>Relations with the International Economy</u>	Growth Strategy and Export Orientation. Foreign Exchange Policies. Tariffs and Trade Protection. Regulation of Foreign Investments. International Transportation Policies. Immigration and Emigration Policies.	Most of these policies have implicit effects on the urban system and can accentuate concentration in the largest cities.
<u>National Economy</u>	Population Policy, Public Sector Investment Allocation; Intergovernmental Fiscal Relations, Fiscal Transfers and Taxation; Transportation Policies (pricing and regulation of various modes and certification by product); Communications Policies (structure of information networks); National growth policy and sectoral priorities; treatment of the rural sector (terms of trade); Labor Policy (minimum wage legislation and regulation of professions); Banking and Finance Policies (regulation of new branches and conditions of operation); Education (regional specialization of higher education); Regulation of Public Utilities.	Of all these policies population policies, sectoral priorities and treatment of the rural sector appear to have the strongest implicit effects. The implicit effects of other policies vary significantly from country to country.
<u>Regional Level (Provincial, State)</u>	Economic Development Policies (priorities for the region); Investment Policies and diversification of activities, regional public investment and transport policies; formulation of policies by broad types of areas; Transport policies (ranking of external links and intra-regional network), Public Transport policies; industrial estates policies, and other employment location decisions, educational facilities; allocation of health and social services; regional Land policies. Education (localization of facilities for general and technical education). Regulation of urban and non-urban Land use. Regulation of utilities.	In most countries the regional level of government is responsible for implementing central government policies and has very close control over very localized activity both within cities and for rural centers. Strategies must be developed for the long term growth of the region, consistent with national trends. Because of economies of scale, concentration of investment in selected urban centers phased according to long term objectives.
<u>Urban Level (Daily Commuting Zone)</u>	Local Land use policies used for decentralization; regulation of industrial location and services sector; extensive use of land control as part of urban transport policy; environmental regulations (solid waste, water and sewerage management); localization of satellite cities and policies toward low income neighborhoods; management of local taxation system and locally owned public utilities; enforcement of building codes, design and construction; localization of major traffic generators (markets, public libraries, stadium, etc...); localization of hospitals and health clinic.	The internal efficiency of cities is an important factor affecting further growth. The application of zoning controls can be used as a means to enforce decentralization. Broad options for future expansion need to be identified and a local strategy established. It must be consistent with the sources of growth of the city.
<u>Rural Centers</u>	Most of the policies for the distribution of services for rural centers are generally determined from the regional level of government. They are directly affected by national policies toward the rural sector and farm policies.	The growth of rural centers is dependent on farm policies, but strengthening of rural services is direct responsibility of provincial level.

national settlements strategies. Of the other policies listed, policies encouraging the improvement of communication networks should be emphasized: policies promoting the growth of large private and public organizations capable of branching out into every city and encouraging also the regional and local expansion of business and professional associations is extremely important and too often overlooked. The rapid diffusion of innovations and the development of extensive regional networks of information should be strongly encouraged.

5.10 The provincial (or state) level of government is very important in the execution of nationally formulated strategies. Provincial decision makers play a crucial role in identifying for the central government the priorities and appropriate policies for their region. The degree of actual autonomy exercised at this level of government varies according to the structure of intergovernmental relations in the country and, particularly, on the level of fiscal resources actually controlled by the region. Intergovernmental transfers are always a problem because the lagging regions most in need of help also have the weakest resource base.

5.11 At the city level this report has stressed the importance of appropriate internal policies for the cities. The quality of city-level management strongly influences the attractiveness of a city for business firms and its growth potential. Many regulatory methods can either encourage or discourage producers and eventually expand or reduce the resource base of the city. The various aspects of local government that affect the efficiency

of a city and the fair treatment of its residents are discussed in detail by Linn. 1/

5.12 Provincial level governments are typically the main providers of assistance to rural communities. Given the national strategies pursued at the national level for the farm sector, they can strongly influence the regional growth of the institutions serving rural populations.

1. Johannes Linn, Policies for Efficient and Equitable Growth of Cities in Developing Countries, Background Paper for the World Development Report, 1979, IBRD.

C. Dominant Policy Issues in Various Countries

1. Limited Market Economies at Early Stages of Urbanization

5.13 Under this category we find a large number of developing countries. They are urbanizing rapidly through the combined effect of rapid population growth and large flows of rural-urban migration compared to the size of the urban system. Their national settlements structure is marked by the coexistence of several distinct regional settlement systems which are relatively simple and are being transformed into one single system. There is a lack of fully developed integration of the system since these countries have gained their independence.

5.14 For such countries efforts at deconcentration are probably very premature: concentration of economic activity and population around the leading centers is necessary to maximize the use of scarce managerial resources and skilled labor, given the low level of income. Major urban regions are also the only ones to offer sufficient market density for many light manufacturing activities. But, the likelihood that further concentration may be stimulated by inappropriate rural sector policies should not be overlooked.

5.15 In such countries, in an early stage of development with a low level of urbanization, the possibility of radical changes in the system is quite significant compared to the other types of countries: national transportation investment can strongly modify the present networks of settlements. Such changes are heavily dependent on the effectiveness of the planning system. There is a risk that haphazard and strongly unbalanced urban growth could yield a large urban agglomeration, with self-contained neighborhoods closely resembling a collection of villages, because income levels are too

low for efficient differentiation of urban activities. The historical experience of other countries shows that, while new patterns can be created during the first stages of development, they will quickly become a dominant factor in the national settlements structure.

2. Large, Low-Income Countries

5.16 In the large, low-income countries of Asia, the absolute magnitude of the urban sector and its relatively small share of the total population indicate that the usual urbanization-industrialization strategies will not be able to rapidly accommodate a growing population. Two rather distinct strategies should be devised--one for the rural sector and one for the urban sector. However, as long as there is a severe overall resource constraint, trade-offs between the two sectors will lead to a heavy rural emphasis on national policies. On the other hand, this does not imply an anti-urban stance on the part of policy makers: the internal management of the large cities is an important problem in terms of difficulty as well as in terms of the size of the populations involved. In India, given the large population of the country, state level urban strategies are needed particularly in those states that are already more than 25 percent urban (Gujarat, Maharashtra, Mysore, Punjab, Tamil Nadu and West Bengal). Given the scarcity of urban resources, their efficient economic allocation should be stressed. In some cases such as Calcutta, national economic policies have been a major reason for a prolonged period of stagnation.

5.17 The essential object of national urbanization strategies in large African countries is to encourage the growth of the agricultural sector and to develop a policy for the provision of national infrastructure which will

support the hinterland and favor the development of a balanced (i.e., polycentric) system of cities in the future. Given the low density of effective demand, the scarcity of managerial talent and the low level of urbanization, direct policies of decentralization in most African countries represent the wrong approach. What is more urgent is the development of the growth potential of the rural sector and the elimination of very unfavorable terms of trade between the rural and the urban sector that accentuate rural-urban migration toward a few major urban centers. These urban centers are extremely rapidly growing and become difficult to manage, in spite of their generally moderate size, because of an insufficient institutional structure and a shortage of managerial talents. The question is not of decentralization, but of avoiding premature urban concentration through more appropriate national sectoral policies in favor of the urban sector. The examples of the Ivory Coast and Tanzania, which have been following different paths but are emphasizing effective rural development, are positive illustrations of the use of such policies. The economic structure of Nigeria does not look very different from that of the other countries when the mineral sector is isolated from the rest of the economy; the added degree of flexibility provided by oil revenues can be used in a way that will support an efficient pattern of national settlements.

3. Middle-Income Countries

5.18 In the middle-income countries, policies dealing with city-to-city interactions as well as rural-urban interactions must be considered. The big city problem is very important, particularly in Asia and Latin America. Too frequently, economists from advanced countries argue that, since they have not found significant social costs for large Western (mostly U.S.)

cities, there is probably nothing wrong with the growth of very large cities in middle-income countries. This may prove to be a case of extrapolating research findings out of context. The studies of advanced economies are suggesting two important results: (1) the social economic costs of congestion and pollution imposed on the very large cities by newcomers are small and represent only a small percentage of the value of the total city output; (2) on the other hand, failure to charge newcomers fully for the congestion and pollution externality costs that they impose on present residents leads to a large volume of in-migration, in proportion to the total city population, because of the high wage elasticity of labor demand on any one of these cities.

5.19 The social economic costs experienced by large urban areas of developed countries are small because the urban structure is already fully developed. Because cities have grown more slowly in these countries than in developing countries when income levels were already high, appropriate infrastructure exists not only in the capital region but also in alternative cities. ^{1/} In addition, knowledge about pollution and environmental costs is widely available and increasingly used; significant pollution controls are enforced so that the market has been adjusting to them.

1. It is worth remembering that, because cities in developing countries are very large, given their income level, their level of infrastructure is also low. For instance, in Japan only 23 percent of households had access to systems in 1975, because of the very fast growth of its cities. See Economic Plan for the Second Half of the 1970s, Economic Planning Agency, Japan, May 1976, p. 112.

5.20 On the other hand, one cannot expect that the social costs of very large city sizes in middle-income countries will be small compared to the total output of the capital region, because of market distortions. First, there is a great deal of ignorance about pollution and congestion (lower sensitivity because of lower income levels?). There are very few countries in developing countries where firms are actually required and compelled to control (and thus pay for) the pollution that they emit. Second, because of a severe lack of infrastructure (both physical and socioeconomic), these firms do not have a wide choice of good locations in other cities. We have no precise notion of the social losses in terms of economic growth which various types of firms in middle-income countries may suffer through congestion problems in large cities. These losses occur because of the firms' inability to expand sufficiently to reap full economies of scale for lack of good alternative locations. Meanwhile, migrants have to go where the jobs are and they stream into the largest cities because of lack of employment opportunities elsewhere.

5.21 National urbanization policies for the middle-income countries, with respect to the very large cities, should pay much greater attention to the locational needs of business firms, and of manufacturing firms in particular. Policy makers need to know more about various activities to determine: (1) what firms need to remain in the largest cities; (2) what firms could benefit from expansion elsewhere because their growth is presently constrained; (3) what kinds of activities can be made routine to such an extent that decentralization is not harmful; and (4) what kind of cities and regions are appropriately endowed with physical and socioeconomic infrastructure to become attractive locations to manufacturing firms. With rapid

economic population and economic growth, increasing congestion and pollution costs can induce the location of expanding firms away from the largest urban centers.

5.22 Within the large cities much more vigorous policies against pollution and congestion must be pursued. Business firms should pay for the pollution that they discharge in the environment. Cities should make sure that one mode of transportation is not subsidized at the expense of other modes. In particular, because ownership is rising very rapidly, the automobile should bear the full cost of the resources it is using in terms of space and infrastructure, and particularly the congestion costs that it imposes on public transportation systems in downtown areas. The equitable provision of urban services is also a major problem.

5.23 In the case of very sharp regional disparities, separate efforts must be made to improve lagging regional economies. It is not a good idea to mix policies favoring decentralization away from the capital region with active policies concerning regional inequalities by forcing firms out of the capital into depressed areas. In such areas the local market is too small to allow even local firms to grow, and at the same time, transportation and communications systems are weak. Policies concerning depressed regions should be based on their potential comparative advantage (often agriculture). If a region is too poor in resources to support the local population, an important policy consists of raising educational levels to allow migrants to move under better conditions. A combination of higher local income levels and migrant remittances may eventually bring the region to a new threshold in terms of

support the hinterland and favor the development of a balanced (i.e., polycentric) system of cities in the future. Given the low density of effective demand, the scarcity of managerial talent and the low level of urbanization, direct policies of decentralization in most African countries represent the wrong approach. What is more urgent is the development of the growth potential of the rural sector and the elimination of very unfavorable terms of trade between the rural and the urban sector that accentuate rural-urban migration toward a few major urban centers. These urban centers are extremely rapidly growing and become difficult to manage, in spite of their generally moderate size, because of an insufficient institutional structure and a shortage of managerial talents. The question is not of decentralization, but of avoiding premature urban concentration through more appropriate national sectoral policies in favor of the urban sector. The examples of the Ivory Coast and Tanzania, which have been following different paths but are emphasizing effective rural development, are positive illustrations of the use of such policies. The economic structure of Nigeria does not look very different from that of the other countries when the mineral sector is isolated from the rest of the economy; the added degree of flexibility provided by oil revenues can be used in a way that will support an efficient pattern of national settlements.

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ANNEX 2.1

LEVEL OF URBANIZATION IN 33 COUNTRIES AND REGIONS

100

100

WORLD (1)*

AFRICA (2)

75

75

50

50

25

25

1900 1925 1950 1975 2000

1900 1925 1950 1975 2000

100

100

Eastern Africa (10)

Middle Africa (11)

75

75

50

50

25

25

1900 1925 1950 1975 2000

1900 1925 1950 1975 2000

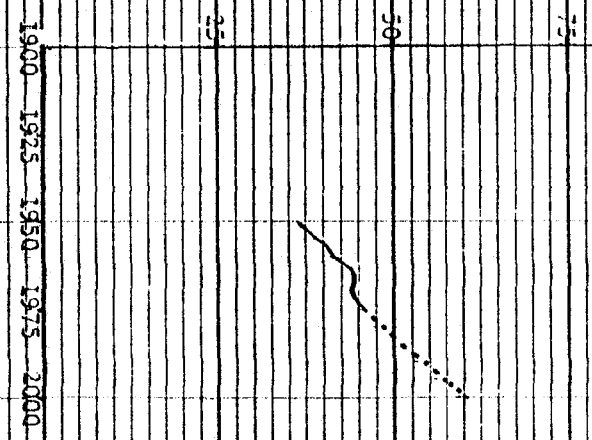
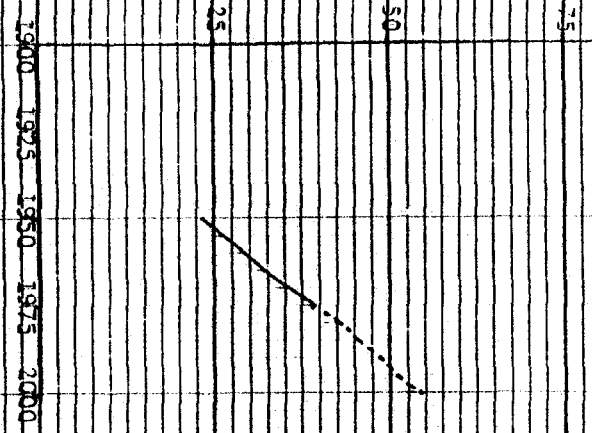
* For the countries included in each region see the attached list.

%100
- 1977 - %100

Annex 2-1 (page 2 of 9)

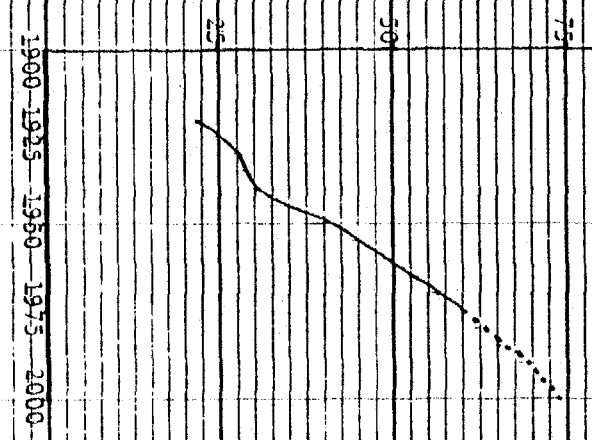
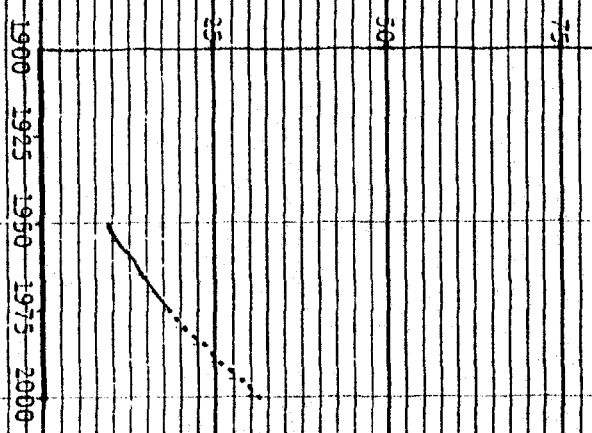
Northern Africa (12)

Southern Africa (13)



Western Africa (14)

Latin America (3)



2100

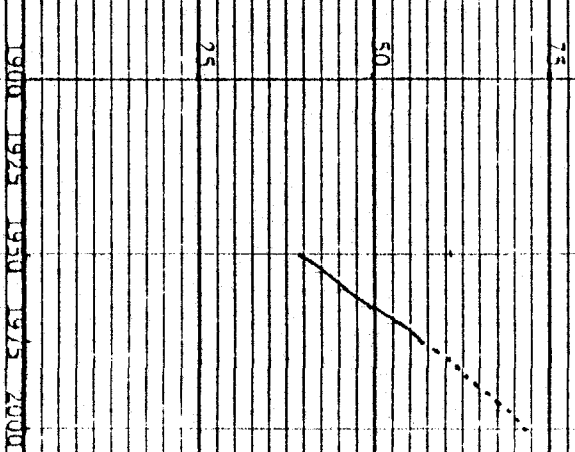
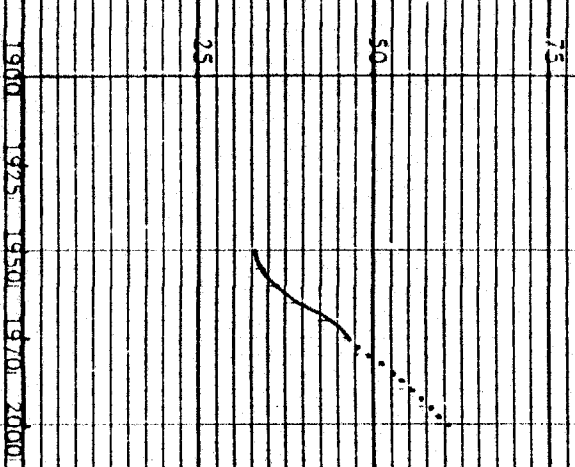
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Annex 2-1 (page 3 of 9)

Caribbean (13)

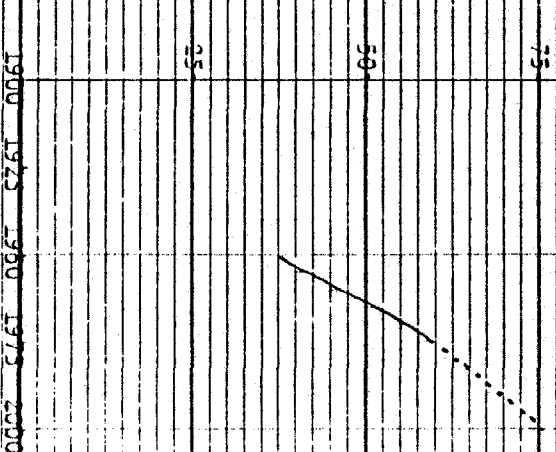
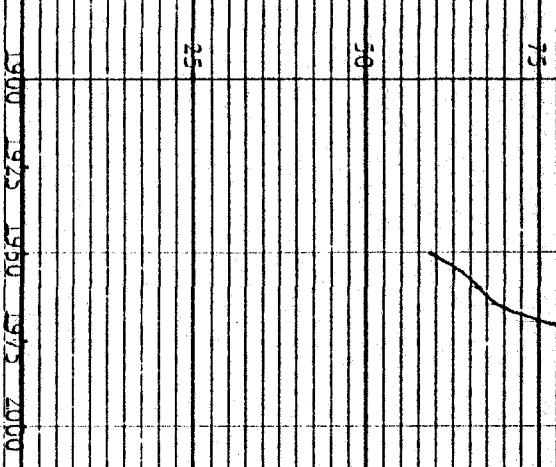
Middle America (15)

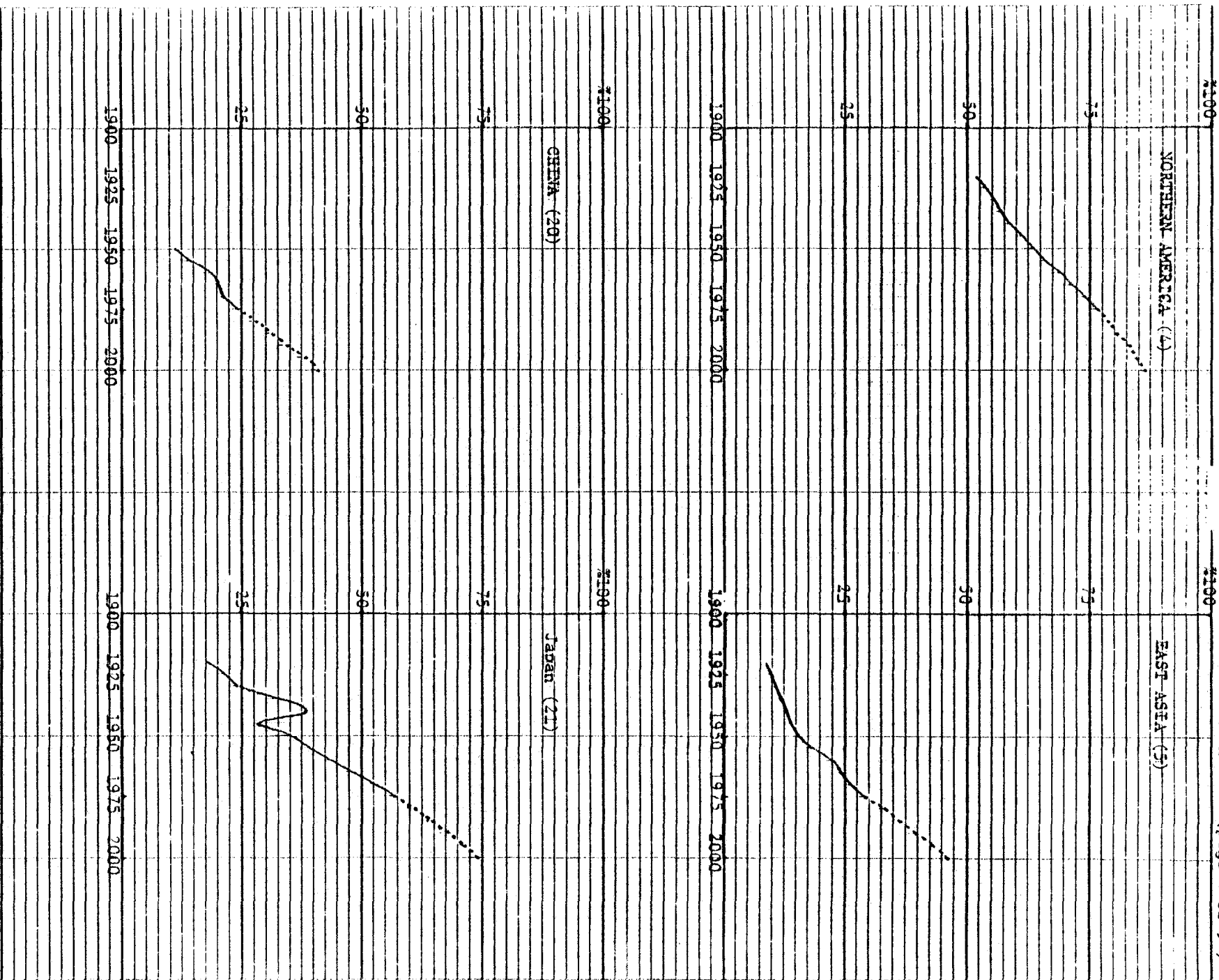
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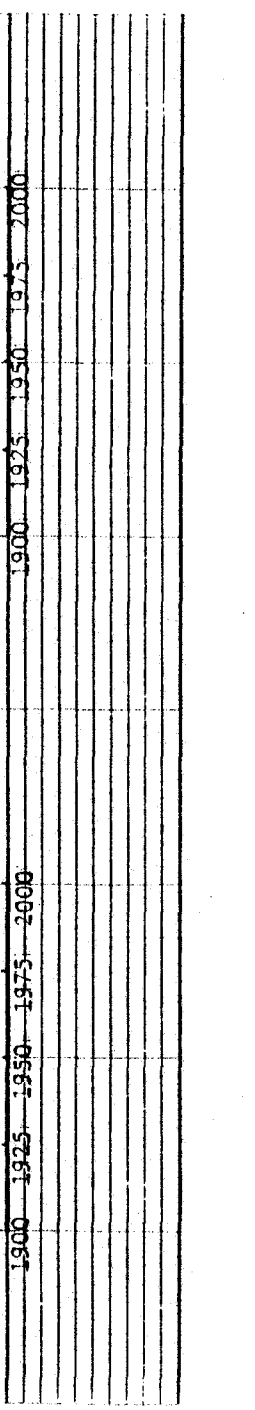
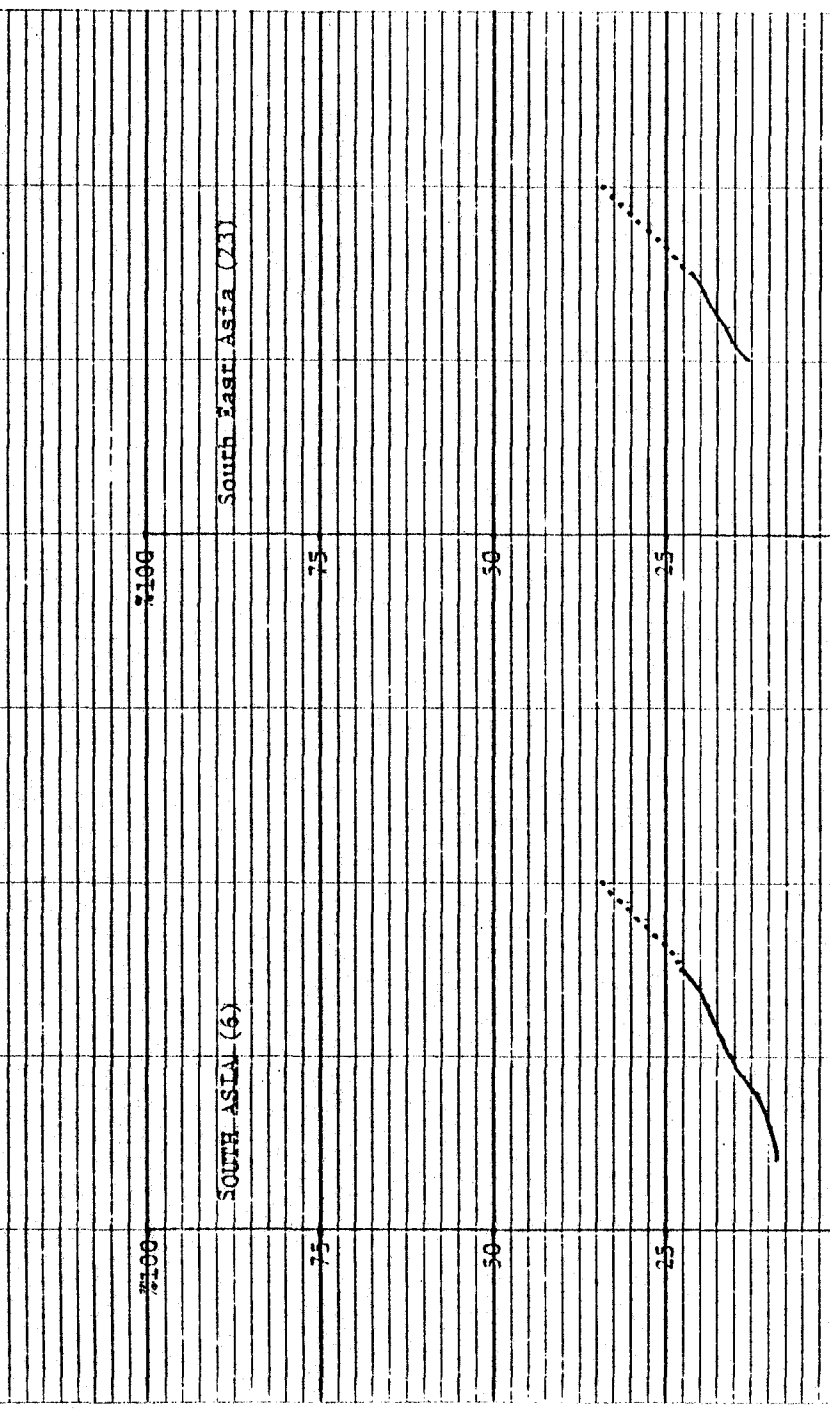
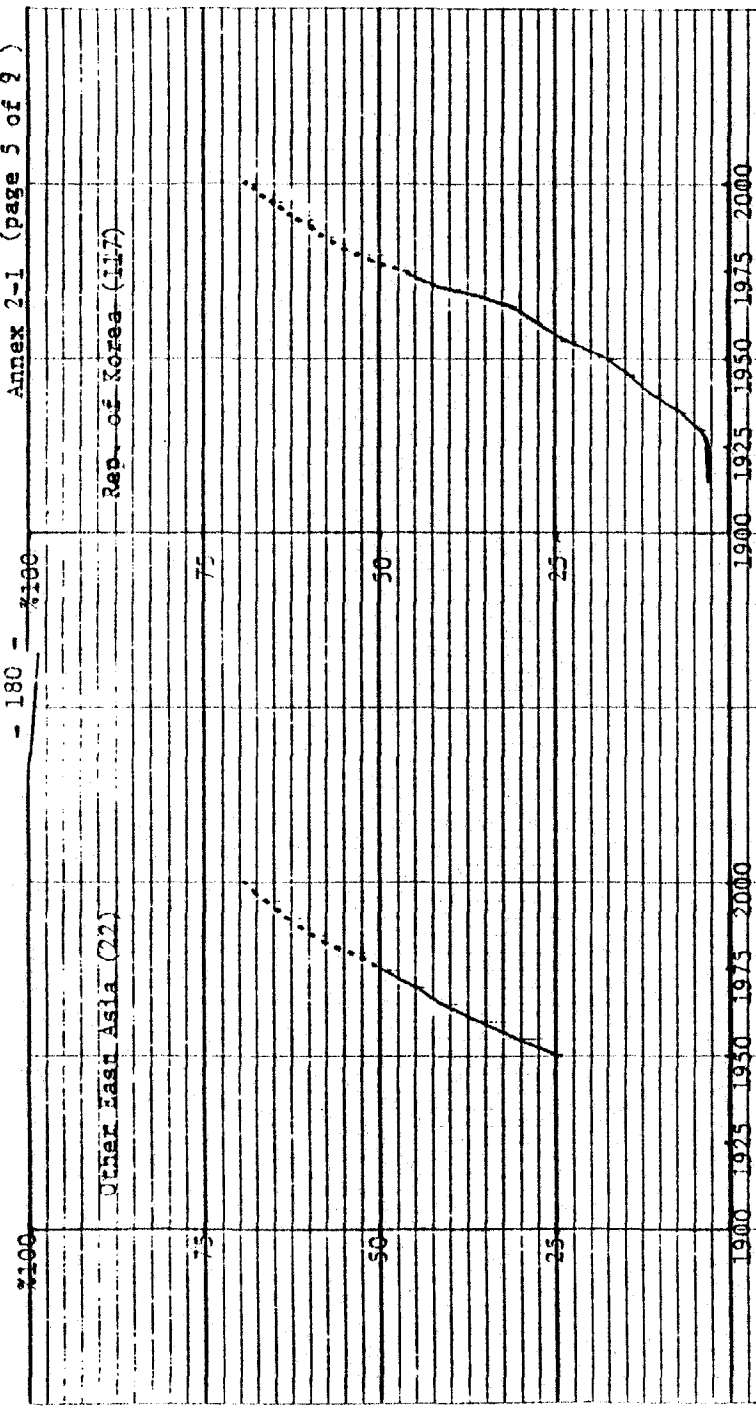


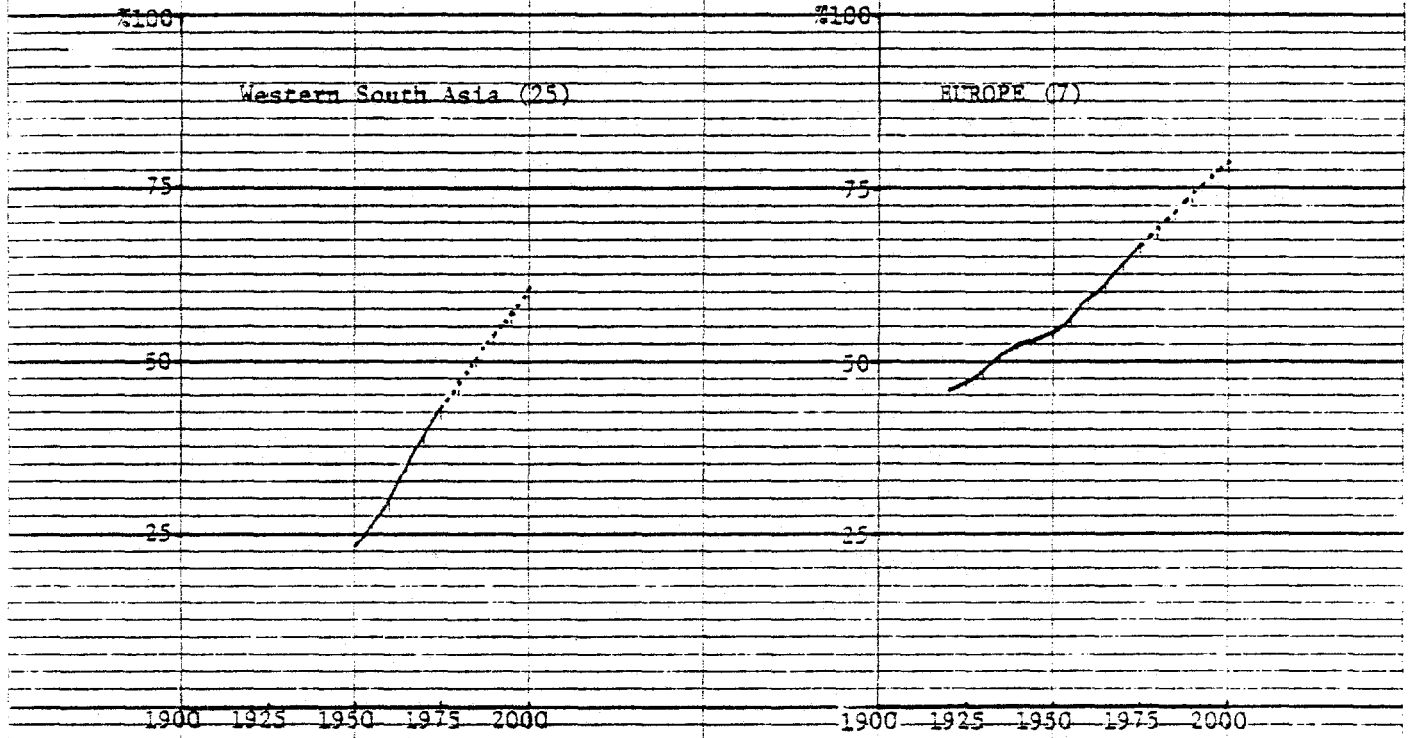
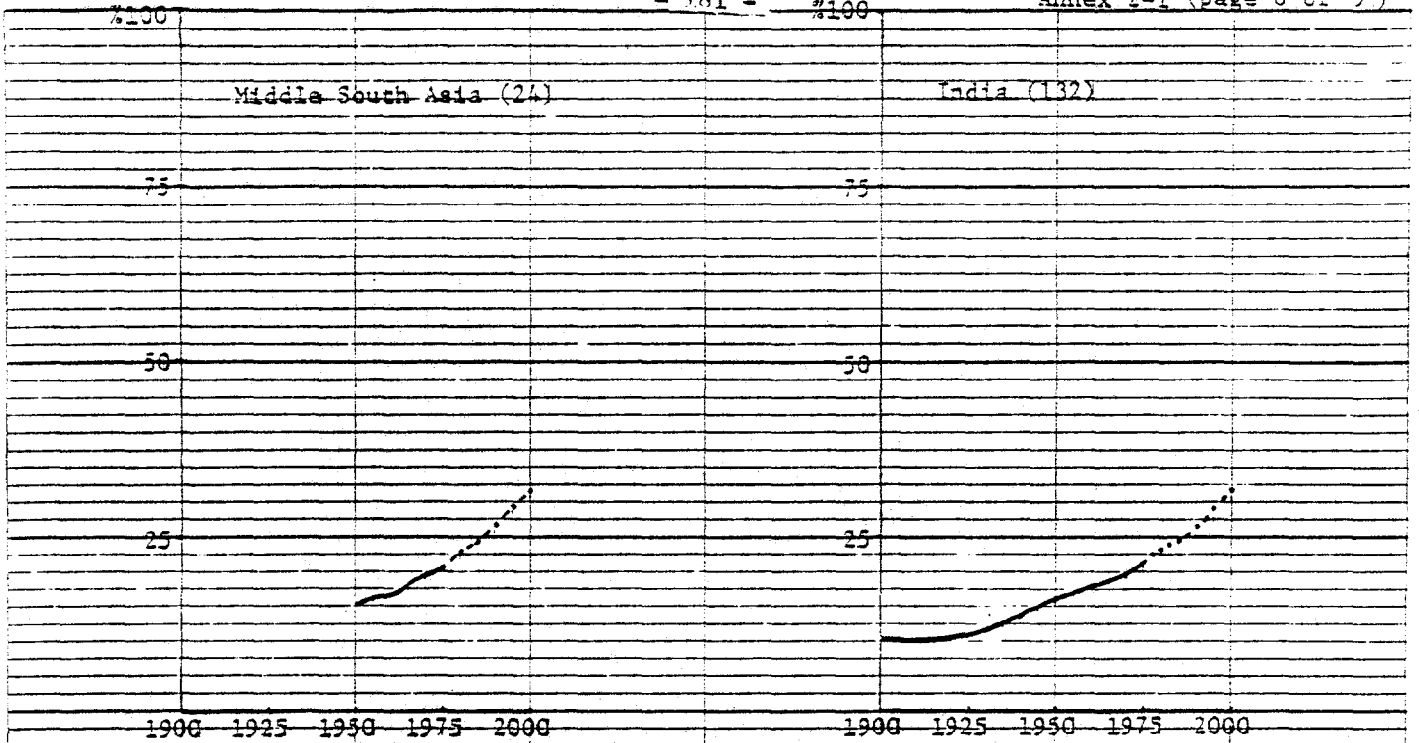
Temperate South America (10)

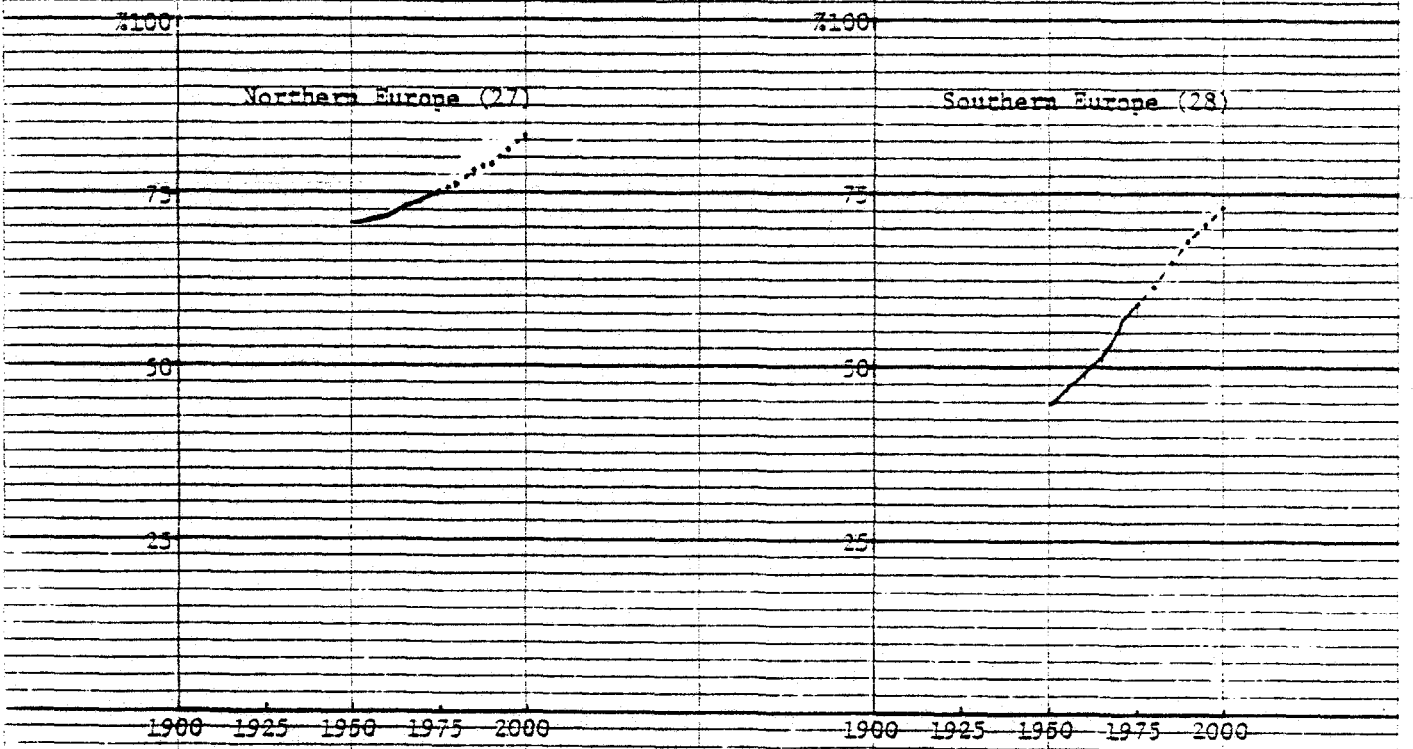
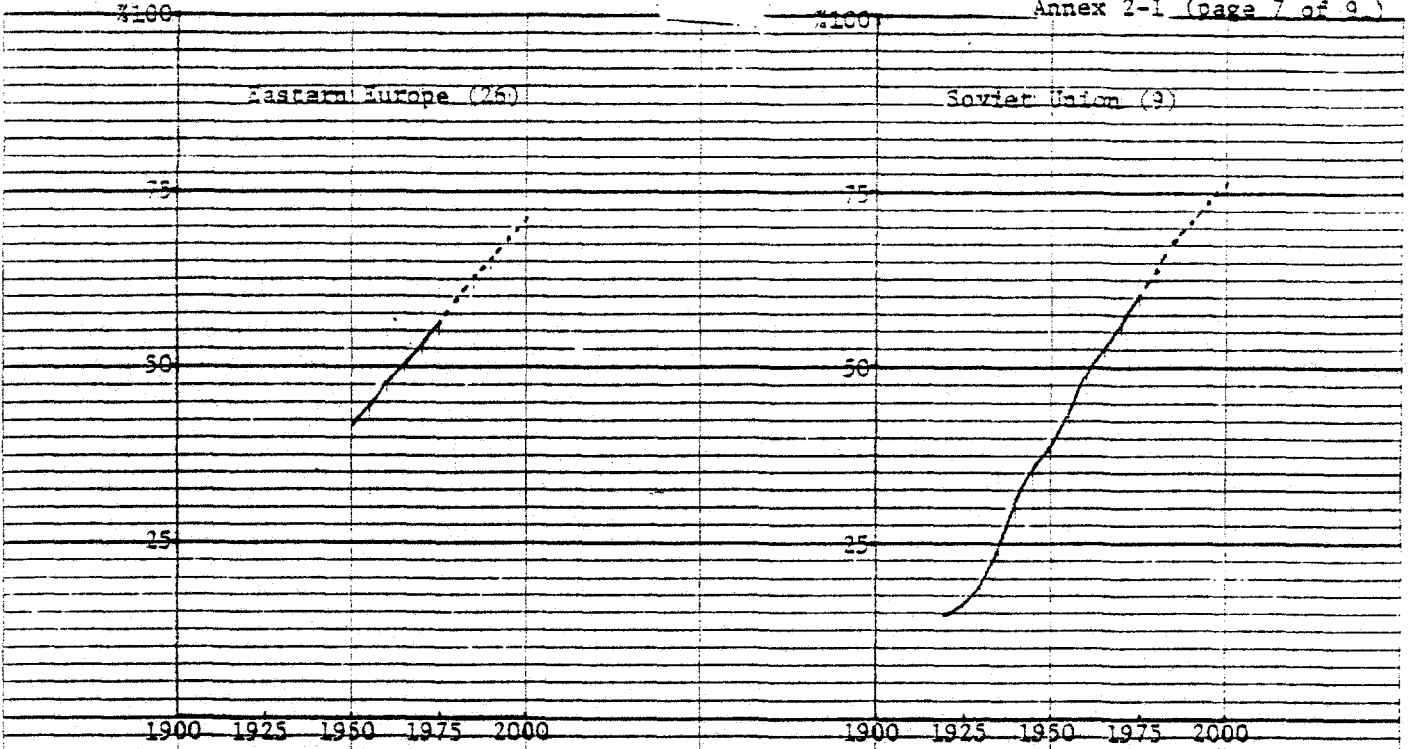
Tropical South America (18)

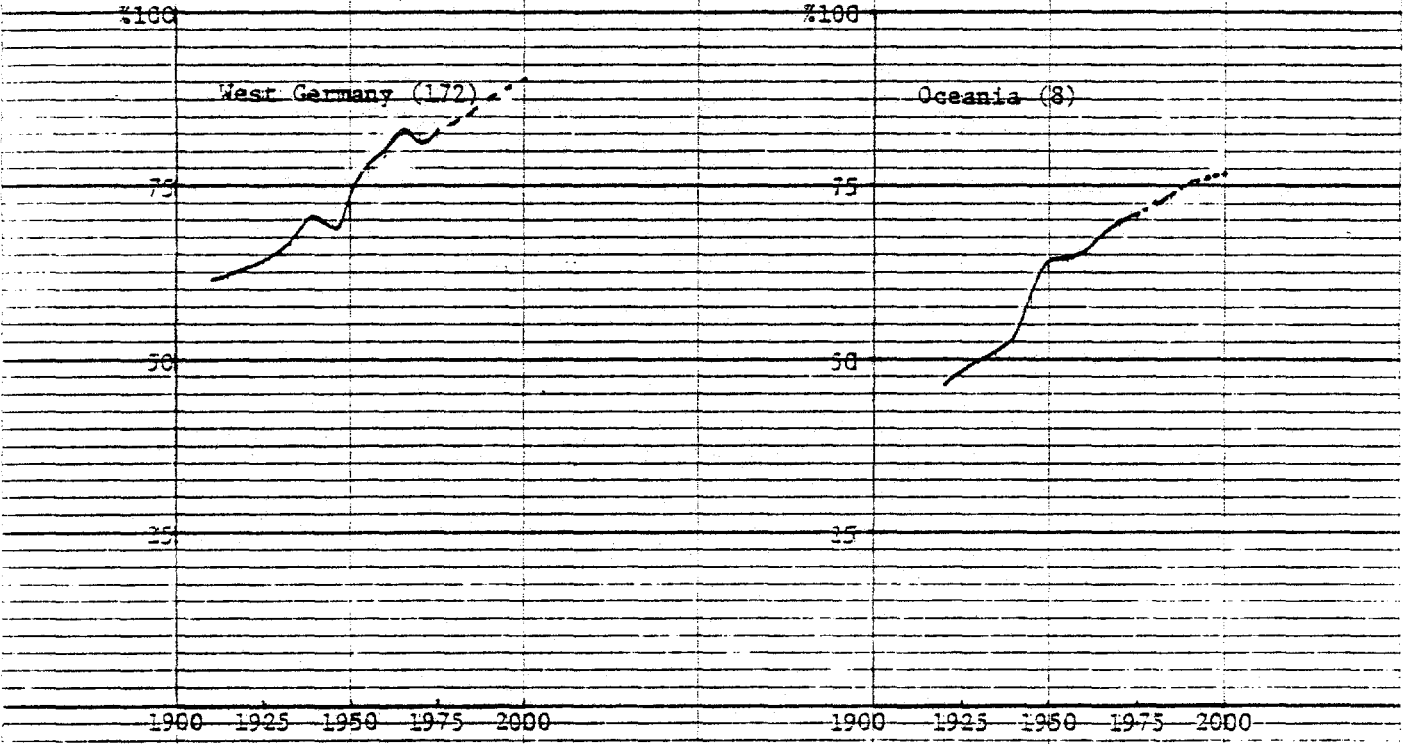
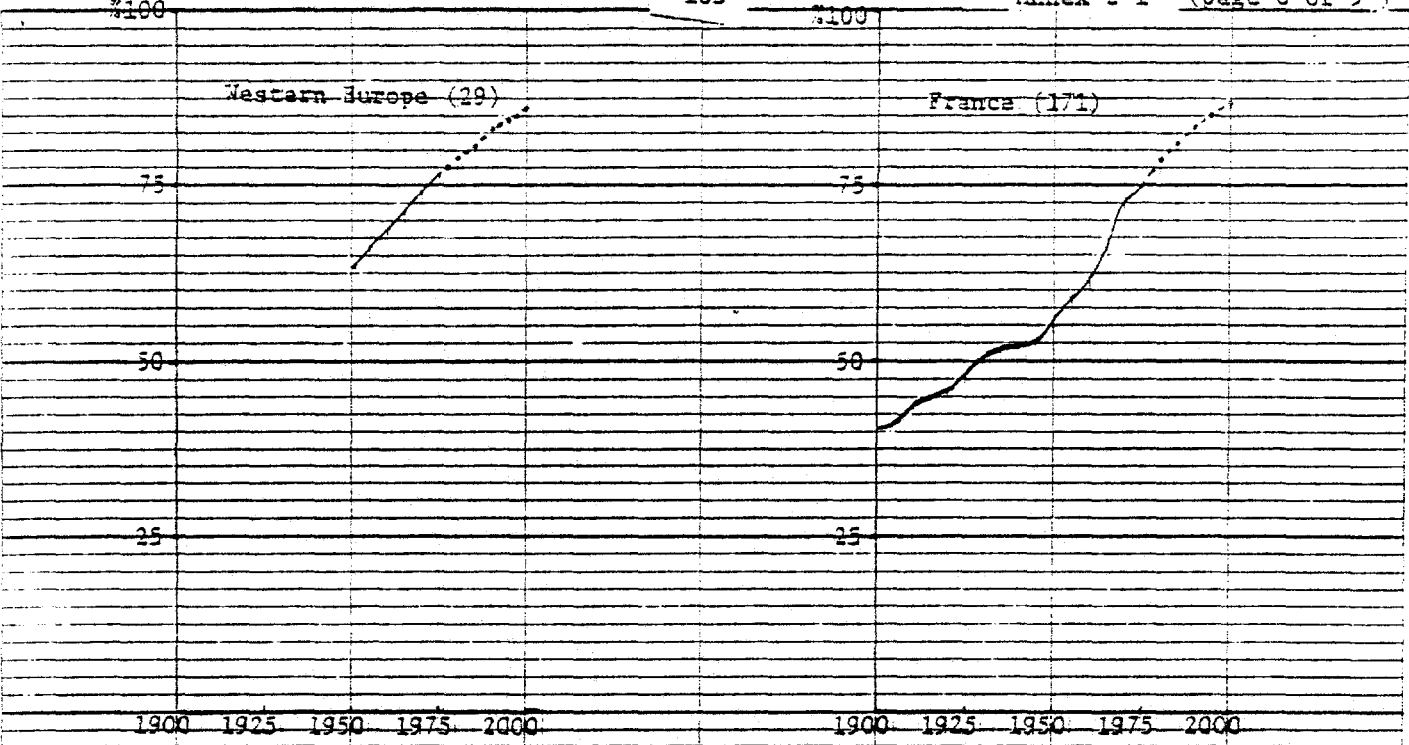












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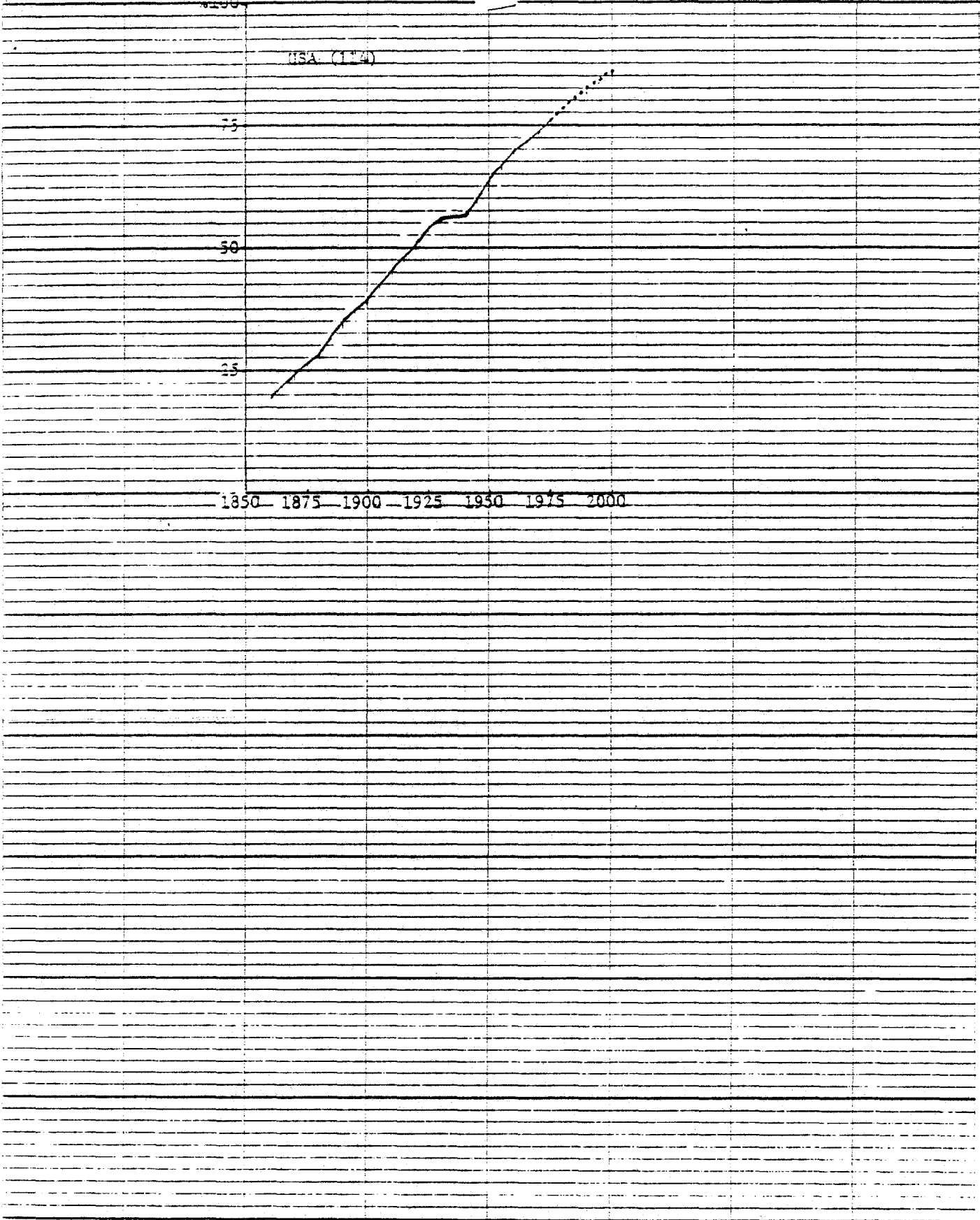
USA (194)

75

50

25

1850 1875 1900 1925 1950 1975 2000



Notes: Solid line indicates actuals and dotted line indicates projections.

Sources: For the years of 1950 through 2000, for all regions and individual countries: United Nations, Urban Rural Projection from 1950 to 2000, October 9, 1974. Medium term with medium variant, computer printouts.

For India - 1901 to 1941: S. Goldstein, ed., Patterns of Urbanization: Comparative Country Studies for International Union for the Scientific Study of Population, Working Paper 3 (Belgium: 1977), p. 295.

For Republic of Korea - 1915 to 1945 a/: Edwin S. Mills and Byung Nack Song, Korea's Urbanization and Urban Problems 1945-1975, Korea Development Institute, Working Paper 7701 (Seoul: 1977).

For Japan - the years of 1920, 1925, 1930, 1935, 1940, 1945;

For France - the years of 1901, 1906, 1911, 1921, 1926, 1931, 1936, 1946; and

For West Germany - the years of 1900, 1910, 1925, 1933, 1939, 1946: Demographic Yearbook, 1952, United Nations, Statistical Office (NY: 1954).

For Europe, Northern America, Soviet Union, Oceania, East Asia, South Asia, Latin America and Africa, the years of 1920, 1930 and 1940: UN Population Studies No. 44, Growth of the World's Urban and Rural Population, 1920-2000, ST/SOA/Series A/44 (New York: 1970), p. 49.

For the U.S.A. - the years of 1860, 1870, 1880, 1890 and 1900: Allan Pred, Bureau of Census, Spatial Dynamics of Urban Growth, Table 2.1, p. 17;

- the years of 1910, 1920, 1930 and 1940: Demographic Yearbook 1952, United Nations, Statistical Office (NY: 1954).

a. North Korea is included.

Annex Table 2.2: Urban Rural Growth Differential, 1950-1970

Rank											
1.	Papua New Guinea	10.35	32.	Burundi	4.17	67.	PDR Yemen	2.89	101.	Thailand	1.99
2.	Singapore	9.72	33.	Turkey	4.11	68.	Tanzania	2.89	102.	Malaysia	1.96
3.	Zaire	8.82	34.	Colombia	4.08	69.	Spain	2.89	103.	Sierra Leone	1.87
4.	Kuwait	7.53	35.	Finland	4.05	70.	Somalia	2.77	104.	Bangladesh	1.79
5.	Hong Kong	6.61	36.	Sweden	4.00	71.	Pakistan	2.68	105.	Syria	1.72
6.	Mongolia	6.39	37.	Uganda	3.98	72.	Egypt	2.66	106.	Hungary	1.71
7.	Zambia	6.38	38.	Brazil	3.89	73.	Haiti	2.65	107.	Australia	1.60
8.	Yemen Arab Rep.	6.32	39.	Rhodesia	3.86	74.	Vietnam	2.65	108.	Cuba	1.56
9.	Angola	6.27	40.	Madagascar	3.80	75.	New Zealand	2.63	109.	Portugal	1.54
10.	Central Africa	6.09	41.	China	3.79	76.	Lao	2.60	110.	Belgium	1.47
11.	Rwanda	5.99	42.	Dominican Rep.	3.76	77.	Nigeria	2.60	111.	Philippines	1.38
12.	Venezuela	5.90	43.	Uruguay	3.75	78.	Peru	2.59	112.	South Africa	1.30
13.	Lesotho	5.88	44.	France	3.72	79.	Iran	2.59	113.	Netherlands	1.30
14.	Lebanon	5.85	45.	Japan	3.61	80.	Libya	2.58	114.	India	1.11
15.	Guinea	5.85	46.	Mauritania	3.55	81.	Sri Lanka	2.57	115.	Bhutan	0.87
16.	South Korea	5.71	47.	Jamaica	3.53	82.	Sudan	2.55	116.	Honduras	0.86
17.	Chad	5.61	48.	Congo Peoples Rep.	3.52	83.	Panama	2.55	117.	East Germany	0.70
18.	Ivory Coast	5.51	49.	USSR	3.48	84.	Tunisia	2.50	118.	Costa Rica	0.62
19.	Ethiopia	5.50	50.	Canada	3.48	85.	Togo	2.38	119.	Paraguay	0.57
20.	Algeria	5.35	51.	Romania	3.47	86.	Malawi	2.38	120.	Guatemala	0.51
21.	Bulgaria	5.30	52.	Jordan	3.45	87.	USA	2.37	121.	Austria	0.51
22.	Nepal	5.17	53.	Albania	3.45	88.	Ecuador	2.34	122.	El Salvador	0.46
23.	Benin	5.17	54.	Liberia	3.38	89.	Indonesia	2.32	123.	Trinidad and Tobago	0.32
24.	Cameroon	4.74	55.	Mexico	3.37	90.	Ireland	2.26	124.	UK	-0.41
25.	Saudi Arabia	4.43	56.	Morocco	3.29	91.	Mali	2.26			
26.	Cambodia	4.41	57.	Afghanistan	3.27	92.	Israel	2.18			
27.	North Korea	4.33	58.	Yugoslavia	3.27	93.	Czechoslovakia	2.15			
28.	Chile	4.27	59.	Greece	3.21	94.	Nicaragua	2.14			
29.	Ghana	4.26	60.	Argentina	3.18	95.	Norway	2.14			
30.	Mozambique	4.22	61.	Upper Volta	3.17	96.	West Germany	2.13			
31.	Iraq	4.18	62.	Kenya	3.11	97.	Bolivia	2.08			
			63.	Denmark	3.10	98.	Switzerland	2.08			
			64.	Burma	3.03	99.	Senegal	2.07			
			65.	Poland	3.01	100.	Italy	2.04			
			66.	Niger	2.92						

Annex Table 2.3: Share of Net Migration in the Growth of
the Urban Sector (1970-1975)

1. East Germany	1.6	33. Benin	.5909	69. Dominican Rep.	.4727	106. Singapore	.32
2. Angola	.9839	34. Poland	.5909	70. North Korea	.4706	107. Australia	.3182
3. Bulgaria	.8214	35. Greece	.5882	71. US	.4667	108. Peru	.3095
4. Uruguay	.7647	36. Czechoslovakia	.5882	72. Mauritania	.46	109. Canada	.3
5. Yemen Arab Republic	.7625	37. Switzerland	.5789	73. Mali	.4565	110. South Africa	.2973
6. West Germany	.75	38. Zaire	.5781	74. Thailand	.4528	111. Paraguay	.2703
7. Papua New Guinea	.7426	39. Guinea	.5758	75. Tunisia	.4524	112. Nicaragua	.2667
8. Finland	.7368	40. Zambia	.5735	76. India	.4474	113. Panama	.2619
9. Hungary	.7333	41. Malawi	.5660	77. Kenya	.4444	114. Netherlands	.25
10. Rwanda	.7013	42. Upper Volta	.5577	78. Lebanon	.4444	115. Kuwait	.2439
11. Belgium	.7	43. Haiti	.5556	79. Mongolia	.4444	116. Mexico	.2391
12. Yugoslavia	.6897	44. France	.5556	80. Algeria	.4386	117. Syria	.2143
13. Romania	.6786	45. Burma	.5417	81. Egypt	.4359	118. El Salvador	.2051
14. Lesotho	.6716	46. Cambodia	.5410	92. Viet Nam	.4348	119. Venezuela	.2051
15. Chad	.6667	47. Ethiopia	.5357	83. Pakistan	.4340	120. Guatemala	.2
16. Sweden	.6667	48. Morocco	.5294	84. Sierra Leone	.4318	121. Libya	.16
17. Burundi	.6557	49. Portugal	.5294	85. Liberia	.4310	122. Ecuador	.1026
18. Norway	.65	50. Jamaica	.5263	86. Colombia	.4286	123. New Zealand	.0526
19. Republic of China	.6429	51. Uganda	.5147	87. Malaysia	.4255	124. Israel	.0294
20. Nigeria	.6429	52. Congo People's Rep.	.5111	88. Trinidad & Tobago	.4211	125. Hong Kong	-.1176
21. Tanzania	.64	53. Albania	.5102	89. Philippines	.4167		
22. Cameroon	.6346	54. Ghana	.5091	90. Rhodesia	.4068		
23. South Korea	.6327	55. Bhutan	.5	91. Turkey	.4048		
24. Nepal	.625	56. Niger	.5	92. Iran	.4043		
25. USSR	.625	57. PDR Yemen	.5	93. Honduras	.4		
26. Central Africa	.6207	58. Austria	.5	94. Japan	.3913		
27. Saudi Arabia	.6190	59. Denmark	.5	95. Italy	.3846		
28. Sudan	.6182	60. Lao	.4898	96. Cuba	.3793		
29. Mozambique	.60-6	61. Somalia	.4894	97. Brazil	.3556		
30. Sri Lanka	.6047	62. Indonesia	.4894	98. Ivory Coast	.3538		
31. UK	.6	63. China PR	.4848	99. Argentina	.35		
32. Afghanistan	.5926	64. Madagascar	.4833	100. Jordan	.3469		
		65. Togo	.48	101. Costa Rica	.3421		
		66. Ireland	.4783	102. Senegal	.3415		
		67. Bangladesh	.4737	103. Iraq	.34		
		68. Spain	.4737	104. Chile	.3333		
				105. Bolivia	.325		

Chart Table 2.4. Total and Total Population Growth, 1970-1975, based on quarterly 1970-1975
 (Annual recording is per capita 100)

	Total Population Growth 1970-1975	Total Population Growth 1970-1975	Total Population Growth 1970-1975	Total Population Growth 1970-1975	Total Population Growth 1970-1975	Total Population Growth 1970-1975
New Income Countries						
1. Bhutan	2.2	4.8				
2. Cambodia	2.8	6.1				
3. Lao PDR	2.5	4.9				
4. Ecuador	2.6	5.6				
5. Haiti	2.5	4.8				
6. Bangladesh	2.0	3.8				
7. Rwanda	2.3	7.7				
8. Somalia	2.6	4.7				
9. Upper Volta	2.2	5.2				
10. Syria	2.2	4.8				
11. Ecuador	2.1	5.1				
12. Chad	2.1	6.3				
13. Nepal	2.1	5.6				
14. Senegal	2.7	4.6				
15. Vietnam	2.2	5.2				
16. Guinea	2.7	6.6				
17. Guinea	2.8	6.5				
18. Togo	2.1	1.8				
19. Niger	2.6	4.6				
20. Upper Volta	2.2	5.4				
21. Chad	2.2	5.6				
22. Niger	2.7	5.4				
23. Gambia	2.4	6.2				
24. Pakistan	2.0	5.3				
25. Tanzania	2.7	7.5				
26. Haiti	1.2	6.0				
27. Madagascar	1.2	4.8				
28. Sierra Leone	2.3	4.8				
29. Sri Lanka	2.7	4.1				
30. Central African Rep.	2.2	5.8				
31. Tanzania	2.4	4.7				
32. Kenya	3.5	5.2				
33. Uganda	3.2	4.5				
34. Upper Volta	1.9	6.2				
Middle Income Countries	3.7	4.4				
35. Togo	2.6	3.0				
36. Egypt	2.2	1.9				
37. Kenya, 208	2.7	3.4				
38. Cameroon	1.9	5.2				
39. Sudan	2.1	5.5				
40. Angola	2.1	5.2				
41. Venezuela	2.7	3.0				
42. Nigeria	2.3	7.0				
43. Thailand	2.9	3.3				
44. Bolivia	2.7	4.2				
45. Ecuador	2.7	4.5				
46. Senegal	2.7	4.2				
47. Philippines	2.8	4.8				
48. Zambia	2.9	5.4				
49. Liberia	2.3	5.8				
50. El Salvador	3.1	3.9				
51. Papua New Guinea	2.6	10.1				
52. Congo People's Rep.	2.2	4.3				
53. Morocco	2.8	2.8				
54. Nicaragua	3.5	1.7				
55. Oman	2.7	1.5				
56. Ivory Coast	2.2	4.5				
57. Jordan	1.2	1.9				
58. Colombia	2.8	2.8				
59. Saudi Arabia	4.0	4.0				
60. Ecuador	2.5	3.9				
61. Paraguay	2.7	3.7				
62. Korea, Rep. of	1.8	4.9				
63. Nicaragua	2.3	4.5				
64. Dominican Rep.	2.9	2.9				
65. Syrian Arab Rep.	3.3	4.2				
66. Peru	2.9	4.2				
67. Tunisia	2.3	4.2				
68. Malaysia	1.7	4.2				
69. Venezuela	2.2	5.7				
70. Turkey	2.5	4.2				
71. Costa Rica	2.5	2.5				
72. Chile	2.8	3.8				
73. Cuba, Rep. of	2.0	3.6				
74. Jamaica	1.8	3.8				
75. Lebanon	3.0	3.4				
76. Mexico	3.5	3.5				
77. Brazil	2.9	4.5				
78. Panama	3.1	4.2				
79. Iraq	3.2	3.0				
80. Uruguay	0.2	1.7				
81. Somalia	2.3	2.8				
82. Argentina	2.2	2.0				
83. Yugoslavia	2.9	2.9				
84. Portugal	2.8	2.7				
85. Iraq	4.7	4.7				
86. Saudi Arab	2.9	2.7				
87. Trinidad and Tobago	1.1	1.1				
88. Tunisia	3.1	3.9				
89. Greece	0.7	2.7				
90. Singapore	1.7	2.5				
91. Spain	1.0	1.9				
92. Israel	3.2	3.4				
Industrialized Countries	1.8	1.8				
93. South Africa	2.4	3.7				
94. Ireland	1.2	2.3				
95. Italy	0.8	1.3				
96. United Kingdom	0.2	0.5				
97. New Zealand	1.8	1.9				
98. Japan	1.4	2.2				
99. Austria	0.4	0.8				
100. Finland	0.5	1.8				
101. Australia	0.5	2.1				
102. Netherlands	1.2	1.2				
103. France	0.8	1.8				
104. Belgium	0.3	1.0				
105. Germany, Fed. Rep.	0.2	0.8				
106. Norway	0.7	2.8				
107. Denmark	0.4	1.3				
108. Canada	1.4	2.6				
109. United States	0.8	1.5				
110. Sweden	0.4	1.2				
111. Switzerland	0.8	1.9				
Central, Middle East, Europe	4.2	4.2				
112. Saudi Arabia	2.4	6.3				
113. Libya	3.2	3.0				
114. Kuwait	5.2	4.2				
Central, Europe, USSR	2.9	2.8				
115. China, People's Rep.	2.7	3.2				
116. Korea, Dem. Rep.	1.7	5.1				
117. Albania	2.4	4.3				
118. Cuba	4.4	2.8				
119. Hungary	3.0	3.4				
120. Bulgaria	3.4	3.5				
121. USSR	2.9	2.4				
122. USSR	2.7	2.4				
123. Poland	2.2	2.2				
124. Czechoslovakia	0.7	1.7				
125. Germany, Dem. Rep.	-0.2	1.5				

Source: World Bank, World Development Report, 1977
 Washington, D.C. 20547, Table 2.1

Annex Table Z.5: Primacy Index (4-city Index, 1976)

A. City Proper		B. Agglomeration		A. City Proper		B. Agglomeration		
<u>4,000 and over</u>				<u>1,000 and over</u>				
1. Zaire:	4.047			1. Egypt:	1.642			
2. Chile:	4.823			2. Morocco:	1.261	(1.202)	7. China:	0.759
<u>2,000 and over</u>				3. Cuba:	1.463		8. India:	0.670
1. Peru:	3.376			4. Argentina:	1.346		9. Israel:	0.759
2. Hungary:	3.741			5. Bolivia:	1.179	(4.063)	10. Malaysia:	0.691
<u>2,000 and over</u>				6. Colombia:	1.085	(.931)	11. Pakistan:	0.968
1. Mexico:	2.634	(2.754)		7. Venezuela:	1.232		12. Philippines:	0.746
2. Iran:	2.344			8. Burma:	1.081		13. Saudi Arabia:	0.581
3. Austria:	2.783			9. Indonesia:	1.344		14. Syria:	0.863
4. UK:	2.640			10. Iraq:	1.987	(2.183)	15. Turkey:	0.976
5. Romania:	2.448	(2.208)		11. Japan:	1.523	(1.523)	16. Belgium:	0.541
				12. South Korea:	1.535		17. East Germany:	0.798
				13. Vietnam:	1.625		18. West Germany:	0.738
				14. Bulgaria:	1.290		19. Italy:	0.690
				15. Czechoslovakia:	1.135		20. Netherlands:	0.558
				16. Denmark:	1.246		21. Poland:	0.697
				17. Finland:	1.145		22. Sweden:	0.824
				18. France:	1.281	(3.377)	23. Switzerland:	0.782
				19. Greece:	1.331	(1.880)	24. Yugoslavia:	0.664
				20. Spain:	1.131		25. USSR:	0.968
				21. Australia:	1.491	(.652)	26. Zambia	
				22. Bangladesh:	-	(1.143)		
				23. Algeria:	1.250	(1.256)		
				<u>-5000+</u>				
				1. Nigeria:	0.632		1. South Africa:	0.386
				2. Sudan:	0.528		2. New Zealand:	0.403
				3. Canada:	0.770	(0.621)		
				4. USA:	0.979	(0.615)		
				5. Brazil:	0.810	(1.917)		
				<u>Below 0.499 -</u>				

Source: U.N. Demographic Yearbook, 1976.
The index is the ratio of the largest city over the next three largest.

Annex Table 2.6: Typology of Countries

MARKET-MIXED ECONOMIES

1. Very small countries

a. Small low income countries (no data listing)

b. Advanced city states

CASE#	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	HONG	2110.	1.	4.5	4010.	9495.
2	SING	2700.	1.	2.3	2250.	6210.

2. Countries with limited domestic markets

#	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	NEPA	120.	141.	12.9	150.	1548.
2	SRI L	200.	65.	13.8	655.	2760.
3	PAPJ	490.	462.	2.8	113.	1372.
4	AFGH	150.	648.	14.0	749.	2240.
5	SIER	200.	72.	3.1	214.	620.
6	MOZA	170.	783.	9.5	384.	1615.
7	CAVE	290.	475.	7.5	250.	2204.
8	UPVO	110.	274.	6.2	59.	682.
9	SOMA	110.	638.	3.3	230.	363.
10	MALI	100.	1240.	5.8	197.	580.
11	YEMA	250.	195.	6.0	120.	1500.
12	NIGR	160.	1267.	4.7	130.	752.
13	RENI	130.	113.	3.2	178.	416.
14	MADA	200.	567.	9.1	378.	1820.
15	CHAD	120.	1284.	4.1	179.	492.
16	GUIN	150.	245.	5.7	197.	855.
17	RWAN	110.	26.	4.2	54.	452.
18	UGAN	240.	235.	11.9	331.	2856.
19	MALW	140.	119.	5.2	160.	728.
20	TUSS	260.	56.	2.3	148.	598.
21	BURJ	120.	29.	3.8	79.	456.
22	SEVE	390.	195.	5.1	808.	1949.
23	GHAN	580.	232.	10.1	957.	5858.
24	ZAMB	440.	753.	5.1	448.	2244.
25	IVOR	610.	323.	7.0	262.	4270.
26	ANGJ	330.	1247.	5.5	475.	1815.
27	RMDD	550.	391.	6.5	568.	3575.
28	ELSA	490.	21.	4.1	565.	2009.
29	HAIT	200.	24.	4.7	494.	940.
30	JAMA	1070.	11.	2.1	605.	2247.
31	DOMI	780.	49.	4.8	929.	3744.
32	NICA	750.	130.	2.3	385.	1725.
33	PAPA	640.	407.	2.6	565.	1664.
34	COST	1040.	51.	2.0	401.	2030.
35	BOLI	390.	1099.	5.8	655.	2262.
36	HOND	390.	112.	3.0	296.	1170.
37	GUAT	630.	109.	5.5	979.	4095.

Annex Table 2.6 (cont'd)

3. Large, low income countries

a. Africa

N	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	EGYP	280.	1001.	38.1	6932.	10668.
2	ETHI	100.	1222.	28.7	1153.	2870.
3	KENY	240.	583.	13.8	699.	3312.
4	TANZ	180.	945.	15.1	517.	2718.
5	NIGR	330.	924.	77.1	2064.	29298.
6	TAIR	140.	2345.	25.4	2008.	3556.
7	SUDA	290.	2506.	15.9	803.	4611.

b. Asia

N	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	BURM	120.	677.	30.8	2449.	3696.
2	INDI	150.	3288.	620.4	8077.	93060.
3	INDO	240.	1904.	135.2	5593.	32448.
4	PAKI	170.	804.	71.3	4465.	12121.
5	BANG	110.	144.	80.4	1918.	8844.

Definition of variables:

GNPCAP = 1976 GNP per capita in US dollars

LANDAREA = total area of the country in 1,000 sq. kilometers

NATPOP = national population (in millions)

CITYPOP = population of the largest city in 1,000

GNP 1976 = estimate of total GNP based on the product of the per capita GNP and total population (in 1976 million dollars)

Source: World Development Report, 1978, IBRD.

Annex Table 2.6 (cont'd)

4. Middle income countries

a. Asia

N	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	PHIL	410.	300.	43.3	4444.	17753.
2	KORR	670.	99.	36.0	7266.	24120.
3	THAI	380.	514.	43.0	3277.	16340.
4	MALY	460.	330.	12.7	452.	10922.
5	TAIW	1070.	36.	16.3	2023.	17441.

b. Mediterranean, Middle East

N	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	ALGE	990.	2382.	16.2	1179.	16038.
2	TURK	990.	781.	41.2	3255.	40788.
3	YORD	540.	447.	17.2	1856.	9288.
4	IRAN	1934.	1648.	34.3	4435.	66405.
5	SYRI	790.	185.	7.7	1053.	6006.
6	TUNI	840.	164.	5.7	931.	4788.
7	JORD	610.	98.	2.8	634.	1708.
8	IRAC	1390.	435.	11.5	3433.	15985.
9	LEBA	-1.	10.	3.2	1243.	-1.
10	SPAI	2920.	505.	35.7	3520.	104244.
11	ISRA	3920.	21.	3.6	1138.	14112.
12	PORT	1690.	92.	9.7	1278.	16393.
13	GREC	2590.	132.	9.1	2764.	23569.
14	SAJD	4480.	2150.	8.6	667.	38528.
15	LIBY	6310.	1760.	2.5	214.	15775.

c. Latin America (countries with rapid urban population growth)

N	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	ECUA	640.	244.	7.3	1006.	4672.
2	PERU	800.	1285.	15.8	3901.	12640.
3	COLD	630.	1139.	24.2	3416.	15246.
4	MEXI	1090.	1973.	62.0	11943.	67580.
5	BRAZ	1140.	8512.	110.0	9965.	125400.
6	VEVE	2570.	912.	12.4	2673.	31868.

d. Latin America (countries with slow urban population growth)

N	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	CHIL	1050.	757.	10.5	2450.	11025.
2	ARGE	1550.	2767.	25.7	8436.	39835.
3	JRUG	1390.	179.	2.8	1559.	3892.

Annex Table 2.6 (cont'd)

5. Advanced industrial countries

RY	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNPI976
1	NETH	6200.	41.	13.8	1032.	85560.
2	BELG	6780.	31.	9.8	1099.	66444.
3	UNST	7490.	9367.	215.1	17013.	1697139.
4	ITAL	3950.	301.	56.2	6030.	171410.
5	CANA	7510.	9976.	23.2	3048.	174232.
6	SWED	8470.	450.	8.2	1358.	71094.
7	GERF	7380.	243.	62.0	9701.	457560.
8	SWIT	8880.	41.	6.4	755.	56832.
9	JAPA	4910.	372.	112.8	17317.	553408.
10	FRAN	6550.	547.	52.9	9863.	346495.
11	UNKI	4020.	244.	56.1	10711.	225527.
12	AUSL	6100.	7687.	13.7	2984.	83570.
13	FINL	5420.	337.	4.7	853.	26414.
14	NEMZ	4250.	269.	3.1	716.	13175.
15	DEMN	7450.	43.	5.1	1329.	37995.
16	NORW	7420.	324.	4.0	663.	29680.
17	AUSI	5330.	84.	7.5	1888.	39975.
18	IRLA	2560.	70.	3.2	863.	8142.
19	SAPR	1340.	1221.	26.0	1659.	34840.

Annex Table 2.6:(cont'd)

6. Centrally Planned Economies

I. Low income

a. China

NO	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	CHN	410.	9597.	865.8	10888.	354978.

b. Other low income

NO	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	LAOS	90.	237.	3.3	132.	297.
2	CUBA	850.	115.	9.5	2209.	8170.
3	VIET	-1.	333.	47.6	2046.	-1.
4	KORJ	470.	121.	16.3	1157.	7661.
5	ALBA	540.	29.	2.5	169.	1350.
6	CAVE	-1.	181.	8.1	605.	-1.

II. Middle, higher income

a. USSR

NO	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	USSR	2760.	22402.	256.7	7734.	708492.

b. Other middle income

NO	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	YUGO	1660.	256.	21.5	870.	36120.
2	ROMA	1450.	239.	21.4	1715.	31030.
3	BULG	2310.	111.	9.8	1091.	20329.
4	HUNG	2280.	93.	10.5	2063.	24168.

c. Higher income

NO	COUNTRY	GNPCAP	LANDAREA	NATPOP	CITYPOP	GNP1976
1	GERD	4220.	109.	16.8	1102.	70896.
2	CZEC	3940.	129.	14.9	1096.	57214.
3	POLA	2860.	313.	34.3	3912.	98094.

APPENDIX 1

Urbanization and Spatial Development in Latin America
(including figures on urban concentration in cities above 250,000)

Al.1 There are important differences in terms of patterns of development among Latin American countries. At the level of the continent, the contrast in settlement patterns between Central America and Mexico on the one hand, and South America on the other, has often been pointed out (see for instance, Stohr, 1975). 1/ In Central America, the main population centers are in the interior, and the coastal areas are only sparsely settled because of their inhospitable climate in contrast with higher areas of the interior. In South America, the pattern of development is a coastal one, with the most densely populated areas and the largest cities located within a rather narrow fringe on the coast. This coastal pattern of development reflects the historical dependence of the economies on overseas markets for the export of raw material in exchange for industrial goods and new technology. However, the exploitation of natural resources and the strong attraction that they exert on population location is presently modifying this pattern of population. Redistribution of population can be stimulated by various resources: in Mexico the development of new oil resources in the Southeast (Tamaulipas, Vera Cruz, Tabasco, and Chiapas) is having a profound effect on the current and prospective structure of settlement patterns in the entire eastern region of the country, throughout the North to the U.S. border.

Al.2 Related to the exploitation of the natural resources located away from the major urban centers and the degree of national integration, is the

1. Walter Stohr, Regional Development, Experiences and Prospects in Latin America. Paris: Mouton, 1975.

crucial role of transportation policies. Internal as well as international integration requires better access between major economic centers and the opening up of the interior, which will considerably affect the existing settlement pattern. In South America, the problem is one of expansion toward the interior, in Central America and Mexico, where the main economic centers are located along the North-South transportation axis, the problem of greater national integration is to spread the transportation system to the coastal regions.

Al.3 The geography of South America and the present distribution patterns of population, production and consumption will dictate the form of economic integration which will be feasible both within countries and between countries. Topography and climate combined have been an important deterrent to transport development; frequently a complex structure of mountains makes road building difficult and expensive. Elsewhere, the great Amazonian region presents obstacles of a very different kind, being the largest area of tropical rain forest in the world.

Al.4 Simplifying the description of South America, one could distinguish five major regions according to their dominant physical, economic and urbanization characteristics. The first region would be the dominant industrial and urban center of the sub-continent covering the southern coastal part of Brazil from Porto Alegre in the south to Belo Horizonte in the north, narrowing further south along the coast of Brazil to Uruguay and Montevideo. Then, we have the urban core of Argentina, with Buenos Aires, Rosario and Bahia Blanca. A second region would be the hinterland of the Urban Industrial Core, to the Andes in the west and the Amazon Basin in the north. It includes the region

of Patagonia, the North Argentinian plateau, the Brazilian Sertao and, further north, the campo cerrado, mixed with forest. It also includes part of Uruguay and the entirety of Paraguay, with its rich hydro-electric potential in the east (see World Bank Country Study on Paraguay, August 1978). On the other side of the Andes, Chile would form by itself a third region, with its unique structure (4200 km long and 400 km wide), with most of its population clustered in the central region, and heavily urbanized. Peru and Bolivia constitute another distinct fourth region, sharply differentiated into: (1) a coastal zone, and (2) a highland area, with its largely Indian population of particularly low standards of living, poorly integrated into the national economy. The Altiplano is a region of difficult access which is a barrier to both domestic and international integration among regions in the center of the continent. Further north, Colombia and Venezuela form a separate entity (fifth region) characterized by geographic homogeneity and its relative isolation from the rest of the continent by land because of the Amazon Basin and the Andean mountain range. Both countries are a mixture of valleys and highlands. In Colombia, in particular, the system of separated valleys had led to the blossoming of regional urban centers which have not been overwhelmed by the capital regions, so that, at present, the degree of concentration of urban population in Bogota is much less than in other Latin American countries as can be seen from the index of primacy (see Table 2.5). The concentration of urban population in Caracas and the Federal District Miranda is very high in Venezuela, and projected trends are for even greater concentration.

Al.5 Ecuador has traits which associate it with Colombia, others which relate better to Peru and Bolivia. Together with the last two countries, it has the sharpest division found in Latin America between the population of

European origin and the Indian population. Each group lives in very distinct areas: along the Pacific coastal areas, one finds the mestizo groups, while the large, self-sufficient Indian population lives in the high valleys of the interior.

Al.6 The Amazon basin and the northeast Brazil constitute other natural regions of a distinct character which have been difficult to integrate into the national economy of Brazil and the rest of the continent. However, the contrast between both is great: while the Amazon is underpopulated, the Brazilian Northeast has always had great difficulty in providing employment opportunities to its population and has been a major source of migration to all other regions and sectors of the economy. The 10 states that make up the Northeast have sharply different characters in terms of their population. The main characteristic of the area is its undeveloped urban system: there are few very large cities where activities are concentrated (Salvador 1,067 million in 1970, Recife 1,630 million, Fortaleza 0.864 million) and many very small cities of limited importance.

National Settlement Dynamics: Overall Characteristics and Differentiating Traits

Al.7 The specific national settlements characteristics of Latin American countries can best be understood by considering the various constraints slowing down the diffusion of economic impulses. These are: structural unemployment, marked inequalities in the distribution of income, disequilibrium in living conditions between the rural and the urban sector and productivity differences among sectors, as well as between small- and large-scale firms within the same sector. These structural problems have been major constraints

on the diffusion of technical progress and the modernization of economic activities, within the rural sector (see Janvry) as well as within the urban sector. Second, in the same manner that there are barriers to the diffusion of new technologies throughout the various sectors of the economy, there are barriers to the diffusion of economic changes across space as well: an insufficiently developed national transportation system, scarcity of investment resources in various regions, important linguistic barriers limiting the diffusion of education among minorities because the national educational system is not adapted to their needs, and an unbalanced distribution of political power concentrated in the central government.

Al.8 What characterizes spatial development in Latin American countries is the contrast between: (a) significant levels of overall development in terms of per capita income levels, degree of sophistication of the manufacturing sector, and productive capacity of the economy, and (b) conspicuous structural and institutional barriers to the widespread distribution of economic and social progress. We will review, in turn, three groups of problems hindering the diffusion of development in Latin America: (a) urban-rural disparities affecting the diffusion of economic impulses between urban centers of varying sizes and the region where they are situated, with an emphasis of the limited contributions of small urban and medium-size centers to the rural hinterland surrounding them; (b) inter-urban disparities affecting the transmission of economic impulses among the various cities which make the urban system of each country (throughout the urban hierarchy cities of varying sizes as well as cities of similar size in various provinces); (c) inter-regional disparities, which have the most immediate political repercussions because they affect not only national economic integration but political and

as well. In the smaller countries of Central America and the Caribbean, one can add to the first three disparities the problem of international disparities within the Central American region, limiting the diffusion of economic growth and economic integration into more productive and more coordinated systems.

Al.9 Urban-Rural Disparities are extremely conspicuous in Latin America. The inequality in land ownership patterns have historically yielded a small class of large landowners and extensive absentee ownership (sometimes even based abroad) combined with a large population of tenants, small independent farmers and laborers. The net result is that the population of rural areas has a very low level of education and does not possess the economic and human capital necessary to adopt innovations and raise its level of income. In addition to the generally unstable terms of trade for farm products in the region, the farm population occupied in the production of major export crops such as coffee is exposed to the instability of the international markets. In addition, there are in several countries, strong cultural barriers between the dominant Spanish culture of the larger urban centers and the subdued American-Indian culture of the countryside. The net effect is the existence of very pronounced income disparities between cities and rural areas accompanied by the complete political, sociological and economic dependence of rural areas on the urban center.

Al.10 The very inequal distribution of land and human capital reduces the ability of rural areas to produce new agricultural methods or to adopt appropriate innovations imported from other regions or other countries. The existence of a bias in agricultural research consistent with the technical needs of the extensive type of farming associated with large landholding

is a recognized factor in limiting the productivity gains in many Latin American countries. Great inequalities in the distribution of land ownership affect patterns of agricultural innovations, depriving the large majority of small-scale farmers from the type of innovations which could raise their income levels, stimulate their regions and, in turn, greatly improve rural-urban interactions between small cities and their rural hinterland through product markets as well as factor markets. The situation has been particularly well documented for Argentina but applies elsewhere as well. 1/

Al.11 In terms of internal spatial development in Latin American countries, one can distinguish at least five major types of areas:

- (1) Metropolitan regions, consisting of very large cities or national capitals;
- (2) Other relatively advanced regions with a level of income higher than the national average, some based on (a) manufacturing and/or mining activities, (b) others relying on rich and productive agriculture;
- (3) Depressed areas which have levels of income significantly below the national average. The type of action necessary in favor of such regions is heavily dependent on the population involved: (a) in highly (or densely) populated areas, the types of programs which must be considered will require heavier levels of investment than in the case of (b) sparsely populated regions, which will by force receive much lower priority in national government objectives, except when national security objectives might be involved;

1. Alain de Janvry.

- (4) New Settlement Areas. In addition to these three types of regions which are encountered in practically all countries, Latin American countries often have an undeveloped frontier. These new settlement areas often have great potential that remains only partially evaluated. Then again, one could distinguish between (a) new settlements where income levels are already fairly high, the promise of further growth fairly clear and expectations for substantial progress are widespread and attracting private initiatives and (b) new settlement areas where income levels are still low, and public sector efforts on a substantial scale might be required in order to attract more private efforts into the region;
- (5) Border Areas, such as the new industrial zones in Mexico. (See Appendix 2, summarizing regional planning efforts in Latin America until the early 1970s).

APPENDIX I - Figure 1

URBAN CONCENTRATION IN CITIES ABOVE 250,000, Latin America

ARGENTINA				BRAZIL			
				41.7	38.9	39.0	38.3
56.2	55.7	54.0	53.6				
1947	1960	1970	1980	1950	1960	1970	1980
CHILE				COLOMBIA			
49.2	51.5	54.1	56.2	63.1	61.1	72.0	
1952	1960	1970	1980	1951	1964	1973	
MEXICO				PERU			
29.7	30.6	31.1	32.1	52.4	57.4	57.4	58.1
1950	1960	1970	1980	1940	1960	1970	1980

VENEZUELA				COSTA RICA			
33.8	35.1	33.7	32.5	D.70	E.73	E.70	E.64
							B
				A	A	B	A
1950	1960	1970	1980	1950	1963	1973	1980
EL SALVADOR				GUATEMALA			
D.63	E.60	E.62	E.61	E.82	E.78	E.75	E.71
C	C	C	D				C
B	B	B	B	B	B	B	B
A	A	A	A	A	A	A	A
1950	1961	1971	1980	1950	1964	1973	1980
HONDURAS				NICARAGUA			
E.82	E.78	E.75	E.71	D.54	D.58	E.58	E.59
				B		C	C
					B	B	B
A	A	A	A	A	A	A	A
1950	1964	1973	1980	1950	1963	1971	1980

APPENDIX 2

Brief Review of Regional Policies in Latin America 1/

A2.1 Since the early 1960s, practically all governments in Latin American countries have created programs of some sorts to deal with problems of spatial development either for selected individual regions or for several regions at the same time in a coordinated fashion. Often in the 1970s these plans have led to the formulation of national plans such as the recently released National Plan for Human Settlements in Mexico. At the end of the 1960s, a survey organized by ECLA identified some 75 significant regional development programs of various sorts, and the survey was not even an exhaustive one. While some of these reported efforts proved to be ephemeral, others have reached international visibility. (See Stohr, 1975, especially Chapter II).

A2.2 These programs could be classified according to the institutional arrangements created to structure them, according to the method of policy formulation adopted and according to the dominant nature of the task to be achieved. Some programs received important powers and had an executive structure allowing for a full range of activities, ranging from planning to actual decision-making powers for carrying out the plan selected. They are generally autonomous organizations, structured as regional corporations, such as Sudene in Brazil, Corporacion de Valle del Cauca in Colombia, Comision del Papaloan in Mexico, Conzuplan and Corporacion Venezolana de Guyana in Venezuela.

1. This outline is essentially a summary of the very useful study by Walter Stohr, Regional Development: Experiences and Prospects of Latin America, (Paris-The Hague: Mouton, 1975).

A2.3 More frequently, we have commissions councils or planning offices with only advisory functions and no executive powers. Because they imply no devolution of power and generally very limited autonomous financial resources, if any, these coordinating organizations are much more frequent. They are also less conspicuous and probably less effective. A third variety of regional planning effort consists of a non-institutionalized program where the activities of several sectoral decision making centers are expected to be coordinated on a specific spatial objective, such as a national "growth center" policy, where energy policies, transportation policies, and industrial location policies are expected to favor selected cities within a given size-range in their investment activities.

A2.4 The institutional arrangement chosen affects the origins of policy formulation and executive decision. In some cases new objectives and specific plans are expected to originate from the region itself, in other cases they are the outcome of cooperative efforts between central and regional entities. Sometimes objectives and criteria are selected solely at the national levels.

A2.5 Many types of efforts can be distinguished. In a purely regional context, one can consider a wide range of major orientations to classify various programs. This classification is not a rigorous one but is commonly accepted and can always be revised as needed. For Latin American countries, Stohr considered the following dominant objectives:

- (a) devolution of power: decentralization of decision-making;
- (b) development of depressed regions;
- (c) new settlements based on agricultural development;
- (d) new settlements based on mineral resources;
- (e) development and restructuration of major metropolitan regions;
- (f) consolidation of other developed areas;

- (g) new growth pole development;
- (h) border area development; and
- (i) river basin development.

Obviously each objective must be related to the characteristic of a country, and more than one dominant objective for national spatial policy may have to be selected. Also, some objectives may be related, but the underlying reasons may differ from country to country. Let us examine some of these.

A2.6 In the case of devolution and decentralization of decision-making, the Brazilian needs differ markedly from those of, say, Bolivia or Chile.

In the case of Brazil, the sheer size of the country and of its population requires that decision-making be decentralized, when in Bolivia or Chile there was a need for decentralization because of the extreme concentration of decision-making power and fiscal resources, since practically all public expenditures are made by the central government. Such concentration of power has paralyzing effects on local initiative, local management and the timely processing of new projects.

A2.7 As far as the need to correct wide regional disparities is concerned, Guatemala and Peru face a very difficult situation where the gap between the income level of the capital region and the poorest Indian population region is very wide. In the case of Mexico, the issue of regional disparities is of a somewhat different nature: the problem there is less that the difference between the poorest and the richest region is extreme than the fact that a very large proportion of the population in the regions earns less than half the national average. In Mexico the regional disparity problem involves several different states and requires more coordinated national set of policies.

A2.8 Among the countries with very sparsely populated regions, the problems of Paraguay, where the greatest proportion of the national territory is uninhabited, will require different policies from those of Uruguay, Venezuela or Brazil, viz. toward the resource frontier. In Paraguay new policies have to be based on the rapid expansion of the agricultural frontier of the East combined with major opportunities for border area development near Brazil and Argentina, thanks to the large hydro-electric potential of the Parana River 1/. In Venezuela the case for developing the resource frontier in the Guyana region is based on the exploitation of mineral resources and has led to the most vigorous of this type of effort in Latin American countries. In Uruguay the development of the agricultural frontier would be aimed at a better distribution of population, which is now practically entirely concentrated in the capital region of Montevideo.

A2.9 When looking at projects to restructure major metropolitan regions, the situation is quite different, depending on whether one deals with small countries with high concentration of population in the capital region (in such countries as Uruguay, Guatemala, Panama, El Salvador and most of the Central American as well as the Caribbean countries), or large countries facing problems of metropolitan management in the context of large states and vast hinterland regions (such as Brazil, Mexico or Argentina).

1. World Bank, Paraguay: Regional Development in Eastern Paraguay, 1978.

APPENDIX 3

Country Scale and the Choice of National Settlements Strategies:
State Policies in Sao Paulo, Brazil

A3.1 In addition to the level of urbanization of a country, the size of the area and the population to be subjected to a National Settlements planning effort is a major consideration. One of the major problems of the Central American and Caribbean countries is that their domestic economies are often too small to provide the necessary scale for significant manufacturing activities and room for expansion. Their patterns of urbanization are dependent on the dynamics of their economic growth, which is itself dependent on the strength and stability of international integration schemes. Similar problems are emerging or will be emerging soon for the smaller African countries.

A3.2 On the other extreme of scale we find very large countries which have a space so differentiated that problem of National Settlements policies are more effectively addressed at the state level than at the national level, or more precisely, in such countries there is a need for a hierarchy of "nested" strategies, whereby at the national level, general directions may be given for the spatial strategy through the choice of sectoral economic policies and the provision of inter-governmental fiscal transfer mechanisms, but the detail of more specific tactics and the application of instruments would be left to state units. In very large countries the structures of the urban systems are too sharply differentiated between states to permit attempts at centralized treatment, and the central government would be too removed from the factual context to guide effectively the details of the policy. Two countries which are particularly clear illustrations of the need for nested National Settlements strategies are India and Brazil. India's policies are

predetermined by its level of urbanization and the extreme scarcity of resources. In the group of the middle-income countries, Brazil's case is particularly interesting: it has often been discussed through the problems of the Northeast, and to illustrate the need for differentiated National Settlements policies for sub-units, the case of Sao Paulo will be briefly discussed. It illustrates in striking fashion the nature of the spatial dualism that prevails in many middle-income countries.

A3.3 By international standards, the state of Sao Paulo is an important country by itself. Its population of 23 million represents 21 percent of the population of Brazil. Its gross product of about 57 billion dollars represents 42.7 percent of the Brazilian GNP. Its contribution by sector represents 55 percent of the industrial output, 35 percent of services, 18 percent of agriculture and 4.5 billion dollars (or 38 percent) of all Brazilian exports. Its per capita GNP of 2,400 dollars is about double the national average. The concentration of human resources in the state are very high, with 10 universities spread over 100 campuses, where about 85 percent of graduate students working for advanced degrees are located. The state is the financial center of the country: of the 47 private banks of the country, 29 have their headquarters in the city of Sao Paulo. It is estimated that 50 percent of all bank deposits in Brazil are made in the state. Similar statistics concerning the transportation, energy and industrial sector can be marshalled to illustrate the strong dualistic nature of the national spatial system of Brazil. The fact that Sao Paulo exports 68 percent of all Brazilian coffee also well illustrates the tendency for the most dynamic agriculture to be located with the zone of influence of major urban centers.

A3.4 The urban system of the state consists of a fully developed hierarchy of cities marked by extreme concentration in the city of Sao Paulo, which is

one of the five largest metropolitan regions of the world, with a population over 12 million (which is still growing in 37 out of the 571 municipalities found in the state). Sao Paulo has 59 percent of the urban population of the state and 10 percent of Brazil's population. Hence, there is a strongly felt need for a deconcentration strategy at the state level.

A3.5 Since 1972, Sao Paulo has created "Projects Counter", an advisory service for firms wishing to establish new industrial plants in the state. It is meant to coordinate the public development objective with business requirements. It advises businesses in the choice of alternative locations available in the states, provides technical advice for the use of the tax and financial incentives available from the federal government through the Industrial Development Council, and under certain conditions, will even provide financial plans for the project. It is estimated that over its 5 years of operation this program has been involved in planning sites for 300 industrial projects and about half as many financing arrangements.

A3.6 Such an arrangement was deemed clearly insufficient to affect deconcentration significantly. If it is to affect the distribution of new economic activities, the state must show its "visible hand" in a strong and durable fashion to minimize risk for both firms and migrant households. Since 1976, an official plan has been adopted, called the Regional and Urban Development Policy (PDUR), for the deconcentration and decentralization of industry out of the greater Sao Paulo region.

A3.7 The central objective of the plan is to demonstrate a commitment to industrial dispersion to "medium-size cities" to improving living conditions and employment opportunities in these cities and, thus, the choices of urban

location by both urban migrants and business firms. 40 of the 534 municipalities outside the Sao Paulo metropolitan regions have been selected for the strategic location and will benefit from additional public sector investment in roads, water and sewage systems, energy supplies, new schools and comparable projects. These municipalities are also expected to undergo a managerial reorganization in order to implement these plans (and benefit from federal and state funding). This reorganization would include: drawing a municipal plan, creating municipal planning agencies, comprehensively reviewing local land use regulations and reorganizing the tax collection system. In terms of significance, the cities involved include about 16 percent of the total population, 12 percent of the state industrial product and 12 percent of the industrial labor force.

A3.8 The programs are differentiated further according to the region where the strategic cities are located. The plan identifies four regions:

- (i) The area of restoration of the quality of life consisting of the Metropolitan Region of Sao Paulo and the Santos coastal zone. In this area further growth is to be controlled to prevent further deterioration of the urban environment;
- (ii) The area of control close to the greater Sao Paulo (Campinas, Sorocaba, the north coast and the Rio-Sao Paulo area) where growth is going to be controlled strictly to avoid rapid and chaotic expansion;
- (iii) The area of dynamic action lies further up-state and is expected to be more effectively connected to Sao Paulo and to benefit from new industrial districts and industrial estates, new roads, housing and water and waste disposal systems;

- (iv) The area of promotion is the southwestern part of the state (western Paranapanema region and the southern Riberia Valley) and is being specialized in agribusiness activities. Its prospects may be greatly improved indirectly by the hydroelectric projects along the Parana river of more direct value to the states of Parana and Paraguay.

Work is also in progress for a program to control the process of urbanization and safeguard scenic areas along the axis between Sao Paulo and Rio de Janeiro. This will be done through the coordination of all governments; programs.

A3.9 This Sao Paulo state program is a good illustration of a National Settlements strategy defined and applied within a sub-unit of a country. Success will be a function of the government's ability to maintain the same strategy over a long-time horizon and in solving the resource allocation problems for public investment between the urgent, current needs of the Sao Paulo urban region, which is developing chaotically, and the longer-term needs of the areas of deconcentration. Business firms will draw from the comparison of the sizes of the two budgets, one for the metropolitan region and the other for the "medium-size cities", an estimate of the state commitment to the urban strategy it has announced, hence, the degree of risk in selecting the more dispersed locations offered by the new PDUR. The extent to which the PDUR has selected medium size cities consistent with the way economic impulses travel through the urban network will also have a major effect.

A3.10 At the national level, the efforts of the Federal Government in confronting the problems of the Northeast and the development of the Amazonian frontier are already very familiar (SUDENE, Participation Fund, etc...). To a great extent, Brazil is one of the middle-income countries

which has been most successful in creating a cooperative system between the Federal and State governments to develop more effective National Settlements strategies. More recently, a new legal framework has been created to deal with the problems of metropolitan development on a national scale (Lei Complementar 14 to the 1967 Constitution). The definition of basic principles for an urban policy in the second National Development Plan (1974) and the creation of the National Commission on Metropolitan Regions and Urban Policies (CNPU) with resources coming from a new National Urban Development Fund (FNDU) are expected to disburse approximately 2 billion U.S. dollars over the period 1975-1979. There are many issues that remain to be sorted out, particularly in the reconciliation of the effects of sector policy objectives, with their differentiated impact on various states, to the objectives of the National Settlements strategies.

APPENDIX 4

Centrally-Planned Economies: the Soviet Union and China

A4.1 The pattern of urbanization experienced by centrally-planned economies is quite different from those of other countries and demonstrates the powerful influence of the political and economic planning system on the type of urbanization that can be achieved. For illustrative purposes, we shall discuss first the case of the Soviet Union because it is one of the two leading centrally-planned economies and its urbanization is more easily documented. Further comparative analysis with the other centrally-planned economies is advisable to confirm the characterizations presented here.

A4.2 The record shows that, at the beginning of the century, the Soviet Union had about the same level of urbanization as India, with 10 percent of the population urbanized. In 1950, its level of urbanization was almost 40 percent. Since then, the pace of urbanization in the Soviet Union has been higher than that of all the other major U.N. regions of the world. By 1975, it had passed the 60 percent level. This rapid rate of urbanization was due to large increases in the urban population and a decline in the rural population. The overall population growth rate has been low by world standards (under 1 percent). During the third quarter of the century, the urban population of the Soviet Union has doubled from about 71 to 154 million. What is remarkable is that, in 1950, only 11 percent of the Soviet urban population lived in large cities over one million. Despite a projected increase of the number of such cities from 2 to 28 by the year 1985, the share of the population living in large cities will be less than 25 percent at that time: a level still considerably less than that of most countries. How did the

Soviet Union establish such a record when it had pioneered the emphasis on heavy industrialization as the key to development (to the relative neglect of the rural sector) and when this type of strategy generated elsewhere a heavy concentration of the urban population in the largest cities?

A4.3 One must distinguish two elements in the Soviet experience. First, the fact that the Soviet Union had the highest rate of urbanization of the nine broad regions defined by the U.N. Population Division shows that centrally-planned economies will not be necessarily more successful in slowing rural-urban migration flows than market economies. On the other hand, the lesser concentration of populations in the very large cities needs explanations.

A4.4 The most important aspect of the centrally-planned economy urbanization strategy was the systematic attempt to economize on the cost of urbanization and to block rural-urban migration through a two-pronged strategy. 1/ In the rural sector very labor-intensive technologies were encouraged for agriculture and very capital-intensive technologies for industry. This situation encouraged much higher productivity gains in manufacturing than in agriculture. At the same time, the demand for higher urban services, which would have been associated with higher levels of productivity of industrial labor, was suppressed by the absence of a direct link between productivity and wages. Since savings are collected and allocated by the central plan, there has been a tendency to limit the supply of needed urban services. 2/

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1. For other Soviet-influenced centrally-planned economy descriptions, see Roy E.H. Mellor, Eastern Europe: A Geography of the Comecon Countries, New York: Columbia University Press, 1975.
 2. Gur Ofer, "Economizing on Urbanization in Socialist Countries: Historical Necessity or Socialist Strategies" in Internal Migration A Comparative Perspective by Alan Brown and Neuberger (eds), New York 1977 and V. G. Davidovich, Town Planning in Industrial Districts, translated from Russian, 1968.

A4.5 To be specific about the patterns of urbanization in the Soviet Union, the projected significance of the large cities over one million to the end of the century is as follows:

Growth of Large Cities over One Million in the Soviet Union

	1950	1960	1970	1975	1980	1990	2000
Number of Cities	2	5	10	12	23	29	33
Population (1,000)	7,464	11,954	21,105	25,273	39,288	53,456	65,944
Percent of Urban Population	10.5	11.4	15.4	16.4	22.8	25.4	26.9
Level of Urbanization	39.4	44.3	49.0	60.5	64.2	70.8	76.3

Source: U.N. data provided by the Population Division, Department of Economic and Social Affairs (November 3, 1975 report, currently being revised).

Thus, the Soviet Union appears to be controlling the growth of its very large cities better than most other countries. The methods which have been used to achieve this result appear to have been:

- (1) The capital-intensive approach to industrial investment combined with the labor-intensive approach to agricultural investment, which has not discouraged the aggregate rural-urban transfer of population;
- (2) The tendency to limit investment in infrastructure and the limited supply of public services (this may have made smaller size cities more livable than the large cities);
- (3) The emphasis on "new" industrial cities (see Davidovich) which has concentrated the supply of new services and skilled labor in intermediate urban centers;

(4) The Marxist dogma that the service sector is basically "unproductive" and should be discouraged (this is an additional fact that may have played against the rapid growth of the large cities).

It is not at all evident that the Soviet "...experience suggests that the conflict between an industrial development strategy (which favors spatial concentration) and a dispersed settlement pattern is not avoided in a centrally planned economy." 1/

A4.6 The neglect of agriculture and collectivization may have undermined the viability of small towns by suppressing small-scale industries and services in the Soviet Union. Based on U.N. demographic data, a table similar to the Soviet table can be built for the People's Republic of China, which has chosen to emphasize rural development rather than heavy industry as a key to rapid development. Unfortunately, the data obtained for the P.R.C. are practically useless in comparing the effect of an agriculturally oriented growth strategy on the expansion of the large cities. From what numbers we have, it appears that the P.R.C. has much more urban concentration than the Soviet Union at comparable levels of urbanization; this is probably due to the much higher level of population density in the P.R.C. irrespective of growth strategy.

A4.7 The sharply fluctuating share represented by the large cities in the total urban population cast doubts on the strengths of the projections attempted by the U.N., on the basis of very poor original information for the years 1975 to 2000. The table fully supports the U.N. insistence that

1. H.W. Richardson, City Size and National Spatial Strategies in Developing Countries, World Bank Staff Working Paper No. 252, April 1977.

such projections are highly dependent on the original data base and the fertility, mortality, as well as migration, assumptions used. This U.N. warning must be heeded, particularly when a single country like the P.R.C. is "projected" to have an urban population of 478 million (or 15 percent of the urban population of the world) by the year 2000.

Growth of Large Cities over One Million
in the People's Republic of China

	1950	1960	1970	1975	1980	1990	2000
Number of Cities	7	17	22	26	31	44	47
Population (1,000)	16,682	37,415	51,576	62,558	93,975	116,672	157,508
Percent of Urban Population	26.9	30.6	30.8	30.1	37.0	32.5	32.9
Level of Urbanization	11.5	18.9	21.7	24.8	28.0	34.7	41.5

Source: U.N. Population Division, November 1975 Estimates. These estimates appear to be questionable.

A4.8 For our knowledge of urban development in the People's Republic of China, it is necessary to rely on the expertise of a limited number of specialists. The demographic information on P.R.C. cities made available to the U.N. Population Division in 1975 is questionable. Only qualitative statements can be made. Until now, China had adopted a quasi-autarchic development approach. For mostly political reasons, it has established strict control on its international trade. A common source of urban expansion of developing countries is thus extremely tightly controlled.

A4.9 The following quotation from Christopher Howe's study of China's economy is probably as valid a statement as can be made at the present time:

"The contrast between the rapid (urban) growth up to 1957 and the slowing down since then suggests that the nature of growth has changed. It has, in the 1950's migration into the cities, accounted for 50 percent to 60 percent of their population increase; the balance was supplied by the natural growth of the urban population. Since then the volume of migration has been greatly reduced, and its contribution to urban growth must now be quite small... During the First Five Year Plan it was intended that urban growth should favor further development of Manchuria (a region already urbanized by the Japanese before 1949), and the establishment of new cities in the North and West, and in other regions in the deep hinterland. At the same time restrictions were placed on the economic development of the seaboard cities, to the extent in some cases of removing both plants and workers to the more favored areas (...). In 1956, interest and investment in the seaboard cities were resumed because it was discovered that the high costs of developing new cities in remote areas made a more balanced policy sensible. Mao himself went so far as to describe the period before this change as the seven years that were wasted. In 1958, a further policy was introduced, one that has persisted to this day. This is the policy of developing 'small and medium cities.' In conversation, Chinese officials give varying definitions of these city types, but an authoritative article published in 1958 described the policy in the following terms. 'Small cities' have populations up to 300,000, and are to be generally developed. 'Medium cities' are those with populations of 400,000 to 700,000, and are to have 'limited development'. Anything bigger is a 'large city' and is to be 'generally restricted'. Special emphasis is put on control of cities with populations of a million or more.

"The rationale of this policy has varied. At first, the case for small and medium cities was their 'cheapness' in the sense that the costs of administration and public works are lower in them than in large cities, and that the development of big cities puts pressure on transport. (...) Recently a new argument has appeared, to the effect that large cities are the natural location for heavy industry, while small and medium cities are appropriate for light industry and industries with close agricultural links. In this way urban policy has been related to the policy of putting agriculture first. (...)

"In judging China's achievement in urban control, the first point is that when we look at the comparative pace of urban and industrial growth, we find the decline in the speed of urban growth (54 percent down since 1957) closely reflects the decline in the rate of industrial growth (42 percent down). Thus although the Chinese have not been achieving 'industrialization without urbanization', they have, by controlling migration reduced increases in urban population to a rate appropriate to the slower speed of industrial expansion. The second and even more impressive point is that in some 'large cities' the planners have succeeded in combining stable growth or declining population with continued economic growth. This has been done by drawing labor for industry from the ranks of the non-employed, and from people in 'marginal', low productivity occupations (...)". 1/

1. Christopher Howe, China's Economy, New York: Basic Books, 1977, p. 12.

APPENDIX ON THE SOVIET UNION

The Soviet urban planning ideology has been described as follows:

"The works of Marxism-Leninism classics not only justify the necessity of eliminating the antagonism between town and country and their consequent fusion, but they also outline how this can be achieved: (1) the harmonious development of productive forces according to a single overall plan; (2) a greater equalization of the distribution of large-scale industry and of the population over the country; (3) achieving strong internal links between industrial and agricultural production; (4) the development of communications; (5) overcoming the excessive concentration of population in large cities (as the capitalist means of production is eliminated). Socialism will lead to 'a new settlement pattern of mankind with the elimination of both rural neglect, isolation from the world, its barbarism, and of the unnatural concentration of huge populations in the large towns' (V.I. Lenin)."

David G. Khodehaev and Boris S. Khorev. "The Concept of a Unified Settlement System and the Planned Control of the Growth of Towns in the USSR." Geographia Polonica, Vol. 27, 1973, p. 43-51.

APPENDIX 5

Problems with New Towns: Some Country Illustrations

Chandigarh, Punjab, India (1973)

"...over 25 years of its life, in spite of rigorous development control enforced on a completely new site, approximately 15 percent of the population of the city lives in industrial settlements which have developed outside the visualized framework of the master plan. Fifty-four percent of the commercial and services enterprises also operate in 'non-plan' locations and forms. A considerable amount of land use in the city is contrary to that envisaged in the Master Plan." Madhu Sarin, Planning and the Urban Poor, the Chandigarh Experience, D.P.U., University of London, December 1975; (p.x).

Brazilia, Brazil (1968)

"...Can the satellite town provide a better life for dwellers on the outlying urban regions of the Federal District, or is Brazilia destined to be surrounded by what is sometimes termed 'slum suburbs'?"

"Initially, many in-migrants of impoverished means came to Brazilia to work. They were forced to live in 'Cidade Livre' or 'Free City' which was several miles outside the capital. At its height, Cidade Livre was a shanty town of 60,000 inhabitants ... as it became apparent that Cidade Livre was to become a permanent feature of the urban landscape, its name was changed to Nucleo Bandeirante, and an effort was made to correct some of its greatest deficiencies. Three more satellite towns on the periphery of Brazilia-Taguantina, Gama, and Sobradinho were established in an attempt to provide cheap housing, for people who as non-government employees had a low priority for housing in Brazilia." Glenn Stephenson, "Two Newly Created Capitals: Islamabad and Brazilia" Town and Planning Review, Vol. 41, October 1970, p. 325.

Gwangju New Town, Korea (1971), later renamed and reorganized as Songnam.

"According to the relocation plan, the phased steps were to involve 20,000 in 1969; 55,000 in 1970; 50,000 in 1971, 75,000 in 1972 and 87,000 in the last year of 1973. But as of 1971, it was believed that 60% of the relocatees had left their lots and either returned to the old towns of Seoul or moved to the peripheral area of the new town. In both cases, they created new shanty towns by invading public land. New invasions in the peripheral areas of Gwangju were worse than the housing lot situation in the town itself." (emphasis added). Won Kim, "A Study of National New Town Development Policy in Korea", Columbia University, Ph.D. Thesis, 1974, p. 881.

U.S. New Towns (1978):

"When the new communities concept was born during the Johnson administration, the idea behind it was to curb uncontrolled suburban growth with the development of self-contained, racially and economically integrated communities. Housing was to range from subsidized units to the upper price levels; stores, industries, offices, schools and parks were also included in the planning.

Thirteen planned communities received federal support in the form of long-term debt financing. Most were located beyond the outer rings of major cities, although one, Cedar Riverside, was located in downtown Minneapolis, and another, Soul City, in rural North Carolina.

However, all but a few of those projects turned out to be financial failures. Two weeks ago, the Department of Housing and Urban Development announced a plan to liquidate the unsuccessful ones and try to save the others" (emphasis added) Washington Post, Saturday, October 7, 1978.

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