University of the Philippines
SCHOOL OF ECONOMICS

Discussion Paper 8001 February 1980

URBANIZATION AND SPATIAL DEVELOPMENT IN THE PHILIPPINES: A SURVEY

by

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ACKNOWLEDGMENTS

Research on this paper was supported by the Philippine Institute for Development Studies (PIDS). Research assistance was provided by Ms. Catalina de Leon and typing was done by Ms. Ana R. Aureo.

ABSTRACT

This paper surveys urbanization and spatial development in the Philippines by reviewing studies dealing one way or another with the subject. The objective is to put spatial and urban issues in perspective so that an understanding of them may cumulate through research. Research on these issues has been generally fragmentary, lacking overall consistency and coherence. There is a need to view urbanization and spatial development within a unified framework. These two aspects of development are closely intertwined in that they both depend on the nature and pattern of industrialization as well as on the structure and pace of agricultural development. In addition, they are determined in no small measure by macroeconomic policies that exert implicit spatial biases, probably even more so than by regional and rural policies explicitly designed to foster dispersed regional development. Therefore, to be more useful, research and, by implication, policy should adopt a framework that takes into account these important dimensions.

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I. INTRODUCTION

In recent years, issues of urbanization and spatial concentration of population and economic activity have quickly gained priority in the agenda of scholars and governments. This is true in both developed and developing countries, but it is in the latter countries where the concern is more intense. For instance, of 116 developing countries surveyed by the United Nations, 68 declared the spatial distribution of their population to be "highly unacceptable", 42 admitted that it was "unacceptable to some extent", and only six responded that it was "acceptable".[1] In all likelihood, spatial and urban issues will consume a good deal of the attention and energy of researchers and policymakers in LDCs during the remainder of this century.

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[1]Based on data from the 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, cited in Preston (1979).

As of 1980, the world urban population is estimated to be about 1.8 billion, representing an increase of approximately 80 percent since 1960. In the next twenty years it is expected to grow again by over 70 percent, reaching a total of around 3.1 billion in 2000 A.D. (United Nations 1975). These figures indicate that the world was 41 percent urban in 1980 and will be just about half urban by the year 2000.

Of the 1.3 billion additional urban population between now and the year 2000, 80 percent will occur in the less developed regions. This would push the urban population in the less developed regions from just under a billion to roughly 2.0 billion, or from 30 percent of total population in 1980 to 41 percent in 2000 A.D. Cities with populations of over a million will multiply to 300 in the developing world from only less than a hundred at present.

The bulk (about two-thirds) of total urban growth in the next twenty years will fall upon Asia, mainly because of the two vast countries, India and China. Urban population in the ASEAN region will expand by 127 percent (total population by 60 percent) from about 69 million to 157 million although the level of urbanization by the year 2000 will rise to only 35.8 percent from 25.3 percent in 1980 (below the developing world average in both years).

The scale of urban growth in the coming years is thus phenomenal, its dimensions multiple, many of them still improperly understood. In all probability, a substantial part of this urban growth will continue to be added to the principal city and to one or two secondary cities (at the most) of the developing country. The concentration of population and economic activity would become more pronounced and the problems associated with it could become more serious. It is, therefore, important to identify and understand the real issues so that the proper approach to them can be taken.

This paper attempts to provide a survey of urbanization and spatial concentration of population and economic activity in the Philippines. The objective is to be able to put spatial and urban issues in perspective so that an understanding of them may cumulate through research. An overview of Philippine urbanization is first presented. This is followed by a lengthy review of studies on urbanization and regional development. The government's role in terms of explicit as well as implicit spatial policies is then discussed. Finally, a conceptual framework and an agenda for research is proposed.

II. AN OVERVIEW OF PHILIPPINE URBANIZATION AND SPATIAL DEVELOPMENT

Philippine urbanization seems to have proceeded slowly[2] but, as in most developing countries in Asia, it has been marked nonetheless by increasing primacy. These trends can be readily gleaned from Tables 1-3. The sluggishness in urbanization is evident in Table 1 where the tempo (or urban-rural growth difference) had been slackening steadily from 3.4 percent during the 1918-39 interval to 0.45 percent during the most recent intercensal period, 1970-75. Over the five-year period 1970-75, the level of national urbanization scarcely rose (or gained merely 1.6 percentage points if the 1970 urban definition is used for both 1970 and 1975; see Table 1 footnote c). Against this background, urban concentration had been increasing unremittingly as reflected in the index of primacy (Table 2), which shows the ratio of Metropolitan Manila to the combined populations of the next three largest cities (Cebu, Iloilo, and Bacolod). Urban concentration is likewise illustrated by the metropolitan share of national urban population, which expanded from 26 percent in

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[2] Relative to the historical experience of Western countries as well as the contemporary experience of Southeast and East Asian countries (see Pernia 1976a for an elaboration).

Table 1. Level and Tempo of Urbanization and Total, Urban, and Rural Population: Philippines, 1903-75

Year	Urbanization		Total Population		Urban Population		Rural Population	
	Level (in percentages)[a]	Tempo[b]	Number (thousands)	Percentage Change	Number (thousands)	Percentage Change	Number (thousands)	Percentage Change
1903	13.1	n.a.	7,635.4	n.a.	1,000.2	n.a.	6,635.2	n.a.
1918	12.6	-0.32	10,314.3	1.91	1,294.2	1.64	9,020.1	1.96
1939	21.6	3.36	16,000.3	2.22	3,450.7	5.02	12,549.6	1.66
1948	27.0	3.09	19,234.2	1.91	5,183.7	4.25	14,050.5	1.16
1960	29.8	1.28	27,087.7	3.06	8,072.5	3.98	19,015.2	2.70
1970	32.9	1.46	36,684.5	3.01	12,068.8	4.02	24,615.7	2.56
1975[c]	33.4	0.45	42,070.7	2.78	14,046.5	3.08	28,024.2	2.63

n.a. -- not applicable

[a] proportion urban

[b] urban-rural growth difference

[c] Uses the 1970 urban definition; for all the other years the 1963 urban definition is used. If the 1970 definition is used for 1970, the level of urbanization would be 31.8 instead of 32.9 percent. See Annex for the definitions.

SOURCE: Philippines, Bureau of Census and Statistics, census data from various years.

Table 2. Index of Urban Primacy: Philippines, 1903-75

Area	1903	1939	1960	1970	1975
Small metropolitan area	4.03	3.57	4.27	4.26	4.43
Large metropolitan area	a	a	4.91	5.31	5.76

NOTE: The small metropolitan area of Manila comprises the four chartered cities of Manila, Caloocan, Pasay, and Quezon and the four municipalities of Makati, Mandaluyong, Navotas, and San Juan. The large metropolitan area includes the small metropolitan area as well as nine other municipalities: Malabon, Mrikina, Las Piñas, Paranaque, Pateros, Pasig, Taguig, Meycauayan, and Valenzuela. The total land area of the large metropolitan area is about 610.8 square kilometers. The next three largest cities used in the computation of the index are Cebu, Iloilo and Bacolod.

[a]Much of the large metropolitan area was still rural at this time.

Table 3. Level of Urbanization, Urban Population, Percentage of National Urban Population, and Annual Growth Rate: Metropolitan Manila, 1903-75

Year	Level (in percentages)	Urban Population (thousands)	Percentage of National Urban Population	Annual Rate of Growth
1903	76.9	256.7	25.7	n.a.
1918	87.1	371.1	28.7	2.36
1939	90.3	903.3	26.2	4.55
1948	97.1	1,526.1	29.4	5.51
1960	98.1	2,426.5	30.0	4.17
1970	100.0	3,952.6	32.8	4.90
1975	100.0	4,970.0	35.4	4.69

NOTE: All data in this table refer to the large metropolitan area of Manila (see note to Table 2).

n.a. - not applicable

SOURCE: Philippines, Bureau of Census and Statistics, census data from various years.

1903 to 35 percent in 1975 (Table 3).

The regional pattern of urbanization can be seen in Table 4 for the period 1903-70 and in Table 5 for the 1970-75 interval. The country's regions are divided into four groups: metropolitan, more urbanized, less urbanized, and frontier regions. The level of urbanization that divides the metropolitan and more urbanized regions, on the one hand, and the less urbanized and frontier regions, on the other, is the national level in 1960 and 1970 computed excluding Metropolitan Manila.[3]

The data in Tables 4 and 5 lead to some noteworthy observations. First, the metropolitan region, which was in 1903 already at a much higher level of urbanization (77 percent) than all other regions, urbanized very rapidly and completed the process by 1970. Thus, Manila has been an urban "island" in a predominantly rural "sea", so to speak. Second, the more urbanized regions, comprising Central-Southern Luzon and Western-Central Visayas, were in 1903 at a level (10 percent) lower than that of the less

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[3]When Metro Manila is included in the computation, the national average becomes too high and virtually all regions fall below the average.

Table 4. Regional Urbanization Levels and Tempos, 1903-1970 (in percent)

Region	Level				Tempo		
	1903	1939	1960	1970	1903-39	1939-60	1960-70
Metro Manila	76.9	90.3	98.1	100.0	3.0	8.3	4.9
More Urbanized	10.1	17.5	26.7	30.5	1.9	2.6	1.9
Central Luzon	11.1	16.5	26.5	31.8	1.3	2.9	2.6
Southern Luzon	10.1	18.0	26.8	32.8	1.9	2.5	2.9
Western Visayas	13.3	21.5	30.5	27.6	1.6	2.2	-1.4
Central Visayas	5.7	13.7	22.2	28.5	2.8	2.8	3.3
Less Urbanized	12.5	16.5	19.8	20.5	0.9	1.0	0.4
Ilocos	13.8	15.9	17.6	20.6	0.5	0.6	1.9
Bicol	14.3	18.0	21.9	21.8	0.7	1.1	-0.1
Eastern Visayas	9.5	15.4	18.9	19.0	1.6	1.2	0.1
Frontier	5.8	16.2	18.6	18.3	3.4	0.8	-0.2
Cagayan	3.4	11.5	14.1	14.3	3.8	1.2	0.1
Western Mindanao	3.8	21.7	16.8	16.2	5.7	-1.6	-0.4
Northern Mindanao	12.5	15.2	20.2	18.7	0.6	1.7	-1.1
Southern Mindanao	1.6	18.1	20.9	21.5	7.8	0.9	0.4
Philippines	10.2	17.0	22.9	24.8	1.7	1.8	1.0
(excl. metro)							
Philippines	13.1	21.6	29.8	32.9	1.7	2.1	1.5

NOTE: Based on the 1963 urban definition. See Annex.
SOURCE: National Census and Statistics Office, Census on Population (Manila, various years).

Table 5. Regional Urbanization Levels and Tempos, 1970-75 (in percent)

Region	Level		Tempo
	1970	1975	1970-75
Metropolitan Manila	100.0	100.0	4.6
More Urbanized	29.0	30.5	1.5
Central Luzon	30.2	33.9	3.5
Southern Luzon	30.6	31.8	1.1
Western Visayas	26.7	26.7	0.0
Central Visayas	27.9	28.9	1.0
Less Urbanized	19.3	19.5	0.2
Ilocos	19.4	21.1	2.1
Bicol	19.2	18.4	-1.0
Eastern Visayas	19.4	18.7	-0.9
Frontier	18.9	19.4	0.5
Cagayan	14.1	13.4	-1.4
Western Mindanao	15.8	14.9	-1.3
Northern Mindanao	20.9	23.2	2.8
Southern Mindanao	26.6	26.7	0.1
Central Mindanao	15.6	15.5	-0.2
Philippines (excluding Metropolitan Manila)	23.6	24.5	1.0
Philippines	31.8	33.4	1.5

NOTE: Based on the 1970 definition (see Annex); thus, the differences from the 1970 figures of Table 4.

SOURCE: NCSO, 1970 and 1975 Census.

urbanized group but urbanized rapidly, particularly after 1939, reaching 30 percent in 1970. Third, the less urbanized regions of Ilocos, Bicol, and Eastern Visayas urbanized at a very slow pace, gaining only eight percentage points (12 to 20 percent) during the entire period from 1903 to 1970. This group of regions is characterized by consistently severe net out-migration and incomes even lower than those in the frontier regions. Fourth, the frontier regions of Cagayan and Mindanao were (by definition) the least urban in 1903 (6 percent), urbanized most rapidly up to 1939, but diminished in speed thereafter, remaining still the least urban region (18 percent) in 1970.[4] Fifth, the national trend looks very different when the metropolitan region is excluded, i.e., the levels of urbanization are substantially lower and the tempos slower. Finally, the majority of the regions in the less urbanized and frontier categories experienced a fallback in urbanization levels (or negative urbanization tempos) during 1970-75 while none of the more urbanized regions had a similar experience (Table 5).

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[4]Before 1939 large numbers of persons moved to the frontier regions, causing a more rapid pace of urbanization there. Later the population movements slowed down and shifted to the metropolitan and more urbanized regions.

In general, all regions outside Metro Manila evinced decelerating urbanization in the 1960-70 and 1970-75 periods, and this trend was especially pronounced for the less urbanized and frontier regions, which practically stagnated. In 1975, these regions were roughly five percentage points below the national average (excluding the metropolitan area) and more than 10 points below the more urbanized level. The divergence between the less urbanized and frontier regions on the one hand and the more urbanized regions on the other has become very significant indeed. To illustrate, for instance, it took approximately 31 years for the country to transform itself from 19 percent to 30 percent urban.

The regional structure of urbanization reflects the differential rates of natural increase among regions and between rural and urban sectors within regions, as well as differences in the volume, composition, and type of migration within and between regions. Underlying these differentials are the disparities in socioeconomic conditions and development across regions, reinforced by both the explicit and implicit spatial policies of the government (Pernia 1976b, Renaud 1979).

As expected, interregional disparities in urbanization are associated with differences in industrialization and income. Table 6 shows that in 1960 about two-fifths of the labor force in the more urbanized regions were employed in the industrial sector compared to less than one-third in the less urbanized regions. In 1970, the disparity widened to 24 percentage points as more than one-half (56 percent) of the labor force was industrialized in the more urbanized regions and only one-third in the less urbanized group. On the other hand, there was a nine-point difference between the less urbanized and frontier regions in 1960, which narrowed to merely four percentage points in 1970. With the singular case of Greater Manila excluded, the correlation coefficient (r) between levels of urbanization and industrialization for the eleven regions was 0.87 for 1960 and 0.93 for 1970. Moreover, a positive, though weak (r = 0.25), relationship is found between tempos of urbanization and industrialization during the interval.[5]

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[5] Analogous to urbanization tempo, industrialization tempo is the difference between the growth rates of nonprimary and primary employed labor force.

Table 6. Labor Force Industrialization Levels (percent) in 1960 and 1970 and Mean Family Incomes (pesos) in 1971, by Region

Region	1960 Industrialization[a]	1970 Industrialization[a]	Mean Family Income
Greater Manila[b]	98.9	98.6	7,785
More Urbanized	40.7	55.8	3,943
Central Luzon	41.6	60.2	4,127
Southern Luzon	52.5	67.5	4,332
Western Visayas	30.6	41.7	3,206
Central Visayas	33.7	41.5	2,548[c]
Less Urbanized	27.1	32.2	2,754
Ilocos	19.9	31.7	3,299
Bicol	31.6	36.4	2,785
Eastern Visayas	28.6	27.9	2,548[c]
Frontier	18.2	28.3	3,217
Cagayan	13.6	22.4	2,390
Western Mindanao	18.9	24.9	3,062[d]
Northern Mindanao	22.9	34.5	3,062[d]
Southern Mindanao	15.4	27.6	3,577
Philippines	34.1	45.4	3,736

[a] Industrialization of employed workers aged 10 and over, i.e., proportion in non-primary activities.

[b] A smaller version of Metro Manila comprising the cities of Manila, Caloocan, Pasay, Quezon, and the municipalities of Makati, Mandaluyong, Navotas, and San Juan.

[c] Central and Eastern Visayas were taken as one region in collecting income data.

[d] Ditto for Western and Northern Mindanao.

SOURCES: National Census and Statistics Office, Census on Population; and "Income and Expenditures in the Philippines: 1971," An Economic Situation Report (Manila, 1960, 1970; and 1972).

A close positive association between regional urbanization and family income levels is also apparent (Table 6). The correlation coefficient is 0.78 with Greater Manila excluded, and goes up to 0.97 with the inclusion of Greater Manila. It is interesting to note that the frontier regions generally had higher incomes compared to the less urbanized regions. Although the frontier regions were backward in terms of industrialization, they seemed to be better off with respect to income because of their agricultural endowments. For this reason, whereas the less urbanized regions suffered severe out-migration, as noted above, the frontier regions experienced significant in-migration and comparatively little out-migration.

The link between regional urbanization (or spatial population distribution) and the regional pattern of economic activity is further illustrated by data on manufacturing establishments, employment and value added in 1956 and 1974 (Table 7). Over this long interval, the relative shares in economic activity remained roughly stable, with the combined regions of Metro Manila and Southern Luzon claiming the lion's share and the more urbanized group coming a far second. The same pattern is exemplified by Table 8 which exhibits 1974 data on gross regional domestic product (GRDP)

Table 7. Indicators of Regional Concentration of Manufacturing, 1956 and 1974

	Percent Share of Manufacturing Establishments		Percent Share of Manufacturing Employment		Percent Share of Manufacturing Real Value Added	
	1956	1974	1956	1974	1956	1974
Metro Manila and Southern Luzon[a]	70.76	67.53	64.45	67.47	64.45	61.96
More Urbanized						
Central Luzon	8.40	8.82	5.95	8.00	8.86	8.44
Western Visayas	4.47	3.69	10.35	6.56	15.12	14.20
Central Visayas	5.89	6.01	5.38	4.36	4.10	5.28
Less Urbanized						
Ilocos	1.85	1.69	2.04	1.25	1.25	0.82
Bicol	1.09	2.00	1.33	0.63	0.60	0.36
Eastern Visayas	1.31	0.39	0.86	0.29	0.54	0.50
Frontier						
Cagayan	0.71	1.72			0.14	0.45
Northern Mindanao	1.80	2.39	4.20	2.77	1.89	2.08
Western Mindanao	0.55	0.98	0.92	0.86	0.34	0.39
Eastern Mindanao	1.31	0.39	0.61	1.33	0.73	1.87
Southern Mindanao	2.51	3.34	2.31	4.27	0.99	3.65
Philippines	1,833	2,843	150,878	454,200	2,329.6[b]	10,040.8[b]

[a]Data are not available separately for Metro Manila and Southern Luzon
[b]In million pesos at constant 1972 prices.

SOURCE: Moran (1978: Table 2.6b, p. 47) based on: BCS, Annual Survey of Manufactures, 1956; NCSO, Annual Survey of Establishments, 1974; and NEDA, Philippine Statistical Yearbook, 1977.

Table 8. Gross Regional Domestic Product (GRDP) and Value Added in Manufacturing (VAM) per capita, and Share of VAM in GRDP, 1974

	GRDP Per Capita (₱)	VAM Per Capita (₱)	Share of VAM in GRDP (%)
Metro Manila	6,600	2,475	37.6
More Urbanized			
Central Luzon	1,780	509	29.1
Southern Luzon	2,384	620	25.6
Western Visayas	2,677	678	25.4
Central Visayas	2,016	366	17.9
Less Urbanized			
Ilocos	1.431	152	10.6
Bicol	1,187	165	13.8
Eastern Visayas	1,304	121	9.2
Frontier			
Cagayan	1,325	78	5.9
Northern Mindanao	1,775	249	14.1
Western Mindanao	1,472	116	7.9
Eastern Mindanao	1,426	196	13.5
Southern Mindanao	2,755	403	14.5
Philippines	2,418	492	24.8

SOURCE: Moran (1978: Appendices 2-4, pp. 144-146) based on NEDA, Philippine Statistical Yearbook, 1977.

and value added in manufacturing (VAM) per capita, as well as the share of VAM in GRDP. For example, Metro Manila's GRDP per capita (₱6,600) is easily more than double the highest in the more urbanized group (Western Visayas ₱2,677) which, in turn, is over twice as much as the lowest GRDP per capita (Bicol ₱1,187).

Broadly speaking, the spatial concentration of population and economic activity may be viewed in terms of two major disparities: (a) that between Metro Manila and the rest of the country, and (b) that between the more urbanized regions on the one hand and the frontier and less urbanized regions on the other. It may also be pointed out that the less urbanized regions have been persistently the most disadvantaged. In this connection, it should be stressed that the issue is not one of balanced development for its own sake (or symmetry). The central question is: what pattern of urbanization and spatial development is more efficient in reducing, if not eliminating, poverty particularly in certain regions of the economy? The assumption is that the current spatial structure of development has not been conducive to the promotion of equitable social well-being.

Spatial and urban imbalances would persist for some time to come and their accompanying difficulties could attain serious proportions unless the underlying causal mechanisms are properly understood and the appropriate measures implemented. Furthermore, policies and programs addressed to the so-called "urbanization problem" entail vast amounts of scarce resources. These huge outlays will amount to nothing in the long run unless a sound and systematic national urbanization policy evolves on the basis of an intelligent grasp of spatial and urban issues.

III. THEORIES OF URBAN AND SPATIAL DEVELOPMENT

The literature on urban and regional development stems from four main theoretical sources. First is the effort by geographers and other social scientists like economists to explain the presence of population and industrial agglomeration in the midst of a geographic-economic plain. This literature is identified largely with theories of, among others, the hierarchical systems of cities, the size distribution of cities, and the rank size rule for cities.

The second source is the attempt to explain and, hopefully, predict the location of economic activity. A major characteristic of this class of studies is what has now come to be known as the neoclassical approach, which uses the concepts of profit maximization and production functions.

Third is the application of the concept of economic base and its attendant multiplier (whether implicit or explicit). /Homer Hoyt, as early as 1939, started working with this concept. While this approach has oftentimes been criticized, it remains in use to the present.

The fourth source are the skeptical reviews of the prevailing literature in economic development. These are primarily an offshoot of the second and third lines of development. Examples are the spread and backwash effects propounded by Myrdal (1957) and the dependency theories of Prebish (1950) and Frank (1972).

The concept of growth poles emanated from a combined application of the last three traditions. Under this strategy a deliberate imbalance is effected in the initial stage when the government develops a rival pole to the primate city, perhaps to the detriment of areas that are even more backward. This initial push is expected to stimulate the growth of areas surrounding the pole at later stages. The complete program envisions a balanced development for all areas of the country once the initial stages have been passed.

Central Place Theory

The first tradition which emanated from Von Thunen's (1826) analysis is known as central place theory, first substantially developed by Christaller (1933) and then extended by Losch (1944) into a theory of spatial economics. In recent years, research in this direction has been undertaken primarily by economic geographers like Beckmann (1958) and Berry (1961) to articulate hypotheses regarding the hierarchical systems of cities, the primacy of some cities, and the size distribution of cities, among others.

Under this theory the city is present primarily to perform essential services for a given area. Thus, the surrounding land supports the urban center, and the size of the area served by the city depends on the minimum volume needed to support an industry producing a particular service. The city in this sense is called a "central place." Because of differences in volume requirements, some central places will serve smaller, others larger areas. These market areas may overlap and some cities will be a coincidence of several central places both large and small.

Larger centers will cater to small towns for some services which require wide areas of coverage. This theory offers an explanation for an hierarchical system of cities of different sizes. Among the many empirical observations that this theory is consistent with, the rank size rule for cities in the developed countries is prominent.[6] This general concept has implications on questions of "optimal" city size.

Industrial Location Theory

The most widely known of the early writings on industrial location is the classic article by Von Thünen (1826) which hypothesizes a fixed point in space around which land of homogenous physical characteristics extends.

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[6] Where, if P_r is the population size of the city with rank r, P_1 the population of the largest city, we have:

$$P_r = P_1/r^q$$

and q is a constant that can be deduced empirically. See Zipf (1948) for an elaboration.

Competitive industries locate on this land by bidding for the available space. A pattern of land use then results which strikingly corresponds with the structure of present-day cities.[7] Industrial location theory, which was first formulated in a comprehensive way by Alfred Weber (1909), uses partial equilibrium least cost theory of industrial location. This essentially micro-economic formulation has been elaborated in recent years primarily by Isard (1956), who shows the conventional neoclassical theory of the firm as a special case where transport costs are zero and all inputs and outputs are perfectly divisible and mobile. Further, Isard treats industrial location and trade (especially international trade) as being complementary. According to him, both are simultaneously determined by the same forces.

Classical location theory, as generally understood, is an extension of the profit maximization principle in economics. The most common interpretation for most of the theory's history is the minimization of transport costs.

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[7] For an analytical explanation, see Muth (1961).

It is assumed that the sources of materials, the location and size of markets, as well as the relevant transport rates are known. The only factor allowed to vary under these assumptions is transport cost. In a static setting, therefore, the solution is straightforward. The best location for a factory is the one that minimizes the total cost of transport for the firm.

Several complications may be introduced. First, all the other factors may not be constant over the duration of the fixed capital of the firm, e.g., the location and size of the market may change. What become relevant are the discounted cash flows of the different cost and revenue components. Second, weight and/or volume gains and losses may be introduced during specific points of manufacturing or distribution. Thus, regional economists classify industries into: (a) materials-oriented, (b) market-oriented and, (c) footloose industries (Hoover 1971). This taxonomy follows the general approach of minimizing transport costs. Finally, the emphasis may be on other terms in the profit function of the firms and the utility function of consumers. The models of spatial competition (Hotelling 1952) and the approaches of the new (though now coventional) urban economics (Alonso 1964, Muth 1969) are of this general type. The use of the

microeconomic theory of the firm and its extension to special cases characterize this class of approaches to the growth of regions. As will be shown later on, an appropriate generalization is an important part of the integrated approach to urbanization and regional growth in a developing economy.

Regional Macroeconomics

The third type of analysis concentrates on the interrelationships between regions. Geographical factors are only implicit in these models and distance variables do not appear. These factors are brought in by formulating separate macroeconomic systems or regions which interact with each other through imports and exports. The geographic character of the problem is shown by treating these systems as separate points in space. This approach is probably most accurately characterized as regional macroeconomics. As such, the relationships formulated are not too different from those of the world models which link different national macroeconomic models.

Economic base models are the most common manifestation of this tradition. The most important growth stimulus are

exports to other regions, i.e., a particular region grows and develops as its exports increase.

Backwash and Dependency Effects

Finally, the skeptical view of the conventional literature in economic development has led to a conceptualization of the debilitating effects on the local economy of being close (in distance or trade relations) to a larger market. A counter argument is found in the positive stimuli to growth from trade with richer neighbors. However, concrete functional relationships which would allow for empirical estimates have not yet resulted from this research. This literature has served more as a qualifying theme rather than as the main thrust of regional development programs.

The diverse threads of the foregoing urban and regional development theories have recently been applied to developing countries. Three main groups of researchers may be mentioned. The first are the practitioners in the developed countries who are attempting to modify or revise the mainstream theories (largely characterized as "neoclassical") for application to situations in developing countries. William Alonso of Harvard

University (formerly of the University of California at Berkeley) and Harry W. Richardson of the University of the Southern California are the principal exponents in this group. Not far behind, two groups have been set up in international organizations to study the spatial character and impact of economic development. The Urban and Regional Economics group of the World Bank and the United Nations Centre for Regional Development are exerting substantial efforts in examining issues related to urban and regional growth in developing countries.

Theory of Urban Economic Efficiency

Theorists from developed countries start from critiques of either specific points or all of classical theory. These critiques then lead to modified theories to be used for developing countries. Alonso begins in a series of papers (1968, 1970a, 1970b) with a critical review of the literature on optimum city size and proceeds to consolidating the studies on the primacy of the capital cities with those on regional economic development. Dissatisfied with the results of the theories of city size which for the most part depended on minimization of the costs of public services, he tries to incorporate

in these theories the main threads of location theory. Essentially, he stresses the main thesis of industrial location theorists that firms (and industries) will locate where the profit is maximized. However, the early location theorists incorporated only partially the spatial dimension by introducing the minimization of transport costs.[8] In cases where transportation cost is not crucial, which are quite frequent, mainstream location theory still predicts poorly. More specifically, conclusions reached by conventional theory are reasonable only in developed countries where the assumption of uniform production costs and price per unit are the norm since their conditions more closely approximate those assumed by perfect competition. Otherwise, the theory cannot adequately explain actual conditions.

Alonso (1970b) generalizes the location model to account for the situation in developing countries by explicitly recognizing that production cost per unit and output per capita, as well as the costs of public

[8] Formally, the models minimize total costs (or in some cases maximize total profit). However, except for the transport aspect, these neoclassical approaches are still basically spatially dimensionless in the sense that price and total cost per unit (except for transport) are identical across space. Thus, profit maximization and/or cost minimization reduce to the problem of minimizing transport costs.

services (as incorporated in the social marginal product and cost curves) are functions of city size. His model of city size is shown in Figure 1. Here labor is excluded from the construction of the cost curve. Beyond a certain population level, production costs net of labor rises. The average product (AP) is shown rising monotonically partly to simplify the argument and partly because this is suggested by most empirical evidence.

The general formulation sheds light on the confusion about the optimum city size and the primacy of capital cities in developing countries. The point of minimum per capita cost, P_a, is uninteresting (except in the rare case where the output per capita also reaches a maximum and the difference between output and cost per person is maximized at that exact point). Yet, this is probably the implicit ideal of those who complain that capital cities are "too big." The socially optimal point occurs far to the right of minimum cost per person -- at P_c where marginal cost is equal to marginal product -- assuming that the social objective is to maximize net social benefit. Of course, this point may or may not exist: marginal product may remain higher than marginal cost. In fact, the analysis shows that decentralized decision-making may lead to a sub-optimal rather than a supra-optimal point. Individuals left to decide by themselves will prefer a city up to the size P_b where the difference between the

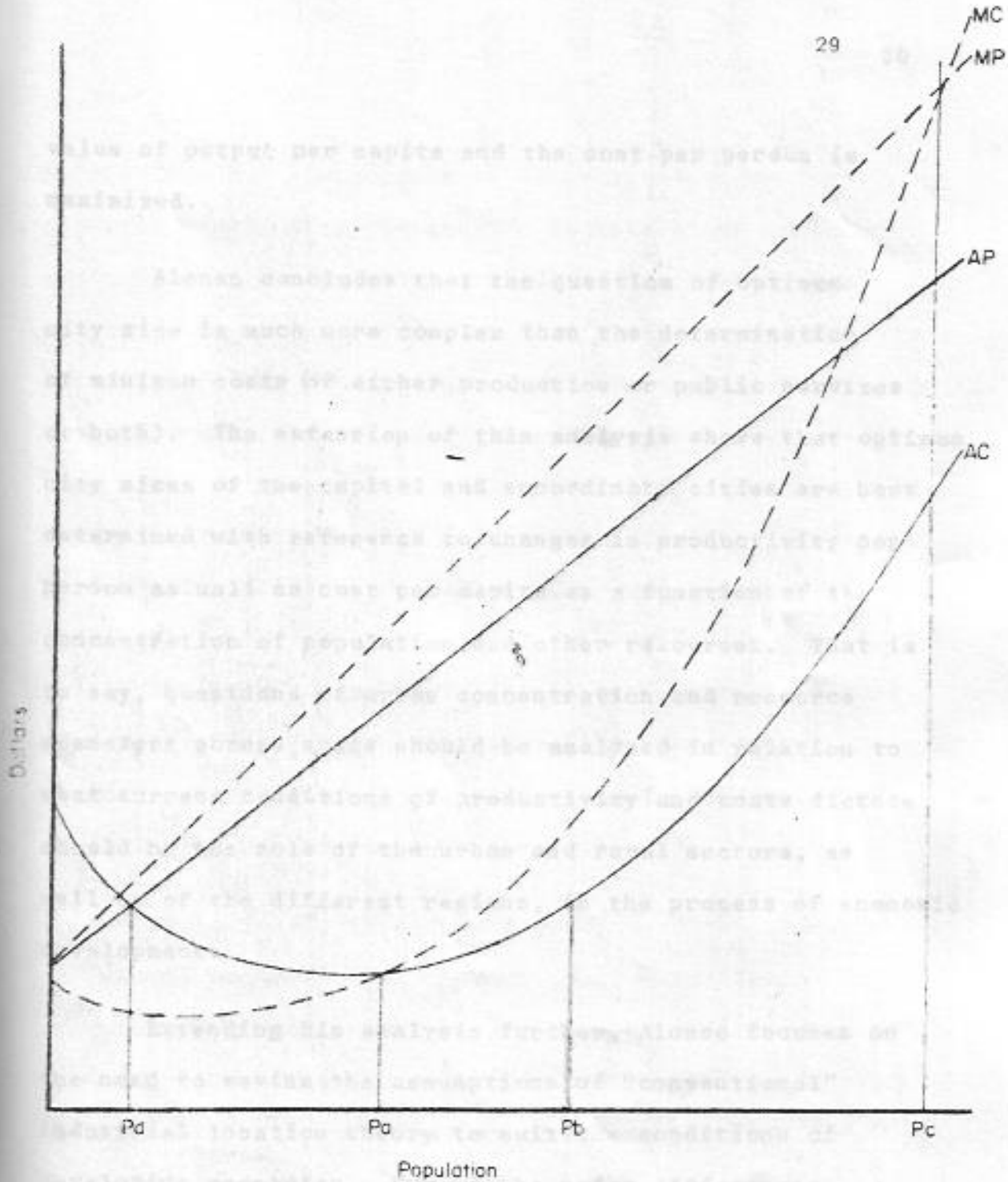


Figure 1: Urban Cost and Product Curves with City Size

SOURCE: Alonzo (1970b:7)

value of output per capita and the cost per person is maximized.

Alonso concludes that the question of optimum city size is much more complex than the determination of minimum costs (of either production or public services or both). The extension of this analysis shows that optimum city sizes of the capital and subordinate cities are best determined with reference to changes in productivity per person as well as cost per capita as a function of the concentration of population and other resources. That is to say, questions of urban concentration and resource transfers across space should be analyzed in relation to what current conditions of productivity and costs dictate should be the role of the urban and rural sectors, as well as of the different regions, in the process of economic development.

Extending his analysis further, Alonso focuses on the need to revise the assumptions of "conventional" industrial location theory to suit the conditions of developing countries. Two of the major differences between developing and developed countries are the utter lack of relationships between different locations as well as the presence of uncertainty and dearth of information

in the former. The absence of connections among the different regions of the country increases the costs of production by a big factor because of the inability of companies to spread the risks. For example, companies in distant locations are forced to carry replacement parts for their machinery because otherwise a breakdown would take weeks or months to repair. In a city, the inventory kept by a common supplier for several similar firms would be a smaller percentage of their combined volume because they would in effect be spreading the risks among themselves. This problem is minimized in developed countries because of a much more efficient network of communications. In cases where the materials are imported, the attraction of the capital city is all the more accentuated.

Operating in locations distant from the urban center is full of uncertainties in developing countries. For instance, labor wages may be low but the skills required for operation may be absent. Supervisory and managerial skills may also have to be imported. It is often very difficult to gather information on points of uncertainty in distant locations. On balance, these uncertainties tend to outweigh whatever advantages distant places may offer, so that one observes the persistent trend of locating in the capital city of the country.

It will be useful to bring together these thoughtful considerations in order to arrive at a more relevant policy framework for national urbanization and regional development.

Skepticism of the Neoclassical Paradigm

Richardson (1979) is even more critical of classical location theory. He points out two aspects that make conventional theory inadequate for developing countries. The first is its heavy emphasis on the assumption of marginal adjustments for firms. In developing countries locational moves are almost invariably long-distance jumps on account of market segmentations. The combination of locational inertia and discontinuities in spatial cost and revenue functions causes decision-makers to behave in a manner inconsistent with the profit-maximizing location model.

The second defect of the neoclassical framework, in Richardson's view, is the assumption of determinacy in locational decisions. He suggests that the most striking characteristic of industrial location patterns in developing countries is the overwhelming concentration of firms in the primate city and its metropolitan area. Agglomeration

interacts with uncertainty. Specifically, concentration serves to spread the risks that are so rampant and endemic in developing countries. New firms and industries, therefore, tend to flock to the capital city. This process becomes cumulative and serves to draw even more resources from the rest of the economy.

The preceding criticism probably explains why the "naive" neoclassical model which posits an inverse relationship between the marginal products of labor and capital, and predicts flows of these factors in opposite directions until factor flows are equilibrated, does not work for developing economies. Richardson proposes using instead the "cumulative causation" model of Myrdal (1957) as the framework for analysis. Regional models can be made to incorporate space more explicitly. Population and economic activity are distributed reflecting the net impact of the opposing forces of concentration and dispersion. Agglomeration economies are the main force for concentration. Friction costs promote dispersion. Variations in regional growth rates over space and time are then explained by changes in the relative strengths of agglomeration and dispersion. The trick in economic and regional development will thus be to manage these opposing forces for the promotion of national goals.

Growth Centers and Agropolitan Development

Much of the recent literature on regional development comes from the United Nations Centre for Regional Development (UNCRD). Experimenting with regional models used in developed countries, people identified with UNCRD are testing the applicability of the concepts of agropolitan development and growth centers.

Friedmann (1973 and 1974) leads in the effort to extend the growth pole concept to the dualistic situation of most developing economies. According to him and Douglass (1975), "development must be fitted to ecological constraints; priority attention (in agrarian economies) must be given to rural development; and planning for rural development must be decentralized, participatory, and deeply immersed in the particulars of local settings" (p. 334). This means the recognition of agriculture as a leading sector of the economy. Operationally, this strategy envisions the conscious development of agropolitan districts -- areas of "certain size/density where services and conveniences that are appropriate at this scale and adjusted to prevailing levels of cultural economic development" are present. These districts are to be treated as "single,

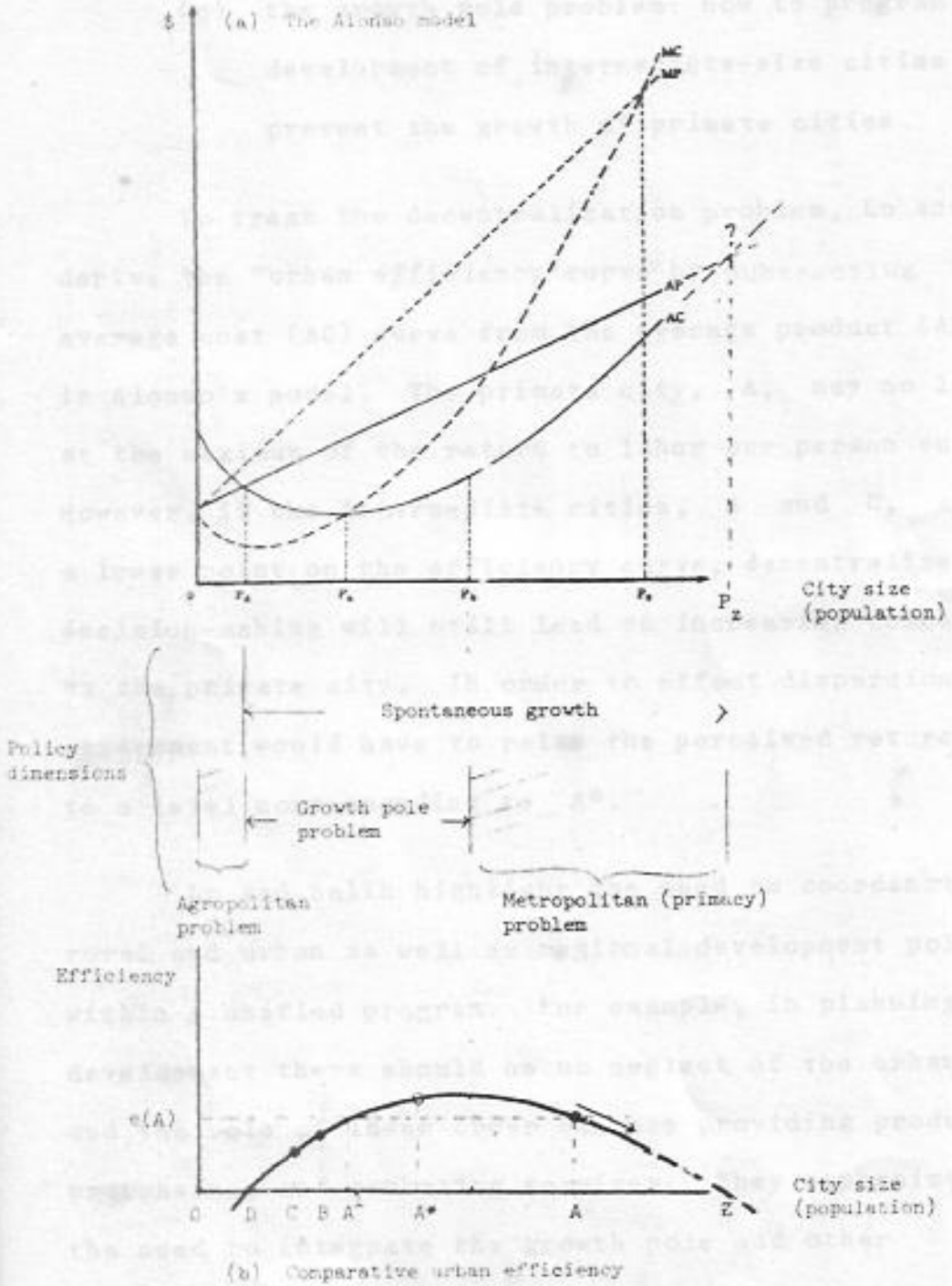
integrated and self-governing unit(s)." Each unit is to have sufficient resources and autonomy to carry out its own development. As conceptualized, agropolitan districts would serve as counter-magnets to the primate city for the attraction of population and other resources.

Lo and Salih (1976 and 1979) examine the effects that past history has had on the urbanization pattern of the country. Dissatisfied with the concept of "growth poles" previously applied and following the general thrust of Friedmann's analysis, they extend the Alonso model of city size and economic efficiency to the formulation of a strategy for agropolitan development and growth centers. Amplifying Alonso's model in Figure 2, they identify the various stages of city size from minimum (P_a) to the maximum (P_z). Spontaneous growth of cities takes place from P_a to P_z. Using this analysis, they single out three policy dimensions of urban and regional planning:

(a) the agropolitan problem: how to induce the growth of towns below P_a to the threshold of self-sustained growth.

(b) the metropolitan problem: how to manage the growth of cities beyond P_b.

Figure 2. Economics of Urban Size and Comparative Efficiency



SOURCE: Le and Salih (1976:221).

(c) the growth pole problem: how to program the development of intermediate-size cities to prevent the growth of primate cities.

To treat the decentralization problem, Lo and Salih, derive the "urban efficiency curve" by subtracting the average cost (AC) curve from the average product (AP) curve in Alonso's model. The primate city, A, may no longer be at the maximum of the return to labor per person curve. However, if the intermediate cities, B and C, are at a lower point on the efficiency curve, decentralized decision-making will still lead to increasing concentration at the primate city. In order to effect dispersion, the government would have to raise the perceived return to labor to a level corresponding to A^{R}.

Lo and Salih highlight the need to coordinate rural and urban as well as regional development policies within a unified program. For example, in planning rural development there should be no neglect of the urban function and the role of lower-order centers providing production, processing, and marketing services. They emphasize also the need to integrate the growth pole and other approaches in a broader regional policy framework.

National Urbanization Policies

Among the papers coming out of the Urban and Regional Economics group of the World Bank is Renaud's (1979) analysis of urbanization trends and policies in developing countries. Rather than being an application or a proposal of a particular model, it is a comprehensive review of the literature on urbanization and spatial development culminating in a national urbanization strategy for developing countries.

Renaud's main thesis is that all countries, especially developing ones, should have a national urbanization strategy as an outcome of careful national debate. In his view, the main determinants of urbanization and population concentration in urban areas are: (a) the development and structure of the agricultural sector; (b) the growth and locational pattern of industries, as well as the location decisions affecting the distribution of manufacturing and service activities among cities; and (c) the condition of the transportation network. Further, there are unintended spatial biases of national economic development policies. The biases are usually generated by: (a) trade policies protecting the manufacturing sector; (b) credit allocation; (c) public investment; (d) subsidy or pricing policies towards economic activities in a few cities and regions; and (e) the management practices of the government and its regulation of economic activities.

The direct transplant of theories developed in advanced countries, like the growth pole theory, as guides for urbanization policies may be both inapporpriate and ineffective. Among the conditions implicitly assumed by these theories are: (a) the presence of substantial multiplier effects of initial investments in selected growth poles, (b) the similarity of analytical results for wholesale and retail activities and manufacturing, and (c) the trickling down of economic effects from major urban centers to the smallest town. The first assumption takes for granted a high closure of the economic region around the growth pole, a condition that is far from fulfilled in developing countries. Secondly, empirical research has shown that the behaviour of wholesale and retail firms may be very different from that of manufacturing establishments. Thirdly, the interrelation between the growth pole city and its hinterland may be relatively weak or totally non-existent. Yet, urban and regional development policies have frequently been premised on these assumptions. The result has been the persistence of conditions that policy-makers have sought to correct and the almost total inability of the government to influence the spatial trends in economic activity.

Renaud sees as the major challenge of national governments the rectification of four major types of imbalances: (a) rural-urban imbalance, (b) regional imbalance, (c) imbalances between cities of different sizes, and (d) imbalances between social groups within cities. Consequently, the three major elements of a national urbanization strategy would be: (a) the correction of unintended and unwanted spatial effects of national economic policies, (b) the reduction of sharp regional disparities and the socio-economic integration of regions, and (c) efficiency in the management of cities.

IV. STUDIES ON PHILIPPINE URBANIZATION

The history of research on Philippine urbanization is still a short one. Its origin can be traced to a local article of Cressey on the development of Philippine cities (1958), which was subsequently published abroad (1960). This article describes the nature and functions of Manila and the secondary cities: Cebu, Iloilo, Bacolod, Zamboanga, and Davao. Another early paper by Spencer (1958) details the political origin of the city in the Philippines.[9]

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[9] A more recent paper by Hollnsteiner (1969) offers a historical and an anthropological perspective on the evolution of Manila and its contemporary problems.

Urban Development and Primacy

Manila rapidly evolved as a primate city due to the fact that, given its excellent harbor as well as good communications with other parts of the country, it functioned chiefly as the link between the Philippine economy and the United States. As Cressey (1960:402) puts it, "Its growth has not been the product primarily of the domestic economy, but of external economic and political forces impinging upon the island". After World War II, Manila's political, economic, intellectual and cultural importance steadily increased, drawing inexorably an increasing number of people and institutions. For instance, the 1955 Census of Establishments showed that 30 percent of all establishments in the country employing five or more workers, as well as 42 percent of all workers in firms of this size, were located in Metropolitan Manila (defined to include Manila City, Quezon City, Pasay, Caloocan, Makati, San Juan, Paranaque and Mandaluyong only).

Cebu, Iloilo, Bacolod, Zamboanga and Davao are medium-sized cities which are also provincial capitals. As seaports their principal activity consists in assembling raw materials for export and in distributing imported manufactured goods to nearby places (see also

Ullman 1960). These cities, however, are small and primitive in comparison with Metro Manila. For example, in 1955 there were 488 establishments with 50 or more workers in Metro Manila while in all of these five other cities there were only 88 such firms. Close to half of these 88 enterprises were located in Cebu, indicating its position as the second urban center in the country. The rest of the so-called chartered cities are relatively insignificant. Most of them are in fact "overbounded" in that they include within their legal limits large segments of agricultural land (see also Spencer 1958).

In short, urbanization in the Philippines has been dominated by Manila's development as the primate city -- largely the outcome of foreign contacts rather than of the indigenous forces.[10] "Instead of the next largest cities gradually declining in size, as Zipf found to be true in most European and American nations, the decline in the Philippines is like that of a precipice" (Cressey 1960:404). Thus, one cannot speak of a systematic urban hierarchy in the Philippines.

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[10] On a more positive note, Laquian (1966) stresses the key political and administrative role played by Manila in the development of the nation and in the shift towards an urban way of life.

Ullman (1960) identifies five types of centers forming some kind of an urban hierarchy:

a) national center -- Manila (population 1,700,000).

b) interregional centers -- Cebu, Iloilo, Davao, and (partial) Zamboanga (population 50,000 - 200,000).

c) major centers -- centers (33) of large trade areas, all but two of them provincial capitals; most have soft-drink warehouses and gasoline depots (population 10,000 - 40,000).

d) secondary centers -- centers (34) similar to major centers but less important (population 5,000 - 25,000).

e) minor centers -- small retail and social centers (126) (population 1,000 - 5,000).

Below the minor centers are the barrios or rural farm settlements numbering more than 17,000.

Ullman observes that "The number of centers in each hierarchical class, not surprisingly, does not follow the theoretical framework of either Christaller or Lösch ($k = 3$, $k = 4$, or $k = 7$, which means that the number of equal-size cities in lower size classes increases regularly by 3, 4, or 7 times). In the Philippines, there are a great number of major and secondary centers than the models call for, a fact that may well reflect the insularity of the country and a naturally fragmented set of hinterlands as well as the changing transportation system and

poor measures of size and numbers... The Philippine distribution most closely approaches k = 4... The k = 4 arrangement, according to Christaller, is the most efficient for transportation, and this may be of some significance. In the final analysis, of course, elements of all three systems, in various parts of the islands, are to be expected, if underlying conditions permit; a close fit theoretically to any one should not be expected" (p. 218).

The social complexity of towns and cities was examined by Fujimoto (1968) through scalogram analysis (Guttman scales). Conceiving of a community as an information processing organism, one can expect that the first town or city is more complex or differentiated than the second, the second more than the third, and so on such that these communities can be ordered cumulatively along the differentiation dimension (Carneiro and Tobias 1963). In other words, a community of a higher rank order will have all the features of lower rank-order communities and, if a certain service is present, certain other services will also be available. This pattern of community differentiation is borne out by Philippine data.[11]

[11] On a related point, it appears that a city's in-migration rate rises as the city matures and then declines after a certain saturation point is reached (Mariano 1975).

Rural-to-Urban Migration

Apart from studies on the development of cities and primacy, other research efforts have been concerned with rural-to-urban migration. This is an appreciable component of urban population growth, but it is not the principal one, as is commonly assumed. Other important contributors to urban growth are urban natural increase and reclassification of places from rural to urban (Pernia 1976c).[12] Total urban growth in the Philippines during the 1960-70 interval, for example, was accounted for in this manner: 54 percent natural increase, 28 percent reclassification, and 18 percent rural-to-urban migration. With respect to individual cities, urban in-migration was responsible for well over half of the population growth of the bigger cities, particularly Metro Manila, during the same period.[13] In general, big cities tended to grow slower than small ones but their growth was largely generated by in-migration. Small cities grew faster than big ones owing more to natural increase than to in-migration.

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[12] See also Preston (1979) for evidence from data on other LDCs.

[13] Urban in-migration, however, is distinct from rural-to-urban migration per se to the extent that it includes migrants from other urban areas, not just rural places.

The sheer magnitudes of rural-to-urban and rural-to-metro migration have been considerable but, on balance, perhaps not as overwhelming as is popularly supposed. As data from the 1973 National Demographic Survey (NDS) indicate, internal migration in the Philippines has been characterized not just by rural-to-urban streams but by other intersectoral flows as well (Pernia 1977 and 1979). Prior to 1965 the most sizable flows were rural-to-rural, rural-to-urban and rural-to-metro, in that order, all together accounting for over three-fourths of the total volume of internal migration. More recently, the rural-to-urban stream became more significant than the rural-to-rural flow, but both streams diminished in overall dominance as all the other streams gained some importance. There was lesser movement from rural areas, greater mobility between urban areas, and increasing migration from the urban and metro locales to the rural scene. All this implies that the phenomenon of rural-to-urban migration can be better understood if it is viewed in the overall internal migration context and not simply in relation to the growth of cities.

Selectivity of migration or the characteristics of migrants is a subject that has received a lot of attention from researchers. The majority of rural-to-urban migrants have been found to be young adults, females, and of relatively high education status comparable to, if not higher than, that of the native urban residents (Panganiban 1956, Pascual 1966, DeVoretz 1972, Kim 1972, Hendershot 1976). Further, the selectivity of migration tends to be directly related to the degree of urbanism of the place of destination; e.g., migrants to Metro Manila seem better prepared in terms of education and occupation than migrants to other urban areas (Hendershot 1971, Pernia 1977).

This positive selectivity would seem to provide some guarantee that migrants do benefit by their move to the city. Their unemployment rate appears to be no higher than the urban average and their incomes compare favorably with those of long-time urban residents (Pernia 1977). This seemingly advantageous position of urban migrants should, however, be interpreted with caution. It could simply imply that migrants just grab the first job they encounter rather than queue in the labor market, which may be the more rational thing to do from a lifetime earnings perspective. Alternatively, it may mean that positive selection occurs not so much before migration but rather after arrival in the city, sending the unsuccessful

ones back to the countryside. These conjectures have not as yet been satisfactorily verified by research.

Studies based on interviews with migrants in slum and squatter settlements are near unanimous in discovering that these migrants consider their current situation better than their former condition in rural areas (Laquian 1968, Cariño 1971). They seem to be committed to city life despite their inferior socioeconomic status and the deplorable state of the slums (Lopez and Hollnsteiner 1976). On the basis of theory, these micro studies and other census-based research, it is now strongly felt that rural-to-urban migration is irreversible. Rather than turning migrants back, what may be needed is a well-designed migration policy that would modify population movements into a pattern that is more socially desirable and efficient (Laquian 1972, Cariño 1976, Pernia 1976b).

Other studies on migration have employed the econometric method (e.g., DeVoretz 1972, Pernia 1978 and 1979). DeVoretz finds that even a small wage differential determines a migrant's destination. In addition, such other factors as language and distance are important considerations.

Applying logit analysis to data from the 1973 NDS, Pernia (1978) shows that, in general, personal and household characteristics are more crucial in the decision to migrate than external factors which have been stressed by other studies. Kinship ties at destination seem to be a decisive factor in the choice to migrate (see also Mincer 1978). Occupation at destination appears to interact more strongly with migration than does income (lending support to the "job vacancies thesis," i.e., potential migrants may be more responsive to occupational rather than to income mobility). Hence, with respect to policy, such factors as education, employment, and kinship present themselves as potential vehicles for migration policy.

A more disaggregated approach shows that the factors which influence migration decision tend to vary depending on sector of origin and destination, as well as on whether the decision to be made involves a return to origin or a repeat move to another destination (Pernia 1979). Thus, education, occupation, expected monetary income, marital status and sex exert different intersectoral and sequential effects on migration choice.

An implication is that migration policy may be more realistic and, hence, more effective if it views migration intersectorally and sequentially, in addition to considering the personal attributes of migrants or potential migrants.

While knowledge about the determinants of migration has quickly grown in recent years, understanding of its consequences on origin and destination areas has remained embryonic.[14] There are implicit indications that places of origin have been drained of valuable human resources -- such loss (possibly) partly accounting for the perennial stagnation of rural areas (Pacho and Tapales 1972, Pernia 1977). On the other hand, out-migration may have alleviated these areas of some population pressure.[15] These ideas, nevertheless, have remained largely conjectural. Likewise, the analysis of the role that

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[14] See also Greenwood (1975), Todaro (1976) and Simmons et al. (1977) for a general discussion of this point.

[15] This positive effect, however, appears to be less consequential because certain rural regions (e.g., Eastern Visayas and Bicol) have continued to be depressed despite a long experience of heavy out-migration. It would probably seem more logical to suppose that these regions have remained backward at least partly because of the out-migration of the more able members of the population (Zachariah and Pernia 1975).

migration has played in the settlement of Mindanao by Wernstedt and Simkins (1965 and 1971) is general at best. To our knowledge, there is no single piece of research that systematically examines the impact of migration on cities, except to insinuate that migrants contribute to city problems and to the strain of urban resources and facilities.

Urban Problems

A number of papers have been written on urban problems, particularly those of the metropolis, such as urban blight, water, health, sanitation, un- and under-employment, criminality, and anomie (Araneta 1964, Dotson 1964, Pascual 1972). Hendershot (1969) discusses two kinds of problems: (a) those arising from a simple increase in the number of people who must be served, and (b) those resulting from a changed relationship among people, environment and technology. Problems of the first type (e.g., garbage collection) are easier to recognize and plan for. They can be solved by simply expanding the scale of operation without making any basic organizational change. Problems of the second kind (e.g., increasing criminality) entail not just additional resources but new and better forms of organization.

Most urban scholars agree that the solution to urban problems is better planning and a coordinated development of regional urban centers (e.g., Laquian 1972, Cariño 1976, Prantilla 1976). However, Hollnsteiner (1974) argues that urban planning as practised has failed essentially because it has ignored, or even worked against, the welfare of the masses.

National and Regional Urbanization

Recent concern about dispersed development has turned the attention of scholars from the consideration of Metro Manila or of individual cities to the urbanization of regions or groups of regions. Smith (1970), for example, applying principal-components analysis to municipal-level data, specifies three major factors underlying urbanization and socioeconomic development in Lowland Luzon: socioeconomic status, population growth, and literacy. Abenoja (1975) attempted to delimit urban places in Central and Eastern Visayas and produced urbanization scores for the different municipalities that correlated closely with the proportion urban in those places. The same exercise was carried out for Mindanao municipalities by Smith and Bouis (1975) with similar results.

A general overview of Philippine urbanization at the national level using data from the 1970 Census was done by Pascual (1972). A more thorough examination of urbanization and urban growth at the national, regional, and provincial levels from 1903 to 1970 was undertaken by Pernia (1976a). A historical analysis reveals a number of points about urbanization in the Philippines. First, religious and political forces during the Spanish regime appear to have generated a relatively high urbanization level by the beginning of this century. Second, the post-war acceleration in total population growth was accompanied by a deceleration in the pace of urbanization because virtually all of the acceleration went to rural growth. Yet, whereas the proportion urban increased only two and a half times (from about 13.1 to 32.9 percent) in approximately 70 years, the urban population multiplied at least twelvefold.[16] Third, the more developed regions urbanized faster than other regions but, more conspicuously, urban growth was concentrated in the metropolitan area as mirrored in the continuous rise of the primary index.

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[16]Preston (1979) shows that the pace of urbanization (rate of change in the proportion urban) in LDCs is not exceptionally rapid by historical standards, but that the growth rates of urban populations represent an unprecedented phenomenon. See also Davis (1975) for a discussion of urban growth in Asia.

Thus, apart from the impact of large absolute increments to urban population overall, the phenomenal expansion of Metropolitan Manila has apparently created the illusion that the country has been urbanizing rapidly.[17] The dizzying growth of Manila has, in fact, been confounding experts on how to properly define the metropolitan area.

A comparative analysis shows, firstly, that the speed of urbanization in Western countries during the nineteenth and early twentieth centuries proved to be generally faster than that in the Philippines during the 1950-60 and 1960-70 decades, although their urban growth rates were slower. Secondly, other contemporary Southeast and East Asian countries also evinced more rapid urbanization, particularly the fast-developing ones.

The slow pace of Philippine urbanization in the 1950s and 1960s appears to be directly associated with the sluggish transformation of the economy compared with neighboring Asian economies which experienced also buoyant urbanization (Pernia 1976b). Within the Philippines itself

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[17] Manila has, of course, been the center of attraction and attention of sorts so that Philippine urbanization has been synonymous with its growth. This "metro bias" has fostered an apparent contradiction, namely, that the country has been urbanizing rapidly and yet is predominantly rural, and will continue to be so for sometime yet. For a discussion of the metro bias in Asian urbanization, see Jones (1972).

(excepting Metro Manila), the more urbanized regions (Central and Southern Luzon, Western and Central Visayas) were more advanced than other regions in terms of demographic development (lower fertility and mortality), labor force industrialization, and income levels. Not surprisingly, these regions also evinced rapid urbanization tempos of over four times those experienced by the less urbanized (Ilocos, Bicol, Eastern Visayas) and frontier regions (Cagayan and the Mindanao regions), or nearly twice the national average. As a consequence, the disparity among regions outside Metro Manila widened over time. By 1970, the more urbanized regional group was 30 percent urban while the others stagnated at between 18 and 20 percent, which is a temporal gap of about 31 years in terms of the country's historical experience.

Provincial-level analysis shows that development variables are the main determinants of urbanization (see also Renaud 1979). These variables are: industrialization and commercialization, farm mechanization, better communication or higher literacy, urban in-migration from other provinces, and proximity to the metropolitan area. Demographic factors (fertility and farm density) that denote the rural pressure to migrate seem

insignificant.[18] And, rather than induce permanent migration, better road networks may improve rural-urban interchange or integration.

On the whole, the issue that needs to be confronted in the Philippines (and most likely in other developing Asian countries as well) is not rapid urbanization but unbalanced urbanization. The phenomenon of primacy -- whereby urbanization is concentrated in the metropolis -- must be understood as the cumulative consequence of historical, demographic and economic trends, reinforced by the long tradition of interest in the premier city and neglect elsewhere. More importantly perhaps, as will be discussed later, concentrated urbanization and development may have resulted from the indirect or implicit biases of macroeconomic and growth policies in favor of Metro Manila and against the other regions.

This kind of concentrated development is vividly described by Castillo, a rural sociologist, as follows: "By all indicators, Manila and its appended environs is

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[18] Several other studies indicate that the "push" factors are less important than the "pull" or development factors in migration and urbanization. See, e.g., Kumar (1973), Simkins and Wernstedt (1971), and Zachariah and Pernia (1975).

different from the rest of the country. It has more of the 'good things in life' than any other region and promises to be even more so. This Metropolis is our image to the world, our 'crown jewel', and the dreamland of many a rural youth, but it is not the Philippines. We are a nation of villages and villagers, Manila's skyline notwithstanding" (1979:251).

V. STUDIES ON PHILIPPINE REGIONAL DEVELOPMENT

Research on regional development in the Philippines is even thinner than that on urbanization previously discussed. It can be identified with only a few names and research projects. Probably preoccupied with the macroeconomic problems of development, socioeconomic practitioners have left the spatial context of economic development largely unexplored.

Spatial Dimension in Development

Sicat (1968) is probably one of the earliest Filipino scholars to expressly recognize the importance of the spatial dimension in development. In a series of articles in the late 1960s and early 1970s, he attempted to measure growth differentials among the various regions of the country

and posited hypotheses about the government's role in unbalanced spatial development. Using local government revenue and expenditure as proxies for gross regional product, he shows how fast each of the 10 regions of the Philippines had grown relative to the other during the period 1948-1966. This long period is divided into two stages. During 1948-1961, the four main cities of Metropolitan Manila (Manila, Quezon, Caloocan and Pasay) and the province of Rizal grew fastest. This was the phase of exchange controls when the overvalued peso favored import-substituting industries, which had located themselves around the capital city and principal port of the country. In 1961, the government devalued the peso and decontrolled the currency. From 1961 to 1966, the fastest growing regions were Mindanao, Cagayan, and Western Visayas. The latter two produce goods for export, tobacco and sugar, respectively. Mindanao at this time was opened up for in-migrants from the north. The rapidly expanding log industry was likewise located primarily in this region.

Sicat (1970b) also explicitly recognizes that the macroeconomic policies being used to spur industrialization in the economic development effort had implications on the

growth of the regions. "Innocent looking policies of the past carry with them excessive biases in favor of industrial concentration that place the biggest single stumbling block to the speed of regional growth" (Sicat 1972:2). Among the macroeconomic policies mentioned are: (a) exchange rate policy, (b) tariff rates as well as policies on domestic taxes and production subsidies, (c) tax incentives given to specific industries in the industrialization effort, and (d) monetary policy. These policies were used in the import-substitution strategy to achieve industrialization.

Microeconomic policies were likewise adopted to further the industrialization drive. In the late 1960s, the Investment Incentives Act was passed which set up the Board of Investments (BOI) with broad powers to extend tax and financial incentives to individual firms in selected industries. The government signified its awakening awareness of the spatial dimension of development by including regional dispersal as a consideration in choosing firms for favored treatment. However, as Sicat (1972) notes, the regional aspect was drowned by other factors that had also to be considered. In the end, the regional factor made negligible difference in the divisions made by the BOI.

Government Relocation Schemes

A parallel development is described by Ocampo (1972) and Laquian (1972). From 1950 to 1970 various population relocation schemes were carried out by the government. These ranged from the EDCOR and NARRA[19] programs to help families migrate from areas of dissidence in Central Luzon and Western Visayas in the 1950s to programs for squatter relocation from Tondo to various parts of Cavite in the late 1960s and early 1970s. Carried out for various purposes, however, these relocation programs were not integrated within a national urbanization policy, Laquian points out. While the analysis is quite indicative of the general trends, the primary results of the effort is a description of national government policies with probable effects on population distribution as well as on regional and urban development. No effort is made to trace the causes and consequences of the differential growth rates of various areas of the country. These papers may, therefore, be characterized as a description of the "state of the art" of the national government's population policies rather than a research effort

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[19] Economic Development Corporation and National Resettlement and Rehabilitation Administration, respectively.

to test specific hypotheses or a concrete program to influence urban and regional development one way or the other. The papers, nonetheless, remains a valuable starting point by giving some clues for research and policy analysis.

Regional Concentration and Growth

The middle of the 1970s saw the start of an earnest effort to document the relationships underlying regional concentration and development. Picking up from where Sicat had left off, Miranda (1977) and Moran (1978) have made noteworthy attempts to explain in quantitative terms the determinants of urban and regional growth.

Miranda examines the relationships among regional concentration level, regional capital per worker, and regional profit level for selected industries. He also considers the relationship between the size of firms and the concentration level but does not test it directly. Using data from the NCSO's economic census of 1972 and from the survey of the top 1,000 corporations by Business Day, Miranda obtains the positive relationships that he hypothesized.

Miranda employs univariate regression analysis between pairs of different variables to test the relationships and, therefore, does not include control variables that may be relevant for each functional relation. For example, he does not explicitly test whether the regional concentration level is a function of the regional profit level or of the size of the market in each region. Neither does he attempt to find out which among the three variables -- the regional profit level, the size of firm, and profit differentials -- leads to regional concentration. The answer to this issue could very well be an important piece of information in the formulation of a national urban strategy.

Meager as the results may be, the research attempt by Miranda is nevertheless valuable, at least as an indication of the direction the influence on industrial location may go. No doubt, the paucity of information led him to perform less rigorous tests than one might hope for. What remains for subsequent research is to gather more information on what has been started or to modify the hypotheses so that they may be amenable to more thorough analyses with alternative data. The solution will probably be a combination of these two efforts.

Moran's (1978) work is part of a bigger project to investigate the effects of industrial promotion policies in the Philippines (see Bautista and Power 1978). Her portion of the study looks into the regional impact of these policies. The study may be divided into two main parts: (a) a historical review of comparative regional growth of the manufacturing sector from 1948 to 1974, and (b) a survey of 31 firms set up after 1970. An additional section tries to review government policies affecting the regional dispersal of industries.

Moran's review of regional growth in the Philippines is a continuation of Sicat's (1968) study. The data used for the study come from the Census of Establishments of 1948, 1961, 1967 and 1972 and the Annual Survey of Manufacturing of 1956 to 1974, all done by the NCSO. In general, the results support Sicat's finding of the predominance in growth of the four cities of Metropolitan Manila and its immediate environs during the period of controls, 1948-1961, and their relative deceleration in growth thereafter as compared with the other regions. At the end of the period under study, however, Metropolitan Manila was still the pre-eminent region of the country reflecting either of two possible conclusions regarding the government's effort towards regional dispersal in the 1970s: (a) "that the government policies are so recent that their effectiveness cannot yet be determined", or

(b) "that these policies are not really effective in encouraging the dispersal of manufacturing activity to regions outside Metro Manila and Southern Tagalog" (Moran 1978:51).

The second portion of Moran's study is an analysis of survey data on manufacturing firms that had started business in 1970 when the government embarked on explicit policies geared toward regional dispersal. Data were obtained through interviews personally conducted by the author. Several questions were asked, e.g., which factor was the most important in the locational decision.[20] A major finding was that government policies for regional dispersal of industries have not been very effective in influencing plant location.

VI. THE GOVERNMENT'S ROLE: A COMMENTARY

The role of the government in the pattern of urbanization and regional development is a major theme of the papers on the spatial apsects of growth in developing countries. Inspite of the varied frameworks and model orientations, writers working on the locational impact of government

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[20] Survey results from questions of attitudinal factors must often be qualified because choices are not always presented clearly in actual situations. However, this is largely corrected for by the fact that the questions are post hoc explanations of decisions already made. The finding was also broad enough to be useful even if only as an indication of the direction of the effect.

policies are almost unanimous in stressing the strong actual and potential influence of the government (frequently, the national government) on the growth of the different parts of the country. The magnitude of the implicit side effects of macroeconomic policies designed to achieve economic growth or industrialization stands in stark contrast with the meager influence of government policies explicitly meant for regional dispersal or balanced spatial development.

Macroeconomic Policies

By far the most frequent reference to the government's role in spatial economies has to do with the unintended side effects of macroeconomic policies that have been used by developing countries over the past three decades. In order to accelerate industrialization and economic growth, governments deliberately favored specific kinds of industries. Unconsciously, they simultaneously favored certain localities either by expanding the markets for these industries in particular geographic areas or by promoting industries that tend to cluster around strategic points in the country.

The argument above is most comprehensively reviewed for developing countries by Renaud (1979) and persuasively applied by Sicat (1968, 1970a, 1970b) to the Philippine situation. Sicat, for example, views the exchange rate policies of the 1950s, the tariff and domestic tax/subsidy programs, and the monetary policies of the postwar period to have been orchestrated as part of a grand strategy of import substitution. The plan was to spark a full-scale industrialization following the birth of industries that were to take over the domestic market for manufactured products from imports.

The complication arose because these industries were dependent on imported raw materials and semi-processed products for their operations. They, therefore, tended to cluster around the national capital where import licenses were being rationed out as well as near the principal port where the imports were allowed entry into the country. As in many other developing countires, in the Philippines the principal port is found in the national capital itself. Likewise, as has frequently happened elsewhere, the biggest market for these manufactured products coincided with the national capital region. Sicat and later Moran (1978a) provide indicative proof for this phenomenon by their analysis of the different periods of Philippine industrialization.

Metropolitan Manila grew fastest relative to the rest of the country during the period of exchange controls.

Regional and Rural Policies

Contrast with above implicit spatial policies the performance of explicit policies to disperse industries or development in general to other regions of the country. These policies, inter alia, include: (a) incentives for firms located outside Metro Manila under the export incentives act of 1970, (b) the development of the Bataan Export Processing Zone and other industrial estates, (c) the Board of Investment's incentives for firms to locate outside of the Metro Manila region,[21] and (d) various rural and agricultural development programs and schemes. Indications given by a descriptive analysis of Philippine manufacturing and the direct, if partial, test by Moran (1978b) show that these policies for dispersal have had at best a negligible effect on the pattern of urbanization and regional development.

[21]The prohibition of new firms to locate within a fifty-kilometer radius of Manila's center is not included in the list under the assumption that the area beyond still belongs to the Metro Manila region.

Urban Policies

Urban policies and programs have not been very helpful either. As in the case of macroeconomic policies, they appear to have worked at cross-purpose with policies explicitly intended to decentralize development. These urban policies principally include: (a) infrastructure investments and other public capital expenditures; (b) private investments particularly those with government participation; (c) urban social services, and (d) policies on multinationals and foreign investments.

From all indications it is evident that Manila is practically the only city in the country benefitting from these policies and programs. Accordingly, whatever development projects are introduced in the regions are overshadowed and effectively offset by gigantic programs, both public and private, in the metropolis. In short, what the government gives to the regions with the right hand seems to be taken back with the left, so to speak.

Net Result

On balance, therefore, public policies in the Philippines may be said to have been a very strong factor for spatial concentration. This has for the most part been an unintended result, as shown by the later efforts to promote the regional dispersal of industries. It is unclear, however, whether the government should push for the regional dispersal of industries or, if it should, to what extent. The answer requires a consideration of whether there is an optimal size of the primate city -- Metro Manila -- as well as optimal sizes of the other urban centers in the country; whether optimal city sizes are uniform for specific types of industries, and whether there are minimum city sizes for the efficient operation of industries. An important part of the answer is to be able to measure exactly how strong are the biases for agglomeration introduced by government macro policies. A resolution of these issues will be essential in the formation of a national urbanization policy that will be useful for the long-term development of the country.

VII. CONCEPTUAL FRAMEWORK AND RESEARCH AGENDA

It is evident from the survey that research on urbanization and spatial development in the Philippines has been fragmentary. Studies on the subject may be classified into the following categories:

a) development of cities and primacy, with the spotlight frequently on Manila;

b) rural-to-urban migration, with "urban" usually referring to the metropolis;

c) urban problems -- largely an impressionistic description of such matters as water, health, sanitation, congestion, un- and under-employment, criminality, and anomie;

d) urbanization of regions and of the country as a whole;

e) comparative economic performance of the different regions with emphasis on Metro Manila, in relation to changing strategies of industrialization;

f) comparative concentration of economic activity by region for each industry, and the relationship between regional profit level, size of firm, and regional concentration of industries;

g) factors important in the decision of selected new firms to locate.

On the whole, these studies have been diffuse in that they have been undertaken independently by different scholars, largely isolated from each other and with different purposes in mind. As a result, the current state of the art on urbanization and spatial development lacks overall consistency and coherence. Studies have not been undertaken as a cumulative process in a way that would systematically enhance over time the stock of knowledge about urban and spatial issues. Stock-of-knowledge accretion via systematic and coordinated research would probably have more and better impact on policy and planning.

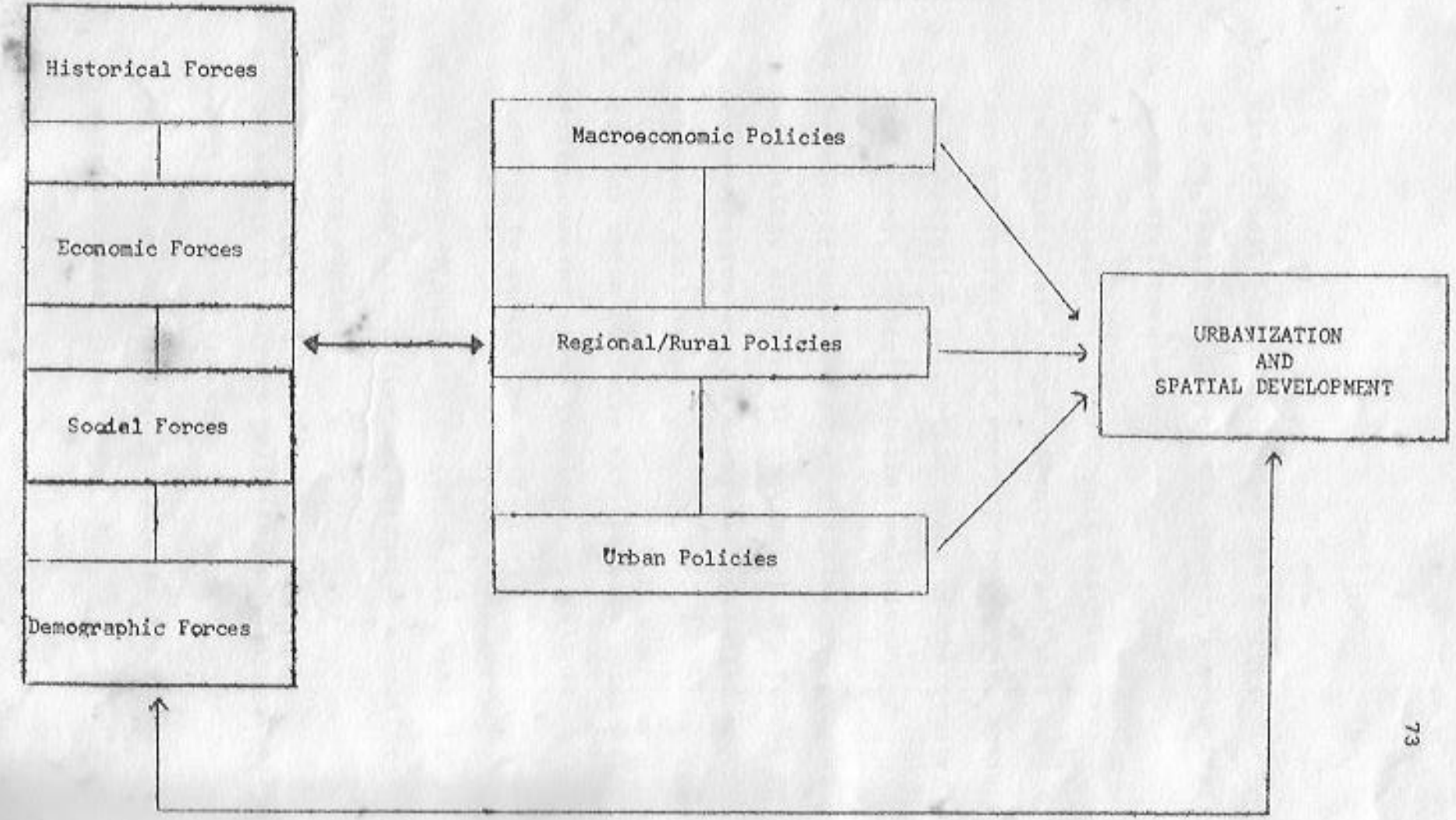
There is need, first of all, to view urbanization and spatial development within a unified framework. That is to say, they should not be regarded as solely a population distribution problem on the one hand and solely an industrial concentration problem on the other. This has been the general approach of research in the past. It has become clear, however, that these two aspects of development are closely intertwined. Urbanization and spatial concentration depend on the nature and pattern of industrialization as well as on the pace of agricultural development. But they

are also determined in no small measure by macroeconomic policies that exert implicit spatial biases, probably even more so than by regional and rural policies explicitly designed to foster dispersed regional development. Therefore, to be more useful, research should now adopt a framework that takes into account all these important dimensions.

Such a broad framework may be provisionally sketched as in Figure 3. This shows the different government policies as the more proximate determinants of urbanization and spatial development. Macroeconomic policies are positioned at the top since they are deemed to be the most potent of the policies. Urban policies are also indicated because, if they benefit principally the primate city, they tend to offset regional and rural policies intended to disperse development. In addition, historical, economic, social and demographic forces interplay with urbanization and spatial development, as well as with the various public policies.

This framework readily suggests that a research agenda should include the following:

Figure 3. A Simplified Framework Illustrating the Key Causal Links with Respect to Urbanization and Spatial Development



1. Historical, economic, social and demographic forces that have shaped the country's urbanization and spatial development.

2. Macroeconomic and growth policies that have introduced unintended effects and biases toward the concentration of economic resources, activities, and population in certain areas of the country (in short, implicit spatial policies);

3. Recent regional and rural policies and programs explicitly designed to counteract the forces of concentration and to disperse population and economic activities.

4. Various urban policies and projects intended to solve current urban problems, as well as schemes to manage the "big city."

On the basis of such investigation, it should be possible to identify alternative urbanization scenarios under the following regimes:

a) no change in current policies, or a perpetuation of the current trend;

b) given a set of "ideal" conditions for urban and industrial growth;

c) given feasible policies considering historical antecedents and the current trend.

Finally, in order to come to grips with the"urbanization problem" in the 1980s and perhaps further ahead, the elements of a national urbanization strategy should be proposed.

ANNEX

1963 Urban Definition

Urban places include:

1. In their entirety, all municipal jurisdictions which, whether designated as chartered cities, provincial capitals or not have a population density of at least 1,000 persons per square kilometer (the whole of Quezon, Baguio and Cebu cities not withstanding the minimum density rule, are to be included).

2. For all other cities and municipalities with a population density of at least 500 persons per square kilometer, only the poblacion (regardless of population size) plus any barrio having at least 2,500 inhabitants and any barrio contiguous to the poblacion with at least 1,000 inhabitants (for cities where the poblacion is not specified, the central district or the city proper, e.g., for Davao-Bucana (a), Davao Proper (b), and Molabe (c), shall be regarded as the poblacion for purposes of this definition).

3. For all other cities and municipalities with a population of at least 20,000 persons, only the poblacion (regardless of population size) and all barrios having at least 2,500 inhabitants, contiguous to the poblacion.

4. All other poblaciones having a population of at least 2,500 persons.

1970 Urban Definition

Urban places include:

1. In their entirety, all cities and municipalities which have a population density of at least 1,000 persons per square kilometer.

2. Poblaciones or central districts of municipalities and cities which have a population density of at least 500 persons per square kilometer.

3. Poblaciones or central districts (not included in 1 and 2) regardless of population size which have the following:

   a) Street pattern, i.e., network of street in either at parallel or right angle orientation;

   b) At least six establishments (Commercial, manufacturing, recreational and/or personal services); and

   c) At least three of the following:

      (i) A town hall, church or chapel with religious service at least once a month;

      (ii) A public plaza, park or cemetery;

      (iii) A market place or building where trading activities are carried on at least once a week; and

      (iv) A public building like a school, hospital, puericulture and health center or library.

4. Barrios having at least 1,000 inhabitants which meet the conditions set forth in 3 above, and in which the occupation of the inhabitants is predominantly non-farming/fishing.

BIBLIOGRAPHY

Abenoja, Macrina. 1975. "Urbanization in the Central and Eastern Visayas," M.A. thesis, Population Institute, University of the Philippines.

Alonzo, William. 1964. Location and Land Use, (Cambridge, Massachusetts: Harvard University Press).

_____. 1968. "Industrial Location and Regional Policy in Economic Development," Working Paper No. 74 (February), Berkeley: Institute of Urban and Regional Development, University of California.

_____. 1970a. "The Question of City Size and National Policy," Working Paper No. 125, (June), Berkeley: Institute of Urban and Regional Development, University of California.

_____. 1970b. "The Economics of Urban Size," Working Paper No. 138, (November), Berkeley: Institute of Urban and Regional Development, University of California.

Araneta, Luis Ma. 1964. "The Blight of Urbanization," Comment, No. 21, pp. 76-82.

Bautista, Romeo M. and Power, John H. 1978. Industrial Promotion Policies in the Philippines, Manila: Philippine Institute of Development Studies and the Philippine Center for Economic Development.

Beckmann, Martin. 1958. "City Hierarchies and the Distribution of City Size," in Economic Development and Cultural Change, Vol. I (April).

Berry, Brian J.L. 1961. "City Size Distributions and the Distributions of City Size," in Economic Development and Cultural Change, Vol. IX (July).

Cariño, Benjamin V. 1971. "Hope or Despair: A Comparative Study of Slum and Squatter Communities in Five Philippine Cities," Philippine Planning Journal, Vol. 3, No. 1 (October), pp. 8-14.

_____. 1976. "Managing Migration Streams and Population Redistribution: Alternative Strategies and Research Needs," in R.A. Bulatao (ed.), Philippine Population Research, (Makati: Population Center Foundation), pp. 251-270.

Carneiro, Robert C. and Stephen Tobias. 1963. "Scale Analysis as an Instrument for the Study of Cultural Evolution," Transactions of the New York Academy of Sciences (October).

Castillo, Gelia T. 1979. Beyond Manila: Philippine Rural Problems in Perspective (Ottawa: International Development Research Centre).

Christaller, W. 1933. Die Zentralen Orte in Suddentschland (Jena: G. Fischer Press).

Cressey, Paul F. 1958. "The Development of Philippine Cities," Siliman Journal, Vol. V, pp. 349-361.

_____. 1960. "Urbanization in the Philippines," Sociology and Social Research, Vol. XLIV, pp. 402-409.

Davis, Kingsley. 1975. "Asia's Cities: Problems and Options," Population and Development Review, Vol. I, No. 1 (September).

DeVoretz, Don J. 1972. "Migration in a Labor Surplus Economy," Philippine Economic Journal, Vol. XI, No. 1, pp. 58-80.

Dotson, Arch T. 1964. "Metropolitan Problems in Asia and Some Solutions," Philippine Journal of Public Administration, Vol. III (July), pp. 227-233.

Frank, André Gunder. 1969. Capitalism and Underdevelopment in Latin America (New York: Monthly Review Press).

_____. 1972. "The Development of Underdevelopment," in Cockroft, Frank and Johnson (eds.), Dependence and Underdevelopment in Latin American Political Economy (New York: Doubleday, Anchor Books).

Friedmann, John. 1973. Urbanization, Planning and National Development (Beverly Hills: California Sage Publications).

_____. 1974. A Spatial Framework for Rural Development: Problems of Organization and Implementation (Los Angeles: UCLA School of Architecture and Urban Planning).

_____ and Douglass, M. 1975. "Agropolitan Development: Towards a New Strategy for Regional Planning in Asia," Paper presented at the U.N. Center for Regional Development Seminar, Nagoya, Japan. (November 4-13).

Fujimoto, Isao. 1968. "The Social Complexity of Philippine Towns and Cities," Solidarity, Vol. III, pp. 76-90.

Greenwood, Michael J. 1975. "Research on Internal Migration in the United States: A Survey," Journal of Economic Literature, Vol. XIII, No. 2 (June), pp. 397-433.

Hendershot, Gerry E. 1969. "The Challenge to Urbanization in the Seventies," in M.B. Concepción (ed.), Philippine Population in the Seventies (Manila: Community Publishers).

_____. 1971. "Cityward Migration and Urban Fertility in the Philippines." Philippine Sociological Review, Vol. XIX, Nos. 3 & 4, pp. 183-192.

_____. 1976. "Social Class, Migration and Fertility in the Philippines," The Dynamics of Migration: Internal Migration and Migration and Fertility, Occasional Monograph Series, Vol. I, No. 5, Interdisciplinary Communications Program (Washington, D.C.: Smithsonian Institution).

Hollnsteiner, Mary R. 1969. "The Urbanization of Metropolitan Manila," in Walden F. Bello and Alfonso de Guzman II (eds.), Modernization: Its Impact in the Philippines IV, (Quezon City: Ateneo de Manila University Press).

_____. 1974. "Urban Planning: A Curbside View," Philippine Planning Journal Vol. V, Nos. 1 & 2 (April); pp. 65-72.

Hoover, Edgar M. 1975. An Introduction to Regional Economics, (New York: Knopf Press).

Hotelling, H. 1952. "Stability in Competition," in Readings in Price Theory, selected by a committee of the American Economic Association (Chicago: Irwin Press).

Hoyt, Homer. 1939. "The Structure and Growth of Residential Neighborhood in American Cities (Washington: U.S. Government Printing Office).

Isard, Walter. 1956. Location and Space Economy (Cambridge, Massachusetts: M.I.T. Press).

Jones, Gavin W. 1972. "Implications of Prospective Urbanization for Development Planning in Southeast Asia," Paper presented at the SEADAG Population Panel Seminar on the Urban Focus, Pattaya, Thailand (June 11-14).

Kim, Yun. 1972. "Net Internal Migration in the Philippines, 1960-1970," Journal of Philippine Statistics, Vol. XXIII (July), pp. 9-29.

Kumar, Joginden. 1973. Population and Land in World Agriculture: Recent Trends and Relationships (Berkeley: Institute of International Studies, University of California).

Laquian, Aprodicio A. 1966. The City in Nation-Building (Manila: College of Public Administration, University of the Philippines).

_____. 1972. "The Need for National Urban Strategy in the Philippines," Paper presented at the seminar on Planning for Urbanization within National Development Planning in Southeast Asia, Local Government Center, University of the Philippines, Manila (January 4-7).

Lo, Fu-chen and Kamal Salih. 1976. "Growth Poles and Regional Policy in Open Dualistic Economies: Western Theory and Asian Reality," Growth Pole Strategy and Regional Development Planning in Asia (Nagoya, Japan: United Nations Centre for Regional Development).

_____ and Mike Douglas. 1978. "Uneven Development, Rural-Urban Transformation, and Regional Development Alternatives in Asia," UNCRD Working Paper No. 78-02, Nagoya, Japan.

Lopez, Maria Elena and Mary R. Hollnsteiner. 1976. "People on the Move: Migrant Adaptations to Manila Residence," in R. A. Bulatao (ed), Philippine Population Research (Makati: Population Center Foundation), pp. 227-250.

Lösch, August. 1954. The Economics of Location translated by W. Woglom and W. Stolpe (New Haven: Conn.: Yale University Press).

Mariano, Vicente D. 1975. "Urbanization and Internal Migration in 45 Philippine Cities During the 1960's," M.A. thesis, U.P. Population Institute.

Mills, Edwin S., and Byung Nak Song. 1978. "Korea's Urbanization and Urban Problems 1945-1975," Working Paper 7701 (May), Korea Modernization Study Series 1 (Final Draft), Korean Development Institute.

Mincer, Jacob. 1978. "Family Migration Decisions," Journal of Political Economy, Vol. 86, No. 5 (October).

Miranda, Casimiro V., Jr. 1977. "The Regional Pattern of Industrial Location: A Study of the Philippine Space Economy," Ph.D. Dissertation, Wayne State University.

_____. 1978. "The Spatial Pattern of Philippine Manufacturing," Philippine Review of Business and Economics, Vol. XV, No. 2, (June), pp. 57-88.

Moran, Presentacion B. 1978. "A Policy Evaluation of Regional Dispersal of Manufacturing in the Philippines," M.A. thesis, School of Economics, University of the Philippines.

_____. 1978. "Regional Structure of Philippine Manufacturing," Philippine Review of Business and Economics, Vol. XV, No. 2 (June), pp. 117-142.

Muth, Richard F. 1961. "Economic Change and Rural-Urban Land Conversions," Econometrica, Vol. XXIX (January), pp. 1-23.

_____. 1969. Cities and Housing (Chicago: University of Chicago Press).

Myrdal, Gunnar. 1957. Economic Theory and Underdeveloped Regions (London: Duckworth Press).

Ocampo, Romeo B. 1972. "Governmental and Non-Governmental Programs in Influencing Migration in the Philippines," Report A-3, University of the Philippines Internet Project.

Pacho, Arturo G. and P.D. Tapales. 1972. "Conditions in an Area Contributing to Rural Urban Migration," Report submitted to Internet as part of study on rural-urban migrants and metropolitan development.

Panganiban, Antonia. 1956. "School Performance as a Factor in Philippine Rural-Urban Migration," Philippine Sociological Review, Vol. IV, Nos. 2 & 3 (April-July), pp. 2-15.

Pascual, Elvira M. 1966. "Population Redistribution in the Philippines," Population Institute, University of the Philippines, Manila.

_____. 1972. "Urbanization in the Philippines," Paper presented at the SEADAG Population Panel Seminar on the Urban Focus, Pattaya, Thailand, (11-14 June).

Pernia, Ernesto M. 1976a. Urbanization in the Philippines: Historical and Comparative Perspectives, Papers of the East-West Population Institute, No. 40 (Honolulu: East-West Center).

_____. 1976b. "Urbanization and Economic Development in the Philippines: Some Implications for Regional Policy," Philippine Economic Journal, Vol. XV, No. 4.

_____. 1976c. "A Method of Decomposing Urban Population Growth and an Application to Philippine Data," Papers of the East-West Population Institute, No. 41 (Honolulu: East-West Center).

Pernia, Ernesto M. 1977. "The Impact of Migration on Rural Areas in the Philippines," Philippine Economic Journal, Vol. XVI, Nos. 1 and 2.

_____. 1978. "An Empirical Model of Individual and Household Migration Choice: Philippines, 1965-1973," Philippine Economic Journal, Vol. XVII, Nos. 1 and 2.

_____. 1979. "An Intersectoral and Sequential Analysis of Migration Decision: Philippines," Philippine Review of Business and Economics, Vol. XVI, No. 1 (March).

Perroux, F. 1955. "Notes on the Concept of Growth Poles," Economic Applique.

Prebisch, Raul. 1950. The Economic Development of Latin America and Its Principal Problems, Economic Commission for Latin America, United Nations, Labor Success.

_____. 1969. "The Theory of the Peripheral Economy" in Friedeberg, A.S. (ed.), The U.N. Conference on Trade and Development of 1964 at the Center of International Political Discussions (Rotterdam: Rotterdam University Press).

Preston, Samuel. 1979. "Urban Growth in Developing Countries: A Demographic Reappraisal," Population and Development Review, Vol. II, No. 2 (June), pp. 195-216.

Renaud, Bertrand. 1979. "National Urbanization Policies in Developing Countries," World Bank Staff Working Paper No. 347, (July), Development Economics Department, World Bank, Washington D.C.

Richardson, Harry W. 1979. "The Relevance and Applicability of Regional Economics to Developing Countries," Paper presented at the UNCRD Consultative Meeting, Nagoya, Japan (November 5-7).

Sicat, Gerardo P. 1968. "Regional Economic Growth in the Philippines 1948-1966," IEDR Discussion Paper No. 68-1 (Quezon City: U.P. School of Economics).

_____. 1970a. "Policy Problems of a Vigorous Industrialization," IEDR Discussion Paper No. 70-1 (Quezon City: U.P. School of Economics).

_____. 1970b. "Economics of Regional Development: Interaction of National and Regional Policies," IEDR Discussion Paper No. 70-5 (Quezon City: U.P. School of Economics).

Sicat, Gerardo P. 1970c. "Provincial Development Assistance, Regional Progress, and Local Leadership," Remarks delivered before the "Conference on Accelerating Provincial Development" conducted jointly by the U.P. Local Government Center and the NEC-AID Provincial Development Assistance Project at the Magellan Hotel, Cebu City on September 9, 1970.

_____. 1972. "Regional Dispersal," a Reconstruction of the Extemporaneous Speech delivered before the 6th Annual Convention of the Association of Government Mechanical and Electrical Engineers of the Philippines held at the Dr. P. Garcia Auditorium, N.S.D.B. Manila on May 11, 1972.

_____. 1973. "Regional Planning for Human Settlements," Speech delivered before the First Philippine Environmental Planning Congress at the Ramon Magsaysay Hall, Social Security System (SSS) Building, Quezon City on March 31, 1973.

Simkins, Paul D and Frederick L. Wernstedt. 1971. Philippine Migration: The Settlement of the Digos-Padada Valley, Davao Province, Monograph Series No. 16 (New Haven: Yale University Southeast Asia Studies).

Simmons, Alan et al. 1977. Social Change and Internal Migration, A Review of research findings from Africa, Asia, and Latin America (Ottawa: International Development Research Centre).

Smith, Peter C. 1970. "Areal Differentiation and the Urbanization Process in Lowland Luzon," Ph.D. Dissertation, University of Chicago.

_____ and Howarth Bouis. 1975. "An Approach to Delimiting Social and Economic Concentration Through Scalograms: Mindanao, 1972," Research Note No. 41, Population Institute, University of the Philippines, Manila.

Todaro, Michael P. 1976. Internal Migration in Developing Countries (Geneva: International Labor Organization).

United Nations. 1975. "Trends and Prospects in Urban and Rural Population, 1950-2000, As Assessed in 1973-1974," Prepared by the Population Division, Department of Economics and Social Affairs, ESA/P/WP. 54. United Nations, New York.

Ullman, Edward L. 1960. "Trade Centers and Tributary Areas of the Philippines," Geographical Review, Volume I (April) pp. 32-56.

Von Thünen, J. H. 1826. Dev Isolieste Staat in Beziehung anf Landivertschaft and Nationalokonomie, Hamburg: 1 Fr. Pertues.

Weber, Alfred. 1909. Uber der Standort der Industien (Tubingen: J.C.B. Mohr), translated and edited by C.J. Friedrich as Alfred Weber's Theory of the Location of Industries (Chicago: University of Chicago Press).

Wernstedt, Frederick L., and Paul D. Simkins. 1965. "Migrations and the Settlement of Mindanao," Journal of Asian Studies, Vol. XXV, No. 1 (November), pp. 83-103.

Zacharial, K.C. and Pernia, E.M. 1975. "Migration in the Philippines with Particular Reference to Less Developed Regions of the Country," Report to the World Bank (September).

Zipf, George K. 1948. Human Behavior and the Principle of Least Effort (Cambridge, Massachusetts: Addison Wesby Press).