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Urban and Regional Imbalances in Economic Development*

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Most developing countries seem to think that they suffer from gigantism of their principal cities, and this view is shared by many experts. It is an ill defined disease. In some cases the worrisomely big city is quite small by comparison to urban areas in other countries, but looms large and is growing rapidly by comparison to the other cities in the country. In a descriptive sense, this phenomenon has been called "primacy" and is often thought to be associated with underdevelopment or the early stages of development. The most common economic argument for calling this concentration excessive is the belief that per capita costs, particularly for infrastructure investment, rise after a certain urban size. However, there is no agreement as to the size at which this occurs; nor, for that matter, is there solid evidence that costs do in fact increase with urban size for a given level of services and facilities.

A companion argument points to the extreme differences in income between the principal cities and the more backward areas, and policies for the development of the less advanced regions are frequently justified on the grounds of economic justice, although it is sometimes also argued that such policies serve to accelerate total national economic development.¹

Thus, urbanization and regional policies often converge and complement each other. The former tries to steer development away from over-urbanized regions, and the latter tries to attract and promote development in backward regions.² This paper will try to show that these complementary policies may often be detrimental to economic growth.

It must be noted, however, that two policy goals are involved in these policies: efficiency and equity. By efficiency is meant, most simply, national economic growth, often measured in terms of per capita national product or a discounted consumption stream. By equity is meant a more equal distribution of income.³ Other goals are possible and frequently referred to—for instance, occupation of territory for national defense, as in the case of Israel; or the use of regional planning as a technical device to insure the territorial congruence of plans which have been drawn sectorially; or the pleasing of dissatisfied populations to promote political stability. However, most statements of goals may be paraphrased as: "Of course, the

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principal goal is efficiency, but many other goals are possible, such as equity." Such statements introduce the miscellaneous category too soon; the equity goal is held frequently enough to be named and opposed to efficiency.⁴ After equity, other goals seem to be more randomly held. The point here is that efficiency and equity are two different commonly held goals, and that they may be in conflict. For instance, it is conceivable that the path of fastest economic growth may imply sharp geographic inequalities, concentrating wealth and power in a few advanced centers and condemning backward areas to lengthy periods of poverty. Conversely, policies of regional equalization may slow down the growth of the total economy.

The ambiguity of concepts of regional definition, particularly with respect to the scale of regions, calls for discussion here of an important theoretical development which has recently achieved prominence in several variations, of which the best known is that associated with Francois Perroux and his term "growth poles."⁵ This approach transfers most of the problem of inequality from the national to the regional level. It emphasizes the importance of principal regional centers for growth and permits, for instance, policies that seek to equalize income between regions while recognizing the correlation between urbanization and development. Such a strategy has been called "concentrated decentralization."⁶ However, it must be noted that, while regional averages may converge, it is perfectly possible that territorial inequalities in income within regions will be greatly increased, and that even if regional *averages* are brought within a common range, no improvement may be obtained in the distribution of income among the population as a whole. More importantly, perhaps, there is no guidance as to the proper size of regions and centers. Thus, a country too finely divided into many regions would be inviting a spreadout and probably inefficient distribution of investment over its territory; on the other hand, a country too grossly divided into few regions might mask over-urbanization or primacy behind regional averages. Since, even if we exclude such as San Marino and Andorra, nations vary in their population by three orders of magnitude, all of a small country may be smaller than a region in a large country, and a pattern which might be viewed as perfectly acceptable dispersal in the large country might be viewed with dismay by the small one as extreme polarization.

This obvious point bears emphasis. The population of a great many developing countries is no greater than that of a good-sized metropolis. Yet, for what may be no more than esthetic preference, most nations, regardless of size, divide their territory into about the same number of planning regions, not far from a range from ten to two dozen. To illustrate by an example which is not extreme, the total population of Chile is about half of that of the New York metropolis. Its total gross national product is comparable to the gross regional product of metropolitan Buffalo, N.Y. Yet regional disparities are one of the principal concerns of Chile, and justly so. Santiago, it appears to be generally held, is becoming too big.

But, from a point of view of international comparison, it is a very modest capital. The principal argument used to demonstrate the excessive size of Santiago is its large size in proportion to total national population and to national urban population. Yet, if a long-range view is taken, and Chile is viewed as part of a Latin American common market, the size of Santiago seems rather small in an array of cities that includes Río, São Paulo, Buenos Aires, and Lima. The point of all of this is that, in the absence of empirically determined scales of relevant sizes of regions and growth poles,⁷ these concepts have limited relevance as a guide to policy and action. They have served, however, to prevent the spreading of investment like butter on a piece of bread. The present view is that the national territory is to be covered by distributed centers, like a ham with cloves.

Within the efficiency goal, the complementary policies of urbanization and regional development contain implicit assumptions regarding questions of fact which have not yet been demonstrated. The two principal ones are: (1) urbanization costs per capita (for housing, services, commuting, etc.) rise after a certain population size, and consequently large cities are uneconomic locations for development; and (2) the less developed regions, being relatively virgin territory, must hold opportunities for very high returns. In a sense, these views amount to a simple concept of diminishing returns to scale with size, implying that returns are higher in the less developed regions. If this is true, there appears to be no conflict between the goals of efficiency and equity, since total product will be maximized when all regions are equally developed, or developed in proportion to their natural endowment. Another frequent argument for this point of view is that the development of backward regions serves national development by creating the markets necessary to achieve the necessary demand for efficient scale of production. I shall not address myself to this argument in this paper, except to note that it carries strong implicit assumptions as to the relative income elasticities of demand for the contemplated production mix.

The basic questions remain: are bigger cities less efficient than smaller ones? Are there rich unexploited opportunities in the more backward regions? If the answers to these questions are in the affirmative, policies of counterurbanization and regional equalization are indicated, from the point of view of both efficiency and equity. If the answers are in the negative, efficiency goals will be served by encouraging geographic concentration and regional inequality, and there exists a conflict between the two goals.⁸ The answers to these dilemmas are of vital importance. As of today, it may be generalized that virtually every nation that deals with this issue in its national plan has based its policy on the belief that its principal city is too big, regardless of its size. Among the many developed countries which are following policies of relative or absolute dispersal are France, Great Britain, Poland, and the U.S.S.R. Among the underdeveloped countries, Puerto Rico, India, Chile, Venezuela, Ghana, and Egypt are

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just a few of many. However, these plans very seldom state with useful clarity their assumptions of fact or their policy alternatives.

First, let us examine the matter of relative efficiency of urban size. The formulation of this issue in effect equates the city to a giant firm. Per capita costs of urbanization are said to decline, to a point, and to rise thereafter. A review of the literature on this issue affords no consensus on the population size at which this turning point is reached. But even if we knew the point of least costs per worker or inhabitant, the issue of optimal size for efficiency would not be answered. To paraphrase Keynes, the engine of business is not economy but profit. That is to say, even if costs rise after a certain point, where productivity is rising faster (by reason of external economies or economies of scale) big cities will yield a greater net return per worker or inhabitant than smaller ones. Thus, even under a condition of rising marginal costs, net marginal product per capita may be not only positive but increasing.

All of these statements must unfortunately be couched in the conditional for, although this is a central issue for the planning of development, there exists an abundance of opinion but a paucity of facts. Considerable evidence conforms to a belief in increasing returns to urban scale. For countries in which data exist, it may be generalized that the larger the city, the higher the per capita income. It must be noted, however, that it has been suggested without proof that a possible explanation for this positive correlation lies not in efficiency but in exploitative situations, based on absentee ownership, political and economic power, perverse flows of funds and skills, and other parasitic factors.

More detailed data exists, to my knowledge, for only two countries, both among the wealthiest. In the cities of the German Federal Republic, per capita regional product rises with population considerably faster than governmental expenditures including welfare.⁹ In the United States, per capita income rises strongly and unequivocally with urban size. Governmental expenditures per capita tend to rise, but by far smaller absolute magnitudes, suggesting that, if an "optimal size" does indeed exist, it is far likelier to depend on the productivity-per-capita function than on the cost-per-capita function.¹⁰ It may be noted that none of half a dozen price indices comparing living costs among urban areas shows relation to urban size.

In brief, there is no basis for the belief that primacy or overurbanization *per se* is detrimental to the efficiency goal of economic development. There are good grounds for believing in increasing returns to urban size.¹¹

Neither has there been empirical demonstration that a policy of regional equalization is consonant with rapid economic development. If the backward regions are believed to contain unexploited opportunities, and there is a general expectation of decreasing returns to capital in any one region, then classical economics would indicate that a distribution of investment proportional to resources and population would result in the

fastest national growth. However, classical location theory is ill suited to the conditions of developing nations. It is based on perfect knowledge, predictability, mobility of factors, inexhaustible entrepreneurship, and, to a large extent, a fully developed transportation network. None of these conditions obtain in developing countries. A full adaptation of location theory to the conditions of developing countries is beyond this brief paper, but a few illustrations may be given.

The transport network is typically not a full lattice covering the national territory, but rather a tree-shape in which the branches converge on the great port cities. These cities therefore, although they appear peripheral on an ordinary map, are the most central (accessible) in functional terms to the nation as a whole. Further, the frequent intervention of import and export of products and materials in the productive processes of developing nations gives extraordinary importance to these break-of-bulk points. Neither is information evenly available. The more remote the region, the less is known about it. This includes local customs, the chemical and physical properties of local materials, the cost and timing of operations, the quality and seasonal patterns of water, and a thousand other things, all of which add to the uncertainty of the investment decision, whether private or public, and thus require higher margins of return to justify investment. These uncertainties are, of course, in addition to the certainties of poorer communications, slower deliveries, incompetence or absence of supporting services, etc. The uncertainties add to the risks, and the certainties to the costs, and both lead to a need for large and clear advantages to justify locations outside of the developed centers.

A further important factor in the location of industry in developing countries which is neglected in classical theory is that of entrepreneurship and technical skills. Universally, managers and technicians prefer to live in the major cities for obvious personal reasons, and inducements to get them to go to less developed areas are not only likely to be expensive, but, even when successful, may produce only second-raters. Needless to say, especially in developing countries, the quality of management and the competence of technicians is likely to be the most important single factor for an enterprise. This is because the uniqueness and fluidity of each situation call for the highest order of personal ability and energy, since precedents and the supporting institutional matrix are deficient. Further, especially in the area of management, conditions in developing countries change rapidly and often unpredictably, as ministries are reorganized, regulations are changed, the cost and availability of funds fluctuate, relative factor prices vary suddenly, etc. In contrast with developed countries, where comparable changes are usually less frequent and less radical, and where information is easily available in a depersonalized form through printed documents or efficient bureaucracies with clear spheres of authority, in developing countries personal contacts, rumor, influence, and unfortunately, in many cases, extralegal procedures are of far greater

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importance. In short, information is likely to be vitally needed on short notice because of the rapidity and frequency of changing circumstances, and, since the sources and modes of this information are unperiodic, unpredictable, and require cultivation of sources, evaluation of intangibles, and delicate negotiations which can only be conducted through personal, face-to-face contacts, they exercise a tremendous pressure toward spatial concentration. Thus, a hard-pencil advantage of a few percentages in one or another cost, which might be decisive in a developed country, is likely to be washed out in the interest of the flexibility and adaptability of a central location in a developing country.

These pressures toward location in the large cities are only slightly less likely to operate in the case of state enterprises than in the case of private ones as long as the efficiency goal is the principal one considered, and the equity goal is seldom recognized explicitly. Even within the efficiency goal, the procedures for accounting for most governmental projects generally are, as are those for private enterprises, based on money costs to the enterprise rather than on net costs to the economy. Thus, it is usually ignored that the price of materials which include a tax or a duty is different from the point of view of the economy than from the point of view of the project. Similarly, most land rent would not represent a cost from the point of view of the national economy, while it would undoubtedly be a cost on the books of the project. In fact, certain types of rent would constitute an addition to national wealth. The project will see most of its cost as average costs, but they will affect the national economy as marginal costs. Such differences between money costs and economic costs and benefits could be handled to some degree by such emerging techniques as cost-benefit analysis, but they very rarely are.

Yet other considerations *within* the efficiency goal may result in different location strategies between nationally planned growth and incremental project-by-project growth, whether private or public. The first of these is the issue of external economies. In some specific cases vertical or horizontal linkages can be handled by relatively well established methods such as input-output or industrial complex analysis, but in the majority of the cases the important relations elude us, and we must refer again to the macroeconomic consideration of efficient urban size. A particular project or group of projects, each of which may be of little interest in itself, may serve to bring a particular region or secondary urban area to a critical mass sufficient to start off vigorous and self-sustaining growth and may thus be justified in terms of induced external economies. We have only vague and anecdotal ideas as to the conditions for such growth: there must be a sufficient variety of activities that unexpected relations and complementarities can be discovered and efficient specialization is possible; the pool of skills must be sufficiently large and varied to permit change and adaptability; life for the upper classes must be sufficiently varied and interesting to keep the best men from fleeing provincial

dullness; local markets must become large enough to attract their own suppliers; the demand for some services must become large enough to justify some major forms of infrastructure such as large airports or specialized financial services. All of these things are relatively well known, but we do not know much about the critical sizes or thresholds involved, especially for the subtler forms of human interaction, so that we cannot measure or predict the contributions to externalities of particular projects, even in cases in which these would be decisive in the calculation of costs and benefits.

Other considerations may indicate a divergence between the national interest as a whole and incremental growth which considers each project individually. The asymmetry of risks and costs and the motivations of managers or project directors may quite sensibly lead to a national policy that discourages risks and encourages central locations.¹² But a nation that contemplates a multiplicity of projects as well as external benefits might be willing to accept occasional failures, and to encourage by subsidies, insurance, or direct intervention groups of projects some of which would be rejected if considered by themselves. The principle is similar to that of health insurance, which, by distributing skewed risks, permits lower per capita investment for the same degree of coverage.¹³

A final set of considerations, which may be termed structural changes, may be considered separately, although they are little understood and are hard to distinguish from the previous considerations. By structural changes are meant the long-range changes in the macroeconomic landscape of a nation. Let me illustrate by a grand example. The pre-Colombian cities of Latin America were, in large degree, central place cities oriented to the national territories.¹⁴ During the colonial centuries into the present, the principal cities of Latin America have been port cities, oriented to the break-of-bulk and transshipment functions that characterize colonial economies. In the last decade, as Latin America has tried to struggle out of the colonialism of economic dependence, we have witnessed the emergence, after half a millennium, of a new round of internal cities: Santo Tome in Venezuela, Brasilia in Brazil, several newly invigorated cities such as Cordoba in Argentina, the trans-Andean experiments of Peru. Other structural changes which may be expected include the reorientation of transportation systems from the port-centered fan-shapes of colonial economies to the fuller reticulation of national development, and the rise of some centers and the decline of others as land reform and other changes in agriculture take hold and as the modes, speed, and costs of transportation change the geographic range of central places and complementary activities. Massive movements of population are a certainty, and the rapid evolution of social and economic behavior will bring about changes in quantity so significant that they will amount to changes in kind. The most familiar example of such transformations is that of nations which, from having a vast majority of their population in rural occupations, have

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passed to having a vast majority living in cities. These nations bear witness to its being a change in kind.

My point is that a long-run view of development in a nation must anticipate that fundamental transformations will occur, although their precise form may not be known. Project-by-project analysis must of necessity assume the stability of certain parameters and be essentially incremental. This is amply demonstrated by the most advanced econometric techniques currently in use: they use rates of change or proportionalities which are in effect partial differentials of a first or second degree of models which are essentially static or which grow by expansion rather than by structural transformation or redefinition of categories. This may seem abstract and as imperfectly understood by this writer as by the readers, and therefore further illustration may be helpful. The manufacture of many products will pass from an artisan to an industrial mode of production; many nations, especially in Africa, will pass from a cultural-ethnic solidarity among segments of their population (i.e., tribal) to an organization along territorial (i.e., provinces or regions), sectoral (i.e., industries), or class lines. Acceptance of style by consumers will pass from a basis on custom and tradition to a basis on novelty or other types of symbolism. I believe that it can be said with fairness that our best quantitative techniques take minimal notice of these fundamental transformations. Perhaps this issue is one of the reasons for the division in so many countries between economic and physical regional planners. The former are more sophisticated and more accurate but deal with short perspectives of time, perhaps five years, while the latter, often more romantic and intuitive, deal with longer perspectives, on the order of twenty-five to forty years.

In brief, location theory adapted to developing countries would indicate that the efficiency goal is best served by a policy that permits concentration, at least in the short run. Long-range considerations of the changing macroeconomic landscape may modify this position to one of concentrated decentralization, but this is not clear. Below we shall discuss some recent theory and empirical evidence of such changes in the economic landscape of developing countries. These suggest that concentration is typical of the take-off stage of development, and that equalization takes place as the economy matures.

Albert Hirschman¹⁵ and Gunnar Myrdal¹⁶ arrived at fairly similar models of spatial polarization of economies in the process of development. In the early stages of development, the advantage lies with the developed centers, which enjoy the existence of overhead facilities, external economies, political power, spatial preferences of the decision-makers, immigration of the more vigorous and educated elements from the underdeveloped regions, flows of funds from the land-wealthy in the hinterlands to the financial markets in the cities, and a variety of other factors. These factors lead to polarization, that is to say, to concentration in the large cities and increases in the differences of regional incomes.¹⁷ After a certain point,

however, certain "trickling-down effects" come into prominence. The spread of literacy and bureaucratic practices improve knowledge in and about the backward areas; the opening of transportation routes to reach these areas as markets for the developed centers also opens them as possible locations for productive activities; universal education and standardization of all aspects of life permit an integration of the space-economy and, by making externalities more nearly comparable everywhere, make the more distant opportunities more accessible and more interesting for development. Thus, in this view, in the early stages of development there will be increasing disparity between developed and underdeveloped regions, but there will be a tendency toward equalization as the economy reaches maturity.¹⁸

Two recent empirical studies support this view. Williamson's¹⁹ findings may be summarized as follows: (1) regional disparities are greater in less developed countries and smaller in the more developed; (2) over time, regional disparities increase in the less developed countries and decrease in the more developed. These findings too suggest that regional inequality, if plotted against economic development, would result in a bell-shaped curve, with some peak being reached at the transition from the take-off to the mature stage. Similarly, El Shaks²⁰ finds that a cross-section of the world's nations results in a near-normal curve of primacy on economic development. That is to say, primacy is rare in very underdeveloped countries, rises during the take-off stage, and decreases thereafter. His time-series studies of developed countries also support this view, although not as neatly as the cross-section data. To avoid confusion, it must be stressed that this does not refer to suburbanization of large cities, which is an internal reorganization of the urban mass at a totally different geographic scale. Neither does it mean that the large urban areas break up and become smaller. Far from it, the largest cities continue to grow in the mature stage of the economy, but secondary centers grow faster.

It would appear, then, from Hirschman's theoretical approach and Williamson's and El Shaks' empirical observations, that polarization, regional inequality, or primacy are normal aspects of the early stages of development, corrected by natural processes (a form of negative feedback) with the achievement of development. Primacy, overurbanization, and gigantism are not diseases but growing pains. It is tempting to conclude that national policies need not concern themselves with fighting further urbanization in the principal cities or with regional balance as such, and that developing nations should concentrate on speeding the growth of national product. An invisible hand may be at work, and, given world enough and time, it may reconcile the efficiency and the equity goals. But there exist the realities of political pressures and the equally real altruistic desire among many for early equalization, and some difficult questions remain unanswered by this analysis.

Given that the wholehearted pursuit of efficiency goals will in due

time result in satisfying the equity goals, can we be sure that the opposite does not hold? If regional equity is in some measure actively pursued for its own sake, may it not serve to accelerate national growth? This may be the case if a series of decisions made on short-term bases toward efficiency miss out on the opportunities of the changing macrogeography of development. We argued, for instance, that decisions might be quite different if probabilistic studies of costs and benefit are made of groups of projects rather than for single projects. We also argued that decisions based on expected secular changes of what may be termed the macrospatial aspects of the economy might differ substantially from decisions made within the context of five-year plans. Or to put it another way, viewing existing and possible centers of activity in terms of the classical theory of the firm, chains of decisions on alternative investments based in each case on the contemporary marginal cost and product curves may lead to decisions quite different from those based on long-run curves. The answers to these questions remain a matter of guesswork, emotion, and opinion for lack of factual information, although in my opinion the burden of proof should rest on the theories which favor dispersal, since existing evidence and some existing theory point to concentration during the take-off stages as at least one possible path to development.

But there is another class of policy problems which remain unanswered for lack of conceptual tools. Whereas the efficiency goal has a relatively objective measure through the concepts of national income, and particular choices over time may to some extent be compared through discount rates, no such conceptual tools are available for the equity goal. As we have shown, even the grossest measures of equity depend on the grain or scale of regional definition. More basically, given two alternative distributions of income, we often have no way of determining which is more equitable, particularly if more than two regions are involved.²¹ There are no accepted ways of comparing successive distributions of regional income over time comparable to the techniques for discounting future income. Further, since the goals of equity and efficiency are usually held simultaneously, the problem of how much growth in national product would be surrendered for a given amount of equity (if it were measurable) is one that plagues the planning and political functions of nearly every country. It is no wonder that the advocates of both centralization and decentralization hope that their approach will satisfy both goals simultaneously, and that this difficult choice may be avoided. It may be hazarded that, should a simple and intuitively satisfactory numerical measure of equity be devised, it would do as much to revolutionize planning thought and techniques as has the introduction of the concept of rates of growth in national income since the Second World War. This would be particularly true if this measure of equity were cognate with the measure of efficiency, and the two could be compared.

To summarize: (1) it appears that a policy that pursues concentration

is a possible path to satisfy the efficiency goal; (2) such a policy may be in agreement with the equity goal, especially in the long run. However, (3) we do not know whether long-run structural changes make possible some form of decentralization policy that satisfies the efficiency goal better, while recognizing earlier the equity goal. Finally, (4) there are no good quantitative criteria for comparing alternative regional distributions with respect to equity, especially if a time dimension is added. Thus, there is great need for factual knowledge to determine what alternatives are open and for the development of conceptual tools for choosing among these alternatives.

* This work was conducted as part of the Harvard Regional Economic Development Program, supported by a grant from the Economic Development Administration of the Department of Commerce. It also reflects earlier work by the author at the Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University.

1 Sometimes one encounters advocacy of what may be called a naïve form of balanced regional growth, which holds in effect that all parts of the nation must grow at the same rate. It has recently been pointed out that the "big-push," sectorially balanced growth strategy of Rosenstein-Rodan and others, which stresses the complementarity of certain sectors, is likely to result in sharp differences in regional rates of growth, with a bias toward the more developed centers, thus leading to greater regional inequality. See W. F. Ilchman and R. C. Bhargava, "Balanced Thought and Economic Growth," *Economic Development and Cultural Change*, Vol. 14, No. 4 (July 1966), pp. 385-99.

2 In developed countries, depressed regions are more often the object of regional policy than backward regions. The frontier region, which is of importance principally in developing countries, will not be discussed in this brief paper. Neither will the relative priorities of agricultural and other types of development be discussed.

3 This issue, of course, is often taken up in terms of inequities of income among classes or sectors, but our concern here will be with interregional comparisons of income.

4. These two goals are discussed abundantly if abstractly in regard to the meaning of the Pareto optimum in welfare economies.

5 See, for instance, F. Perroux, "Note sur la notion de 'pôle de croissance,'" *Economie appliquée* (January-June 1953).

6 L. Rodwin, "Metropolitan Policy for Developing Areas," *Daedalus* (Winter 1961).

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7 There is at this time very little sense as to the relevant dimensions of such scales. It is likely that they may have to combine population, some measure of size of economy, and distance or area. Thus, in the case of Chile, its long, thin shape probably augments regional differentiation and its perception.

8 This issue is slightly more complex and admits of other alternatives which will be treated in a subsequent paper. For instance, marginal productivity of labor in backward areas may be below the average product in those areas. In that case, migration from the country to the city would in fact raise income per capita in the backward areas. This may occur, for instance, in cases of overpopulation and too small farms, or of unemployment (sometimes disguised) in rural areas. If the marginal productivity of such people is greater in the large cities than in the hinterland, there exists no conflict between concentration and income equalization. It will be obvious to the reader that I am also ignoring the possibility of transfer payments from the rich to the poor regions as a means of avoiding the dilemma.

9 Based on *Statistisches Jahrbuch Deutschen Gemeinden* (52) (Braunschweig: Waisenhaus Buchdruckerei). The data is for 1964. I thank H. Schlegel for directing me to this source.

10 For instance, local government expenditures per capita in U.S. counties in 1957 rose from about \$120 for populations of about 50,000 to about \$200 for populations of over 1,000,000. H. J. Schmandt and G. R. Stephens, "Local Government Expenditure Patterns in the United States," *Land Economics* (November 1963). But median family income rose by \$1,100 over the same range. L. F. Schnore, "Some Correlates of Urban Size: A Replication," *American Journal of Sociology* (September 1963). Even if we disregard the greater range and quality of services in large cities, the rise in family income translated into per capita terms is four times as large as the rise in government expenditures. It may be noted that in the United States a great deal of the literature concerns itself with the problems of governmental costs by municipal subdivisions of metropolitan areas, and that in that literature a distinction is drawn between the city (a municipality) and a metropolitan area. In this paper, it is obvious, the city is used to mean the whole of an urban area.

11 One argument sometimes advanced, but to my knowledge not fully developed, is that the rate rather than the level of urbanization is uneconomic. In other words, it is not the size of cities that is costly, but the rapidity with which they are growing. Needless to say, no data exists showing whether this is true. Theoretically, one may argue that many lumpy elements of infrastructure could be more efficiently provided under conditions of rapid growth, with shorter periods of idle capacity. Some interesting work on the engineering aspects of this, termed a "threshold theory," are reported for Polish cities by B. Malisz, in J. Fisher, ed., *City and Regional Planning in Poland* (Ithaca: Cornell University Press, 1966). On the other hand, the rapidity of the growth

may strain the capacity of certain sectors (principally construction, education, civil order) and result in costly or bad solutions.

12 On this point, see W. Isard and T. A. Reiner, "Aspects of Decision-Making Theory and Regional Science," *Papers and Proceedings of the Regional Science Association*, Vol. 9 (1962).

13 This point bears a close relation to the discussion of a "social rate of discount" among welfare economists. However, their arguments are based on the different time preferences of society and individual investment projects. The argument here is based on the effects of large numbers on probabilities and decision strategies and is similar to the "principle of massed reserves" in the standard discussions of economies of scale and external economies. In the United States this principle has been successfully applied in housing through the federal mortgage insurance program, and it is now being tentatively applied to the field of foreign investment.

14 See J. E. Hardoy, *Las Ciudades Precolombinas* (Buenos Aires: Ediciones Infinito, 1964).

15 A. O. Hirschman, *The Strategy of Economic Development* (New Haven: Yale University Press, 1958), Ch. 10.

16 G. Myrdal, *Rich Lands and Poor* (New York: Harper, 1957).

17 These arguments and the related ones presented in this paper are new to a large extent only in emphasis and in their policy orientation. For instance, Edward Ullman, in "Regional Development and Concentration," *Papers and Proceedings of the Regional Science Association*, Vol. 4 (1958), states succinctly that large cities grow because they enjoy externalities and economies of scale and because they are centers of decision-making and innovation. Distant areas lack these advantages and, being remote, tend to suffer from higher transportation costs.

18 Myrdal is more pessimistic than Hirschman about this eventual convergence and stops his analysis with what he terms the vicious circle of backwash effects, which are equivalent to Hirschman's polarization.

19 J. G. Williamson, "Regional Inequality and the Process of National Development: A Description of the Patterns," *Economic Development and Cultural Change*, Vol. 13, No. 4, Part II (July 1965).

20 S. El Shaks, "Development, Primacy, and the Structure of Cities," unpublished Ph.D. dissertation, Harvard University, 1965. It should be noted that El Shaks achieves a significant theoretical improvement in the definition of primacy by the construction of an index which considers the distribution of urban sizes as a whole. This may explain the difference between El Shaks' findings and those of B. Berry, who finds no pattern. See N. Ginsburg and

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B. L. Berry, *Atlas of Economic Development* (Chicago: University of Chicago Press, 1961), p. 36.

21 The case of Italy's Mezzogiorno is instructive here. In its early stages the policy was a simple one of equalization between North and South. It was soon abandoned, and instead a policy of achieving sufficient scale for self-sustaining development in the South was substituted. In other words, a subnational efficiency goal was substituted for a national equity goal. See, for instance, H. B. Chenery, "Development Policies for Southern Italy," *Quarterly Journal of Economics*, Vol. 76 (November 1962).