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Urban Growth in Developing Countries: A Demographic Reappraisal

SAMUEL H. PRESTON

Governments and scholars alike have shown rapidly growing concern with issues of population distribution. Among the 116 developing countries that responded to the United Nations' "Fourth Population Inquiry among Governments" conducted in 1978, only six declared the spatial distribution of their population to be "acceptable". Forty-two replied that it was "unacceptable to some extent," and 68 declared it to be "highly unacceptable." To another question addressed specifically to the desirability of current rates of rural-urban migration, only three countries expressed a desire to accelerate such migration. Twenty-three wished to maintain it at present levels, 76 to slow it down, and 14 to reverse it.¹

Part of the concern with population distribution reflects a belief that current redistributational patterns, particularly net migration from rural to urban areas, are a product of unjustifiable regional and sectoral distortions in patterns of development. Rural-urban migration functions as an indicator of these distortions, at the same time as it may make reversing them more difficult. Another part of the concern on the part of governments grows out of the practical administrative difficulties of planning local public services in the face of unplanned changes in the population of users. Doubtless a third factor in some cases is the belief that dispersed and largely invisible rural masses tend to make fewer demands on the government and to constitute less of an implied threat to social order than do concentrated urbanites, many of whom have made an enormous migratory investment in expectation of economic and social betterment.

In view of the importance being attached to distributional issues, particularly to urban growth, it is useful to examine carefully the demographic processes that are currently responsible for and associated with such growth. Many common views of these processes appear to be seriously misleading and unnecessarily alarmist. In this review, we rely primarily upon material developed in the course of a United Nations study of urban and rural population change.² This study assembled estimates of urban and rural population and of the population of cities larger than 100,000 from 1950 to the present.³ The study does not deal with all aspects of population distribution, but only with those demographic aspects that relate to distinctions between urban and rural areas and between places of differing size. Four conclusions of this study are described here, and their bearing on distribution policy is considered.

1. The rate of change in the proportion urban in developing countries is not exceptionally rapid by historical standards; rather it is the growth rates of urban populations that represent an unprecedented phenomenon.

The most common measure of the rate of urbanization is the annual change in the percentage of the population living in urban areas. According to this measure, urbanization in developing countries did not proceed with unusual speed in the quarter-century from 1950 to 1975. In this period the percentage urban grew from 16.7 to 28.0 in developing countries.⁴ While this is a rapid increase, it is very similar to the one that occurred in more developed countries during the last quarter of the nineteenth century. Between 1875 and 1900, the percentage urban of countries now more developed grew from 17.2 to 26.1.⁵ The slight difference from the growth in developing countries 75 years later is well within the margin of error of the estimates. The rates of net rural-urban migration required to achieve the observed increase in the urban percentage may even have been greater in more developed countries, in view of the higher rates of rural than of urban natural increase that typically prevailed at the time.⁶ That is, to achieve a certain increase in the urban percentage, higher rates of net rural-urban migration were required in developed countries than in developing countries, where rural-urban differences in rates of natural increase are far less significant.⁷

Nor does it appear that rates of urbanization or of net rural-urban migration are accelerating in developing countries. Between 1950 and 1960 the proportion urban grew by 5.1 percentage points and between 1960 and 1975, a period 50 percent longer, by 6.2 percentage points. (These figures include China's uncertain estimates, which show deceler-

ated urbanization.) The pace of urbanization has been accelerating in Africa but decelerating in Latin America. Changes in rates of net migration into urban areas (measured over the base of the urban population) can be computed for 11 countries using intercensal survival techniques applied to adjacent intercensal periods. These 11 developing countries are the only ones with three postwar censuses, with urban and rural age-sex distributions for each census to permit analysis of growth components, and with definitions of urban areas that are either stable or adjustable to stability. In general, the net in-migration rates showed considerable stability. Among the 11 countries, five had changes in annual net urban in-migration rates of less than 3 per thousand (India, Chile, El Salvador, the Dominican Republic, and Turkey), five countries showed declines larger than that amount (Brazil, -5.7; Ecuador, -4.7; Venezuela, -9.8; Sri Lanka, -3.1; and the Union of South Africa, -6.3), and one country, Panama (+4.4), recorded a rise larger than 3 per thousand.⁸ Geographic coverage is clearly incomplete, but the results support other indications that the pace of urbanization is not quickening.

Many accounts leave the impression that rural-urban migration rates in developing countries, like birth rates, are high and more or less uniform from country to country. This impression is decidedly false. Net out-migration rates from rural areas in fact have typically been higher in recent years in developed than in developing countries. The mean rural out-migration rate for the most recent intercensal period averaged 18.5 per thousand in the 20 developed countries and 13.7 per thousand in the 29 developing countries for which reasonably reliable measurement is possible. Within developing countries themselves the same tendency is evident: countries more advanced economically have experienced a more rapid flow from rural areas. Thus, Puerto Rico, Argentina, Chile, and Venezuela all had net rural out-migration rates of more than 25 per thousand annually, while Paraguay, Ghana, Guatemala, Bangladesh, India, and Indonesia had rates below 8 per thousand. The simple correlation between rate of rural out-migration and gross national product per capita in the 29 developing countries is .61. In general, rural outmigration is fastest in countries whose economic performance allows the best possibilities for accommodating the exodus. This view contrasts with one in which absolute deprivation in rural areas, associated in part with rapid rural natural increase, is seen as the motive force driving multitudes to the city. Poorer countries in general have not only more deprived rural areas but also more developed urban ones. The net effect of poverty seems to be to hold population in rural areas. (During the Great Depression in the United States, reverse net urban-rural migration actually took place.)⁹ Obviously, it would be useful to have standardized measures of economic and social performance within urban and rural areas of these 29 countries; regrettably, such information is not available. It is worth

noting that constant proportional differences between urban and rural incomes over the sample would suggest that rural-urban migration should be higher in richer countries. Rural-urban migration is reasonably viewed as an investment, the monetary returns from which depend on absolute income differences between the sectors; the same urban-rural income ratio would translate into higher absolute differences in the richer countries.

While the rate of urbanization (the rate of change in proportion urban) has not been unprecedented in developing countries, the growth rate of the urban population has been. Between 1875 and 1900, urban populations in now-developed countries grew by 100 percent and rural populations by 18 percent. While developing countries were traversing roughly the same range in proportions urban between 1950 and 1975, their urban populations grew by 188 percent and their rural ones by 49 percent. The growth factors of both rural and urban populations were much larger simply because rates of natural increase were much faster. Urban growth is currently exceptionally rapid in developing countries, but the explanation is not to be found in unusually rapid changes in the urban proportion produced by rural-urban migration but in the rapid changes in total population to which those proportions are applied.

2. Urban growth through most of the developing world results primarily from the natural increase of urban populations.

This point is readily overlooked in the midst of scholarly and political concern with internal migration. It has been made before by Kingsley Davis, Eduardo Arriaga, Salley Findley, and the United Nations Population Division, and new findings on components of urban growth provide strong confirmation. Of the 29 developing countries whose data support a decomposition of the sources of urban growth during the most recent intercensal period, 24 had faster rates of urban natural increase than of net in-migration (the latter also including area reclassification). The mean percentage of urban growth attributable to natural increase for the 29 countries was 60.7 percent. Among the largest developing countries the percentage was 67.7 in India (1961-71), 64.3 in Indonesia (1961-71), and 55.1 in Brazil (1960-70). There is apparently a slight tendency for the percentage of urban growth attributable to natural increase to grow over time.

The list of five countries that are an exception to the rule is informative. One is Bangladesh, where international migration and population upheavals were substantial and where the very low urban proportion of 5.2 percent gives an unstable base for computation. The remaining countries are Puerto Rico, South Korea, Turkey, and Argentina. This group

has achieved much higher levels of income per capita than the average developing country and/or has made unusually rapid economic progress. This grouping is consistent with the tendency noted above for the richer developing countries to experience the fastest rates of rural-urban migration. For the remaining countries, where economic performance has been less satisfactory, around two-thirds of urban growth has resulted from natural increase. Thus, natural increase seems to be by far the largest source of urban growth in countries where rapid growth is most problematic. It should be noted that the coverage of African populations in the data set is very poor and that results pertain primarily to Latin America and Asia (except China). Judging from the unusually rapid urban growth in Africa, it is likely that rural-urban migration is a more important source of growth there than is implied by the above account.¹⁰

3. Among the factors that influence the growth rate of individual cities, national rates of population growth stand out as dominant in intercity comparisons.

Many factors unique to a particular city have an important influence on its growth rate: annexation practices, topography and geography, the health of industries in which the city specializes, productivity trends in the rural hinterland, government investment patterns and redistribution policies, rural-urban income and employment disparities, possibilities for accommodating marginal settlements, and so on. Despite the undoubted importance of these individual factors, it is possible to form some solidly based generalizations about more readily measured variables that discriminate among the growth rates of individual cities.

The analysis reported below is based primarily upon an examination of growth rates of the 1,212 cities in the world (excluding China) that had reached 100,000 in population at the earliest of the two most recent observations. In most cases, the observations derive from successive national population censuses. Where possible, an agglomeration definition of cities is used in preference to definitions based on administrative boundaries. Since concrete population estimates are used rather than interpolated or extrapolated figures, the dates of estimate vary somewhat from city to city. Typically, results are based upon growth rates recorded between the 1960 and the 1970 rounds of population censuses. The mean date of the initial observation is 1962.

Four factors reflecting demographic, economic, and political variables are selected for examination of possible correlation with city growth rates: the size of city and its administrative status; national rate of population growth; national economic level and growth rates in terms of per capita gross domestic product; and region.

Size of City and its Administrative Status Much attention has been drawn to the phenomenon of demographic giantism in recent patterns of city growth. Primate cities in developing countries are said to be drawing a disproportionate influx of population from other areas. Their rapid growth is alleged to result from biases in patterns of government expenditure and employment, in part resulting from the undue political influence of these agglomerations. Alan Gilbert points out that large capital cities contain relatively large numbers of government employees, who are often paid above prevailing market rates, and that they often enjoy disproportionate infrastructural investments as well.¹¹ In some cases the distortions are seen as a legacy of colonial penetration. Thus, Jorge Hardoy points to the extreme coastal concentration of large cities in Latin America as evidence of the distortions resulting from trade relationships with and natural resource exploitation by colonial powers.¹² Graeme Hugo notes that the Dutch had concentrated the administrative bureaucracy in Jakarta and that the centralization tendency was exacerbated under local rule.¹³ Extensive treatments of urban bias and colonial exploitation as major factors in urban growth can be found in recent volumes by Michael Lipton and by Janet Abu-Lughod and Richard Hay.¹⁴

Many economists and regional scientists have emphasized a different set of factors to explain growth patterns by size of city. They point out that firms in large cities enjoy economies of agglomeration: economies of operation that are external to a firm but result from the presence of other firms and of social infrastructure. For example, a firm beginning operation in a large metropolis generally has access to a skilled labor force, banking and credit facilities, networks of buyers and sellers, and a large local market. Consumer agglomerative economies add variety and reduce the cost of consumer goods, while social agglomerative economies reflect efficiencies in providing public services to larger populations. Diseconomies of large size principally occur in the form of congestion and pollution and usually can be sloughed off on the society at large, thus reducing the disadvantages of large city size for firms making locational decisions.¹⁵

Most but not all of the evidence on agglomerative economies refers to developed countries. It suggests that substantial economies are typically realized by expansion of a city into the range of 100,000–300,000 in population. Beyond that point, social agglomerative economies show sharply diminishing returns except for some vertically integrated services such as water treatment and sewage disposal plants, pipelines, and electrical supply. Agglomerative economies in manufacturing seem to persist throughout the range of observation; productivity is higher in larger cities for reasons not readily explicable in terms of capital per worker or size of enterprise.¹⁶

Since the desirability of city expansion presumably depends upon the marginal increase in economies of agglomeration, and since there is

weak evidence that the marginal gains decrease after a size of 100,000–300,000 is reached, such reasoning suggests that, above this level, city size should be negatively related to population growth. This presumes of course that population growth, and in particular migration, is responsive to the relative economic advantages of places and that these advantages are not totally overridden by biases in patterns of government expenditure and regulation. On the other hand, the political explanation of growth seems to suggest that growth rates should increase with size of place since larger cities attract more than their “share” of growth stimulants.

The actual relation between city size and city growth rates is quite complex and seems to provide some support for both positions, which are of course not mutually exclusive. Table 1 displays the relation recently observed between city size and city growth rates for the world and its major regions.¹⁷ The general relation between city size and city growth rates in developing regions is U-shaped. Cities in the two size classes between 100,000 and 500,000 are growing at an average of about 3.9 percent annually. In the three size classes between 500,000 and 4 million, the average growth rate has declined to 3.1–3.2 percent. For the cities in developing regions larger than 4 million, growth rates again reach the level of 3.9 percent. There are only ten such cities, however—2 percent of the total number of cities and about 11 percent of the total urban population of developing countries—so that the predominant relation between city size and city growth rates is negative. It is also negative, though somewhat irregular, in developed regions. For all cities, the correlation between growth rates and the log of city size is a modest -0.083 . These results are at least consistent with studies showing economic gains from city growth to decline after a size of 100,000–300,000 is reached.

If the slight negative association between city size and city growth comes as a surprise, the reason is probably that so many calculations of urban growth patterns present tabulations based not on individual cities but on size classes. Under the latter format, the set of cities within a particular size class changes over time as cities graduate into and out of the limits that define the class. Under conditions of rapid population growth, it typically happens that no cities devolve out of the highest size class, while many graduate into it. The result is that the highest size class of cities experiences by far the most rapid growth. For example, between 1965 and 1975 it is estimated that the population in cities over 4 million in developing regions grew from 55.9 to 120.6 million, or at the very rapid annual rate of 7.7 percent. But almost half of this growth resulted from the fact that the number of cities in this class grew from 9 to 17, so that 32 million were added to this size class through graduation.

The aggregate results seem to provide support primarily for the

Table 1
City Growth Rates between Latest Two Censuses as a Function of Size of
City at First Census, by Region (Number of Cities in Parentheses)

Size of City	Average Annual Intercensal Growth Rate										
	World	Developed Regions	Developing Regions	Africa	Latin America	North America	East Asia	South Asia	Europe	Oceania	Soviet Union
4 million +	0.0272 (20)	0.0155 (10)	0.0389 (10)	0.0266 (1)	0.0455 (4)	0.0170 (3)	0.0358 (5)	0.0295 (2)	0.0097 (4)	0.0 (0)	0.0085 (1)
2-3,999 million	0.0235 (31)	0.0182 (19)	0.0320 (12)	0.0 (0)	0.0 (0)	0.0191 (6)	0.0173 (6)	0.0466 (6)	0.0174 (10)	0.0236 (2)	0.0101 (1)
1-1,999 million	0.0205 (74)	0.0118 (40)	0.0308 (34)	0.0261 (3)	0.0373 (8)	0.0153 (9)	0.0232 (17)	0.0355 (9)	0.0074 (22)	0.0 (0)	0.0214 (6)
500-999,000	0.0254 (143)	0.0213 (88)	0.0320 (55)	0.0342 (6)	0.0438 (12)	0.0270 (24)	0.0218 (23)	0.0380 (15)	0.0150 (37)	0.0247 (3)	0.0241 (23)
250-499,000	0.0271 (288)	0.0181 (159)	0.0381 (129)	0.0445 (20)	0.0390 (20)	0.0242 (35)	0.0367 (48)	0.0340 (50)	0.0109 (73)	0.0319 (2)	0.0239 (40)
100-249,000	0.0290 (782)	0.0223 (476)	0.0395 (306)	0.0470 (53)	0.0360 (66)	0.0202 (96)	0.0361 (102)	0.0370 (134)	0.0192 (203)	0.0142 (7)	0.0271 (121)
All cities	0.0276 (1338)	0.0206 (792)	0.0377 (546)	0.0445 (83)	0.0378 (110)	0.0216 (173)	0.0329 (201)	0.0365 (216)	0.0160 (349)	0.0203 (14)	0.0257 (192)

arguments regarding agglomerative economies. But the ten largest cities do seem to have more rapid growth than could be expected on this basis alone, suggesting that political factors may be influential. Procedures more directly tailored to testing the importance of political factors seem to provide stronger support for their influence. Intercensal growth rates in the 1,212 cities were compared with a variety of demographic, economic, and political indicators pertaining to the initial census date or to the intercensal period. The independent contribution of variables was computed by means of multiple regression, with intercensal population growth rates of cities used as the dependent variable. Results are presented in Table 2.

The basic relation between city size and city growth rates remains negative when other variables are introduced. When size of city increases by a factor of 4 above 100,000, annual city growth rates decline on average by about 3 per thousand. However, there is evidence that, apart from the absolute size of a city, its position in a country's urban hierarchy

Table 2
Effect of Demographic, Economic, and Political Variables
on Intercensal Growth Rates of 1,212 Cities
(in Annual Percentage Growth Rate)

Variable	Unit of Measurement	Effect of One Unit Increase in Variable on City Growth Rate ^b
<i>Demographic</i>		
National intercensal population growth rate	Annual percentage growth	1.002 ^a
Log, initial city size	Persons	—0.211 ^a
Initial proportion urban		—2.859 ^a
<i>Economic</i>		
Initial level of national GNP per capita	Thousands of US 1964 dollars	0.332 ^a 0.239 ^a
Intercensal growth rate of national GDP per capita	Annual percentage growth	
<i>Political</i>		
Capital city	1 if capital city; 0 otherwise	0.589
Largest city	1 if largest city in country; 0 otherwise	0.292
<i>Regional</i>		
Latin America	1 if in Latin America; 0 otherwise	0.614 ^a
Asia	1 if in Asia; 0 otherwise	—0.223
Africa	1 if in Africa; 0 otherwise	—0.025

^a F value significant at 5 percent.
^b Partial regression coefficients. The constant term is 4.119. R² is .312.

influences its growth rate. In particular, national capitals grow at an average annual rate of 0.6 percent, or 6 per thousand, faster than would otherwise be expected. And if a city is the largest in a country, it grows at an annual rate of 3 per thousand faster than otherwise would be expected. Although neither of these variables is statistically significant, the reason is that the groups of largest cities and of capitals overlap so substantially that the independent contribution of either is quite limited. However, as a *pair* they do make a statistically significant contribution to explaining city growth. To the degree that discrimination between them is possible, being a capital city seems to impart more growth momentum than being the largest city.

These results are thus consistent with the view that spatial patterns of government expenditure bias patterns of city growth toward capital cities and toward the largest city in a country. Whatever economic advantages pertain to size of city should be captured in the variable directly measuring its size. But being the largest city in a country or a capital confers a sizable additional growth increment. However, it would seem unwise to overemphasize a political explanation of city growth in view of the small number of cities that fall into these categories. Only 7 percent of the cities over 100,000 are either capitals or largest cities. Adding the two variables to the equation increases explained variance in city growth rates by only 1.5 percent. These cities seem to have attracted an undue amount of attention, perhaps because they are centers of communication and gathering places for intelligentsia. Many other factors can be shown to influence city growth rates and pertain to a wider set of cities.

National Rate of Population Growth The rate of population growth in the nation in which a city is located has a powerful effect on a city's growth rate. The simple zero-order correlation between growth rates in these 1,212 cities and rates of population growth in their respective nations is $+.516$. Thus, of the 31.2 per cent of variance explained in city growth rates by all of the factors introduced, fully 85 percent is accounted for by national population growth rates alone $[(.516)^2/.312]$.¹⁸ An appreciation for the dominance of this factor can be gained from a simple cross-tabulation of city growth rates by city size and by national population growth rates, presented in Table 3. Without exception, cities in a particular size class experience faster average growth as their country's population growth rate increases in increments of 1 percent. All of the categories in which average city growth rates exceed 4.5 percent occur within the group of nations in which population growth exceeds 3 percent. Within a particular category of national growth rates, the relation between city size and city growth tends to be flat and somewhat irregular, certainly not as systematic as the relation with national population growth rates.

Table 3
Average Annual City Growth Rates between Latest Two Censuses as a
Function of City Size and Growth Rate of the Country in Which
City is Located (Number of Cities in Parentheses)

Size of City	Population Growth Rate of Country			
	0–.0099	.01–.0199	.02–.0299	.03 +
4 million +	0.0123 (8)	0.0324 (7)	0.0404 (4)	0.0577 (1)
2–3.999 million	0.0092 (11)	0.0210 (10)	0.0419 (10)	0.0 (0)
1–1.999 million	0.0112 (36)	0.0252 (23)	0.0339 (11)	0.0412 (4)
500–999,999	0.0189 (71)	0.0248 (38)	0.0377 (25)	0.0454 (9)
250–499,999	0.0166 (130)	0.0312 (72)	0.0351 (64)	0.0519 (22)
100–249,999	0.0192 (349)	0.0311 (199)	0.0382 (176)	0.0532 (58)
All cities	0.0178 (605)	0.0298 (349)	0.0375 (290)	0.0517 (94)

Regression results in Table 2 suggest that, other things being equal, an increment of 1 percent in national population growth rates is associated with an increment of 1.002 percent in city growth rates. Nothing could indicate more clearly that cities draw from the same sources of growth as nations. Although the relationship is hardly surprising, it is worth noting that many mechanisms could have resulted in a different relationship. If high rates of natural increase were propelling rural people to cities, the coefficient of national population growth rates would be expected to exceed unity. If rapid natural increase in cities made them inefficiently large, the opposite result might be expected. Policies to affect rates of natural increase that were more effective in urban than rural areas would produce a coefficient exceeding unity; if they were more effective in rural areas, it would fall short. Instead, the coefficient is what one would expect if changes in national growth rates were associated in precisely equal measure with changes in city growth rates.

National Economic Level and Growth Rates Other things being equal, nations at higher levels of GNP per capita and with faster rates of economic growth have faster growing cities. According to Table 2, a gain of \$1,000 in gross national product per capita is associated with a rise of 3.3 per thousand in annual rates of city growth, and 1 percent faster annual growth in gross domestic product is associated with a gain of 2.4

per thousand in city growth rates. These results thus support those cited above—based on a completely different data set and estimation procedure—that suggest rural–urban migration is faster in countries at higher economic levels and with faster economic growth. The positive association between city growth and national economic growth cannot be unambiguously interpreted since city growth could contribute to, as well as result from, more rapid economic growth. However, it is unlikely that the average city is large enough that its population growth could contribute substantially to measured national economic growth during an intercensal period; rather, the lines of causation presumably run predominantly from economic growth to city population growth. Once again, the results imply that city growth is most rapid in the countries with the strongest economies.

Region The 104 Latin American cities larger than 100,000 in the data set are growing faster, on average, than could be expected on the basis of national population growth rates or any of the other variables considered. The difference amounts to an average excess in growth of about 6 per thousand annually. Most other evidence on urban patterns also shows Latin America to be deviant. As indicated in Table 1, city growth rates in Latin America tend to increase with size of city, contrary to relations that generally prevail elsewhere. This pattern is reinforcing a preexisting tendency for Latin America to have a more top-heavy size distribution of cities than other regions. Furthermore, occupational structures in Latin American urban and rural areas differ from norms established elsewhere. In particular, nonagricultural activities in Latin America are unusually highly concentrated in urban areas. The concentration of manufacturing and service occupations is some 8–14 percentage points higher in urban areas than would be expected based on the percentage of total labor force in agriculture. As a result, rural areas in Latin America are to an unusual extent agricultural enclaves. This concentration may be related to urban growth patterns in the sense that the rising factions in nonagricultural activity that normally accompany development are disproportionately absorbed by urban areas. Many factors could probably be invoked to account for the shortage of rural nonagricultural activity: land tenancy systems that drain off agricultural profits into cities; proximity to the United States; better transportation and communication networks than in other developing regions; and so on. The basic point to stress here is that the urbanization process is caused by a multitude of factors operating in each country and each city. Certain of these factors are shared widely enough that they can be identified through the use of global data. Others are evidently widely shared by Latin American cities only; still others—accounting for around 69 percent of the variance in city growth rates—can only be identified at a lower level of aggregation.

4. Urban growth in developing countries has typically not been associated with a deterioration in industry/urban ratios.

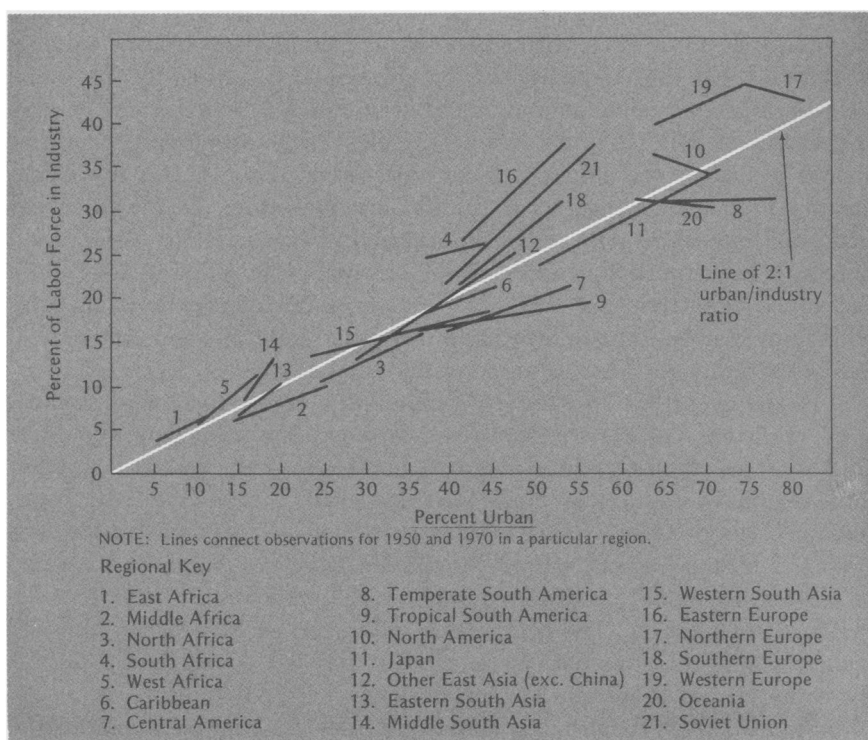
One of the key arguments underpinning the notion that urbanization in developing countries is abnormal is that their urban populations are “supported” by an unusually small industrial labor force. This point was solidly established in the 1950s by Bert Hoselitz, who compared current industry/urban relations in developing countries to those in now developed countries during the late nineteenth and early twentieth centuries.¹⁹ This was an alarming observation to many, largely because industrial activity, producing tangible output, was seen as being in some sense more “productive” than the service occupations that were tending to substitute for industrial ones. The evident bias against services is a bit odd in view of the fact that the vanguard of most-developed countries has for some time been tracing out a definition of development in which services play the dominant role. It is not altogether clear why developing countries should aspire to the nineteenth-century rather than to the twentieth-century European model. That the nineteenth-century European model was itself anomalous with respect to industry/urban relations is suggested not only by twentieth-century developments in developing and more developed countries alike but also by descriptions of preindustrial cities as locuses mainly for administrative, religious, military, and commercial activities, rather than for manufacturing.²⁰

In any event, it is worthwhile examining whether the “overurbanization” tendencies as denoted for years around 1950 have persisted since that time. An efficient way to acquire some sense of the trends is to compare regional estimates of labor force structure compiled by the International Labour Organisation with estimates of urban–rural distributions prepared by the United Nations Population Division. Although both sets of estimates are built up from national census publications, they are independent in technique. The comparison will again exclude China and will compare 1950 relations with those in 1970, beyond which date estimates for many countries are more or less arbitrary extrapolations.

Figure 1 plots the urban population percentage against the industrial percentage of the labor force for each region in 1950 and 1970. The two observations for a particular region are connected by a line, with the 1950 observation always appearing to the left. It is clear that most of the points fall close to a line through the origin with a slope of 1/2 (each increment in percent urban being matched by an increment of 1/2 in the industrial percentage). For the world as a whole (excluding China), the ratio of industrial to urban percentages was .552 in 1950 and .578 in 1970. If anything, this small change suggests a reversal of the overurbanization tendency. The degree to which regional trends adhere to the common 1:2

ratio can be inferred from the slope of their lines. Most of the more developed regions display a lower and even negative slope, reflecting the emergence of service-dominated economies. Southern and Eastern Europe and the Soviet Union experienced a sharp rise in the industry/urban ratio during the period, which in the latter two instances is said to reflect a development strategy that attempts to economize on investible resources by restraining the growth of urban populations with their high consumption requirements.²¹

Figure 1
Relation between Percentage Urban and Percentage
of Labor Force in Industry, 1950 and 1970



The largest of the developing regions, Middle South Asia, also experienced a rise (of 29 percent) in the industry/urban ratio. This region, dominated by India with relatively good censuses, is in large part responsible for the estimated increase in this ratio for the world as a whole. Africa and the rest of Asia show no serious and certainly no consistent departure from the 1:2 ratio between 1950 and 1970. But, once again, Latin America appears to be an exception. Each of the four Latin American regions shows a decline in the industry/urban ratio between 1950 and

1970. The decline is especially marked in both Temperate and Tropical South America. As noted above, the industrial shortage in Latin America is more evident in rural than in urban areas, though it pertains to both.

The foregoing discussion relates to national and international data rather than to labor force structures in urban areas themselves. Data on urban labor force structures provide much less coverage, particularly for trends. Trend data on urban labor force structures have been examined for eight developing countries. Dates of censuses and the change recorded in the percentage of the urban labor force in clerical, sales and traditional service occupations are the following: Puerto Rico, 1960–70 (—4.3); Costa Rica, 1963–73 (—1.9); Peru, 1961–72 (—1.4); Ecuador, 1962–74 (+0.6); Nicaragua, 1963–71 (0.0); Sri Lanka, 1953–70 (—11.6); Morocco, 1960–71 (—1.8); Thailand, 1954–70 (+5.0).²² Needless to say, classification of the labor force is inexact, and changes in classification can create bogus trends for a particular country. Relatively uniform upward trends could support notions of service sector inflation; but for these countries, at least, no such tendency is evident. Where the urban service sector is rising in developing countries, it is typically a result of rising fractions of professional, technical, and administrative personnel. Each of the eight countries had a rise in the percentage in professional-managerial occupations, averaging 4.0 percentage points.

Other research has also questioned the assumption that rapid urban growth would lead to an inflated urban service sector in developing countries. Because entry requirements in service jobs are typically less stringent than in industrial ones, it is alleged that the increment in labor supply will tend to be absorbed disproportionately into the service sector. Alan Udall reviews these arguments and finds them unconvincing.²³ Furthermore, he examines a “natural experiment” in Colombia, where rural disturbances led to a rapid labor flow to Bogota. The influx of workers, however, did not seem to depress the size of the manufacturing sector nor to inflate that of services. Instead, he argues that the distribution of workers among sectors is determined primarily by demand factors related to income growth and government policy. Dipak Mazumdar also questions the prevailing model, particularly the assumption that the service sector plays a predominant role as a point of entry into the labor force for migrants to urban areas.²⁴

Discussion

This is not the place for a full-scale consideration of the desirability of reducing rates of urban growth and rural–urban migration. Some of the results reported here would seem to call for moderation of the sometimes frantic tone that such discussions assume. Urban growth has been

fastest, other things being equal, where economic levels and economic growth rates are highest; changes in proportions urban among developing regions are not outpacing historical standards; relations between urban and industrial populations do not seem to have deteriorated in the post-war period; urban growth is partly self-limiting since growth rates of cities decline as their size increases and as urban proportions grow. Still there is no cause for complacency in these findings, both because the population shifts accompanying urbanization are being superimposed upon what remain very rapid rates of national increase and because the aggregate measures used in the analysis preclude consideration of a wealth of economic, social, and institutional factors that influence and are influenced by this phenomenon. It would be foolish to make general statements about the advantages or disadvantages of slowing urban growth, since these will obviously vary from place to place. In one city, expansion may be very costly for topographical reasons, or it may overtax existing municipal services; in another, expansion may result in economies of agglomeration or facilitate transportation linkages with other cities.

In part, the desirability of slowing urban growth depends on the costs attached to different policies for doing so. In this regard, it is worth emphasizing that urban growth can be strongly influenced by policies affecting rates of natural increase, as well as by policies to influence migration. There is strong evidence that declines in national rates of natural increase tend to be matched one-for-one by declines in rates of urban growth. In most countries, natural increase accounts for the bulk of urban growth. But rates of natural increase or net migration must themselves be dealt with through specific policy measures. A common typology of such measures as they bear on natural increase is also applicable to migration. Migration can be influenced by providing information or services that allow individuals to more effectively exercise their choices; by changing individuals' incentives to move; by "restructuring" development; or by coercive measures such as identity cards or physical barriers.

The "free choice" option would seem more likely to hasten than to slow urbanward migration. Urban incomes are practically always higher than rural ones. Migrants to cities in general seem to fare well with respect to acquiring jobs and improving their standards of living. Families that send migrants to the city in Africa and Asia typically enjoy a stream of remittances that enhance their own living standards.²⁵ Urban standards of public services usually exceed rural ones. Providing information on these matters, along with transportation services to allow people to act on the information, is not likely to slow urban growth. For those whose approach to population policy emphasizes the enhancement of free choice in the prevailing social context, policies to affect natural increase by providing family planning services would seem to provide the most palatable means of reducing urban growth.²⁶ Oddly, family planning services are

rarely seen as a candidate for slowing urban growth, which probably reflects an artificial but well-entrenched distinction between population growth and population distribution policies.

Coercive measures doubtless have been and will continue to be effective in slowing migration to urban areas, and they admit to more effective enforcement than is the case with antinatalist coercion.²⁷ But most governments find them intrinsically offensive. Tinkering with individuals' incentives to move would seem to be administratively difficult and of questionable effectiveness, apart from making the more fundamental changes that would constitute a restructuring of development patterns.

There are many possible ways of restructuring development to influence urban growth. We have seen at least indirect evidence that government biases toward capital and largest cities promote unusually rapid population growth therein. Redressing the inequities that give rise to these growth imbalances is surely a praiseworthy goal from many points of view. But only a small minority of cities would be affected by policy revisions directed at capitals and largest cities. More general changes likely to affect migration are the promotion of rural development efforts and the provision of basic needs—health, education, food, and so on—to all of the population, rural and urban alike. These efforts are still in their infancy in most parts of the world, and adequate evidence of their impact on rural–urban migration is not available.

While it would seem that improved living standards in rural areas would serve to increase their relative attractiveness and to restrain the flow of rural–urban migration, there are some reasons to doubt that they would act very powerfully in this direction. It is a common observation that rural out-migration probabilities are higher among those with higher educational attainments, no doubt reflecting the greater returns to urban residence for the educated than for the uneducated.²⁸ However, improving schooling opportunities in rural areas very likely would dampen the flow of individuals (and their families) who migrate to urban areas specifically to acquire more education. Thus, the age pattern of migration may change more than its level as a result of programs to improve rural education. Rural health advances will almost certainly accelerate rural growth and, where land tenure systems are not absorbent, they are likely to speed out-migration. Perhaps most important is the impact of advances in agricultural productivity on employment prospects for agricultural labor. Effects on migration are likely to vary somewhat according to whether the advances are labor-saving or labor-using and with elasticities of demand for the product in question. A recent review cites evidence that improvements of labor productivity in the production of basic food-stuffs are likely to accelerate rural out-migration because of deterioration produced in the terms of trade for those products.²⁹ The most promising

avenue of rural development for stemming out-migration seems to be one of increasing the returns to farmers from the production of export crops, either through productivity advances or through elimination of discriminatory agricultural taxes. Focusing on export crops averts the urbanizing influences that arise from inelastic internal demands for agricultural products.

These options do not exhaust the possibilities for rural development activities. Developing small-scale rural industries, opening new lands to agricultural settlement, altering terms of trade between rural and urban areas, improving rural credit and marketing facilities, and many other possibilities exist. That the bulk of population in developing countries resides in rural areas and will continue to do so for at least a generation is surely sufficient reason for focusing development activities and plans on this sector. But the history of developed countries, contemporary relations among developing countries, and evidence on agglomerative economies suggest that success in these development enterprises will ultimately be registered not by rural population retained but by rural population released. If a recession in rates of urban population growth ranks high on the list of development objectives—and its placement requires more careful analysis than it has usually received—then it seems important to recognize the central role of natural increase in current levels of and variations in urban growth rates. It is conceivable, for example, that many rural development activities will depress urban growth more through their impact on natural increase than through their impact on rates of rural out-migration.

Notes

1. Data are drawn from United Nations Economic and Social Council, Population Commission, Twentieth Session, *Concise Report on Monitoring of Population Policies*. E/CN.9/338. 22 December 1978, pp. 27–28.

2. United Nations Population Division, *Patterns of Urban and Rural Growth* (forthcoming, 1980).

3. Data for all countries were processed in such a way that estimates pertain to a uniform sequence of dates: 1950, 1955 . . . 1975. Such estimates were made by interpolation wherever possible, under the assumption that growth rate differences between urban and rural areas were constant during the period between two con-

crete urban estimates. When extrapolation was required, the procedure was to assume constant urban–rural growth differences at a level to that observed in the most nearly adjacent period during 1950–1978.

4. This group consists of Africa, Asia except Japan, and Latin America. It does not include Turkey, Cyprus, or Israel.

5. John V. Grauman, “Orders of magnitude of the world’s urban and rural population in history,” *United Nations Population Bulletin* No. 8. (New York: United Nations, 1977), pp. 16–33.

6. Kingsley Davis, “Cities and mortality.” International Union for the Scientific Study of Population, International

Population Conference (Liege: IUSSP, 1973), Vol. 3., pp. 259–282.

7. *Patterns of Urban and Rural Growth*, cited in note 2.

8. These migration rates and those cited in the remainder of the paper include the element of reclassification. The population of areas reclassified from rural to urban during an intercensal period is unavoidably included among the urban in-migrants. Those reclassified may represent on average about a quarter of the total growth assigned to migration. *Patterns of Urban and Rural Growth*, cited in note 2, Chapter 3.

9. Theodore W. Schultz, *Agriculture in an Unstable Economy* (New York, 1945), p. 90.

10. However, for the three African countries where measurement of components of change was possible, natural increase contributed 57.6 percent in Ghana (1960–70), 63.0 percent in Morocco (1960–71), and 74.4 percent in the Union of South Africa (1960–70). Since the rate of urban growth in Africa was about 4.9 percent annually during 1960–75 and since a plausible estimate of urban natural increase is about half of that figure, it is reasonable to assume that perhaps half of African urban growth is accounted for by migration and reclassification of areas. Ita Ekanem suggests that migration may have accounted for slightly more than half of urban growth in Nigeria. “The dynamics of urban growth: A case study of medium-sized towns of Nigeria.” Paper contributed to the Conference on Economic and Demographic Change; Issues for the 1980s, International Union for the Scientific Study of Population, Helsinki, Finland, 28 August–1 September 1978.

11. Alan Gilbert, “The argument for very large cities reconsidered,” *Urban Studies* 13, no. 1 (February 1976): 27–34.

12. Jorge E. Hardoy, “Potentials for urban absorption: The Latin American experience,” *Food, Population, and Employment: The Impact of the Green Revolution*, ed. Thomas T. Poleman and Don-

ald K. Freebairn (New York: Praeger, 1977).

13. Graeme J. Hugo, “New conceptual approaches to migration in the context of urbanization: A discussion based on Indonesian experience.” Paper prepared for a seminar on “New Conceptual Approaches to Migration in the Context of Urbanization,” organized by the International Union for the Scientific Study of Population’s Committee on Urbanization and Population Redistribution, Bellagio, Italy, 30 June 30–3 July, 1978.

14. Michael Lipton, *Why Poor People Stay Poor: Urban Bias in World Development* (Cambridge, Mass.: Harvard University Press, 1977); Janet Abu-Laghd and Richard Hay, Jr., *Third World Urbanization* (Chicago: Maaroufa Press, 1977).

15. For a recent review of agglomerative economies, see Gerald A. Carlino, *Economics of Scale in Manufacturing Location* (Leiden: Martinus Nijhoff, 1978).

16. Among the studies providing evidence on the size of agglomerative economies are Carlino, cited in note 15; Leo Sveikauskas, “The productivity of cities,” *Quarterly Journal of Economics* 89, no. 3 (August 1975): 393–413; David Segal, “Are there returns to scale in city size?” *Review of Economics and Statistics* 58, no. 3 (August 1976): 339–350; Yngve Aberg, “Regional productivity differences in Swedish manufacturing,” *Regional and Urban Economics* 3, no. 2 (1973): 131–156; Koichi Mera, “On the urban agglomeration and economic efficiency,” *Economic Development and Cultural Change* 21, no. 2 (January 1973): 309–324; Stanford Research Institute, “Costs of urban infrastructure for industry as related to city size: India case study,” *Ekistics* 20 (November 1969): 316–320; C. A. Rocca, “Productivity in Brazilian manufacturing,” in *Brazil: Industrialization and Trade Policies*, ed. J. Bergsmann (London: Oxford University Press, 1970); Werner Z. Hirsch, “The supply of urban public services,” in *Issues in Urban Economies*, ed. Harvey S. Perloff and Lowdon Wingo, Jr. (Balti-

more: Johns Hopkins University Press, 1968); and William A. Howard, "City-size and its relationship to municipal efficiency: Some observations and questions," *Ekistics* 20 (November 1969): 312-316.

17. Chinese cities are included in this table, which accounts for the fact that the total number of cities examined is 1,338.

18. The F value of additional variance explained by the national population growth rate after all other variables are in the equation is an extraordinarily high 105.2, which is three times higher than that of any other variable. A value of 6.64 is significant at 1 percent.

19. Bert F. Hoselitz, "Urbanization and economic growth in Asia," *Economic Development and Cultural Change* 6 (October 1957): 42-54; "The role of cities in the economic growth of underdeveloped countries," *Journal of Political Economy* 61 (1953): 195-208.

20. Gideon Sjoberg, *The Preindustrial City: Past and Present* (Glencoe, Ill.: The Free Press, 1960).

21. Gur Ofer, "Industrial structure, urbanization, and the growth strategy of Socialist Countries," *Quarterly Journal of Economics* 10, no. 2 (May 1976): 219-244.

22. *Patterns of Urban and Rural Growth*, cited in note 2, Table 5.5. These data were assembled and processed under the direction of Jean Smith. Turkey, which appears in Table 5.5, is excluded from the present analysis since the proportion of the urban labor force with unknown occupations rose enormously. In the other countries, the absolute change in percentage with unknown occupations averaged 2.5 percentage points. The largest change occurred in Thailand, where unknowns declined by 6.2 percentage points. Interestingly, Thailand is the only country where the service group rose by more than 1 percentage point.

23. Alan T. Udall, "The effect of rapid increase in labor supply on service employment in developing countries,"

Economic Development and Cultural Change 24, no. 4 (July 1976): 765-785.

24. Dipak Mazumdar, "The urban informal sector," *World Development* (August 1976): 655-679.

25. For good reviews of these matters, see Lorene Y. L. Yap, "The attraction of cities: A review of migration literature," *Journal of Development Economics* 4 (1971): 239-264; Salley Findley, *Planning for Internal Migration: A Review of Issues and Policies in Developing Countries* (Washington, D.C.: US Bureau of Census, 1977); Oded Stark, "Rural-to-urban migration and some economic issues: A review utilizing findings of surveys and empirical studies covering the 1965-1975 period," International Labour Organization, World Employment Programme Working Paper WEP/2-21/WP38, May 1976.

26. The most thorough recent review of the effect of family planning programs on fertility is W. Parker Mauldin and Bernard Berelson, "Conditions of fertility decline in developing countries, 1965-75," *Studies in Family Planning* 9, no. 5 (May 1978): 89-147. The difficulty of inferring the role of family planning programs in fertility declines is reflected in the fact that the 11 countries ranked (in Table 8) as having the strongest "program effort" had an average crude birth rate in 1965 of only 33.7 per thousand. Such low rates, preceding in most cases vigorous family planning efforts, indicate that strong program effort is usually conditional upon high levels of preexisting motivation. Furthermore, the highest figure entering the average crude birth rate calculation is 42 for North Vietnam, where little is known about the demographic situation.

27. For example, see Brian Berry's discussion of the "influx control" urban migration policy for Bantu in South Africa, in *The Human Consequences of Urbanization* (London: MacMillan, 1973), Chapter 4.

28. Derek Byerlee cites evidence

from Tanzania and Kenya suggesting that returns to education are much higher in urban than rural areas. "Rural-urban migration in Africa: Theory, policy, and research implications," *International Migration Review* 7, no. 4 (1974): 543-566.

29. Jacques Gaude, "Causes and repercussions of rural migration in developing countries: A critical analysis," International Labour Organization, World Employment Programme Working Paper WEP/10-6/WP10, October 1976.